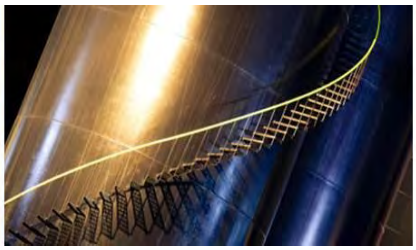

2021 ANNUAL REPORT

Whirlpool Facility
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
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1 Introduction

On behalf of Whirlpool Corporation (Whirlpool), Ramboll US Consulting, Inc (Ramboll) has prepared this 2021 Annual Report for the former Whirlpool facility (Site) on Jenny Lind Road in Fort Smith, Arkansas (see Figure 1). This Report summarizes the investigation, maintenance and remediation efforts by Whirlpool under the oversight of the Arkansas Division of Energy and Environment, Department of Environmental Quality (ADEQ) Office of Land Resources in 2021. This report was prepared in accordance with the Revised Groundwater Monitoring Plan (RGWMP) approved by ADEQ in September 2016; the Remedial Action Decision Document (RADD) issued by ADEQ on December 27, 2013, and revised in November 2015 (Revised RADD); and ADEQ comment letters and Ramboll/Whirlpool responses to previous quarterly/ semi-annual monitoring reports.

The investigation, maintenance and remediation efforts performed at the Site in 2021 consisted of:

- Semi-annual and annual groundwater and indoor air monitoring events in April and October 2021, respectively;
- Additional East Plume groundwater investigation in August and September 2021 along the eastern property boundary, consisting of temporary well installation, groundwater sample collection and the installation of permanent monitoring well MW-205;
- Additional South Plume groundwater investigation in August 2021 to the south of MW-187 and MW-188 based on increasing trichloroethene (TCE) concentrations in the area, consisting of temporary well installation, groundwater sample collection and the installation of permanent monitoring well MW-206;
- Additional South Plume Investigation in September 2021 in the vicinity of MW-190 to address increasing TCE concentrations in the area, consisting of temporary well installation and groundwater sample collection;
- Repair of monitoring wells MW-22R, MW-34R, MW-39R and ITMW-5 located both on site and north of Ingersoll Avenue;
- 2021 Passive Flux Meter (PFM) Investigation to understand the mass of dissolved organic contaminants potentially present within the vertical profile for the respective plumes to facilitate better understanding of plume migration; and
- Site-wide geophysical investigation to identify and characterize preferential groundwater flow paths within the Basal Transmissive Zone (BTZ) beneath the Site.

Supplemental investigations to the East and South were performed in accordance with the respective action plans or work plans and approvals received from ADEQ.

Monitoring at the Site will continue in accordance with the RGWMP with the next groundwater monitoring event planned to occur in Spring 2022.

2 Site Background Information

As summarized in the 2015 Two Year Technical Review Report (Environ 2016), the Site was first developed in 1961 by Norge Corporation as a refrigerator, icemaker and gas/air conditioning manufacturing facility until it was acquired by Whirlpool in 1966. Facility activities included the manufacture of side-by-side household refrigerators, trash compactors and icemakers during Whirlpool's time of operations. Manufacturing operations ceased in 2012.

The Site formerly consisted of approximately 153 acres of which the developed portion of the property consists of the former manufacturing facility [approximately 1,175,000 square feet (ft^2)], a former warehouse (approximately 622,000 ft^2) and ancillary buildings north of the former manufacturing building, including the former boiler room, water treatment plant and degreaser building. Whirlpool sold the warehouse and surrounding property on the southern portion of the Site in September 2014 to Harmon and Whirlpool sold the former manufacturing building and surrounding property (approximately 92 acres) in February 2017 to Phoenix Investors (Phoenix). Two tenants (Mars Petcare and MP Warehouse, Inc) currently conduct warehousing operations within the former manufacturing facility. Phoenix has demolished the ancillary buildings, added shipping docks for warehouse operations and improved asphalt and concrete pavement at locations surrounding the former manufacturing building.

Surrounding property use consists of residential areas located to the north of the property beyond Ingersoll Avenue and commercial industrial properties are located to the south, east and west. Undeveloped property (used for recreational purposes prior to the expansion of Ingersoll Avenue to the east) is also located to the east. Groundwater is not used as a potable water source in the area. Properties immediately north of the Site are subject to water use restrictions.

As summarized in the 2015 Two Year Technical Review Report (Environ 2016), the combination of various investigation and monitoring activities and first-hand accounts from former workers has indicated the primary source of TCE impact at the Site is attributable to former degreasing operations performed in the degreaser building formerly located near the northwest corner of the existing building (see Figure 2A for depiction of the northwest corner of the existing building and the existing groundwater impacts in this area). Incidental releases of TCE impacting soil and groundwater at the former linear drainage feature proximate to the former degreaser building occurred in the form of: (1) incidental drips onto the degreaser building floor from parts that were being washed with TCE and (2) rinsing or cleaning of the degreaser building floor for general housekeeping purposes and the subsequent discharge of mop water through the overhead doors. These incidental releases occurred approximately 30-50 years ago.

Initial remediation activities were performed by Whirlpool in 2014 in close consultation with and under the oversight of ADEQ. These activities included the imposition of a deed restriction on the Whirlpool property; in-situ chemical oxidation (ISCO) injections in Areas 1, 2 and 3 (these areas are generally located at the exterior northwest corner of the existing building and extending north to the north side of Ingersoll Avenue) to quickly reduce TCE concentrations in

groundwater in these areas; and quarterly monitoring of groundwater for volatile organic compounds (VOCs) and natural attenuation parameters.

Whirlpool also conducted additional voluntary remediation activities in 2014 beyond those required under the RADDs, including targeted ISCO injections within the neck area (area generally located east of the electric substation) and the removal of impacted soil in the source area along the linear drainage feature through the performance of 19 large diameter borings (LDBs). Approximately 350 cubic yards (yd^3) or approximately 500 tons was removed and disposed of off-site.

In 2015, Whirlpool conducted further remedial actions, including ISCO injections in the Supplemental Neck Area and Areas 2 and 3 to further increase the separation of the North and South Plumes, performance of an ISCR pilot test near MW-61R (northeast portion of the North Plume) and settlements with local property owners impacted by the North Plume to obtain deed restrictions precluding the use of groundwater in the future.

In 2016, the following investigation and monitoring activities were completed:

- Quarterly groundwater monitoring during the first and second quarters;
- Indoor air and sub-slab vapor monitoring in the existing building in February and June;
- Abandonment of MW-31R, MW-32R and MW-33R in June for the Ingersoll Avenue expansion project performed by the city of Fort Smith;
- Abandonment of MW-66, MW-67R, MW-193 in August for the Jenny Lind Road expansion project performed by the city of Fort Smith and installation of MW-194 through MW-196 (for continued groundwater monitoring at the northeast portion of the North Plume);
- Approval of the RGWMP by ADEQ in September 2016; and
- Annual groundwater monitoring event in November.

In 2017, the following monitoring activities were completed:

- Semi-annual groundwater monitoring event in April; and
- Annual groundwater monitoring event in October.

In 2018, the investigation, monitoring and remediation efforts performed at the Site consisted of:

- Semi-annual groundwater monitoring event in April;
- Investigation near the southwest property boundary and the northeast boundaries of the North Plume in April 2018;
- ISCR was performed in July and August 2018 at the southwest boundary of the South Plume, northeast boundary of the North Plume and at the southeast property boundary; and

- Annual groundwater monitoring event and well rehabilitation in November 2018.

In 2019, the investigation, monitoring and remediation efforts performed at the Site consisted of:

- North and South Plume investigation in which TMW-35 was installed down-gradient of MW-55R and TMW-36 was installed down-gradient of MW-189 and cross-gradient from TMW-19 in June 2019;
- Well abandonments, replacement well installations and well maintenance in June, September and November primarily due to pavement replacement projects performed by Phoenix along the north side of the former Whirlpool building;
- Semi-annual and annual groundwater, indoor air and sub-slab vapor monitoring events in April and October;
- Additional South Plume groundwater investigation along the south property boundary based on the TCE concentrations detected at TMW-36 consisting of hydropunch groundwater samples collected in November;
- Recovery well installation (RW-1), free product assessment and aquifer testing within Area 1 at the location of a former large diameter boring (LDB-11) in November and December;
- Treatability testing sample collection was performed in November 2019 and treatability testing to further assess pH modifications in groundwater and ISCR reagent effectiveness: and
- ISCR injections were performed in December at the northeast corner of the Site in the vicinity of MW-91 and on the property immediately east of the northeast corner of the Site in the vicinity of MW-99 (6427 Jenny Lind Road).

In 2020, the investigation, monitoring and remediation efforts performed at the Site consisted of:

- Semi-annual and annual groundwater and indoor air monitoring events in May and October 2020, respectively;
- Additional Northeast Plume groundwater investigation on the Boys & Girls Club property in the vicinity of MW-184, consisting of hydropunch groundwater samples and the installation of MW-200 and MW-202 in July 2020;
- Additional South Plume groundwater investigation to the south of the southern property boundary [Harmon Arkansas Properties, LLC (Harmon) property] based on TCE concentrations detected in the November 2019 investigation, consisting of hydropunch groundwater samples and the installation of MW-201 and MW-203 in July and September 2020;
- Offsite investigation to the southwest (McPherson Oil) based on TCE concentrations detected in TMW-32, consisting of hydropunch groundwater samples and the installation of MW-197 and MW-199 in July and September 2020;

- Installation of MW-198 in the source area to the north of the former Whirlpool manufacturing building in the vicinity of IW-147; and
- In-situ chemical reduction (ISCR) injections performed in October 2020 along the southern property boundary in the vicinity of TMW-36 and TMW-36B.

Based upon the work performed during the last six years and the valuable database of groundwater monitoring data generated over nearly 30 years, the following general conclusions are presented:

- There are no unacceptable exposures onsite based upon indoor air monitoring and current warehousing operations;
- There are no unacceptable exposures to offsite residents, offsite routine workers or offsite utility maintenance workers based upon previous indoor air and crawl space monitoring and continued groundwater monitoring; and
- Analytical results for VOCs in groundwater demonstrate that natural attenuation of TCE is occurring via chemical, geochemical and biological mechanisms in areas of the South, North and Northeast Plumes as demonstrated by the presence of the reductive dechlorination by-products cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC).

3 Groundwater Monitoring and Onsite Activities

The annual groundwater monitoring event was performed during the week of October 18, 2021. This event included measuring water levels on October 18, 2021, from 132 wells followed by the collection of groundwater samples from 98 wells October 18-22, 2021. The 2013 RADD listed the constituents of concern and RADD remedial action levels (RALs) (Table 1) and the plume boundary wells, onsite wells and offsite wells to be sampled during each groundwater monitoring event (Table 2A). Since the implementation of the RADD, a number of monitoring wells in the original monitoring network have been abandoned due to city road improvements or Site improvements. Also, since 2013, a number of monitoring wells have been installed as a result of continued Site investigative activities. During the 2021 Annual Groundwater Monitoring event, the 98 wells sampled included 44 wells denoted as plume boundary, onsite or offsite wells according to the RADD and RGWMP or designated replacement wells (Table 2A); four shallow wells MW-175, MW-176, MW-178 and MW-179; vapor points VP-7, VP-8, VP-10, VP-12 and VP-14; and the following temporary wells to support the assessment of the source area and plume boundary conditions including TMW-10, TMW-11, TMW-12, TMW-14, TMW-16, TMW-19, TMW-20, TMW-21, TMW-22R, TMW-23, TMW-24, TMW-25, TMW-26, TMW-27, TMW-29, TMW-30, TMW-32, TMW-34, TMW-35, TMW-36, TMW-36B (TMW series of wells).[1]

Groundwater monitoring activities included physical inspection of each well, collection of water level measurements, collection of groundwater samples for analysis of VOCs via EPA Method 8260 in accordance with the RGWMP for all wells monitored, and geochemical and monitored natural attenuation (MNA) parameters for select wells. Constituents of concern (COCs) monitored in groundwater are defined within the RGWMP. Table 1 of the RGWMP lists the wells to be sampled during the annual event. The COCs and additional geochemical parameters were analyzed to assess previous and recent remediation activities as well as natural degradation of site-related chlorinated compounds in groundwater to continue to assess the effectiveness of MNA as the remedy for the groundwater impacts at the Site.

3.1 Well Inspection and Static Water Level Measurements

On October 18, 2021, monitoring wells were visually inspected and static water levels were measured in a total of 132 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. On the morning of October 18, 2021, during the well inspection, monitoring wells were opened to allow water levels to equilibrate to atmospheric conditions prior to their measurement using an electronic water level meter in the afternoon. The instrument was calibrated by the manufacturer prior to its purchase and therefore does not require calibration in the field. 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-

[1] TMW refers to temporary monitoring well. The temporary designation refers to ultimately re-designating wells in the RGWMP for future monitoring. The temporary wells were constructed and installed as permanent wells in accordance with ADEQ requirements.

dedicated sampling equipment) were decontaminated prior to use at each well by spraying and scrubbing the probe and tape with Alconox detergent mixed with distilled water and then rinsing the probe and tape with distilled water prior to being wiped dry.

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

3.2 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 USEPA low stress (low flow) purging procedures (USEPA 1996), at a rate generally between 0.1 and 0.2 liters (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 offsite.

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

- Turbidity: +/- 10% for values greater than 10 Nephelometric Turbidity Unit (NTU) or less than 10 NTU;
- Dissolved oxygen (DO): +/- 10% for values greater than 0.5 milligrams per liter (mg/L);
- Specific conductance: +/- 3%;
- Temperature: +/- 1°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 2021 annual event.

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. Groundwater samples for analysis of dissolved hydrogen concentration were collected by the Microseeps gas stripping procedure (Microseeps 2014).

A total of 98 groundwater samples, 11 field duplicate samples, five matrix spike/matrix spike duplicate (MS/MSD) samples and four equipment blanks were collected during the 2021 annual event. Duplicate samples were taken at a frequency of one duplicate sample per 10 groundwater monitoring samples. Duplicate samples were collected from ITMW-20, ITMW-21, IW-78, MW-24, MW-96, MW-182, MW-184, MW-195, TMW-12, TMW-30 and TMW-35.

Because monitoring wells contain dedicated or new tubing, the only equipment transferred and used from well to well is the water level meter used to monitor well water levels during purging and stabilization prior to sampling and tube weights. Equipment rinsate blanks were collected after water level meters used during the monitoring event were decontaminated to evaluate field decontamination procedures. Equipment rinsate blanks were collected by pouring ASTM Type II deionized water over the decontaminated water level meter probe and tape into the appropriate sample containers. The rinsate blanks were collected after decontamination procedures at MW-27 (EB-01-202110), TMW-10 (EB-02-202110), MW-26 (EB-03-202010) and TMW-19 (EB-04-202110). The preservation and analysis of the equipment rinsate blanks was identical to those of the associated environmental samples.

Sample containers were labelled and packed on ice in insulated coolers before being shipped under chain-of-custody via overnight courier or FedEx to Pace Analytical Services in Lenexa, Kansas (for VOC and MNA parameters) and via FedEx to Microbial Insights in Knoxville, Tennessee (microbial parameters). Chain-of-custody procedures were followed from the point of sample collection through completion of analysis. The laboratories used infrared thermometers to take sample temperatures upon sample receipt in accordance with USEPA Manual for the Certification of Laboratories Analyzing Drinking Water, Fifth Edition.

3.3 Other Site Monitoring Activities

In accordance with the RGWMP, groundwater monitoring was performed for shallow monitoring wells in the North Plume (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 the shallow wells. If excessive drawdown occurred, these wells were purged dry once then allowed to recover prior to collection of the sample within 24 hours of purging dry.

To assess the potential for vapor intrusion into offsite buildings located within the North Plume, soil vapor sampling was attempted at VP-9 (Parcel 3). Similar to other vapor points installed in the neighborhood, an air sample was not retrieved from VP-9.

The data from these shallow wells is presented in the 2021 Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Attachment B).

4 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.

4.1 Hydrogeology

Gradient

Water levels from 135 wells at the Site were collected during the annual event (Table 3) as discussed in Section 3.1. These wells were gauged to provide a current potentiometric surface such that groundwater flow direction could be determined at the Site for the monitoring event.

Figure 2A shows the contours of the groundwater elevations based on the monitoring well static water level measurements completed on October 18, 2021. 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 with groundwater gradients trending northeast, east, southeast and southwest. Beginning at the northwest corner of the former Whirlpool manufacturing building, the groundwater gradient trends east-southeast then, north of Jacobs Avenue, the hydraulic gradient is directed to the north-northeast. The gradient develops a divide along Ingersoll Avenue moving eastward from MW-28 with the northeastern and southeastern components becoming more apparent to the east.

The groundwater data also continues to indicate a second hydraulic gradient divide beneath the former manufacturing facility, the axis of which trends from northwest to southeast. The gradient(s) steepen to the east, northeast east of the former manufacturing building and also to the southwest beyond the extent of the former manufacturing building.

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

- South Plume southeast flow direction from MW-25R to ITMW-4 results in a gradient of 0.0035 feet/foot;
- South Plume southwest flow direction from MW-182 to MW-197 results in a gradient of 0.011 feet/foot;
- South Plume southerly flow from ITMW-5 to TMW-36 results in an estimated gradient of 0.0006 feet/foot;
- Northeast Plume northeast flow direction from MW-87 to MW-184 results in a gradient of 0.005 feet/foot;
- North Plume northeast flow direction from MW-58R to TMW-10results in a gradient of 0.011 feet/foot; and

- North Plume easterly flow direction from MW-56R to MW-194 results in a gradient of 0.02 feet/foot.

Although the gradient remains relatively flat within the former Whirlpool property boundary (i.e., 0.002 feet/foot), the gradient steepens somewhat towards the property boundaries southwest, east along Ingersoll Avenue and northeast near Jenny Lind Road and Brazil Avenue. The southernly gradient from just south of the building to the property boundary is very flat.

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 the shallow horizontal gradient with respect to the monitoring wells screened in the deeper BTZ (Figure 1). Static water elevations along Jacobs Avenue decrease from west to east; from a high of 467.18 feet at MW-177 to a low of 460.16 feet at MW-174. The calculated shallow groundwater gradient west to east based on these two wells is 0.0085 feet/foot. Static water elevations in the deeper BTZ wells also generally decrease from west (MW-71, 463.57 feet) to east (MW-63R, 460.81 feet) with a resulting gradient of 0.003 feet/foot. The highest shallow groundwater elevations were measured in the most up-gradient shallow well MW-178 (467.79 feet). These results suggest that the shallow groundwater horizontal flow gradient generally mimics the deeper groundwater flow gradient to the east/northeast based on the number and location of shallow groundwater monitoring wells available.

Groundwater elevations from shallow groundwater wells MW-174 through MW-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 (-0.26 feet/foot) at the most up-gradient (southwestern) well grouping MW-178/MW-83;
- Downward gradient (-0.44 feet/foot) at MW-177/MW-70;
- Slight upward gradient (0.01 feet/foot) at MW-176/MW-46R;
- Downward gradient (-0.16 feet/foot) at MW-175/MW-46R and MW-56R; and
- Upward gradient (0.12 feet/foot) at the eastern most well pairing, MW-174/MW-63.

A comparison of gradients based upon the April and October 2021 water level measurements is shown on Figure 2B. Vertical gradients were generally consistent with historical gradients. The difference in vertical gradient in MW-178/MW-83 changed from -0.49 feet/foot to -0.26 feet/foot representing the biggest difference in gradients from April to October 2021. The static water

level elevations in the deeper wells fluctuated, ranging from a decrease of 1.03 feet (MW-56R) to an increase of 1.23 feet (MW-63R).

4.2 Groundwater Analytical Results and Discussion

All VOC analytical data from all wells were subjected to data validation in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Review (August 2014). The laboratory analytical reports for the samples are presented in Attachment C. Data validation determined that analytical data collected during the 2021 annual monitoring event were usable for its intended purpose based on an evaluation of QC parameters discussed in the Data Validation Report (Attachment D). However, some data are qualified as estimated due to the inability to meet all QC criteria. Summaries of analytical results (i.e., detected compounds) for samples collected during the annual event are presented in Table 6A (monitoring wells) and Table 6B (ISCO injection wells). Tables 6A and 6B include data qualifiers that may have been assigned from validation. A discussion of the field and laboratory analytical results for this event is presented below.

4.3 VOC Results

This section presents an evaluation of the VOC data that was collected from the Site during the annual event. TCE results for the annual event are presented on Figures 3A and 3B. Like 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

This section discusses VOC concentrations that exceed the RADD RALs at the plume boundaries. Tabulated VOC concentrations measured in these wells during the annual event are presented in Table 6A and historical TCE concentrations and daughter products are presented in Table 7A.

Notable results from the annual sampling event for wells at or near the plume boundaries include:

North Plume

- MW-55R: TCE concentration of 29.9 micrograms per liter (µg/L) (vs. RAL of 5 µg/L). MW-55R TCE concentration first exceeded 5 µg/L in April 2017. TMW-35 was installed west of MW-55R in October of 2019 to confirm the extent of the plume. Sampling results (TCE non-detect) for TMW-35 and MW-68 to the west and MW-50R to the north continue to remain below the RAL of 5 µg/L. Monitoring will continue in accordance with the RGWMP.

- MW-61R: TCE concentration of 6.9 µg/L (vs. RAL of 5 µg/L). The current value has decreased from the high of 20.8 µg/L in October 2019. Since additional ISCR treatment in 2018, TCE concentrations have been reduced from 91.1 µg/L to an estimated concentration of 0.59 µg/L at TMW-10, which is located 60 feet up-gradient from MW-61R . Groundwater geochemical conditions in the area continue to be reducing and concentrations of cis-1,2-DCE confirm TCE degradation is occurring.
- MW-63R: TCE concentration of 3.9 µg/L (vs. RAL of 5 µg/L). The current value has decreased from the high of 7.9 µg/L in April 2021.Monitoring will continue in accordance with the RGWMP.
- MW-194: TCE concentration of 4.1 µg/L (vs. RAL of 5 µg/L). TCE concentrations at MW-194 have decreased to 4.1 µg/L from a pre-injection value of 13.3 µg/L since additional ISCR treatment in 2018. Water quality data continues to indicate reducing conditions at this well with a slight increase in ORP and slight decrease in ferrous iron during the 2021 annual event. Since installation of this well in August 2016, seasonal fluctuations of TCE concentrations have been observed with higher TCE concentrations consistently occurring during the fall events and lower TCE concentrations during the spring events (TCE was 3.6 µg/L in April 2021). Monitoring will continue to evaluate trends at this location.

North Plume boundary wells MW-39R, MW-40R, MW-50R, MW-60R, MW-62R, MW-68R, MW-195 and MW-196 remain below reporting criteria or < 5.0 µg/L. There are no additional areas of concern indicated in the October 2021 monitoring results compared to the October 2020 monitoring results.

<u>Northeast Plume</u>

- MW-91: TCE concentration of 9.5 µg/L (vs. RAL of 5 µg/L). The TCE concentration at MW-91 was 437 µg/L in October 2019 just prior to completion of the ISCR treatment at MW-91 and MW-99. The extent of the TCE plume in this area has been reduced significantly with treatment. TCE at MW-99 has been reduced from 72.6 µg/L in October 2019 to the current estimated concentration of 0.26 µg/L Further discussion of the ISCR remediation performed at this location is presented in Section 7 of this report.
- MW-202: TCE concentration of 67.3 µg/L (vs. RAL of 5 µg/L). MW-202 was installed in July 2020 for a supplemental offsite investigation completed to the northeast at the 6427 Jenny Lind Road Property. The concentration of TCE in July 2020 was 1.5 µg/L. Monitoring at this well will continue in accordance with the RGWMP.

Plume boundary wells MW-96, MW-97, MW-98, MW-183R, MW-184 and MW-200 remain below reporting criteria or < 5.0 µg/L.

South Plume

- ITMW-21: TCE concentration of 4.9 µg/L (vs. RAL of 5 µg/L). This is the lowest TCE concentration recorded at this well located at the west edge of the source area.
- MW-187: TCE concentration of 16.8 µg/L (vs. RAL of 5 µg/L). TCE concentrations at MW-187 have ranged from non-detect to the current value of 16.8 µg/L. A down-gradient sample collected from HP-19, as part of the August 2021 supplemental investigation was non-detect. The supplemental investigation results will be discussed further in Section 5.
- MW-188: TCE concentration of 1.1 µg/L (vs. RAL of 5 µg/L). TCE concentrations at MW-188 have decreased from a previous high of 11.7 µg/L. MW-206 (TCE 1.2 µg/L) was installed in this area for additional plume delineation and is discussed below.
- MW-189: TCE concentration of 238 µg/L (vs. RAL of 5 µg/L). TCE concentrations at MW-189 increased from 66.8 µg/L to the current value of 238 µg/L. TMW-19 installed in 2017 (TCE 40.4 µg/L) and TMW-36 (TCE 110 µg/L) installed in 2019, were installed to determine TCE levels south of MW-189 at the property boundary. ISCR injections were completed in the Southern Area in the fall of 2020 to address TCE impacts at the south property boundary as discussed in Section 7.
- MW-190: TCE concentration of 199 µg/L. This is the third consecutive sampling event for which the TCE concentration at MW-190 has exceeded the RAL. One plume boundary well to the east (MW-191) remains below the RAL. Supplemental investigations were completed in the vicinity of MW-190 in August and September 2021, further discussed in Section 5 of this report. Monitoring of MW-190 will continue in accordance with the RGWMP.
- MW-203: TCE concentration of 102 µg/L. This is the first time the TCE concentration in this well has exceeded the RAL. The South ISCR Treatment Zone was completed in October 2020 along the former Whirlpool property boundary with Harmon. TCE concentrations remain below detection limits in MW-201, located down-gradient from MW-203 on the Harmon property. Monitoring of MW-203 will continue in accordance with the RGWMP.

Southeast Area

- MW-185: TCE concentration of 182 µg/L. Due to increasing TCE concentrations at MW-185 exceeding the RAL, an ISCR treatment zone and an additional monitoring well (TMW-34) were installed down-gradient from MW-185 near the property boundary in July and November 2018, respectively.
- TMW-34: TCE concentration of 126 µg/L (vs. RAL of 5 µg/L). TCE concentrations have ranged from 7.4 µg/L to the current value of 126 µg/L. Cis-1,2-DCE concentration in October 2021 has increased to 65.5 µg/L (52% of the TCE concentration) indicating that

TCE is degrading. A Supplemental investigation was performed in 2021 in the vicinity of TMW-34, including the installation of monitoring well MW-205 (TCE 400 µg/L) up-gradient of TMW-34. The East Plume Investigation is further discussed in Section 5 of this report. Monitoring of TMW-34 will continue in accordance with the RGWMP.

Southwest Area

- MW-199: TCE concentration of 82.3 µg/L (decreased from 84.1 in April 2021). MW-199 was installed at the down-gradient or southwest corner of McPherson Oil in July 2020 and was sampled during the annual event. The Southwest ISCR Treatment Area, completed at the former Whirlpool property boundary with McPherson Oil in July and October 2018 has effectively reduced concentrations up-gradient from MW-199 (TCE reductions in area wells reduced by approximately 70% to 100%).

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

Offsite Wells

The offsite wells include those installed at offsite properties to the north and northeast of the Whirlpool northern property boundary and to the southwest of the southern property boundary that are not otherwise identified as plume boundary wells. This section discusses notable VOC concentrations that exceed the RADD RALs in the offsite wells. Tabulated VOC concentrations measured in the offsite monitoring wells during the annual event are presented in Table 6A and Table 6B.

North Offsite Wells

During the annual event, the highest concentration of TCE detected in groundwater samples from the north offsite wells was 619 µg/L collected from MW-56R. This is a decrease from 706 µg/L at MW-56R in October 2020. TCE concentrations are lower up-gradient at MW-46R at 461 µg/L. Variations are expected to continue in TCE concentrations within the North Plume and monitoring will continue in MW-56R and in up-gradient (MW-46R) and down-gradient wells (TMW-14 – TCE 0.55 µg/L). There are sufficient down-gradient monitoring locations to evaluate conditions and there is a down-gradient treatment zone at the eastern extent of the North Plume just west of Jenny Lind Road.

Onsite Wells

This section discusses VOC concentrations in onsite wells which includes certain wells that are located along the perimeter of the former Whirlpool manufacturing facility within the source area or south of the source area which includes wells immediately adjacent to the former Whirlpool manufacturing building. Tabulated VOC concentrations measured in onsite wells during the annual event are presented in Table 6A.

VOCs were detected above the RADD RALs in 19 of 20 groundwater samples collected from onsite wells. VOCs detected at concentrations exceeding the respective RALs consist of:

- TCE at all onsite wells except for MW-89;
- 1,1-dichloroethane (1,1-DCA) in ITMW-1R and ITMW-9;
- 1,1-dichloroethene (1,1-DCE) in ITMW-9, MW-25R, MW-93 and MW-198;
- cis-1,2-DCE in ITMW-9, ITMW-18, MW-25R, MW-38, MW-91, MW-95 and MW-198;
- 1,1,2,2-tetrachloroethane (1,1,2,2-TCA) in ITMW-19, MW-25Rand MW-198;
- Tetrachloroethene (PCE) in MW-198; and
- VC in ITMW-9, MW-25R, MW-38 and MW-198.

During the annual event, the maximum onsite TCE concentration measured was 36,000 µg/L at RW-1. RW-1 is located in the source area in between the electrical sub-station and former Whirlpool building. The TCE concentration was 28,600 µg/L at MW-95 (the April 2021 TCE concentration at MW-95 was 21,600 µg/L). MW-95 is located beneath the building, at the southern extent of the source area (installed in 2014, the TCE concentration at that time was 22,300 µg/L). MW-198, installed southwest of the former location of MW-86 (south of the former linear drainage feature) in between IW-147 and IW-155, had a TCE concentration of 22,800 µg/L – an increase from the April 2021 concentration of 15,900 µg/L. This increase represented the largest TCE concentration increase in onsite wells from April to October 2021.

<u>Northeast Corner Wells</u>

Eleven wells were sampled during the annual event to evaluate TCE concentrations in the northeast corner of the Site.MW-96, MW-97, MW-98, MW-99 MW-183R, MW-184, MW-200 and MW-202 are plume boundary wells and MW-87, MW-89 and MW-91 are onsite wells. Analytical results from these wells are included in Table 6A.

During this event, MW-91 exhibited a TCE concentration of 9.5 µg/L, a slight increase from the April 2021 concentration of 8.1 µg/L, but still significantly lower than the 51.9 µg/L detected during the October 2020 Annual Event. Further discussion of the remediation performed at this location is presented in Section 7 of this report.

MW-87 and exhibited a TCE concentration of 276 µg/L, a slight increase from the April 2021 value of 233 µg/L, but lower than the October 2020 value of 320 µg/L. MW-89 exhibited a historically low TCE concentration of 3.9 µg/L. This is the first time TCE concentrations in MW-89 are below the RAL.

TCE concentrations in MW-99 located east of Jenny Lind Road decreased to the estimated concentration of 0.26 µg/L. TCE concentrations have been reduced from 72.6 µg/L in October 2019, prior to ISCR treatment, to the current value of 0.26 µg/L.

TCE concentrations in MW-96, MW-97, MW-98 and MW-184 on the Boys & Girls Club property were below detection limits. The TCE concentration at MW-183R during the annual event was an estimated concentration of 0.67 µg/L.

Temporary Wells

In accordance with the action plans presented in the 2016 Annual Report and subsequent revised action plans, 21 temporary monitoring wells (consisting of TMW-10, TMW-11, TMW-12, TMW-14, TMW-16, TMW-19, TMW-20, TMW-21, TMW-22R, TMW-23, TMW-24, TMW-25, TMW-26, TMW-27, TMW-29, TMW-30, TMW-32, TMW-34, TMW-35, TMW-36 and TMW-36B) have been installed on the southern portion of the former Whirlpool property and in the North Plume area.

As shown on Figure 3A, temporary wells in the north were installed to delineate the north-eastern edge of the plume and retained to provide on-going monitoring for the plume and ISCR treatment zones. The annual monitoring results were below detection limits for TCE (less than 0.25 µg/L) at TMW-11, TMW-20, TMW-29 and TMW-35 and below the TCE RAL in TMW-10 and TMW-14. Concentrations exceeding the RAL for TCE in the temporary wells ranged from 5.2 µg/L at TMW-21 to 487 µg/L at TMW-24. The more elevated TCE concentrations are located in wells up-gradient from the ISCR treatment zones discussed in Section 7 of this report.

As shown on Figure 3B, temporary wells were installed southwest of the former manufacturing building to delineate the plume and retained to provide on-going monitoring for the plume and ISCR treatment zones. TCE concentrations in TWM-16, TMW-25, TMW-26, TMW-27, TMW-30 and TMW-32 ranged from below detection limits (less than 0.25 µg/L) at TMW-27 to 24.9 µg/L at TMW-32.

Temporary monitoring wells TMW-19, TMW-36 and TMW-36B (shallow wells screened above the BTZ) were installed to delineate groundwater impacts at the south property boundary and provide on-going information for the plume and ISCR treatment zones installed in October 2020. Concentrations ranged from below detection limits (less than 0.25 µg/L) at TMW-36B to 110 µg/L at TMW-36.

TMW-34 was installed to the southeast to monitor concentrations at the property boundary at the Southeast Treatment Zone down-gradient from MW-185. The TCE concentration detected during this event was 126 µg/L, an increase from 59.9 µg/L in April 2021.

4.4 Monitored Natural Attenuation Sampling

Thirteen wells were sampled for laboratory and field natural attenuation parameters in accordance with the RGWMP.

Geochemical Parameters

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 biotic reductive dechlorination include temperature, concentration or presence of electron acceptors (DO, nitrate, iron, manganese and sulfate), presence and

amount of nutrients (e.g., concentrations of nitrogen and phosphorus), bioavailable carbon source to sustain microbial population, concentrations of COCs and pH.

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

- The groundwater during this sampling event was generally considered to be anaerobic within 88 of the 98 wells measured indicating DO concentrations less than 1 mg/L (see Table 4).
- The ORP of the groundwater samples ranged from a low of -296 mV in MW-186 (located in an ISCR treatment area) to a high of 502 mV in ITMW-10 (located south and down-gradient of the south side of the building). ITMW-10 was the only well sampled with a measured ORP level above 500 mV, indicating that the groundwater is under manganese to iron reducing conditions in all Site monitoring wells. The ORP readings were generally negative (< 0) in areas impacted by ISCR treatments, 100 to 300 mV in areas where no treatment has occurred and zero to 300 mV where ISCO was performed in 2014 and 2015 (i.e., Areas 1, 2 and 3 and the Neck Area).
- The pH of the groundwater ranged from a low of 3.99 in MW-97 to a high of 7.60 in TMW-30. In general, pH levels are in the range of 5-7.
- The temperature of the groundwater ranged from about 17.2°C to 30.5°C, with many of the temperatures around 15°C to 21°C, which is a range that would support microbial growth in groundwater.

The chemical and geochemical data from the 2021 annual event in comparison to the 2020 annual event do not vary greatly in terms of generally low DO (< 1 mg/L), ORP < 300 mV (ORP negative or < 0.0 in ISCR areas), slightly acidic to neutral pH. Groundwater temperatures were higher on average in 2021, with measured temperatures in 2020 in the range of 15°C to 19°C.

Abiotic Degradation

Sulfide, Fe [II] and acetylene were retained for MNA evaluation purposes in the RGWMP. Sulfide results in 2021 were below reporting limits (i.e., less than 50 µg/L) in all MNA samples with the exception of MW-87 and RW-69 (both with concentrations of 100 µg/L). However, because sulfide forms insoluble compounds with many metals, a lack of detection does not indicate that sulfate reduction does not occur. Specifically, sulfide is readily removed from solution by reaction with Fe[II] to form solid-phase iron sulfide minerals. Fe [II] has been detected in all MNA locations and in 82% of all samples since April 2018. Additionally, the presence of Fe [II] suggests that sorbed Fe2+ ions and Fe [II] minerals (e.g., green rust, hematite) may be present in soils. Iron sulfide minerals, Fe [II] minerals and sorbed Fe2+ ions all drive reductive chlorination of chlorinated solvents (He et al. 2015). This geochemical data therefore demonstrates the capacity of the Site for abiotic degradation.

Acetylene is a break down constituent from the abiotic degradation of cis-1,2-DCE (acetylene then degrades to ethylene or ethene). Acetylene results were below reporting limits (i.e., less than 0.50 µg/L) in all samples collected in 2021. Since cis-1,2-DCE can degrade directly to VC without generating acetylene, the assessment of abiotic processes based upon acetylene concentrations is limited.

The presence of ethene suggests complete dechlorination of chlorinated constituents. As discussed above, dechlorination to ethene occurs via abiotic and/or biological processes. Ethene data is provided on Table 6A and Table 6B and data indicates ethene was detected at 13 of the 29 locations monitored[2] and relatively significant ethene concentrations were detected at MW-38 (2.3 µg/L) and TMW-22R (13 µg/L). These observations suggest abiotic processes are contributing to the complete dechlorination of TCE at various locations at the Site.

Biological Degradation

Groundwater sample results continue to show levels of cis-1,2-DCE in groundwater. Of all the monitoring wells sampled, only five wells exhibited TCE concentrations where the cis-1,2-DCE concentration was below detection limits. The TCE concentrations in these five wells ranged from an estimated concentration 0.49 µg/L (MW-195) to 7.8 µg/L (MW-84) and TCE concentrations were less than 5 µg/L in four of these five wells. The consistent detection of cis-1,2-DCE in groundwater provides evidence that degradation of TCE is occurring.

The laboratory analytical results include microbial data with detected concentrations of dehalococcoides (DHC), tceA reductase (TCR) and VC reductase (VCR). The most elevated DHC levels were in two wells sampled for Attenuation Parameters that are also located in the North Plume ISCR treatment area [TMW-10 (DHC 1,140 c/mL) and TMW-11 (DHC 214 c/mL)] (Table 6A and Table 6B).

Three wells outside ISCR treatment areas (RW-69, MW-38 and former ISCO well IW-73) have detections of DHC ranging from 1.2 J c/mL at MW-38 to 106 c/mL at IW-73 indicating the potential for biological activity in the vicinity of these wells.

Biological processes have been enhanced at locations where reducing conditions and pH conditions have been improved (i.e., reduced ORP and increased pH to achieve neutral conditions). For example, DHC populations increased following the establishment of an improved reducing environment (current ORP measurements in TMW-10 and TMW-11 are -121.7 mV and -145.3 mV, respectively) and adjusting the pH closer to neutral (current pH measurements in TMW-10 and TMW-11 are 6.75 and 6.89, respectively).[3] DHC populations

[2] The detection of breakdown constituents is unlikely at monitoring locations where MNA analysis is performed where TCE concentrations are low (i.e., typically less than 5 µg/L to 100 µg/L) since the concentrations of breakdown constituents will be two to three orders of magnitude less than the TCE concentrations depending upon the rate of TCE degradation.
[3] Concentrations of Dhc previously detected at TMW-10 following the 2015 Pilot (Non-detect, 158 and 555 cells/mL) were non-detect (< 2 cells/mL) in TMW-10 approximately 90 days following the 2018 injections (August to November 2018), 20,000 cells/mL in October 2019, 1,120 cells/mL in October 2020, and 1,140 cells/mL in October 2021 [note: TMW-11 was located just outside the estimated area of influence from the 2015 injections (that included bioaugmentation with Dhc)] and did not exhibit reducing

continue to remain moderately elevated at TMW-10 and TMW-11 even though TCE concentrations are below 5 µg/L, cis-1,2-DCE concentrations are below 1 µg/L and VC concentrations are 2.2 µg/L and below detection limits, respectively. Biological processes have likely contributed to the near total dechlorination of TCE in the vicinity of TMW-10 and TMW-11.

Future monitoring will continue to assess biological processes.

4.5 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 Attachment D.

4.5.1 Field Data

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

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

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

4.5.2 Laboratory Analytical Data

All VOC (SW846 5030B/8260B) analytical results for the plume boundary, onsite and offsite wells, received data validation by Ramboll. 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 Data 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.

conditions as observed in MW-61R and TMW-11 at 90 days following the 2018 injections. Concentrations of Dhc previously detected at TMW-11 following the 2015 Pilot (14.2 to 715 cells/mL) had decreased to non-detect (< 2 cells/mL) in TMW-11 by November 2018. Concentrations of Dhc approximately 15 months following the 2018 injections were 638 cells/mL in October 2019, 341 cells/mL in October 2020, and 214 cells/mL in October 2021 (ISCR Remedial Effectiveness - Section 7 of this report).

5 Supplemental Investigations

This section summarizes the South Plume Investigation, the East Plume Investigation, the Willowstick Geophysical Investigation, PFM Investigation, and the monitoring well repair activities conducted both onsite and north of Ingersoll Avenue. This work was completed in August and September 2021. The investigations and well replacement activities further described the following subsections include:

- South Plume: The investigation included soil profiles to shale bedrock and grab groundwater samples at four locations and the installation of one permanent groundwater monitoring well (MW-206) in August and September 2021 (Figure 4).
- East Plume: The investigation included groundwater samples collected from temporary groundwater monitoring wells at eight locations, soil profiles to shale bedrock at eight locations and the installation of one permanent groundwater monitoring well (MW-205) in August and September 2021 (Figure 5).
- Geophysical Investigation: A geophysical Investigation was completed to identify preferential groundwater flow paths within the BTZ beneath the Site and assist in developing a more refined hydrogeologic conceptual site model. The investigation included four survey areas including the source area, the East Plume Area, the South Plume Area and Southwest Plume Area (Figure 6).
- PFM Investigation: The results of this PFM investigation provide additional information regarding the stratification of the TCE impacts within the saturated zone sediments and range of mass flux values to be used in the design of treatment areas to mitigate future groundwater plume expansion.
- Monitoring Well Repairs: A total of four monitoring wells, located both onsite and north of Ingersoll Avenue, were repaired in September 2021.

Investigative activities described in the 2021 Southwest Plume Investigation Work Plan, dated June 18, 2021, and approved by ADEQ on July 12, 2021, were unable to be performed due to the presence and proximity of multiple underground utilities (i.e., wastewater force main, distribution main, stormwater drain, sewer main, fiber optic line and natural gas lines) and overhead powerlines in the vicinity of the boring locations. Ramboll will evaluate alternative sampling locations to continue delineating the Southwest Plume.

Prior to initiating any 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.

Soil cuttings generated from soil boring and well installation activities were containerized in 50-gallon drums and staged on the former Whirlpool manufacturing facility property. Purge water generated from groundwater development activities was also containerized and stored on the former Whirlpool property. Soil and groundwater investigation derived waste (IDW) from the

August and September investigations was disposed of as non-hazardous waste by Environmental Remediation Specialists (ERS) and transported to American Environmental Landfill, Inc. on October 20, 2021. Waste disposal manifests are provided in Attachment E.

5.1 South Plume Investigation

The South Plume investigation was performed during the weeks of August 2, 2021, and September 20, 2021. Groundwater investigation was performed to characterize groundwater impacts from TCE in multiple locations near the southern property boundary of the Site. Increasing TCE trends in monitoring wells MW-187 and MW-188, required further plume delineation as requested by ADEQ in the comment letter regarding the Whirlpool 2020 Annual Report (dated April 29, 2021). Potential plume expansion noted by increasing TCE concentrations in monitoring well MW-190, required investigation as requested by ADEQ in the comment letter regarding Whirlpool 2021 Semi-Annual Report (dated August 5, 2021). The investigation activities summarized in this section were completed in accordance with the June 2021 South Plume Investigation Work Plan approved by ADEQ on July 12, 2021, and amended in Ramboll's Response to ADEQ Correspondence Dated August 5, 2021.

Investigation of the Southwest Plume in 2021 consisted of two events:

- In August 2021, groundwater investigation was performed down-gradient of MW-187 and MW-188, both of which exhibited TCE concentrations exceeding the RAL of 5 µg/L during recent sampling events. Investigation consisted of the installation of two soil profiles to bedrock and two groundwater samples collected from temporary monitoring wells. One temporary monitoring well was converted into permanent monitoring well MW-206.
- In September 2021, investigation was completed in order to evaluate potential plume expansion in the vicinity of MW-190, which exhibited increasing TCE concentrations in recent sampling events. Investigation activities consisted of advancing two soil boring to bedrock to assess the soil profile and the collection of two groundwater samples from temporary monitoring wells.

5.1.1 Investigation Field Procedures

The following sub-sections describe field investigation methods used during the August and September 2021 South Plume Investigations. All soil cuttings and purge water generated from drilling and groundwater development activities for these investigations was collected and containerized in 55-gallon drums and staged on the former Whirlpool manufacturing facility property. The soil and water investigation derived waste was disposed of as non-hazardous waste by ERS and transported to American Environmental Landfill, Inc. on October 20, 2021.

5.1.1.1 August 2021 Investigation

In accordance with the work plan, investigation activities were performed by advancing soil borings at HP-19 (completed as MW-206) and HP-20 to depths of 32.5 feet and 25.0 feet below ground surface (bgs), respectively. Prior to initiating drilling activities, both Arkansas One-Call Utility Locating Services and a private utility locator were contracted to identify underground utilities and other potential obstructions in the work areas. Drilling activities were completed using a Geoprobe 3230DT direct push drilling rig capable of drilling with hollow stem augers and completion of soil probes using direct push technology (DPT).

Continuous soil cores were obtained for geologic logging in order to identify water-bearing zones at both boring locations. The soil profiles observed at each location were logged by a Ramboll geologist. The continuous soil cores were obtained using the GeoProbe™ Dual Tube 45 (DT-45) 4 inch outside diameter (OD) steel casing soil sampling system and 2.25 inch liners for soil sample retrieval. Soil was continuously screened with a photoionization detector (PID) for the presence of volatile organic vapors.

Groundwater sampling was completed to delineate the extent of groundwater impact at HP-19 and HP-20 by installing and sampling from 1 inch diameter PVC temporary wells, screened across water bearing zones identified in the soil cores. The soil borings were advanced using DPT until refusal, targeting the top of the shale at the bottom of BTZ. Groundwater samples were collected at each location using a peristaltic pump and dedicated tubing. The sample point was purged prior to sampling to remove fines and achieve reasonable sample quality depending on the quantity of groundwater available. After groundwater sampling was completed, the soil probe for HP-20 was properly abandoned using bentonite cement grout placed using a tremie tube. The HP-19 location was over-drilled with 6 inch diameter hollow stem augers to facilitate installation of MW-206. Groundwater samples were analyzed for VOCs by USEPA Method 8260. Laboratory analytical reports are provided in Attachment E.

MW-206 was installed on August 5, 2021, at the HP-19 location using hollow stem auger drilling methods. The well was constructed with 22 feet of 2 inch diameter polyVC (PVC) casing flush threaded to a 10-foot PVC 0.010 inch slot well screen. A sand pack was installed in the well annulus around the PVC screen from the base of the well to approximately two feet above the top of the screen. The remainder of the annular space was sealed with hydrated bentonite chips to a depth of one foot below ground surface. MW-206 was completed at the surface with a flush mount protective cover installed with a concrete apron. After installation was complete, MW-206 was developed in accordance with ADEQ guidance (Interim Policy PRCR 96-4, Section L, Page 9) on August 6, 2021, and surveyed by an Arkansas-Licensed Surveyor.

5.1.1.2 September 2021 Investigation

In September 2021, Ramboll installed temporary wells and collected groundwater samples at two locations (HP-21 and HP-27) in the vicinity of MW-190. The stratigraphic profile was

assessed in both borings in order to identify the water bearing zones at each location, targeting the top of the shale at the bottom of the BTZ.

HP-21 was installed to a depth of 38.5 feet bgs to evaluate potential plume expansion down-gradient of MW-190. HP-27 (installed at a depth of 39.0 feet bgs) was added to the scope of work following results obtained from the 2021 Geophysical Investigation, which identified a potential preferential groundwater flow path southwest of MW-190. Data obtained from HP-27 will capture the current conditions of groundwater entering the ISCR treatment zone near TMW-36 and TMW-36B.

5.1.2 South Plume Investigation Results

The lithology encountered in borings HP-19 and HP-20 was consistent with that observed in nearby borings (MW-187 and MW-188). Soil consisted predominantly of silty clays from the surface to depths ranging from 17.5 feet bgs (HP-19) to 18.5 feet bgs (HP-20) with occasional fine sand or sandy clay. This is underlain by a medium to coarse clayey sand and subrounded gravel zone to depths ranging from 23-30.5 feet bgs, which correlates to the BTZ. Observed thickness of the BTZ varied from 3 feet thick at HP-20 to 3.5 feet thick at HP-19. The BTZ was noted to be moist to saturated at HP-19 and slightly moist to moist at HP-20. A thin layer of silty clay or clay was present below the BTZ in both borings. The top of shale bedrock was encountered at 32 feet bgs in HP-19 and 24.5 feet bgs in HP-20. The increase in shale bedrock elevation to the west is generally consistent with data obtained in previous investigations (Figure 7).

At borings HP-21 and HP-27, silty clay was present to depths of 24 feet and 32.5 feet bgs, respectively. Fill material was observed at HP-27 from surface to approximately 7 feet bgs. Thickness of the BTZ varied from 7 feet at HP-27 (32.5-39.5 feet bgs) to 14 feet at HP-21 (24-38 feet bgs). The BTZ was moist to saturated in both HP-21 and HP-27 and was immediately underlaid by the top of shale bedrock in both borings.

Well construction and soil boring logs from this event are provided in Attachment E.

Groundwater analytical sample results from the August 2021 investigation indicated a TCE concentration of 0.35 µg/L at HP-19/MW-206, below the RAL of 5 µg/L. TCE was not detected in the sample collected from HP-20. These results suggest that the contaminant plume does not extend south of MW-187 and MW-188 and offsite contamination in this direction is not a concern at this time.

Results from the September 2021 groundwater investigation indicated a TCE concentration of 154 µg/L in HP-27, located west of MW-190 and up-gradient of TMW-36/36B. TCE was not detected in the sample collected from HP-21.

Analytical laboratory reports from this event are included in Attachment E and a summary of VOC results are provided in Table 1 in Attachment E.

5.2 East Plume Investigation

The East Plume Investigation was performed concurrently with the South Plume Investigation, during the weeks of August 2 and September 20, 2021 to delineate the origin and extent of TCE contamination detected in MW-202, as requested by ADEQ in the comment letter regarding the Whirlpool 2020 Annual Report. A total of eight soil borings (HP-16 through HP-18 and HP-22 through HP-26) were installed along the eastern border of the former Whirlpool facility and the eastern property boundary. Boring HP-17 was converted into permanent groundwater monitoring well MW-205.

The purpose of the investigation was to assess the source and extent of contamination detected at MW-202 on the property owned by the Boys & Girls Club. MW-202 exhibited TCE concentrations of 9.3 µg/L in the 2020 Annual Groundwater Sampling event and 33.3 µg/L in the 2021 Semi-Annual Sampling event. Groundwater analytical data from this investigation also further defined the plume surrounding monitoring wells MW-87 and MW-185. Additional borings were originally proposed in the right-of-way on the eastern side of Jenny Lind Road but were impeded by proximity to nearby utilities; a buried natural gas line and wastewater force main located north-south along Jenny Lind and overhead electric lines constrained drilling to the right-of-way. Private property access agreements will be necessary to permit drilling across Jenny Lind Road at a safe distance from these utilities.

The investigation activities summarized in this report were completed in accordance with the approved 2021 East Plume Investigation Work Plan dated June 18, 2021 and approved by ADEQ on July 12, 2021.

5.2.1 Investigation Field Procedures

In accordance with the work plan, investigation activities were performed by completing soil borings at eight locations consisting of HP-16 through HP-18 in August 2021 and HP-22 through HP-26 in September 2021. Prior to initiating drilling activities, both Arkansas One-Call Utility Locating Services and a private utility locator were contracted to identify underground utilities and other potential obstructions in the work areas. Drilling activities were completed using a Geoprobe 3230DT direct push drilling rig capable of drilling with hollow stem augers and completion of soil probes using DPT.

A continuous soil core was obtained for geologic logging at all boring locations. The soil profiles observed at each location were logged by a Ramboll geologist. Continuous soil cores were obtained using the GeoProbe™ Dual Tube 45 (DT-45) 4 inch outside diameter (OD) steel casing soil sampling system and 2.25 inch liners for soil sample retrieval. Soil was continuously screened with a photoionization detector (PID) for the presence of volatile organic vapors. Boring logs for these three borings are provided in Attachment E. The soil borings were advanced to depths ranging from 24 feet bgs (HP-24) to 31 feet bgs (HP-25) using DPT until refusal, targeting the top of the shale at the bottom of the BTZ.

After DPT refusal, groundwater samples were collected from each boring location using 1 inch temporary well screens set inside the steel casing. At locations HP-16 and HP-17, separate saturated zones were observed during drilling. At these locations, a boring was advanced directly adjacent to the location, to the depth of the shallow saturated zone. This allowed collection of a groundwater sample representative of the isolated shallow saturated interval. At all locations, the 4 inch diameter steel casing was used to isolate the temporary well screen and prevent intrusion of shallow or perched groundwater.

Groundwater samples were collected at each location using a peristaltic pump and dedicated tubing. The temporary well screen was purged prior to sampling to remove fines and achieve reasonable sample quality depending on the quantity of groundwater available. After groundwater sampling was completed, the soil probes for the sampling locations were properly abandoned using bentonite cement grout placed using a tremie tube. The HP-17 location was over-drilled with 6 inch diameter hollow stem augers to facilitate the installation of MW-205. Groundwater samples were analyzed for VOCs by USEPA Method 8260. Laboratory analytical report are provided in Attachment E.

MW-205 was installed on August 4, 2021, at the HP-17 location using hollow stem auger drilling methods. The well was constructed with 19 feet of 2 inch diameter poly vinyl chloride (PVC) casing flush threaded to a 10 foot PVC 0.010 inch slot well screen. A sand pack was installed in the well annulus around the PVC screen from the base of the well to approximately three feet above the top of the screen. The remainder of the annular space was sealed with hydrated bentonite chips to a depth of 1 foot bgs. MW-205 was completed at the surface with a flush mount protective cover installed with a concrete apron. After installation was complete, MW-205 was developed in accordance with ADEQ guidance (Interim Policy PRCR 96-4, Section L, Page 9) on August 6, 2021, and surveyed by an Arkansas-Licensed Surveyor.

5.2.2 East Plume Investigation Results

The lithology encountered during the 2021 East Plume Investigation consisted of silty clay or clayey silt at the surface to depths ranging from 15 feet bgs (HP-17) to 24 feet bgs (HP-26) with occasional sandy clay. The silty clay is underlain by a clayey gravel, clayey sand or gravelly clay layer identified as the BTZ, over dry silty clay, underlain by shale. The range of material identified as the BTZ is apparent comparing HP-26, in which was observed approximately one foot of (moist) silty clay with gravel and sand to HP-17 where 12.5 feet of gravel with sand and clay (moist to wet) was observed. Cross Section A–A' in Attachment E provides a north to south sectional view of the soil profile over the shale bedrock. Shale depths were used to further refine the shale bedrock map (Figure 7), indicating that the shale was the shallowest at HP-23 (450.13 feet BGS) and the deepest at HP-18 (441.29 feet BS).

Groundwater TCE analytical results obtained from this investigation are summarized in the table below.

Location	Screened Interval (feet bgs)	TCE Concentration (µg/L)
HP-16S	15 – 20	DRY
HP-16D	22.5 – 30	179
HP-17S	17 – 22	321
HP-17D	24 – 29	398
HP-18	19 – 29	0.33 J
HP-22	17 – 27	27.4
HP-23	17 – 27	97.9
HP-24	14 – 24	0.90 J
HP-25	21 – 31	127
HP-26	17 – 27	321

Data collected during the 2021 Annual Groundwater Sampling event suggests a northeastern groundwater gradient in the area. Elevated concentrations at up-gradient location HP-26 (321 µg/L TCE) indicate potential migration of TCE to the northeast across Jenny Lind Road to down-gradient monitoring well MW-202 (33.3 µg/L TCE detected in 2021 Semi-Annual Groundwater Sampling event). More data is necessary to define the plume to the south of MW-202, east of Jenny Lind Road.

Subsequent groundwater sampling in October 2021 indicated a TCE concentration of 400 µg/L at MW-205.

Results obtained from this investigation were used to further define the plume along the eastern property boundary. TCE concentrations greater than 100 µg/L are present further north of MW-185 as previously noted. Figures 3A and 3B provide updated isoconcentration maps of the TCE plume at the eastern property boundary.

5.3 Willowstick Geophysical Survey

A geophysical investigation was completed from August 16-20, 2021, at the Site in order to identify and characterize preferential groundwater flow paths within the BTZ beneath the Site. A series of four surveys (Figure 6) were conducted south, southwest and east of the Site building and within the source area off the northwest corner of the Site building. Each survey location was located within an area of the Site that has experienced migration of groundwater impacted by TCE and degradation products. Identification of preferential flow paths would allow future remedial strategies to target flow paths potentially most responsible for migration of impacted groundwater.

5.3.1 Geophysical Investigation Process

This investigation utilized geophysical principles in order to identify preferential flow path(s) within the BTZ beneath the Site. Willowstick Technologies, LLC (Willowstick), a Ramboll subcontractor, performed this specialized investigation. Willowstick has developed a patented method and proprietary software for assessing and identifying preferential groundwater flow path(s) within the subsurface. The investigations methods and findings are presented in a Willowstick report, which is included in Appendix F. This narrative provides an overview of the investigation process and results. The geophysical survey was conducted by (1) inducing an electrical current through the BTZ between electrodes installed on either side of the survey area, (2) measuring the magnetic field at predetermined locations throughout the survey area and (3) assessing the predicted versus measured magnetic fields with a 3D inversion modeling package that is used to identify potential preferential groundwater flow paths.

Electrodes within each survey area were connected to each other via a circuit wire consisting of a sheathed 14 gauged wire used to pass an electric current. An electrode is typically a conductive metal rod or chain connected to each end of the circuit wire and placed within the water column of a monitoring well and within the screen interval of the well. An electrode was placed on either side of each survey area and oriented up-gradient and down-gradient of anticipated groundwater flow. A current was induced through the circuit wire and BTZ to generate a measurable magnetic field within the survey area. A series of magnetic field measurements are collected through each survey area for processing by Willowstick. By comparing predicted and measured magnetic fields through the Willowstick modeling package, they were able to assess electrically conductive flow paths beneath the Site. The preferential flow of electric current is interpreted by Willowstick as highly probable pathways for groundwater flow across each survey area.

5.3.2 Geophysical Investigation Results

After completing all four geophysical field surveys, Willowstick processed all collected data and developed a model showing preferential groundwater flow paths across all survey areas. Figure 6 provides the location of each interpreted flow path identified by Willowstick. The Willowstick team identified five primary and several secondary preferential groundwater flow paths. The preferential groundwater flow paths identified by Willowstick were as follows:

Source Area: A few preferential flow paths (primary and secondary) were identified in this area and in a mostly north and south orientation. These identified flow paths are consistent with historical observations of contaminant migration.

East Survey: Two primary flow path areas were identified and in a mostly east and west orientation that were (1) adjacent to the northwest corner of the Site building near to monitoring wells MW-87 and MW-91 and (2) near the newly installed MW-205 within the interior of the

eastern building exterior wall. The northern identified flow path flows through one of the two permeable reactive barriers installed in 2019 off the northeast corner of the Site building.

South Survey: Two preferential flow paths were identified and in a mostly north and south orientation. The flow paths were both located between monitoring wells MW-189 and MW-190. The primary flow path noted in this survey area is shown in an orientation in line with TMW-36 and the permeable reactive barrier installed along the southern Site boundary in 2020.

Southwest Survey: A primary preferential flow path was identified and in a mostly north and south orientation through the vegetated southwest area of the Site. The southern area of this survey area was covered in dense vegetation and due to health and safety concerns for the field team the extent of this survey area did not extend as far to the south as was planned. Adjacent to the primary flow path identified within this survey is a permeable active barrier installed in 2018 adjacent to TMW-16, TMW-26, TMW-32 and MW-186.

As a whole, the preferential groundwater flow paths identified by Willowstick appear consistent with areas previously known to have experienced contaminant migration and corroborate the location of previously installed permeable reactive barriers. Additionally, after completion of this geophysical investigation, these findings provided decision support for the east and south supplemental investigations described earlier in Section 5.

The potential preferential groundwater flow paths identified by Willowstick are an interpretation of data collected and assessed by Willowstick as part of their process. The following considerations should be noted during evaluation of the identified flow paths:

- Flow paths identified are not considered to be the only flow paths that may exist at the Site.
- It is not assumed that all identified flow paths are considered to be equally impacted by Site contaminants.
- Preferential flow paths noted by Willowstick are those that were identified by their investigation and data analysis methods and are additional lines of evidence that can be used to refine the Site conceptual flow model in addition to site-wide potentiometric surface maps, historical aquifer testing and a recently completed PFM investigation. Together these and other lines of evidence, provide a more complete understanding of Site hydrogeology and potential contaminant migration pathways.
- Flow paths identified by the Willowstick assessment cannot identify flow direction or velocity as the flow paths are based on an electric current passing through more conductive areas of the subsurface. However, these flow characteristics can be assessed through other means including the current Site conceptual hydrogeologic model. Arrowheads indicating flow direction have been added to the preferential groundwater flow paths on Figure 6 based on Ramboll's understanding of the Site's flow model.

5.4 Passive Flux Meter Investigation

The PFM Investigation was conducted in March 2021 and April 2021. The PFM study included the installation of 23 PFMs in 12 wells generating a total of 92 samples. Each PFM segment provides Darcy velocity, TCE and cis-1,2-DCE concentrations and mass flux values. The highest velocities generally correlate with geologic units with higher sand and/or gravel content and lower silt/clay content. The TCE and cis-1,2-DCE mass flux values show stratification of contaminant transport and also provide calculated average TCE concentrations for each well. Data from the PFM generally correspond to concentrations detected during the 2021 semi-annual monitoring event. Appendix G provides the PFM report discussing the investigations methods and findings in detail.

In the North Plume Area (offsite), the higher velocities, TCE and cis-1,2-DCE concentrations and the resulting mass flux values were generally in the coarser grained portion of the BTZ which is somewhat variable in depth and thinner compared to areas onsite and offsite south and east. The exception was RW-69 where the velocity and flux were higher in clayey sand over gravelly clay. The highest flux values generally correlated with the units with the highest velocities. The more elevated North Plume mass discharge values (per unit width of aquifer) occurred at MW-46R, TMW-12 and TMW-24 which also correlated with the North Plume semi-annual sampling results where TCE concentrations were more elevated.

In the Northeast Plume Area, the higher velocities, TCE and cis-1,2-DCE concentrations and the resulting mass flux values correlated with the lower portion of the BTZ just above and to the contact with the underlying silty clay over the shale.

In the South and Southeast Plume Areas, the higher velocities, TCE and cis-1,2-DCE concentrations, mass flux and mass discharge values occurred in the lower portion of the BTZ in sand and/or gravel with variable silt and clay. The more elevated mass discharge values occurred at source area well ITMW-18 and at down-gradient well ITMW-5 located at the south edge of the Building. The highest Darcy velocity occurred in the southeast at MW-185.

In the Southwest Plume Area, the velocities, TCE and cis-1,2-DCE concentrations and the resulting mass flux values were more elevated in two discrete sand – gravel zones, one in the upper portion of the BTZ and the other in the lower portion of the BTZ, both of the sand-gravel zones overly low permeability silty clay.

5.5 Onsite Well Installations

Four monitoring wells, located onsite and north Ingersoll Avenue, were repaired in accordance with the applicable sections of the previously approved Proposed Well Repair and Replacement Work Plan, dated August 20, 2019. The activities included the repair of four monitoring wells:

- MW-22R, located at the approximate northeast corner of the former Whirlpool manufacturing facility;

- ITMW-5, located at the approximate southwest corner of the former Whirlpool manufacturing facility; and
- MW-34R and MW-39R, both located directly north of Ingersoll Avenue to the north of the former Whirlpool property.

MW-22R was repaired due to the placement of new asphalt in the parking area to the northeast of the former manufacturing facility. Repairs consisted of new surface completion and replacement of the flush-mount well cover.

MW-34R and MW-39R were repaired as requested by ADEQ in the comment letter regarding the Whirlpool 2021 Semi-Annual Report (dated August 5, 2021). MW-34R and MW-39R are located adjacent to the Bost Property to the north of Ingersoll Avenue. Both wells were buried by topsoil resultant from recent construction at the property. After uncovering each well, new 2 inch PVC was attached to the top of each well casing in order to return the wells to grade. New flush-mount protective covers were installed at each location.

ITMW-5 was converted from a stick-up well to a flush well to allow semi-truck access to the newly occupied warehouse at the south of the facility. The stick-up pro cover was removed and the PVC cut to surface grade. A flush mount protective well cover was installed.

After well repairs were complete, ITMW-5, MW-34R and MW-39R were re-surveyed for top of casing elevation by an Arkansas-licensed surveyor. MW-22R will be re-surveyed at a later date.

5.6 Supplemental Investigation Summary and Conclusions

Section 5 of this report has presented the results of multiple investigations conducted in March, April, August and September 2021. A summary of the investigations and associated conclusions are as follows:

- TCE concentrations were below 1 µg/L in both groundwater samples collected to the south of MW-187 and MW-188, indicating that plume expansion has likely not occurred in this area despite increasing TCE concentrations in those wells.
- In the vicinity of MW-190, TCE was detected above the RADD of 5 µg/L groundwater at one location to the west, directly up-gradient of TMW-36/36B. TCE was not detected in the groundwater sample collected to the southeast of MW-190, indicating that plume expansion is not currently a concern despite recently increasing TCE concentrations.
- To the northeast, TCE was detected at concentrations exceeding the RADD of 5 µg/L at six locations. Data collected during the investigation further defined the plume to the east of the former Whirlpool facility. Additional data is necessary to define the plume south of MW-202 to the west of Jenny Lind Road. Sampling in October 2021 indicated elevated concentrations onsite to the north of MW-185.

MW-205 was installed on the eastern side of the former Whirlpool facility to further assess TCE concentrations in the vicinity of MW-185.

- MW-206 was installed south of MW-187 and MW-188 to confirm the southern plume boundary.
- The preferential groundwater flow paths identified by the Willowstick Geophysical Survey are consistent with areas previously known to have experienced contaminant migration and are in line with previously installed permeable reactive barriers.
- The PFM Investigation provided additional information regarding the stratification of the TCE impacts within the saturated zone sediments and range of mass flux values to be used in the design of treatment areas to mitigate future groundwater plume expansion.

The monitoring wells installed during these events will continue to be monitored in conjunction with semi-annual groundwater monitoring events as defined within the 2015 RADD until such time as a reduced monitoring program has been agreed to by ADEQ.

6 Plume Concentration Trends

This section includes discussion of trends for individual wells, trends for groups of wells, plume boundaries and estimates of the quantity of TCE in the respective plumes. 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 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).

Tables 7A and Table 7B present 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.

6.1 Lines of Evidence

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

- Statistical Methods. Mann-Kendall non-parametric test (Gilbert 1987; USEPA 2000) to calculate the temporal trend in individual well analyte concentrations over time; and
- Isoconcentration Maps. Qualitative method to evaluate temporal trends by comparing representations of plume concentration and extent for certain periods over the duration of monitoring.

6.1.1 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 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 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 (COV <1).
- No Trend. No statistically significant trend for concentrations along with high variability for results (COV >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.
- Not Detected (ND). Constituent has not been detected at the well during the time period analyzed.

Only monitoring wells included in the RGWMP or designated replacement wells are included in the temporal trend analysis.[4] The following is the list of wells in each category (this list is only presented for evaluation of plume concentration trends):

- North Plume Wells (28 wells). MW-24, MW-27, MW-28, MW-39/39R, MW-40/40R, MW-46R, MW-50/MW-50R, MW-55/55R, MW-56/MW-56R, MW-57/57R, MW-58/58R, MW-60/60R, MW-61/MW61R, MW-62/62R, MW-63/63R, MW-68, RW-69, IW-73, IW-77, IW-78, MW-82, MW-83, MW-84, MW-194, MW-195, MW-196, TMW-10 and TMW-11.
- Northeast Corner Wells (nine wells). MW-87, MW-89, MW-91, MW-96, MW-97, MW-98, MW-99, MW-183/MW-183R and MW-184.

[4] 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.

- South Plume Wells (29 wells). ITMW-1/ITMW-1R, ITMW-2/ITMW-2R, ITMW-5, ITMW-7, ITMW-9, ITMW-10, ITMW-16, ITMW-18, ITMW-19, ITMW-20, ITMW-21, MW-22, MW-24, MW-25/MW-25R, MW-26, MW-29, MW-38, MW-85/MW-85R, 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 (seven wells). ITMW-18, ITMW-19, MW-25/MW-25R, MW-38, MW-85/MW-85R, MW-93 and MW-95.

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

- North Plume Wells (28 wells). The Mann-Kendall trend analysis utilizes data from all wells associated with the 2021 annual groundwater monitoring event for the North Plume (Table 8). As described in more detail below, our determination that a majority of the wells exhibit a decreasing or stable TCE concentration trend is based on the fact that 79% (22 of 28 wells) of these wells exhibit either little or no TCE or a decreasing or stable TCE concentration trend.

  The trend analysis for the 28 wells associated with monitoring the North Plume indicates the following:

  - Two wells exhibit a stable trend for TCE concentrations (MW-46R and IW-73).
  - Eleven wells exhibit a decreasing trend for TCE concentrations (MW-24, MW-28, MW-58/58R, MW-63/63R, RW-69, IW-77, IW-78, MW-83, MW-194, TMW-10 and TMW-11).
  - Three wells exhibit no trend regarding TCE concentrations according to the statistical test (MW-27, MW-68 and MW-82). MW-27 is the first well exhibiting no trend and TCE concentrations have ranged from non-detect (< 1 µg/L) to 56.3 µg/L during the last five years of monitoring (2017-2021). The most recent sampling event had the maximum detected concentration in this period. MW-68 is the second well exhibiting no trend and TCE concentrations have ranged from non-detect (< 1 µg/L) to an estimated concentration of 0.57 µg/L during the last five years of monitoring (2017-2021). MW-82 is the third well exhibiting no trend and TCE concentrations have ranged from 5.6 µg/L to 60.3 µg/L during the last five years of monitoring (2017-2020).
  - Six wells exhibit TCE concentrations below detection limits or below reporting limits (MW-39R, MW-40R, MW-60, MW-62, MW-195 and MW-196).
  - Six wells exhibit an increasing trend for TCE concentrations (each of which is discussed below) (MW-50R, MW-55R, MW-56R, MW-57R, MW-61R and MW-84).

  For these increasing trends:

  - Since 2009 the maximum TCE concentration in MW-50/50R has had a maximum concentration of 1.6 µg/L measured in October 2013. The only detected

concentration of TCE above detection limits was detected in April 2021 and is 1.3 µg/L.

- The TCE concentration at MW-55R had a maximum observed concentration of 29.9 µg/L in the October 2020 Sampling Event; the same concentration was observed in the October 2021 Sampling Event. The occurrence of TCE concentrations exceeding the RAL at MW-55R are mitigated based on the analytical results for down-gradient wells (MW-50R and MW-60R) and side-gradient and boundary well TMW-35 which exhibit little or no TCE impact. TCE concentrations will continue to be monitored at this location due to the concentration variations observed since November 2010.
- The TCE concentration of 6.9 µg/L at MW-61R in October 2021 is lower than the highest historical concentration of 20.8 µg/L in October 2019. ISCR treatment areas were completed in the summer of 2018 to address TCE impacts in groundwater at plume boundary wells including MW-61R. During the recent December 2019 ISCR Event, MW-61R was redeveloped and resampled to confirm representative water quality and for VOC results. The water quality results were similar comparing the October and December 2019 monitoring events and the TCE concentration in the December 2019 sample decreased to 15 µg/L (the results from this sampling effort are provided in the 2020 Annual ISCR Report, Section 7). The data suggests the ISCR efforts in this area are beginning to reduce TCE concentrations particularly considering the significant TCE concentration reductions in up-gradient wells TMW-10 and TMW-11.
- The TCE concentration at MW-56R is 619 µg/L in October 2021. This is a decrease from 902 µg/L at MW-56R in November 2018. Concentrations are lower up-gradient at MW-46R at 461 µg/L. Variations are expected to continue in TCE concentrations within the North Plume and monitoring will continue in MW-56R and in up-gradient (MW-46R) and down-gradient wells (TMW-14). There are sufficient down-gradient monitoring locations to evaluate conditions and there is a down-gradient treatment zone at the eastern extent of the North Plume just west of Jenny Lind Road.
- The October 2021 TCE concentration at MW-57R of 286 µg/L is lower than the highest historical concentration of 453 µg/L in November 2016. TCE concentrations and trends will continue to be monitored at this well.
- The TCE concentration at MW-84 in October 2021 was 7.8 µg/L, which is lower than the historical maximum of 214 µg/L from May 2014.

- Northeast Corner Wells (nine wells). Three wells (MW-87, MW-89 and MW-91) located on Whirlpool property in the area of the northeast corner plume and six wells (MW-96 through MW-99, MW-183 and MW-184) located on Boys & Girls Club property further to the northeast have been sampled at least ten times between June 2014 and October 2021.

- TCE concentrations in MW-91 are stable. The TCE concentration in MW-91 October 2021 of 9.5 µg/L is lower than the maximum concentration of 605 µg/L from April 2017.
- TCE concentrations at MW-87, MW-89 and MW-183 are decreasing.
- TCE concentrations at MW-184 exhibited no trend. The TCE concentrations at MW-184 have all been below reporting detection limits of 1 µg/L, so this statistical increasing trend is qualitatively similar to those trends which are reported as below the practical quantitation limit by the 3TMO software.
- TCE concentrations are increasing at MW-99. The TCE concentration at MW-99 has ranged from below detection limits (less than 0.17 µg/L) to a maximum concentration of 72.6 µg/L in October 2019. Concentrations in April 2021 and October 2021 were estimated concentrations of 0.34 µg/L and 0.26 µg/L, respectively.
- TCE concentrations in MW-96, MW-97 and MW-98 are below detection limits or not detected.

- South Plume Wells (29 wells). As described in more detail below, our determination that a majority of the wells exhibit a decreasing or stable TCE concentration trend is based on the fact that 21 of 29 (72%) of the southern wells exhibit either little or no TCE or a decreasing or stable TCE concentration trend. The trend analysis for the 29 wells associated with monitoring the South Plume indicates the following:
  - Four wells exhibit a stable trend for TCE concentrations (ITMW-1R, MW-38, MW-95 and MW-186).
  - Nine wells exhibit a decreasing trend for TCE concentrations (ITMW-7, ITMW-16, ITMW-18, ITMW-19, ITMW-21, MW-24, MW-25, MW-93 and MW-182).
  - Three wells exhibit no trend regarding TCE concentrations (ITMW-20, MW-26 and MW-85).
  - Five wells exhibit TCE concentrations below reporting limits (ITMW-2R, MW-22, MW-29, MW-191 and MW-192).
  - Eight wells (ITMW-5, ITMW-9, ITMW-10, MW-185, MW-187, MW-188, MW-189 and MW-190) exhibit increasing TCE concentration trends (see further discussion below).
    - The TCE concentration at ITMW-5 of 2,420 µg/L in October 2021 is below the historical maximum concentration of 3,700 µg/L from October 2019. TCE concentrations and trends will continue to be monitored at this well.
    - The TCE concentration at ITMW-9 of 3,620 µg/L in October 2021 is the maximum detected concentration at this well. TCE concentrations and trends will continue to be monitored at this well.

- The TCE concentration at ITMW-10 of 302 µg/L in October 2021 is lower than the historical maximum concentration of 761 µg/L from January 2016. TCE concentrations and trends will continue to be monitored at this well.
- The TCE concentration at MW-185 of 194 µg/L in April 2021 is a historical maximum concentration; in October 2021 the concentration of TCE was 182 µg/L. ISCR remediation was conducted approximately 60 feet down-gradient of this well in August 2018. TMW-34, located down-gradient east of the ISCR remediation, provides further plume definition in this area. The TCE concentration at TMW-34 was 126 µg/L in October 2021. The water quality results comparing the May and October 2021 monitoring events; indicate conditions became more reducing; the ORP decreased from 88.8 to -16.4 and DO decreased from 0.73 to 0.10. Water quality and analytical data values from this effort are included in Section 7 - ISCR Remedial Effectiveness. Further monitoring at this location is needed to fully evaluate ISCR effectiveness and to assess if the plume boundary is potentially at risk for expansion.
- The TCE concentration at MW-187 of 22.4 µg/L from April 2021 is the historical maximum concentration. The October 2021 TCE concentration was 16.8 µg/L. TCE concentrations and trends will continue to be monitored at this well.
- The TCE concentration at MW-188 of 1.1 µg/L from October 2021 is a decrease from the historical maximum concentration of 11.7 µg/L. TCE concentrations and trends will continue to be monitored at this well.
- The TCE concentration at MW-189 of 238 µg/L is below the historical maximum concentration of 670 µg/L from November 2018.
- The TCE concentration at MW-190 of 199 µg/L in October 2021 is the maximum detected concentration at this well and the fourth consecutive monitoring event increase. TCE concentrations and trends will continue to be monitored at this well.

- Source Area Wells (seven wells). The source area wells showed predominantly decreasing or stable concentration trends for TCE.
  - Two wells exhibit a stable trend for TCE concentrations (MW-38 and MW-95);
  - Four wells exhibit a decreasing trend for TCE concentrations (ITMW-18, ITMW-19 and MW-93); and
  - One well exhibits no trend regarding TCE concentrations (MW-85).

6.1.2 Isoconcentration Maps

Figures 3A and 3B show isoconcentration lines at the North, Northeast and South Plumes for the 2021 Annual Event. Supplemental Investigations conducted in August and September to the east of the building and along the eastern property boundary have refined the plume boundaries of the Northeast and Southeast Plumes. Notably, TCE concentrations detected during the investigations indicate the northeast and southeast plumes are connected. Additionally, the 5 µg/L isoconcentration line now connects both the northeast and southeast plumes to the larger south plume. Other than these changes, notable changes (from the 2021 Semi-Annual Sampling event in April 2021) in the North Plume boundaries on Figure 3A consist of:

- TCE concentration of 3.9 µg/L in MW-63R (decrease from 7.9 µg/L) causing the 5 µg/L TCE isoconcentration line to shift from south to north; TCE concentration of 5.2 µg/L in TMW-21 (increase from 2.3 µg/L) causing the 5 µg/L TCE isoconcentration line to move slightly north and east.

Notable changes in the Northeast Plume boundaries on Figure 3A consist of:

- TCE concentration of 3.9 µg/L at MW-89 (decrease from 6.4 µg/L) causing the 5 µg/L TCE isoconcentration line to move south.

Notable changes in the Source Area consist of:

- TCE concentration of 7.8 µg/L at MW-84 (increase from 1.4 µg/L) causing the 5 µg/L isoconcentration line to slightly move north and east;
- TCE concentration of 10.4 µg/L at MW-24 (decrease from 148 µg/L in October 2020) causing the 100 µg/L isoconcentration line to move south; and
- TCE concentration of 36,000 µg/L at RW-1 (not previously sampled) causing the 10,000 µg/L isoconcentration line to slightly move north and east, encompassing both MW-198 and RW-1.

Notable changes in the South Plume boundary on Figure 3B consist of:

- TCE concentration of 238 µg/L at MW-189 (increase from 66.8 µg/L) causing the 100 µg/L isoconcentration line to move south and west; TCE concentration of 110 µg/L at TMW-36 (increase from 11.3 µg/L) causing the 100 µg/L TCE isoconcentration line to move south and east;
- TCE concentration of 102 µg/L at MW-203 (increase from 3.7 µg/L) causing the 5 µg/L and 100 µg/L TCE isoconcentration lines to shift south;
- TCE concentration of 6.8 µg/L at TMW-25 (increase from 3.2 µg/L) causing the 5 µg/L TCE isoconcentration line to move slightly west; and
- TCE concentration of 400 µg/L at MW-205 causing the 100 µg/L (inferred) TCE isoconcentration line to connect through to MW-87.

6.2 Summary of Plume Concentration Trends

North Plume

- The aerial extent for the North Plume remains predominantly within the bounds of the historical maximum plume extent with treatment as observed in October 2021 (the last comprehensive yearly sampling event).

Northeast Plume

- The aerial extent for the Northeast Plume did not change on the Boys & Girls Club Campus where concentrations in the monitoring wells remain < 1 µg/L. South of Ingersoll and east of the Whirlpool property the 2019 ISCR Treatment is controlling plume expansion to the vacant lot owned by the Boys & Girls Club. At the South boundary of the vacant lot, October 2021 results for TCE exceed 5 µg/L (MW-202 TCE 67.3 µg/L).

South Plume (Southwest)

The onsite portion of the Southwest Plume is currently controlled at the west property boundary with the 2018 ISCR treatments. The offsite portion of the Southwest Plume, which has been dissected at property boundary by the 2018 ISCR Treatment, extends beyond the southwest boundary of McPherson Oil and Geren Road, is not defined at the southwest extent where TCE is 18 µg/L. Investigative activities were unable to be performed due to the presence and proximity of multiple underground utilities (i.e., wastewater force main, distribution main, stormwater drain, sewer main, fiber optic line and natural gas lines) and overhead powerlines in the vicinity of the boring locations. Ramboll will evaluate alternative sampling locations to continue delineating the southwest plume.

South Plume (South)

- The western portion of the South Plume, at plume boundary wells MW-187, TCE exceeds > 5 µg/L at 16.8 µg/L. TCE concentrations at MW-188 and newly installed MW-206 are less than 5 µg/L (MW-188 1.1 µg/L and MW-206 1.2 µg/L). At the central portion of South Plume at the property boundary (TMW-36, TCE 110 µg/L) the 2020 ISCR Treatment was completed to treat additional plume migration. Additional monitoring data will be used to indicate the effectiveness of the ISCR treatment for plume control in the area of TMW-36.

South Plume (Southeast)

- An ISCR treatment zone was completed in 2018 at the southeast property boundary east, down-gradient, from MW-185 (2018 TCE concentration 11.7 µg/L). Groundwater data indicates reducing conditions in this area at the down-gradient Treatment Zone

monitoring well TMW-34 (TCE 126 µg/L) and the relative concentration of cis-1,2-DCE has increased from 20-55% of the TCE concentration with no detections of VC. The October 2021 monitoring results indicate TCE concentrations increased at the up-gradient well MW-185 (182 µg/L) and TMW-34. Newly installed MW-205 and the temporary well data indicate migration to the east of the former whirlpool building.

The site-wide groundwater conditions can be categorized as three separate plumes with distinct characteristics (i.e., North Plume and Northeast Plume, South Plume).

The North 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, from the southwest to the northeast, generally less than 200 µg/L in the southwest up-gradient area, trending to a central plume area with more elevated concentrations 300 µg/L to 619 µg/L, then decreasing concentrations down-gradient at the ISCR treatment zones with one area, MW-61R exceeding 5 µg/L at the down-gradient site boundary; and

The Northeast Plume is characterized by:

- An east, northeast potentiometric gradient.
- TCE concentrations generally between 5 µg/L and 276 µg/L.

The South Plume is characterized by:

- A multi-directional potentiometric surface gradient with three trends:
    - A relatively flat south, southeast gradient from the source area at the northwest corner of the building;
    - An easterly-northeast gradient at the southeast portion of the building; and
    - A southwestern component where the gradient increases to the southwest in the southern section of the plume.
- Source area (Area 1) TCE concentrations greater than 20,000 µg/L.

7 ISCR Remedial Effectiveness

Four ISCR injection events (e.g., October 2015, August 2018, December 2019 and October 2020) have been performed at the Site. Each ISCR injection event was performed in accordance with the respective action plan or work plan and approvals received from the ADEQ UIC Program (Inventory Requirements for Authorized By Rule Class V Wells as described in 40 CFR 144.84).

The ISCR technology employed during each of these events combines abiotic chemical reduction and anaerobic bioremediation for the treatment of chlorinated VOCs in groundwater. These physical, chemical and biological processes combine to produce a reducing environment in the treated saturated zone to stimulate complete dechlorination of TCE and daughter products to non-toxic end breakdown products. ISCR reagents are typically effective for a timeframe of multiple years; therefore, the evaluation of data associated with this supplemental injection is anticipated to continue for a similar period of time.

7.1 ISCR Injection Background

A complete history of the four ISCR injection events have been detailed in prior annual reports, however a brief overview is provided herein:

- September to October 2015 (North Plume). This event was the pilot component of the final remedy for groundwater defined by the 2015 RADD for the Site (Figure 8).[5] Injections consisted of 4,844 gallons of ISCR reagents including ProvectIR-40™ [40% by weight zero valent iron (ZVI), magnesium oxide and DHC inoculum. Reagents were distributed across three treatment zones north the Site between Brazil Ave and Jacobs Ave west of Jenny Lind Pl and comprised of a total of 44 temporary direct push injection points.
- July to August 2018 (North Plume, Southwest Plume and Southeast Plume). This event consisted of injecting 21,874 gallons of ISCR reagents distributed across three areas of the Site including 65 temporary injection points adjacent to the 2015 ISCR injection area (Figure 8), 64 temporary points within the southwestern area of the Site (Figure 9) and four points in the southeastern area of the Site (Figure 10). ISCR reagents for this event included ZVI, nutrients, hydrolyzed kelp, calcium propionate, sodium sulfite, Provect-IR™, yeast extract, vitamin B12, vitamin B2 and red yeast rice.
- December 2019 (Northeast Plume). This event consisted of injecting 5,760 gallons of ISCR reagents distributed across 37 temporary injection points within the northeast corner parking lot of the Site (Figure 11). ISCR reagents for this event included ZVI, nutrients, hydrolyzed kelp, calcium propionate, sodium sulfite, Provect-IR™, Provect AMR compound, yeast extract, magnesium hydroxide, vitamin B12 and vitamin B2.

[5] The 2015 RADD specified ISCO and/or ISCR for groundwater treatment.

- October 2020 (South Plume). This event consisted of injecting 6,300 gallons of ISRC reagent distributed across 23 temporary injection points along the south property boundary in the vicinity of TMW-36 (Figure 12). ISCR reagents for this event included ZVI, nutrients, hydrolyzed kelp, calcium propionate, sodium sulfite, Provect-IR™, Provect AMR compound, yeast extract, magnesium hydroxide, vitamin B12 and vitamin B2.

The ISCR reagents for the 2019 and 2020 injection events were adjusted based on results from the 2015 and 2018 injection events for pH control, decreasing methane generation, enhancement of abiotic degradation and longevity of the bioremediation treatment zones.

Innovative Environmental Technologies, Inc (IET) provided materials, equipment and personnel to inject the ISCR reagents and assisted Ramboll personnel in monitoring the progress of each of the four injection events.

7.2 ISCR Monitoring Results

Table 4 provides a summary of groundwater field parameters measurements during the October 2021 sampling event. Table 6A and 7A provide a summary of current and historical groundwater concentrations for Site COCs. Based on review of the field measurements and analytical data provided within these tables, the following assessments have been prepared for the ISCR treatment zones across the Site. Each plume area and the status of the respective treatment area is discussed herein.

North Plume

Monitoring wells MW-61R, MW-194, TMW-10, TMW-11, TMW-21 and TMW-22/22R are located within or adjacent and down-gradient to a north treatment zone. Installation of the north treatment zones were completed in stages with an initial pilot study in 2015 and then an expanded treatment area in 2018. Analytical data for this treatment area can be summarized as follows:

- Biogeochemical data:
    - Iron concentration within all monitoring wells (MW-61R, MW-194, TMW-10, TMW-11, TMW-21 and TMW-22/22R) initially increased post injection as a result of ZVI within the injected reagent; and concentrations remain elevated through the October 2021 monitoring event.
    - TOC concentrations increased within MW-194, TMW-10, TMW-11, TMW-21 and TMW-22/22R to a maximum of 13.4 mg/L 2,240 mg/L, 13.2 mg/L, 3,930 mg/l and 161 mg/L, respectively, by November 2018 or April 2019. Organic carbon concentrations have dropped since reaching peak concentrations at these well locations and in October 2021 TOC concentrations ranged from 0.46 mg/L to 4 mg/L.

- Nitrate concentrations in groundwater have been primarily non-detect with the exception of isolated detections of 84 mg/L or less, which is suggestive that reducing conditions exist within the treatment zone.
- Sulfate concentrations in groundwater have generally been <25 mg/L and have been mostly consistent concentrations at each monitoring well.
- VFAs (e.g., acetic acid, butyric acid and propionic acid) are an intermediate degradation product that are generated during biodegradation of Site COCs. VFAs were generated/increased during early post injection monitoring events; however, analytical results from later post injection monitoring events through to October 2021 show a decreasing trend of detections, or non-detects for previously detected VFAs.
- ORP field data measured during the October 2021 groundwater sampling event ranged from -182 mV to -27 mV. Negative ORP values are generally indicative of potential reductive dechlorination and ORP values less than -100 mV are stronger evidence to support reductive dechlorination.

- VOC data:
  - TCE concentrations in groundwater collected from TMW-10, TMW-11, TMW-21 and TMW-22/22R have been reduced by approximately 98% since each well respective baseline sampling event. Concentrations of TCE in water collected from MW-61R and MW-194 have been reduced by an average of approximately 61%.
  - cis-1,2-DCE concentrations in groundwater at all monitoring wells briefly increased as TCE was degraded to a temporary peak concentration within one year of initial injections followed by a period of decreasing concentrations. In the case of TMW-10 and TMW-11, cis-1,2-DCE experienced two temporary peaks following te 2015 and 2018 injection events.
  - Vinyl chloride concentrations in groundwater at TMW-10, TMW-11, TMW-21 and TMW-22/22R briefly increased as TCE and cis-1,2-DCE were degraded to a temporary peak concentration followed by a period of decreasing concentrations. Groundwater from MW-61R has mostly been non-detect for VC except for a single detection of 0.53 µg/L in October 2021 and groundwater collected from MW-194 has been non-detect for VC since the baseline sampling in July 2018.
  - Detectable concentrations of ethene and ethane have been observed in groundwater during many post injection monitoring events. The detections of ethene and ethane are not as high as ideally desired (typically <3 µg/L), however detections of these analytes do demonstrate that complete biodegradation of Site COCs is occurring.
  - Based on lower detectable concentrations of biodegradation breakdown products (e.g., cis-1,2-DCE, VC and ethene/ethane) and based on continued elevated iron

concentrations, abiotic degradation of Site COCs is likely complimenting on-going bioremediation processes.

Analytical data collected within the north plume treatment area suggests that a remediation treatment zone was successfully established and that a reducing environment still exists that is capable of complete reductive dechlorination and abiotic degradation of Site COCs. Biogeochemical data, including recently reduced TOC and VFA concentrations, suggests that the treatment zone is running low on carbon and energy sources. It is warranted at this time to consider another dose of bioremediation reagent to compliment continued abiotic degradation before the carbon source has been completely exhausted. Ramboll is currently developing a remedial plan for this and other areas of the Site that will be submitted to ADEQ within 2022.

Northeast Plume

The bioremediation treatment zones were established adjacent to MW-91 and MW-99 during the December 2019 ISCR injection event and the analytical data for this treatment area can be summarized as follows:

- Biogeochemical data:
  - Iron concentrations initially increased by three orders of magnitude at each of these two monitoring wells post injection as a result of ZVI within the injected reagent; and concentrations remain elevated through the October 2021 monitoring event.
  - TOC concentrations initially increased to 225 mg/L at MW-91 and 4,590 mg/L at MW-99 during the initial post injection event in May 2020; however, concentrations have steadily decreased since to 15 mg/L and 56.4 mg/L, respectively, during the October 2021 monitoring event.
  - Nitrate has been reduced at both monitoring wells to non-detect, which is suggestive of reducing conditions have been established within the treatment zone.
  - Sulfate has been reduced at both monitoring wells to approximately 3 mg/L or less, which is suggestive of highly reducing conditions having been established within the treatment zone.
  - VFAs were produced/increased during the 2020 post injection monitoring events at both monitoring wells, however, analytical results from the October 2021 monitoring event show significant decreased detections, or non-detects for previously detected VFAs. The exception is lactic acid which was previously non-detect and was detected in both monitoring wells for the first time in October 2021.
  - ORP field data measured during groundwater sampling at MW-91 and MW-99 were -108 mV and -143 mV, respectively. Negative ORP values are generally

indicative of potential reductive dechlorination and ORP values less than -100 mV are stronger evidence to support reductive dechlorination.

- VOC data:
  - TCE has been reduced in groundwater approximately 97% at MW-91 and by 99.6% at MW-99.
  - cis-1,2-DCE and VC concentrations in groundwater from MW-91 and cis-1,2-DCE from MW-99 increased briefly in 2020 and have since been reduced during both 2021 sampling events. Vinyl chloride has been non-detect in groundwater sampled from MW-99 since the baseline sample collected in December 2019.
  - Detectable concentrations of ethene and ethane have been observed in groundwater during both the October 2020 and October 2021 sampling events for MW-91 and MW-99 (except for ethene which was non-detect in water from MW-99 in October 2021). The detections of ethene and ethane are not as high as ideally desired (generally 2.6 µg/L or lower) based on bioremediation breakdown, but detections of these analytes does demonstrate that complete biodegradation of Site COCs is occurring.
  - Based on the lower detectable concentrations of biodegradation breakdown products (e.g., cis-1,2-DCE from MW-99, VC at both MW-91 and MW-99 and ethene/ethane at both MW-91 and MW-99) and based on continued elevated iron concentrations at both MW-91 and MW-99, abiotic degradation of Site COCs is likely complimenting on-going bioremediation processes.

Analytical data collected within the northeast plume treatment area suggests that an initial remediation treatment zone was successfully established and that a reducing environment still exists that is capable of complete reductive dechlorination and abiotic degradation of Site COCs. Biogeochemical data, including recently reduced TOC and VFA concentrations, suggests that the treatment zone is running low on carbon and energy sources. It is warranted at this time to consider another dose of bioremediation reagent to compliment continued abiotic degradation before the carbon source has been completely exhausted. Ramboll is currently developing a remedial plan for this and other areas of the Site that will be submitted to ADEQ within 2022.

Southwest Plume

TMW-16, TMW-26, TMW-32 and MW-186 are located within or adjacent and down-gradient to a southwest treatment zone. TMW-25 is adjacent to, but up-gradient of, the most up-gradient southwest treatment zone. Installation of the southwest treatment zones were completed by August 2018. Analytical data for the treatment area can be summarized as follows:

- Biogeochemical data:

- Iron concentration within all monitoring wells (TMW-16, TMW-25, TMW-26, TMW-32 and MW-186) initially increased by at least three orders of magnitude post injection as a result of ZVI within the injected reagent; and concentrations remain elevated through the October 2021 monitoring event.
- TOC concentrations increased within TMW-16, TMW-25, TMW-26 and MW-186 to at least 2,980 mg/L by November 2018. Organic carbon concentrations have dropped since initial installation of these treatment zones at these well locations and in October 2021 TOC concentrations ranged from 6.2 mg/L to 44.6 mg/L. At TMW-32, TOC increased initially to 4.8 mg/L by November 2018 and has since dropped to 0.65 mg/L by October 2021.
- Nitrate concentrations in groundwater at TMW-16, TMW-25, TMW-26, TMW-32 and MW-186 have either dropped to, or have always been, <1 mg/L or are now non-detect, which is suggestive that reducing conditions have been established within the treatment zone.
- Sulfate concentrations in groundwater at TMW-16, TMW-25, TMW-26 and MW-186 have dropped to and remained <20 mg/L, which is suggestive that strongly reducing conditions have been established within the treatment zone within these areas. At TMW-32, sulfate concentrations have increased from 28.9 mg/L in August 2018 to 45.4 mg/L by October 2021.
- VFAs (e.g., acetic acid, butyric acid and propionic acid) were generated/ increased during the 2018 post injection monitoring events at TMW-16, TMW-25, TMW-26 and MW-186. However, analytical results from subsequent post injection monitoring events through to October 2021 show a decreasing trend of detections, or non-detects for previously detected VFAs.
- ORP field data measured during the October 2021 groundwater sampling event at TMW-16, TMW-25, TMW-26 and MW-186 were ranged from -296 mV to -124 mV. An ORP measurement of groundwater sampled from TMW-32 in October 2021 was approximately -26 mV. Negative ORP values are generally indicative of potential reductive dechlorination and ORP values less than -100 mV are stronger evidence to support reductive dechlorination.

- VOC data:
  - TCE has been reduced in groundwater an average of 92% from the baseline sampling event in August 2018 through October 2021.
  - cis-1,2-DCE concentrations in groundwater at all monitoring wells briefly increased as TCE was degraded to a temporary peak concentration by April 2019 or October 2019 before decreasing to near baseline concentrations or lower.
  - Vinyl chloride concentrations in groundwater at all monitoring wells briefly increased as TCE and cis-1,2-DCE was degraded to a temporary peak

concentration by October 2019 or May 2020 before decreasing to near baseline concentrations or lower.

- Detectable concentrations of ethene and ethane have been observed in groundwater during most post injection monitoring events. The detections of ethene and ethane are not as high as ideally desired (typically <2 µg/L), however detections of these analytes do demonstrate that complete biodegradation of Site COCs is occurring.
- Based on lower detectable concentrations of biodegradation breakdown products (e.g., cis-1,2-DCE, VC and ethene/ethane) and based on continued elevated iron concentrations, abiotic degradation of Site COCs is likely complimenting on-going bioremediation processes.

Analytical data collected within the southwest plume treatment area suggests that an initial remediation treatment zone was successfully established and that a reducing environment still exists that is capable of complete reductive dechlorination and abiotic degradation of Site COCs. Biogeochemical data, including recently reduced TOC and VFA concentrations, suggests that the treatment zone is running low on carbon and energy sources. It is warranted at this time to consider another dose of bioremediation reagent to compliment continued abiotic degradation before the carbon source has been completely exhausted. Ramboll is currently developing a remedial plan for this and other areas of the Site that will be submitted to ADEQ within 2022.

Southeast Plume

TMW-34 was installed in November 2018 after the ISCR injections to provide monitoring data for the southeast treatment zone. MW-185 is an up-gradient well to this treatment zone and can provide a reasonable comparison to TMW-34. Analytical data for this treatment area can be summarized as follows:

- Biogeochemical data:
  - Iron concentration within the down-gradient TMW-34 initially increased by an order of magnitude post injection as a result of ZVI within the injected reagent; and concentrations remain elevated through the October 2021 monitoring event.
  - TOC concentrations at TMW-34 initially increased to from 0.72 mg/L in November 2018 to 3 mg/L in April 2019; however, concentrations have decreased to 0.56 mg/L by October 2019 and have mostly remained low since.
  - Nitrate and sulfate concentrations have not substantively decreased in groundwater collected from TMW-34 since initial injection in 2018.
  - Limited detections of VFAs have been detected in groundwater collected from TWM-34 since the 2018 injections.

  - ORP field data measured during groundwater sampling at TMW-34 and MW-185 were -16 mV and +115 mV, respectively. Negative ORP values are generally indicative of potential reductive dechlorination.

- VOC data:
  - TCE and cis-1,2-DCE concentrations in groundwater collected from TWM-34 have steadily increased from the initial November 2018 baseline sampling event through to the most recent sampling event in October 2021 (TCE – 7.4 µg/L to 126 µg/L and cis-1,2-DCE – 1.5 µg/L to 65.5 µg/L).
  - Vinyl chloride has been non-detect in groundwater sampled from TMW-34 since the baseline sample collected in November 2018.
  - Detectable concentrations of ethene and ethane were initially observed in groundwater during the 2018 and 2019 sampling events at TMW-34. The detections of ethene and ethane are not as high as ideally desired (generally 1.1 µg/L or lower), however detections of these analytes do demonstrate that complete biodegradation of Site COCs has occurred.
  - Similar TCE and cis-1,2-DCE increasing trends in groundwater collected from MW-185 have been observed during the same November 2018 to October 2021 timeframe as with TMW-34 (TCE – 11.7 µg/L to 182 µg/L and cis-1,2-DCE – 1.4 µg/L to 11.7 µg/L).

Analytical data from TWM-34 and MW-185 are suggestive that Site COCs are steadily increasing within the area of southeastern treatment zone. The southeastern treatment zone consisted of only four injection locations and was installed as a limited scale injection area in 2018. Based on analytical data collected since installation of these monitoring wells, further development of a remedial plan is warranted for this area of the Site. Ramboll is currently developing a remedial plan for this and other areas of the Site that will be submitted to ADEQ within 2022.

South Plume

TMW-36 and TMW-36B are located directly adjacent to and down-gradient of the southwest corner of the October 2020 ISCR injection area. TMW-19 is a side-gradient well to this treatment zone and can provide a reasonable comparison to TMW-36 and TMW-36B. TMW-36B was non-detect for all chlorinated VOCs from October 2020 through October 2021, therefore discussions below will mostly focus on TMW-36. Analytical data for this treatment area can be summarized as follows:

- Biogeochemical data:
  - Iron concentrations initially increased by two orders of magnitude at TMW-36 between October 2020 and October 2021 (<50 µg/L to 3,490 µg/L) as a result of ZVI within the injected reagent.

- TOC concentrations did not substantively change post injection and only increased at TMW-36 from 0.37 mg/L to 0.68 mg/L from October 2022 to October 2021.
- Nitrate was reduced in groundwater at TMW-36 from 16.7 mg/L in October 2020 to 0.29 mg/L in October 2021, which is suggestive that reducing conditions have been established within the treatment zone.
- Sulfate was reduced in groundwater at TMW-36 from 56.8 mg/L in October 2020 to 15.3 mg/L in October 2021, which is suggestive that strongly reducing conditions have been established within the treatment zone.
- ORP field data measured during groundwater sampling at TMW-36 were -19 mV. Negative ORP values are generally indicative of potential reductive dechlorination.

- VOC data:
  - TCE concentrations were reduced in groundwater at TMW-36 from 389 µg/L in October 2019 to 11.3 µg/L in April 2021. However, in October 2021 TCE was reported as 110 µg/L in groundwater at TMW-36.
  - cis-1,2-DCE concentrations in groundwater from TMW-36 have mostly been stable at concentrations ranging from 3.2 µg/L to 8.7 µg/L from the baseline October 2019 monitoring event through April 2021. However, in October 2021 cis-1,2-DCE was reported as 64.3 µg/L in groundwater at TMW-36.
  - VC concentrations in groundwater from TMW-36 have mostly been stable at concentrations ranging from non-detect to 0.4 µg/L from the baseline October 2019 monitoring event through October 2021.
  - Detectable concentrations of ethene and ethane have been observed in groundwater during both the October 2020 and October 2021 sampling events at TMW-36 (except for ethene which was non-detect in water in October 2020). The detections of ethene and ethane are not as high as ideally desired (generally 1.2 µg/L or lower), however detections of these analytes do demonstrate that complete biodegradation of Site COCs is occurring.
  - Based on the lower detectable concentrations of biodegradation breakdown products (e.g., limited detections of cis-1,2-DCE, VC, ethane and ethene) at TMW-36 and based on elevated iron concentrations during the October 2021 sampling event, abiotic degradation of Site COCs is likely complimenting on-going bioremediation processes.

Analytical data collected within the south plume treatment area suggests that an initial remediation treatment zone was successfully established and that a reducing environment exists that is capable of complete reductive dechlorination and abiotic degradation of Site COCs.

7.3 ISCR Summary

An ISCR treatment zone remedy has been installed within five areas of the Site; north of the Site (two injections) and the northeast, southwest, southeast and southern portions of the Site. In general, analytical data collected from the various treatment areas indicate that remediation treatment zones were successfully established and reducing environments still exist that are capable of complete reductive dechlorination and abiotic degradation of Site COCs.

The southeast treatment area was a limited scale injection program. Site COCs within this area of the Site have been observed to be steadily increasing within the up-gradient south treatment zone monitoring well MW-185 since 2018. Evidence of remediation of Site COCs has been observed in water collected from down-gradient monitoring well TMW-34 based on transformation of biogeochemical parameters and detection of TCE bioremediation breakdown products.

Ramboll is currently developing a remedial plan for the Site that will address these areas and is anticipated to be submitted to ADEQ in 2022.

8 Summary and Conclusions

Ramboll performed investigation, maintenance, and remediation efforts at the Site in 2021 consisting of:

- Additional East Plume groundwater investigation in August and September 2021 along the eastern property boundary, consisting of temporary well installation, groundwater sample collection and the installation of MW-205;
- Additional South Plume groundwater investigation in August 2021 to the south of MW-187 and MW-188 based on increasing TCE concentrations in the area, consisting of temporary well installation, groundwater sample collection and the installation of MW-206;
- Additional South Plume Investigation in September 2021 in the vicinity of MW-190 to address increasing TCE concentrations in the area, consisting of temporary well installation and groundwater sample collection;
- Repair of monitoring wells MW-22R, MW-34R, MW-39R and ITMW-5 located both on site and north of Ingersoll Avenue;
- Site-wide geophysical investigation to identify and characterize preferential groundwater flow paths within the BTZ beneath the Site; and
- Semi-annual and annual groundwater and indoor air monitoring events in May and October 2021, respectively; and
- Site-wide PFM investigation to characterize stratification of the TCE impacts within the saturated zone sediments and range of mass flux values to be used in the design of treatment areas to mitigate future groundwater plume expansion.

The 2021 Annual Groundwater Monitoring Event was completed in October 2021. The results of the annual groundwater monitoring event indicate the following:

- 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.
- The site-wide groundwater conditions can be categorized as three separate plumes with distinct characteristics (i.e., South Plume, North Plume and Northeast Plume).
    - The South Plume is characterized by:

    - A relatively flat south-southeast potentiometric gradient with a southwestern gradient in the southwestern section of the plume and an easterly gradient in the east and southeast; and
    - Source area (Area 1) TCE concentrations greater than 10,000 µg/L.
  - The North Plume is characterized by:
    - A north-northeast potentiometric gradient that is flat in the south portion of the North Plume but steepens north-northeast; and
    - TCE concentrations generally between 100 and 700 µg/L.
  - The Northeast Plume is characterized by:
    - An east-northeast potentiometric gradient; and
    - TCE concentrations generally between 5 and 320 µg/L.

Groundwater monitoring results in the vicinity of the ISCR injection locations indicate the following:

- In the north plume, previous injections in 2015 and 2018 have successfully established a reducing environment that still exists and is capable of complete reductive dechlorination and abiotic degradation of Site COCs. Groundwater analyzed from monitoring wells within the north plume treatment area have shown TCE reduction with temporary cis-1,2-DCE and VC increases and detectable concentrations of ethene and ethane.
- In the northeast plume, previous injections in 2019 have successfully established a reducing environment that still exists and is capable of complete reductive dechlorination and abiotic degradation of Site COCs. Groundwater analyzed from monitoring wells within the northeast plume treatment area have shown PCE and TCE reduction with temporary cis-1,2-DCE and VC increases and detectable concentrations of ethene and ethane.
- In the southwest plume, previous injections in 2018 have successfully established a reducing environment that still exists and is capable of complete reductive dechlorination and abiotic degradation of Site COCs. Groundwater analyzed from monitoring wells within the southwest plume treatment area have shown TCE reduction with temporary cis-1,2-DCE and VC increases and detectable concentrations of ethene and ethane.
- The southeast treatment area was a limited scale injection program installed in 2018. Site COCs within this area of the Site have been observed to be steadily increasing within the up-gradient monitoring well MW-185. Evidence of remediation of Site COCs has been observed in water collected from down-gradient monitoring well TMW-34 based on transformation of biogeochemical parameters and detection of TCE bioremediation breakdown products.
- In the south plume, previous injections in 2020 have successfully established a reducing environment that still exists and is capable of complete reductive dechlorination and

abiotic degradation of Site COCs. Groundwater analyzed from monitoring wells within the south plume treatment area have shown TCE reduction with a recent increase in cis-1,2-DCE in October 2021 and detectable concentrations of ethene and ethane. It is anticipated that the recent increase in cis-1,2-DCE is a result of ongoing TCE reduction in groundwater and the increase will only be temporary as observed in other treatment areas.

- 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 Attachment B).
- The indoor air data indicate a potential complete exposure pathway due to vapor intrusion into the building. Of the detected constituents, only TCE exceeded the respective conservative indoor air screening level based on a hazard index of 0.1; however, cumulative risk estimates for the onsite worker were below or within ADEQ acceptable range of non-cancer hazard and cancer target values. These results do not indicate health risks from indoor exposures under current operating conditions.

The investigation and monitoring activities at the Site have not identified any complete exposure pathways in the residential area (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. Deed restrictions precluding the use of groundwater and access agreements to facilitate future investigation or monitoring, if required, apply where groundwater impacts have been characterized in the residential area.

Monitoring at the Site will continue in accordance with the RGWMP with the next groundwater monitoring event planned to occur in Spring 2022. Additional Work Plans are being developed to address offsite areas with concentrations above the RAL.

9 References

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

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

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

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

Gilbert, 1987. Gilbert, R. O. Statistical Methods for Environmental Pollution Monitoring, Wiley, NY.

He, Y.T., Wilson, J.T., Su, C. and Wilkin, R.T. 2015. Review of abiotic degradation of chlorinated solvents by reactive iron minerals in aquifers. Groundwater Monitoring & Remediation, 35:4, 57–75.

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, 2015. 2014 Remedial Action Effectiveness Report, January.

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

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

Ramboll, 2016. Onsite Indoor Air and Sub-Slab Soil Vapor Data Report Second Monitoring Event, August 16.

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

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

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

Ramboll, 2017. 2016 Annual Report, February.

Ramboll, 2017. Action Plan, February.

Ramboll, 2017. Action Plan, July.

Ramboll, 2018. Action Plan, January.

Ramboll, 2018. Action Plan, May.

Ramboll, 2019. Onsite Indoor Air and Sub-Slab Vapor Monitoring Report (April 2019).

Ramboll, 2019. Action Plan, October.

Ramboll, 2019. Well Abandonment and Completion Report, November.

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.

USEPA. 2009. Identification and characterization methods for reactive minerals responsible for natural attenuation of chlorinated organic compounds in groundwater. Office of Research and Development. 600/R-09/115.

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 (µg/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
Whirlpool Facility - Fort Smith, Arkansas

Plume Boundary Wells				
MW-50R	MW-60R	MW-61R	MW-67*	MW-66*
MW-63R	MW-62R	MW-36	MW-27	MW-28
ITMW-16	ITMW-2*	MW-22	ITMW-4	ITMW-6
MW-29	ITMW-20	MW-26	MW-31*	MW-39R
MW-40R	IW-72*	MW-68		

Offsite Wells				
IW-73	IW-74	MW-41	IW-76	IW-77
MW-71	MW-46R	RW-69	MW-55R	MW-56R
MW-57R	MW-58R			

Onsite Wells				
MW-25R	ITMW-19	ITMW-17*	ITMW-11	ITMW-12*
ITMW-18	ITMW-15	MW-38	MW-33*	MW-65
MW-35R*	IW-80	MW-34	MW-32*	ITMW-21
ITMW-7	ITMW-10	ITMW-9	ITMW-1R	ITMW-13*
ITMW-14*				

Notes:

* Indicates wells that have been abandoned since 2013

TABLE 2B
MONITORING WELL INSPECTION (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

Well ID	October 2021 Well Condition and Notes	Comments
ITMW-1R	broken bolt	NA
ITMW-2R	no issues	NA
ITMW-4	no issues	NA
ITMW-5	no issues	NA
ITMW-6	well vault lid broken	NA
ITMW-7	no issues	NA
ITMW-9	no issues	NA
ITMW-10	no issues	NA
ITMW-11	no issues	NA
ITMW-12R	no issues	NA
ITMW-15	no issues	NA
ITMW-16	no issues	NA
ITMW-18	broken bolt	NA
ITMW-19	no issues	NA
ITMW-20	no issues	NA
ITMW-21	no issues	NA
IW-72	no issues	NA
IW-73	no issues	NA
IW-74	no issues	NA
IW-75	no issues	NA
IW-76	no issues	NA
IW-77	no issues	NA
IW-78	no issues	NA
IW-79	no issues	NA
IW-80	no issues	NA
MW-22	no issues	NA
MW-23	no issues	New J Plug Installed
MW-24	no issues	NA
MW-25	no issues	NA
MW-26	no issues	NA
MW-27	no issues	NA
MW-28	no issues	NA
MW-29	no issues	NA
MW-30	no issues	NA
MW-34R	no issues	Repaired September 2021
MW-35R	no issues	NA
MW-36R	no issues	NA
MW-37	no issues	NA
MW-38	no issues	NA
MW-39R	no issues	Repaired September 2021
MW-40R	no issues	NA
MW-41R	no issues	NA
MW-46R	no issues	NA
MW-50R	no issues	NA
MW-55R	no issues	NA
MW-56R	no issues	NA
MW-57R	broken bolt	NA
MW-58R	no issues	NA
MW-60R	no issues	NA
MW-61R	no issues	NA
MW-62R	no issues	NA
MW-63R	no issues	NA
MW-65R	no issues	NA
MW-68	no issues	NA
MW-70	no issues	NA
MW-71	no issues	NA
RW-69	no issues	NA
MW-81	no issues	NA

Well ID	October 2021 Well Condition and Notes	Comments
MW-82	no issues	NA
MW-83	broken bolt	NA
MW-84	no issues	NA
MW-85	no issues	NA
MW-86	no issues	NA
MW-87	no issues	NA
MW-88	no issues	NA
MW-89	no issues	NA
MW-90	no issues	NA
MW-91	no issues	NA
MW-92	no issues	NA
MW-93	no issues	NA
MW-94	no issues	NA
MW-95	no issues	NA
MW-96	no issues	NA
MW-97	no issues	NA
MW-98	no issues	NA
MW-99	no issues	NA
MW-172	no issues	NA
MW-173	broken bolt	NA
MW-174	no issues	NA
MW-175	no issues	NA
MW-176	no issues	NA
MW-177	no issues	NA
MW-178	no issues	NA
MW-179	no issues	NA
MW-180	missing bolt	NA
MW-181	no issues	NA
MW-182	no issues	NA
MW-183R	broken bolt	NA
MW-184	no issues	NA
MW-185	no issues	NA
MW-186	no issues	NA
MW-187	no issues	NA
MW-188	no issues	NA
MW-189	no issues	NA
MW-190	no issues	NA
MW-191	no issues	NA
MW-192	no issues	NA
MW-193	no issues	NA
MW-194	no issues	NA
MW-195	no issues	NA
MW-196	no issues	NA
MW-197	no issues	NA
MW-198	no issues	NA
MW-199	no issues	NA
MW-200	no issues	NA
MW-201	no issues	NA
MW-202	1 missing bolt	NA
MW-203	no issues	NA
MW-204	no issues	NA
MW-205	no issues	NA
MW-206	no issues	NA
IW-115	no issues	NA
TMW-10	no issues	NA
TMW-11	no issues	NA
TMW-12	no issues	NA
TMW-14	no issues	NA
TMW-16	no issues	NA
TMW-19	no issues	NA
TMW-20	no issues	NA
TMW-21	no issues	NA
TMW-22R	no issues	NA
TMW-23	no issues	NA
TMW-24	no issues	NA
TMW-25	no issues	NA
TMW-26	no issues	NA
TMW-27	no issues	NA
TMW-29	no issues	NA
TMW-30	no issues	NA
TMW-32	no issues	NA
TMW-34	no issues	NA
TMW-35	no issues	NA
TMW-36	no issues	NA

Notes:

NA: Not Applicable

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

Location	Well Coordinates		Previous TOC Elevation (feet) (if applicable)	TOC Elevation (feet)	Screen Length (feet)	Screened Interval (feet)	Maximum Static Water Elevation (Since Oct 2012)	Maximum Elevation Date	Minimum Static Water Elevation (Since Oct 2012)	Minimum Elevation Date	Static Water Elevation (feet)									
	Easting (feet)	Northing (feet)									10/22/2019		5/11/2020		10/5/2020		4/12/2021		10/18/2021	
											DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation
ITMW-1[4]	591383	368913		477.03	13.75	16.50 - 30.25	464.02	10/5/2015	460.63	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-1R	591378	368921		473.82	10.00	19.00 - 29.00	NA	NA	NA	NA	14.31	459.51	12.41	461.41	11.96	461.86	12.36	461.46	11.81	462.01
ITMW-2[4]	591189	369021		475.08	14.45	12.75 - 27.20	466.03	10/14/2013	461.98	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-2R	591244	369072		474.84	5.00	26.50-31.50	NA	NA	NA	NA	11.54	463.30	12.05	462.79	11.5	463.34	12.09	462.75	11.91	462.93
ITMW-3[4]	591306	369075		474.93	14.80	10.65 - 25.45	467.38	10/14/2013	460.48	1/12/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-4	591251	368208		478.28	14.00	18.20 - 32.20	466.94	1/12/2015	459.58	11/13/2018	18.02	460.26	18.13	460.15	17.77	460.51	18	460.28	17.92	460.36
ITMW-5	590982	368205		474.29	9.75	19.90 - 29.65	460.31	10/18/2021	450.13	4/22/2013	18.70	455.59	18.85	455.44	18.38	455.913	18.71	455.583	13.98	460.313
ITMW-6	590923	367970		483.22	14.50	21.65 - 36.15	466.38	1/12/2015	454.24	4/22/2013	22.86	460.36	22.49	460.73	22.47	460.75	22.73	460.49	22.8	460.42
ITMW-7	590546	368323		482.15	15.00	21.90 - 36.90	463.85	7/20/2015	458.18	10/14/2013	19.82	462.33	19.41	462.74	19.57	462.58	19.61	462.54	20.12	462.03
ITMW-9	591256	368146		482.08	13.50	19.95 - 33.45	463.47	10/5/2015	455.78	4/22/2013	21.91	460.17	22.04	460.04	21.6	460.48	21.86	460.22	21.81	460.27
ITMW-10	590978	368157		481.00	10.95	22.65 - 33.60	463.33	7/20/2015	457.80	4/22/2013	20.61	460.39	20.76	460.24	20.28	460.72	20.54	460.46	20.52	460.48
ITMW-11	590978	369040		473.94	13.45	15.25 - 28.70	465.69	10/1/2012	458.98	1/12/2015	10.11	463.83	10.71	463.23	9.96	463.98	10.62	463.32	10.49	463.45
ITMW-12[4]	590998	369007		476.86	15.00	15.00 - 30.00	466.68	1/12/2015	462.26	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-12R	591015	369004		474.32	10.00	20.00 - 30.00	NA	NA	NA	NA	10.65	463.67	10.36	463.96	10.54	463.78	11.12	463.2	11.05	463.27
ITMW-13[4]	591047	369052		477.98	15.00	14.00 - 29.00	465.29	7/20/2015	462.28	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-14[4]	591098	369056		477.30	14.70	14.80 - 29.50	468.88	10/14/2013	461.08	1/12/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-15	590944	369043		474.31	15.00	15.00 - 30.00	465.22	10/1/2012	462.17	4/25/2017	10.53	463.78	11.11	463.20	10.4	463.91	11	463.31	10.88	463.43
ITMW-16	590967	369100		478.76	15.00	17.00 - 32.00	468.19	1/12/2015	462.46	3/25/2014	14.84	463.92	NA	NA	14.82	463.94	15.39	463.37	15.42	463.34
ITMW-17	590864	369051		477.96	15.00	16.00 - 31.00	466.26	10/14/2013	462.23	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ITMW-18	590976	368955		473.90	15.00	15.00 - 30.00	465.38	7/20/2015	459.34	1/12/2015	9.98	463.92	10.46	463.44	9.86	464.04	10.45	463.45	10.32	463.58
ITMW-19	590890	368961		476.33	15.00	16.00 - 31.00	466.02	1/12/2015	462.23	4/25/2017	12.52	463.81	12.98	463.35	12.37	463.96	13.01	463.32	12.91	463.42
ITMW-20	590370	369042		477.87	15.00	14.00 - 29.00	465.23	7/20/2015	462.80	11/7/2016	13.87	464.00	13.88	463.99	13.5	464.37	13.74	464.13	14.13	463.74
ITMW-21	590629	368898		476.52	15.00	16.00 - 31.00	465.12	7/20/2015	461.27	4/22/2013	12.52	464.00	12.73	463.79	12.35	464.17	12.58	463.94	12.89	463.63
MW-22	591853	368913		473.94	15.00	14.00 - 29.00	464.25	10/5/2015	460.87	11/13/2018	12.00	461.94	12.63	461.31	11.89	462.05	12.67	461.27	11.24	462.7
MW-23	590892	369238		475.66	15.00	14.00 - 29.00	465.36	1/12/2015	462.26	4/25/2017	11.79	463.87	12.31	463.35	12.72	462.94	12.28	463.38	12.23	463.43
MW-24	590876	369134		476.28	15.00	18.00 - 33.00	465.24	7/20/2015	462.30	4/25/2017	12.40	463.88	12.91	463.37	12.3	463.98	12.88	463.4	12.85	463.43
MW-25[4]	590743	369006		476.76	15.00	17.00 - 32.00	465.24	7/20/2015	462.33	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-25R	590747	368986		472.59	5.00	25.00 - 30.00	NA	NA	NA	NA	9.79	462.80	9.01	463.58	8.64	463.95	9.1	463.49	8.93	463.66
MW-26	590566	369230		478.03	15.00	18.50 - 33.50	465.54	7/20/2015	463.08	4/25/2017	13.54	464.49	13.79	464.24	13.37	464.66	13.69	464.34	13.99	464.04
MW-27	591077	369226		475.27	15.00	15.00 - 30.00	465.18	7/20/2015	462.24	4/25/2017	11.50	463.77	12.00	463.27	11.39	463.88	11.97	463.3	11.88	463.39
MW-28	591324	369209		470.50	15.00	13.00 - 28.00	465.21	7/20/2015	458.87	1/12/2015	6.80	463.70	7.42	463.08	6.77	463.73	7.37	463.13	7.18	463.32
MW-29	590181	368371		474.95	15.00	16.00 - 31.00	468.34	1/12/2015	461.98	11/7/2016	11.54	463.41	11.41	463.54	11.23	463.72	11.24	463.71	11.84	463.11
MW-30	590579	368432		479.02	15.00	21.00 - 36.00	467.44	1/12/2015	461.84	11/7/2016	16.02	463.00	16.09	462.93	15.76	463.26	15.89	463.13	16.39	462.63
MW-31[4]	590824	369286		475.99	10.00	17.50 - 27.50	464.69	10/13/2014	460.48	1/12/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-31R	590823	369288		475.73	10.00	20.00 - 30.00	465.13	7/20/2015	463.93	4/13/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-32[1,4]	590909	369279		475.63	10.00	17.00 - 27.00	464.69	10/13/2014	462.54	3/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-32R	590908	369282		475.50	10.00	20.50 - 30.50	465.09	7/20/2015	463.94	4/13/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-33[1,4]	590994	369276		474.82	10.00	15.80 - 25.80	464.70	10/13/2014	462.44	3/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-33R	590993	369277		474.60	10.00	19.00 - 29.00	465.19	7/20/2015	463.97	4/13/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-34[1,4]	590932	369336		474.29	10.00	19.50 - 29.50	464.81	10/13/2014	462.68	3/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-34R	590911	369339		475.05	7.00	21.50 - 28.50	466.25	7/20/2015	463.30	4/25/2017	10.11	464.94	10.65	464.40	NA	NA	NA	NA	11.35	463.70
MW-35R[3]	590994	369333		473.69	10.00	19.50 - 29.50	465.14	7/20/2015	462.15	4/25/2017	9.88	463.81	NA	NA	8.98	464.71	10.39	463.3	10.36	463.33
MW-36[1,4]	591079	369329		473.30	15.00	12.00 - 27.00	464.85	10/13/2014	462.71	3/5/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-36R	591078	369328		472.98	9.00	20.00 - 29.00	465.27	7/20/2015	462.25	4/25/2017	9.06	463.92	9.57	463.41	8.98	464.00	9.57	463.41	9.53	463.45
MW-37	590972	369028		473.43	15.00	15.00 - 30.00	465.25	7/20/2015	462.23	4/25/2017	9.64	463.79	10.11	463.32	9.49	463.94	NA	NA	10.04	463.39
MW-38	590960	369040		474.44	15.00	15.00 - 30.00	465.23	7/20/2015	462.19	4/25/2017	10.68	463.76	11.16	463.28	10.56	463.88	NA	NA	11.17	463.27
MW-39[1,4]	590833	369421		475.46	10.00	19.50 - 29.50	465.00	1/12/2015	461.61	3/5/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-39R	590840	369429		475.41	5.00	24.50 - 29.50	464.88	10/5/2020	463.57	10/18/2021	10.59	464.82	11.06	464.35	10.53	464.88	NA	NA	11.84	463.57
MW-40[1,4]	590998	369622		473.35	10.00	17.75 - 27.75	464.76	10/13/2014	455.04	10/14/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-40R	591013	369624		473.09	10.00	18.50 - 28.50	465.29	7/20/2015	462.31	4/25/2017	9.07	464.02	9.60	463.49	9.02	464.07	NA	NA	9.89	463.20
MW-41[1,4]	591061	369469		472.09	10.00	18.75 - 28.75	464.45	10/13/2014	462.63	3/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-41R	591061	369478		471.84	10.00	18.00 - 28.00	465.13	7/20/2015	462.21	4/25/2017	7.97	463.87	8.50	463.34	7.42	464.42	8.47	463.37	8.44	463.4
MW-46R	591472	369609		465.79	5.00	16.60 - 21.60	464.88	7/20/2015	457.50	1/12/2015	2.05	463.74	2.48	463.31	1.88	463.91	2.49	463.30	2.46	463.33

RAMBOLL

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

Location	Well Coordinates		Previous TOC Elevation (feet) (if applicable)	TOC Elevation (feet)	Screen Length (feet)	Screened Interval (feet)	Maximum Static Water Elevation (Since Oct 2012)	Maximum Elevation Date	Minimum Static Water Elevation (Since Oct 2012)	Minimum Elevation Date	Static Water Elevation (feet)									
	Easting (feet)	Northing (feet)									10/22/2019		5/11/2020		10/5/2020		4/12/2021		10/18/2021	
											DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation
MW-50[4]	591415	370213		463.11	10.00	8.00 - 18.00	459.81	10/13/2014	453.92	1/12/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-50R	591415	370210		462.65	5.00	13.00 - 18.00	459.51	10/18/2021	452.67	4/25/2017	6.91	455.74	6.90	455.75	3.36	459.29	4.74	457.91	3.14	459.51
MW-55[1,4]	591291	369893		465.50	5.00	15.50 - 20.50	463.06	10/14/2013	461.59	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-55R	591291	369895		465.30	2.00	19.00 - 21.00	465.06	7/20/2015	462.02	4/25/2017	1.24	464.06	1.75	463.55	1.12	464.18	1.77	463.53	1.91	463.39
MW-56[1,4]	591687	369730		463.22	5.00	14.50 - 19.50	462.55	10/13/2014	456.49	3/25/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-56R	591687	369732		463.17	2.00	18.00 - 20.00	462.47	7/20/2015	459.03	11/7/2016	1.41	461.76	1.46	461.71	1.12	462.05	1.42	461.75	2.45	460.72
MW-57[1,4]	591690	369811		462.90	5.00	14.00 - 19.00	461.14	4/13/2015	457.65	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-57R	591693	369806		462.92	5.00	15.00 - 20.00	462.26	7/20/2015	458.68	11/7/2016	1.31	461.61	1.27	461.65	0.98	461.94	1.25	461.67	2.40	460.52
MW-58[1,4]	591570	369907		462.71	5.00	12.50 - 17.50	462.71	7/28/2014	461.01	1/12/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-58R	591571	369898		465.98	5.00	14.00 - 19.00	464.68	7/20/2015	461.64	4/25/2017	2.32	463.66	2.83	463.15	2.19	463.79	2.85	463.13	3.00	462.98
MW-60[1,4]	591710	370193		460.85	5.00	12.00 - 17.00	458.07	10/13/2014	452.38	4/22/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-60R	591710	370193		460.66	5.00	10.50 - 15.50	459.65	10/18/2021	455.11	4/25/2017	1.63	459.03	4.14	456.52	1.42	459.24	4.26	456.4	1.01	459.65
MW-61[1,4]	592003	370175		459.61	5.00	10.50 - 15.50	453.32	7/28/2014	448.21	3/5/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-61R	591999	370175		459.31	5.00	10.50 - 15.50	456.38	10/5/2015	451.85	4/25/2017	5.02	454.29	5.12	454.19	4.44	454.87	4.92	454.39	4.12	455.19
MW-62[1,4]	591791	369569		464.33	5.00	15.50 - 20.50	464.03	1/12/2015	456.68	3/5/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-62R	591790	369572		464.19	5.00	15.00 - 20.00	461.72	7/20/2015	457.49	4/25/2017	3.72	460.47	4.32	459.87	3.39	460.8	4.21	459.98	4.19	460.00
MW-63[1,4]	591994	369560		463.87	5.00	16.00 - 21.00	461.43	10/13/2014	455.05	4/22/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-63R	591993	369559		463.94	5.00	15.00 - 20.00	462.29	7/20/2015	458.56	4/25/2017	2.98	460.96	4.37	459.57	2.88	461.06	4.36	459.58	3.13	460.81
MW-65R	590980	369335		473.91	10.00	19.50 - 29.50	473.57	1/12/2015	462.38	4/25/2017	9.91	464.00	10.44	463.47	9.76	464.15	10.42	463.49	10.4	463.51
MW-66	592280	369855		462.06	5.00	12.60 - 17.60	460.25	7/20/2015	446.55	1/12/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-67	592291	370027		459.01	5.00	9.60 - 14.60	458.42	7/28/2014	449.31	10/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-67R	592291	370022		459.16	5.00	12.00 - 17.00	458.96	7/20/2015	456.44	5/2/2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-68	591173	369815		469.80	10.00	14.00 - 24.00	465.22	7/20/2015	462.35	4/25/2017	5.66	464.14	6.18	463.62	5.58	464.22	6.18	463.62	6.22	463.58
RW-69[3]	591170	369678		470.89	10.00	15.00 - 25.00	464.97	7/20/2015	462.00	4/25/2017	7.18	463.71	7.72	463.17	7.12	463.77	7.69	463.2	7.65	463.24
MW-70	591162	369693		471.52	NA	NA	465.32	7/20/2015	462.37	4/25/2017	7.47	464.05	7.99	463.53	7.19	464.33	8.01	463.51	8.94	462.58
MW-71	591170	369695		471.30	NA	NA	465.30	7/20/2015	462.31	4/25/2017	7.29	464.01	7.79	463.51	7.4	463.9	7.78	463.52	7.73	463.57
IW-72[3]	591056	369590		471.83	10.00	15.00 - 25.00	465.37	7/20/2015	462.29	4/22/2013	7.78	464.05	8.23	463.60	7.69	464.14	NA	NA	NA	NA
IW-73	591060	369503		471.38	NA	NA	465.19	7/20/2015	462.28	4/25/2017	7.44	463.94	7.91	463.47	7.36	464.02	7.98	463.4	7.91	463.47
IW-74[2,3]	591058	369545		472.10	10.00	15.00 - 25.00	465.30	7/20/2015	462.34	4/25/2017	8.11	463.99	8.61	463.49	8.02	464.08	8.6	463.5	8.55	463.55
IW-75	591072	369605		472.00	NA	NA	465.19	7/20/2015	462.20	4/25/2017	8.11	463.89	8.63	463.37	8.03	463.97	8.64	463.36	8.64	463.36
IW-76	591050	369426		472.51	NA	NA	465.42	7/20/2015	462.46	4/25/2017	8.40	464.11	8.91	463.60	8.33	464.18	8.92	463.59	8.86	463.65
IW-77[2]	591027	369380		472.97	10.00	20.00 - 30.00	465.33	7/20/2015	462.37	4/25/2017	8.98	463.99	9.50	463.47	8.94	464.03	9.45	463.52	9.45	463.52
IW-78	590984	369338		473.30	NA	NA	465.19	7/20/2015	461.58	11/7/2016	9.47	463.83	9.99	463.31	9.43	463.87	10.00	463.3	10.01	463.29
IW-79	591018	369335		473.90	NA	NA	465.45	7/20/2015	462.45	4/25/2017	9.80	464.10	10.33	463.57	9.75	464.15	10.31	463.59	10.27	463.63
IW-80[2,3]	591047	369343		473.27	10.00	20.00 - 30.00	465.18	7/20/2015	462.25	4/25/2017	9.40	463.87	9.91	463.36	9.36	463.91	9.93	463.34	9.87	463.4
IW-101	590930	369201		475.70	5.00	22.90-27.90	464.66	1/6/2016	463.13	11/13/2018	11.83	463.87	12.41	463.29	11.78	463.92	12.3	463.4	12.28	463.42
IW-115	591007	369344		473.41	5.00	19.10-24.10	472.99	4/12/2021	462.38	11/7/2016	9.54	463.87	10.07	463.34	9.48	463.93	0.42	472.99	9.95	463.46
IW-129	590989	368977		473.54	5.00	24.55 - 29.55	463.08	5/12/2014	463.08	5/12/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW-130	590924	369186		475.58	5.00	23.38 - 28.38	463.20	5/12/2014	463.20	5/12/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW-131	591006	369339		473.37	5.00	19.72 - 24.72	463.21	5/12/2014	463.21	5/12/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW-132	590835	369040		475.49	5.00	23.00-28.00	NA	NA	NA	NA	11.69	463.80	12.24	463.25	11.53	463.96	12.16	463.33	12.03	463.46
IW-134	590885	369037		474.22	5.00	23.00-28.00	NA	NA	NA	NA	10.33	463.89	10.90	463.32	10.19	464.03	10.83	463.39	10.71	463.51
IW-147	590782	368993		473.13	5.00	20.00-25.00	NA	NA	NA	NA	9.32	463.81	9.84	463.29	9.18	463.95	9.82	463.31	9.68	463.45
MW-81	591039	369406		473.60	5.00	20.00-25.00	465.39	7/20/2015	462.41	4/25/2017	9.53	464.07	10.06	463.54	9.49	464.11	10.06	463.54	10	463.6
MW-82	590977	369395		473.54	5.00	21.00-26.00	465.29	7/20/2015	462.30	4/25/2017	9.62	463.92	10.11	463.43	9.56	463.98	10.11	463.43	10.09	463.45
MW-83	590946	369211		475.48	5.00	22.00-27.00	465.25	7/20/2015	462.32	4/25/2017	11.60	463.88	12.11	463.37	11.49	463.99	12.36	463.12	12.01	463.47
MW-84	590882	369194		475.53	5.00	24.00-29.00	466.39	1/6/2016	462.23	4/25/2017	11.69	463.84	12.20	463.33	11.61	463.92	12.19	463.34	12.14	463.39
MW-85[4]	590760	369018		474.41	5.00	25.00-30.00	465.21	7/20/2015	462.24	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-85R	590769	369015		472.34	5.00	24.50-29.50	NA	NA	NA	NA	8.58	NA	9.09	463.25	8.42	463.92	8.99	463.35	8.92	463.42
MW-86[4]	590767	368995		473.19	5.00	23.00-28.00	465.10	7/20/2015	462.19	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-87	592269	368835		470.78	10.00	17.00-27.00	460.91	10/5/2015	457.59	11/13/2018	12.51	458.27	12.85	457.93	12.42	458.36	12.64	458.14	12.32	458.46
MW-88	592151	369043		468.89	10.00	18.00-28.00	462.85	10/5/2015	457.71	4/23/2019	8.12	460.77	10.76	458.13	8.19	460.70	10.70	458.19	8.06	460.83
MW-89	592357	369059		466.91	10.00	15.00-25.00	459.23	10/5/2015	456.30	5/11/2020	9.87	457.04	10.61	456.30	10.15	456.76	10.26	456.65	9.8	457.11

RAMBOLL

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

Location	Well Coordinates		Previous TOC Elevation (feet) (if applicable)	TOC Elevation (feet)	Screen Length (feet)	Screened Interval (feet)	Maximum Static Water Elevation (Since Oct 2012)	Maximum Elevation Date	Minimum Static Water Elevation (Since Oct 2012)	Minimum Elevation Date	Static Water Elevation (feet)									
	Easting (feet)	Northing (feet)									10/22/2019		5/11/2020		10/5/2020		4/12/2021		10/18/2021	
											DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation
MW-90	592157	369157		466.71	10.00	15.00-25.00	463.26	10/5/2015	458.71	4/23/2019	4.25	462.46	7.34	459.37	4.48	462.23	7.43	459.28	4.24	462.47
MW-91	592371	368830		468.90	10.00	15.00-25.00	460.19	10/5/2015	456.33	5/11/2020	11.29	457.61	12.57	456.33	11.6	457.30	11.72	457.18	11.49	457.41
MW-92	590778	368921		473.74	10.00	20.00-30.00	465.29	7/20/2015	462.30	4/25/2017	9.85	463.89	10.29	463.45	9.69	464.05	NA	NA	10.2	463.54
MW-93	590908	368894		477.81	10.00	25.00-35.00	465.12	7/20/2015	462.10	4/25/2017	13.89	463.92	NA	NA	13.93	463.88	14.63	463.18	14.45	463.36
MW-94	591015	368903		477.86	10.00	25.00-35.00	464.97	7/20/2015	461.93	4/25/2017	14.22	463.64	NA	NA	14.26	463.60	14.96	462.90	14.72	463.14
MW-95	590981	368821		477.63	10.00	25.00-35.00	465.01	7/20/2015	461.95	4/25/2017	13.89	463.74	NA	NA	13.92	463.71	14.59	463.04	14.44	463.19
MW-96	592775	369354		457.83	5.00	10.00-15.00	451.84	10/22/2019	449.11	4/25/2017	5.99	451.84	7.11	450.72	8.11	449.72	7.20	450.63	6.56	451.27
MW-97	592687	369527		459.43	5.00	11.50-16.50	451.44	10/22/2019	448.41	1/12/2015	7.99	451.44	8.60	450.83	8.24	451.19	8.80	450.63	8.31	451.12
MW-98	592840	369198		461.62	10.00	15.00-20.00	451.64	10/22/2019	449.16	4/13/2015	9.98	451.64	11.21	450.41	11.31	450.31	10.62	451	10.3	451.32
MW-99	592554	368814		466.80	5.00	18.50-23.50	459.89	7/20/2015	456.67	5/11/2020	9.41	457.39	10.13	456.67	10.04	456.76	9.83	456.97	9.48	457.32
MW-172	590858	369002		472.94	10.00	18.00-28.00	465.27	7/20/2015	461.26	4/25/2017	9.05	463.89	9.61	463.33	8.91	464.03	9.49	463.45	8.95	463.99
MW-173	591973	369624		463.56	1.00	5.00-6.00	463.41	10/5/2020	457.61	4/13/2015	1.16	462.40	1.00	462.56	0.15	463.41	0.60	462.96	0.71	462.85
MW-174	591976	369644		463.45	1.00	11.00-12.00	461.85	5/11/2020	457.67	4/13/2015	3.13	460.32	1.60	461.85	2.93	460.52	3.33	460.12	3.29	460.16
MW-175	591603	369655		464.17	1.00	13.50-14.50	464.17	10/22/2019	460.25	4/13/2015	0.00	464.17	1.27	462.90	1.03	463.14	0.50	463.67	1.38	462.79
MW-176	591474	369675		465.24	1.00	13.00-14.00	464.66	7/20/2015	461.99	4/25/2017	1.42	463.82	1.89	463.35	1.35	463.89	2.09	463.15	1.97	463.27
MW-177	591148	369698		471.50	1.00	9.00-10.00	469.97	1/6/2016	461.78	4/25/2017	4.19	467.31	2.95	468.55	3.09	468.41	3.06	468.44	4.32	467.18
MW-178	590973	369232		475.40	1.00	7.00-8.00	472.05	5/2/2016	467.79	10/18/2021	4.41	470.99	4.02	471.38	4.32	471.08	4.04	471.36	7.61	467.79
MW-179	590984	369232		475.39	1.00	12.00-13.00	473.98	11/13/2018	462.70	4/13/2015	7.26	468.13	11.01	464.38	8.75	466.64	8.70	466.69	7.96	467.43
MW-180	590996	369231		475.32	1.00	6.00-7.00	471.93	5/2/2016	467.30	10/18/2021	4.69	470.63	4.75	470.57	4.84	470.48	4.93	470.39	8.02	467.3
MW-181	591156	369695		471.87	1.00	6.00-7.00	469.57	5/11/2020	456.87	10/5/2015	DRY	DRY	2.30	469.57	3.65	468.22	4.24	467.63	6.33	465.54
MW-182	590403	367900		474.64	10.00	21.00-31.00	461.60	10/5/2015	459.39	11/7/2016	14.52	460.12	14.29	460.35	14.09	460.55	14.18	460.46	14.68	459.96
MW-183[4]	592664	369246		462.42	5.00	15.00-20.00	452.22	4/25/2017	450.11	10/5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-183R	592672	369248		462.43	5.00	13.00-18.00	452.23	10/22/2019	448.68	11/13/2018	10.20	452.23	10.96	451.47	12.48	449.95	11.49	450.94	11.38	451.05
MW-184	592646	369023		465.58	5.00	19.00-24.00	458.42	10/5/2015	451.20	10/5/2020	9.04	456.54	9.92	455.66	14.38	451.20	9.62	455.96	9.15	456.43
MW-185	592256	367995		473.86	10.00	20.00-30.00	463.49	10/5/2015	458.90	11/13/2018	14.43	459.43	14.56	459.30	12.91	460.95	14.45	459.41	14.42	459.44
MW-186	590124	367716		469.80	10.00	18.00-28.00	457.78	4/12/2021	451.25	10/5/2020	13.62	456.18	12.59	457.21	18.55	451.25	12.02	457.78	13.69	456.11
MW-187	590249	367588		477.42	10.00	24.00-34.00	459.21	5/2/2016	457.42	11/7/2016	18.84	458.58	18.71	458.71	18.55	458.87	18.50	458.92	19.18	458.24
MW-188	590646	367509	481.14	481.14	10.00	26.00-36.00	462.10	10/5/2015	459.46	4/25/2017	21.13	460.01	21.20	459.94	20.79	460.35	20.90	460.24	21.27	459.87
MW-189	590860	367666	485.59	485.59	10.00	31.00-41.00	462.83	10/5/2015	459.50	11/13/2018	25.40	460.19	25.36	460.23	25.09	460.5	25.20	460.39	25.42	460.17
MW-190	591325	367745		481.29	10.00	27.00-37.00	463.27	10/5/2015	459.38	11/13/2018	21.26	460.03	21.33	459.96	21.02	460.27	20.95	460.34	21.24	460.05
MW-191	591662	367732		476.85	10.00	23.00-33.00	463.37	10/5/2015	459.27	11/13/2018	16.89	459.96	16.95	459.90	16.66	460.19	16.80	460.05	16.85	460.00
MW-192	592078	367679		475.33	10.00	21.00-31.00	463.42	10/5/2015	459.10	11/13/2018	15.54	459.79	15.60	459.73	15.44	459.89	15.55	459.78	15.55	459.78
MW-193[4]	592312	370289		455.26	5.00	7.50-12.50	453.76	5/2/2016	451.25	10/5/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-194	592161	369791		462.47	10.00	11.00-12.00	459.62	10/5/2020	457.03	4/23/2019	3.29	459.18	4.21	458.26	2.85	459.62	4.31	458.16	2.91	459.56
MW-195	592185	370025		459.36	5.00	13.00-18.00	458.66	10/22/2019	455.78	4/25/2017	0.70	458.66	2.26	457.10	0.83	458.53	2.30	457.06	0.89	458.47
MW-196	592217	370132		457.63	5.00	10.00-15.00	454.92	10/5/2020	452.30	4/25/2017	3.05	454.58	3.44	454.19	2.71	454.92	3.45	454.18	2.9	454.73
MW-197	367744	589986		466.81	10.00	15.00-25.00	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	11.19	455.62	11.20	455.61	11.7	455.11
MW-198	368982	590776		473.08	10.00	19.00-29.00	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	8.95	464.13	9.78	463.3	9.71	463.37
MW-199	367542	589597		463.09	10.00	12.00-22.00	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	9.11	453.98	8.54	454.55	9.31	453.78
MW-200	368850	592704		467.57	10.00	15.20-25.20	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	10.49	457.08	10.66	456.91	10.26	457.31
MW-201	367185	591200		481.07	10.00	26.00-36.00	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	20.71	460.36	20.81	460.26	21.11	459.96
MW-202	368637	592660		468.16	10.00	14.20-24.20	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	9.9	458.26	10.09	458.07	9.81	458.35
MW-203	367411	591032		483.51	5.00	32.00-37.00	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	29.63	453.88	23.27	460.24	23.51	460
MW-204[6]	367991	590580		481.31	10.00	26.00-36.00	NA	10/5/2020	NA	10/5/2020	NA	NA	NA	NA	20.44	460.87	20.88	460.43	20.88	460.43
MW-205	368133	592101		474.66	10.00	19.00-29.00	459.68	10/18/2021	459.68	10/18/2021	NA	NA	NA	NA	NA	NA	NA	NA	14.98	459.68
MW-206	367378	590376		476.43	10.00	22.00-32.00	458.83	10/18/2021	458.83	10/18/2021	NA	NA	NA	NA	NA	NA	NA	NA	17.6	458.83
TMW-10	591973	370113		460.75	5.00	10.50-15.50	458.29	10/5/2020	453.53	4/25/2017	2.81	457.94	4.97	455.78	2.46	458.29	4.90	455.85	2.58	458.17
TMW-11	591956	370078		460.20	5.00	10.50-15.50	458.43	10/5/2020	453.72	4/25/2017	2.00	458.20	4.13	456.07	1.77	458.43	4.09	456.11	1.84	458.36
TMW-12[5]	591873	369860	461.77	461.77	10.00	10.00-20.00	459.43	4/25/2017	456.77	10/18/2021	3.56	458.21	3.52	458.25	3.21	458.56	3.44	458.33	5.00	456.77
TMW-13[4]	592083	369870		460.10	5.00	13.00-18.00	457.59	4/25/2017	457.59	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TMW-14	591873	369736		461.89	10.00	11.00-21.00	461.47	10/22/2019	458.78	4/25/2017	0.42	461.47	1.52	460.37	1.06	460.83	1.31	460.58	2.51	459.38
TMW-15[4]	592032	369683		465.32	10.00	13.00-23.00	457.58	4/25/2017	457.58	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TMW-16	590180	367791		469.39	10.00	18.00-28.00	458.30	10/22/2019	456.00	11/13/2018	11.09	458.30	11.12	458.27	11.29	458.1	11.48	457.91	11.84	457.55

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

Location	Well Coordinates		Previous TOC Elevation (feet) (if applicable)	TOC Elevation (feet)	Screen Length (feet)	Screened Interval (feet)	Maximum Static Water Elevation (Since Oct 2012)	Maximum Elevation Date	Minimum Static Water Elevation (Since Oct 2012)	Minimum Elevation Date	Static Water Elevation (feet)									
	Easting (feet)	Northing (feet)									10/22/2019		5/11/2020		10/5/2020		4/12/2021		10/18/2021	
											DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation	DTW	GW Elevation
TMW-17[4]	590856	367810		484.05	10.00	32.50-42.50	459.53	4/25/2017	459.53	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TMW-18[4]	590672	367598		478.79	10.00	25.00-35.00	459.45	4/25/2017	459.45	4/25/2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TMW-19[5]	590841	367571	485.35	484.99	10.00	33.00-43.00	460.37	10/5/2020	459.35	11/13/2018	24.95	460.04	24.87	460.12	24.62	460.37	24.76	460.23	25.02	459.97
TMW-20	592210	369929		460.57	7.00	11.50-18.50	458.77	10/5/2020	456.53	4/23/2019	1.81	458.76	NA	NA	1.8	458.77	3.18	457.39	2.03	458.54
TMW-21	592082	369959		460.01	10.00	10.00-20.00	459.17	10/22/2019	457.24	11/13/2018	0.84	459.17	1.68	458.33	1.02	458.99	1.29	458.72	2.1	457.91
TMW-22[4]	591985	369997		460.82	7.00	12.00-19.00	NA	10/1/2012	NA	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TMW-22R	591992	369990		460.71	5.00	13.50-18.50	459.70	10/5/2020	457.07	11/13/2018	1.16	459.55	2.40	458.31	1.01	459.7	1.51	459.2	2.78	457.93
TMW-23[5]	591874	370019	461.94	461.68	5.00	14.00-19.00	459.25	10/5/2020	456.16	4/23/2019	2.60	459.08	4.93	456.75	2.43	459.25	4.39	457.29	2.58	459.1
TMW-24[5]	592006	369808	461.23	461.15	7.00	12.00-19.00	460.29	10/5/2020	458.21	11/13/2018	1.10	460.05	2.01	459.14	0.86	460.29	1.07	460.08	2.52	458.63
TMW-25	590283	367848		473.14	10.00	20.50-30.50	459.10	4/12/2021	457.64	11/13/2018	14.28	458.86	14.22	458.92	14.09	459.05	14.04	459.1	14.72	458.42
TMW-26	590115	367763		472.10	10.00	18.00-28.00	457.96	10/18/2021	455.66	11/13/2018	15.04	457.06	14.91	457.19	14.82	457.28	14.79	457.31	14.14	457.96
TMW-27	590091	367871		467.45	10.00	16.00-26.00	457.70	5/11/2020	456.37	11/13/2018	10.06	457.39	9.75	457.70	9.82	457.63	9.87	457.58	10.51	456.94
TMW-28[4]	590092	367956		468.27	10.00	17.00-27.00	NA	10/1/2012	NA	10/1/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TMW-29	592211	369848		462.19	10.00	12.00-19.00	454.62	4/23/2019	452.25	10/5/2020	7.81	454.38	8.61	453.58	9.94	452.25	9.36	452.83	7.94	454.25
TMW-30	590113	367737		469.37	10.00	18.50-20.50	456.74	10/5/2020	454.20	5/11/2020	12.70	456.67	15.17	454.20	12.63	456.74	14.91	454.46	13.33	456.04
TMW-32	590048	367787		466.9	10.00	16.50-26.50	456.48	5/11/2020	455.49	11/13/2018	10.78	456.12	10.42	456.48	10.58	456.32	10.63	456.27	11.2	455.7
TMW-34	592334	368003		471.37	5.00	21.00-26.00	459.15	4/12/2021	458.67	11/13/2018	12.24	459.13	12.36	459.01	12.26	459.11	12.22	459.15	12.26	459.11
TMW-35	591121	369924		473.37	5.00	18.00-23.00	464.40	10/5/2020	463.50	10/18/2021	9.16	464.21	9.66	463.71	8.97	464.4	9.69	463.68	9.87	463.5
TMW-36	590884	367543		485.35	5.00	36.00-41.00	460.34	10/5/2020	459.93	10/18/2021	25.35	460.00	25.25	460.10	25.01	460.34	25.14	460.21	25.42	459.93
TMW-36B	367548	590885		485.35	5.00	25-31	460.28	4/12/2021	460.12	10/18/2021	NA	NA	NA	NA	25.18	460.17	25.07	460.28	25.23	460.12

Notes:

TOC = Top of casing
NA = Not available
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
4 = Abandoned Monitoring Well
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.
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.
5 = During the November 2018 well repair event TOC elevations were modified due to repair work for TMW-12, TMW-19, TMW-23 and TMW-24. The TOC elevations listed on the table represent the most current elevations. All water level elevations prior to November 2018 were calculated using the previous surveyed TOC elevations.
6 = Water level collected on 4/13/21.

TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETER MEASUREMENTS (OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (inches)	Date Sampled	Water Level prior to Purging (ft btoc)	Total Depth of Well Casing (feet)	Set Tubing Depth (feet)	Time Sampled	Water Level after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
RW-1	4	10/22/2021	9.56	33.56	22.00	9:00	9.60	3.3	150	21.8	1,415	0.09	6.74	-4.7	10.25	0.00	NM	Clear
ITMW-1R	4	10/20/2021	11.96	34.05	6.70	16:27	DRY	6.0	150	20.0	686	1.87	6.32	328.6	175.00	2.61	NM	Light brown
ITMW-2R	4	10/19/2021	11.69	27.00	20.78	13:47	12.02	2.6	150	22.7	469	0.39	6.92	-9.1	1.71	0.00	NM	Clear
ITMW-5	4	10/21/2021	14.10	39.29	23.60	17:30	14.24	2.5	100	22.3	883	0.19	5.79	-3.5	28.00	0.03	NM	Clear
ITMW-6	4	10/21/2021	22.99	39.29	32.00	15:17	23.05	4.2	100	18.5	1,205	0.08	7.50	-59.6	1.63	0.15	NM	Clear
ITMW-7	4	10/20/2021	20.16	36.98	29.50	9:12	20.49	2.4	100	19.7	651	0.11	5.03	148.9	0.91	0.00	NM	Clear
ITMW-9	4	10/21/2021	22.03	34.95	28.20	11:35	22.06	3.0	200	19.6	634	0.12	5.94	134.1	1.74	0.22	NM	Clear
ITMW-10	4	10/20/2021	20.75	36.82	31.30	10:23	21.03	4.0	120	19.7	1,136	0.31	5.83	502.0	1.40	0.10	NM	Clear
ITMW-16	4	10/19/2021	15.66	39.18	29.18	10:45	17.10	2.9	100	22.5	284	3.61	7.32	90.6	10.47	0.10	NM	Clear/slightly brown
ITMW-18	4	10/21/2021	10.49	29.50	22.00	8:48	10.60	3.8	100	20.6	3,492	0.20	5.84	213.8	4.00	0.14	NM	Clear
ITMW-19	4	10/21/2021	13.01	33.23	28.23	9:10	13.22	3.5	100	19.1	3,929	2.74	6.12	259.3	1.60	NM	NM	Clear
ITMW-20	4	10/19/2021	14.10	31.03	23.50	9:03	14.89	4.0	100	19.5	602	0.84	5.34	243.9	0.90	0.09	NM	Clear
ITMW-21	4	10/20/2021	12.90	32.99	25.50	10:38	13.65	5.0	100	21.2	2,714	0.19	4.82	316.4	0.76	0.06	NM	Clear
MW-22	4	10/20/2021	11.15	29.20	22.00	9:15	11.33	1.3	100	19.7	93	0.22	5.39	222.0	2.09	0.20	NM	Clear
MW-24	4	10/21/2021	12.92	32.51	25.00	8:45	12.95	3.5	150	21.2	1,335	0.12	5.01	312.6	1.60	0.04	NM	Clear
MW-25R	4	10/22/2021	9.18	39.00	27.10	8:30	DRY	4.5	100	18.9	2,737	4.11	6.16	192.7	High	NM	NM	Clear
MW-26	4	10/19/2021	13.93	35.14	30.14	9:50	14.40	4.8	100	19.9	1,162	0.13	5.14	8.4	0.20	NM	NM	Clear
MW-27	2	10/18/2021	11.81	30.14	25.14	17:30	11.89	6.0	100	23.7	1,503	0.19	5.41	248.4	4.82	0.00	NM	Clear
MW-28	2	10/18/2021	7.12	27.45	20.00	18:00	7.52	3.0	100	23.6	297	0.10	6.21	-17.9	12.07	2.15	NM	Clear
MW-29	2	10/19/2021	11.84	30.32	22.82	11:45	12.07	4.5	100	21.1	527	0.35	4.99	487.1	4.11	0.05	NM	Clear
MW-38	2	10/21/2021	10.16	29.83	22.30	9:15	10.26	4.0	200	21.0	2,194	0.07	5.77	175.4	6.67	0.04	2.1	Clear/slightly turbid
MW-39R	2	10/18/2021	11.82	29.69	27.19	17:10	11.94	2.5	100	21.7	1,246	0.17	5.15	132.3	5.88	1.62	NM	Clear
MW-40R	2	10/19/2021	9.51	28.30	23.30	10:23	9.60	3.0	100	20.6	643	0.10	5.24	-15.3	1.29	3.00	NM	Clear
MW-46R	2	10/21/2021	2.52	25.01	19.01	17:24	3.29	5.0	150	22.0	713	0.09	4.99	153.4	4.94	0.08	NM	Clear
MW-50R	2	10/19/2021	3.20	18.24	15.75	14:32	6.20	1.6	100	21.8	1,050	0.43	6.14	111.4	4.29	0.07	NM	Clear
MW-55R	2	10/19/2021	1.80	20.96	19.96	16:53	5.90	2.8	100	19.4	871	0.03	6.54	139.9	1.63	0.32	NM	Clear
MW-56R	2	10/21/2021	2.56	19.79	18.80	11:42	3.92	2.5	150	19.5	689	0.21	5.65	165.0	3.40	0.58	NM	Clear
MW-57R	2	10/21/2021	2.49	19.35	16.85	13:35	4.30	3.0	150	22.5	763	0.06	5.47	67.1	4.00	1.63	NM	Clear
MW-58R	2	10/21/2021	3.24	21.88	19.38	13:30	3.89	2.0	100	19.8	830	0.23	5.05	153.1	2.98	0.18	NM	Clear
MW-60R	2	10/19/2021	1.17	14.86	12.00	13:48	4.51	2.0	100	22.0	1,307	0.36	6.72	108.7	13.90	0.00	NM	Clear
MW-61R	2	10/20/2021	4.24	15.28	12.80	12:03	5.87	2.5	150	23.8	1,019	0.12	6.47	-74.4	2.94	4.20	NM	Clear
MW-62R	2	10/18/2021	4.05	20.01	17.50	18:20	5.72	3.8	100	20.3	747	0.52	5.53	1.6	4.80	NM	NM	Clear
MW-63R	2	10/20/2021	3.06	19.72	17.25	15:00	8.74	3.2	100	20.4	582	0.15	5.48	-118.6	23.60	NM	NM	Slight brown hue
MW-68	2	10/19/2021	6.24	20.35	16.30	9:07	6.49	2.5	200	19.0	921	0.07	5.32	76.8	2.95	2.31	NM	Clear
RW-69	4	10/21/2021	7.76	28.71	23.71	9:25	7.87	4.0	100	19.3	958	0.18	5.83	-1.5	3.62	6.10	NM	Clear
MW-82	2	10/22/2021	10.08	25.98	23.40	8:30	10.11	2.5	100	18.3	1,294	0.10	5.33	212.7	3.14	0.44	NM	Clear
MW-83	2	10/20/2021	11.95	25.98	23.50	13:38	12.09	3.0	150	25.4	2,629	0.27	7.05	116.0	3.24	0.12	NM	Clear
MW-84	2	10/21/2021	12.06	26.77	24.10	17:09	12.31	4.0	250	23.7	4,875	0.09	6.94	33.8	3.10	0.01	4	Clear
MW-87	2	10/21/2021	12.49	26.84	21.84	10:23	12.81	3.6	100	23.7	480	0.04	5.73	206.8	7.42	0.28	NM	Slight brown
MW-89	2	10/20/2021	9.93	25.08	20.00	13:55	12.78	1.8	100	24.1	630	0.49	5.33	180.3	5.72	0.00	NM	Clear
MW-91	2	10/21/2021	11.84	25.70	20.70	15:25	16.46	2.3	100	25.7	1,145	0.16	6.75	-108.1	11.40	NM	NM	Clear with gray tint, suspended black flakes
MW-93	2	10/21/2021	14.60	34.21	29.21	13:25	14.63	4.0	100	20.7	1,462	0.36	4.97	234.3	5.90	0.30	NM	Clear
MW-95	2	10/21/2021	14.34	34.14	29.14	14:35	15.00	4.0	100	20.9	1,430	0.19	5.13	238.1	7.11	0.00	NM	Clear
MW-96	2	10/19/2021	7.16	14.53	12.00	10:20	7.83	2.0	100	22.0	208	0.08	5.68	28.5	5.44	3.03	NM	Brown tint
MW-97	2	10/19/2021	8.47	15.20	13.00	9:15	11.12	2.0	100	19.7	240	3.47	3.99	174.5	5.80	0.09	NM	Clear
MW-98	2	10/18/2021	10.41	19.65	17.50	17:12	15.57	1.8	100	23.4	193	0.64	5.62	196.9	0.94	0.00	14.00	Clear
MW-99	2	10/19/2021	9.43	22.74	20.20	15:48	15.92	1.5	100	22.0	3,237	0.40	7.12	-143.4	11.40	4.80	NM	Clear
IW-73	2	10/21/2021	8.01	26.82	21.82	12:10	8.00	4.0	100	20.5	719	0.14	5.49	180.0	4.91	0.33	NM	Clear
IW-77	2	10/22/2021	9.45	28.70	23.70	9:05	9.50	3.5	100	19.1	1,656	0.10	7.26	184.5	5.13	0.08	0.00	Clear
IW-78	2	10/20/2021	9.84	10.30	5.30	17:01	9.90	3.8	100	22.3	4,472	1.29	6.69	137.7	8.12	0.00	NM	Clear w/ some black particles
MW-175	2	10/20/2021	1.57	14.59	14.09	9:18	12.02	1.8	100	21.1	1,364	2.06	7.57	63.7	1.90	0.00	NM	Clear
MW-176	2	10/20/2021	2.06	14.00	13.50	11:13	5.42	2.5	140	21.3	887	0.43	7.19	52.8	17.9	0.06	NM	Clear
MW-178	2	10/20/2021	4.36	7.97	7.47	16:05	DRY	0.5	150	30.5	214	0.21	6.56	-39.6	41.10	NM	NM	Dark brown haze, very turbid
MW-179	2	10/20/2021	8.03	12.79	12.39	16:25	DRY	0.5	150	28.5	136	0.46	5.63	164.1	86.40	NM	NM	Cloudy/brown
MW-182	2	10/21/2021	14.84	31.09	26.09	10:09	14.91	5.2	100	17.5	440	0.02	6.39	62.0	0.6	0.17	NM	Clear
MW-183R	2	10/19/2021	11.38	17.82	15.00	11:52	13.35	2.5	100	23.5	295	1.15	5.98	125.5	7.27	0.00	NM	Clear
MW-184	2	10/19/2021	9.19	23.55	18.55	13:25	10.20	2.5	100	21.4	139	0.22	6.16	220.5	44.7	0.17	NM	Clear

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TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETER MEASUREMENTS (OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (inches)	Date Sampled	Water Level prior to Purging (ft btoc)	Total Depth of Well Casing (feet)	Set Tubing Depth (feet)	Time Sampled	Water Level after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
MW-185	2	10/21/2021	14.49	29.19	24.00	16:25	14.49	3.0	100	22.7	345	0.50	5.94	115.3	10.07	0.07	NM	Light brown/slightly turbid
MW-186	2	10/19/2021	13.22	27.80	22.00	14:10	19.29	2.6	100	20.6	1,894	0.16	7.01	-295.9	35.00	1.73	NM	Slight brown hue
MW-187	2	10/19/2021	19.40	30.25	26.00	15:05	19.29	3.2	100	17.8	665	0.11	5.87	138.1	12.70	0.00	NM	Clear
MW-188	2	10/19/2021	21.18	34.58	29.00	16:28	21.77	2.5	100	18.1	595.0	0.24	6.26	-39.4	5.86	2.45	NM	Clear
MW-189	2	10/21/2021	25.55	40.85	38.85	13:56	25.60	4.2	100	19.9	1,068	4.88	6.72	172.9	0.84	0.00	NM	Clear
MW-190	2	10/21/2021	21.31	36.10	31.10	15:20	22.29	4.5	100	24.0	741	0.61	6.78	-51.9	25.20	0.06	NM	Clear
MW-191	2	10/18/2021	16.76	33.20	30.70	16:28	16.78	1.8	100	24.1	213	0.21	6.03	131.0	3.13	0.00	NM	Clear
MW-192	2	10/20/2021	15.52	30.19	27.70	8:50	15.55	3.0	150	22.9	133	0.78	5.14	264.3	3.42	0.09	NM	Clear
MW-194	2	10/20/2021	2.94	21.30	16.30	13:00	3.20	3.7	100	24.3	1,101	0.07	6.38	-199.9	4.50	2.10	NM	Slight brown hue
MW-195	2	10/19/2021	0.89	17.20	14.70	11:35	4.14	1.0	100	23.8	914	0.20	6.61	65.6	2.63	0.02	NM	Clear
MW-196	2	10/19/2021	3.08	15.00	12.50	14:07	11.46	5.0	150	27.8	1,705	0.21	6.72	122.5	48.40	0.28	NM	Clear
MW-198	2	10/21/2021	9.89	29.00	24.00	10:55	9.99	4.5	100	21.4	1,686	0.15	5.81	177.7	4.89	0.00	NM	Clear
MW-199	2	10/21/2021	9.45	22.00	17.00	8:45	10.86	3.3	100	19.7	731	0.17	6.29	58.9	189.00	0.80	NM	Light brown
MW-200	2	10/19/2021	10.28	25.20	20.20	12:09	10.61	2.7	200	20.0	196	0.21	6.52	117.8	21.60	0.01	NM	Clear
MW-201	2	10/19/2021	21.11	36.00	31.00	11:49	21.15	4.00	100	19.8	418	0.16	5.92	34.1	2.82	0.00	NM	Clear
MW-202	2	10/20/2021	9.75	24.20	19.20	13:30	9.90	3.60	100	20.9	206	0.70	6.33	78.9	12.00	0.00	NM	Light brown
MW-203	2	10/19/2021	23.42	37.00	34.50	15:05	23.42	2.20	200	20.0	395	0.18	5.68	153.5	4.47	0.00	NM	Clear
MW-204	2	10/20/2021	10.90	36.00	32.00	15:52	21.90	5.4	100	18.1	734	1.02	6.61	55.4	46.20	0.11	NM	Slightly brown/milky
MW-205	2	10/21/2021	15.08	28.49	23.50	13:49	15.14	3.5	120	23.9	328	0.21	6.11	232.2	6.73	0.03	NM	Clear
MW-206	2	10/20/2021	17.58	31.58	25.00	10:35	17.78	3.2	100	19.5	570	0.10	6.07	144.6	5.04	0.01	NM	Clear
TMW-10	2	10/19/2021	2.45	15.19	12.69	14:31	4.42	2.3	140	21.9	1,583	0.09	6.75	-121.7	9.24	6.80	NM	Clear w/ black particles
TMW-11	2	10/20/2021	1.95	15.13	12.63	9:10	3.46	2.3	100	20.6	1,217	0.04	6.89	-145.3	7.10	2.28	NM	Clear
TMW-12	2	10/21/2021	4.95	20.00	15.00	10:25	5.03	2.3	100	19.5	533	0.19	5.37	81.6	15.60	NM	NM	Clear
TMW-14	2	10/20/2021	2.62	21.00	15.00	12:43	5.35	1.3	100	20.3	174	0.06	6.13	-27.1	12.47	1.58	NM	Slight yellow hue
TMW-16	2	10/19/2021	11.82	28.00	23.00	11:55	17.29	2.4	100	19.6	1,991	0.02	7.12	-250.2	43.5	1.84	NM	Black, fine particles w/n otherwise clear water
TMW-19	2	10/22/2021	25.06	43.00	38.00	9:06	25.42	3.5	150	19.1	452	0.17	6.10	8.0	16.00	2.67	NM	Clear
TMW-20	2	10/19/2021	2.05	17.90	14.40	10:33	2.87	1.5	100	22.0	1,461	0.20	6.68	-102.6	3.48	1.81	NM	Clear
TMW-21	2	10/20/2021	2.21	19.70	14.70	11:20	6.21	3.2	100	21.6	1,231	0.06	6.33	-125.5	7.20	2.30	NM	Slight gray/brown hue w/ fewfine particles
TMW-22R	2	10/21/2021	2.86	17.80	15.30	15:15	8.50	2.5	100	21.4	1,624	0.13	6.89	-102.4	13.90	2.75	NM	Clear
TMW-23	2	10/20/2021	2.60	20.00	17.50	16:50	7.91	3.5	100	21.9	962	0.18	6.33	-175.1	3.60	NM	NM	Clear
TMW-24	2	10/21/2021	2.58	19.50	16.00	12:25	2.96	2.5	100	21.5	812	0.14	5.79	-65.4	9.40	NM	NM	Clear
TMW-25	2	10/20/2021	14.66	30.50	25.50	9:15	18.19	3.0	100	17.2	1,053	0.06	6.89	-124.3	18.9	5.60	NM	Slight gray hue
TMW-26	2	10/19/2021	15.33	28.60	23.60	16:25	20.51	2.6	100	20.3	2,315	0.08	6.79	-210.4	24.20	3.40	NM	Light brown hue w/ some fine particles
TMW-27	2	10/19/2021	10.52	26.40	21.40	11:25	10.89	2.8	100	18.7	241	0.06	5.13	169.4	30.10	0.00	NM	Clear
TMW-29	2	10/19/2021	8.06	27.50	22.50	9:45	13.20	2.8	100	20.8	1,139	0.07	6.47	44.7	109.00	0.00	NM	Clear
TMW-30	2	10/21/2021	13.29	28.80	23.80	12:02	18.76	1.4	100	19.1	3,077	0.02	7.60	-243.7	OVR	2.69	NM	Brown
TMW-32	2	10/20/2021	11.07	26.50	21.50	14:58	11.15	3.0	150	20.3	792	0.20	6.37	-25.6	4.27	4.20	NM	Clear
TMW-34	2	10/20/2021	12.16	24.78	22.30	16:53	13.45	4.0	150	23.8	423	0.10	6.43	-16.4	4.51	1.48	NM	Clear
TMW-35	2	10/19/2021	9.78	23.00	20.50	9:02	10.88	1.5	100	18.5	239	0.06	4.91	229.4	2.68	0.05	NM	Clear
TMW-36	2	10/19/2021	25.34	41.00	38.50	13:20	25.41	3.0	200	20.5	920	0.13	6.58	-19.0	9.14	2.36	NM	Clear
TMW-36B	2	10/19/2021	25.28	31.00	28.50	11:45	25.53	3.0	100	21.6	1,596	0.18	6.41	-52.8	14.30	1.94	NM	Brown, cloudy @ 10:55

Notes:

ft btoc = Feet below top of casing
ORP = Oxidation reduction potential
DO = Dissolved oxygen
(°C) = Degrees Celsius

mL/min = Milliliters per minute
mg/L = Milligrams per liter
NTUs = Nephelometric turbidity units
NM = Not measured

mV = Millivolts
NS = Well not sampled
(µS/cm) = Microsiemens per centimeter
NR = Due to the recording of erroneous field data, this value is not reported

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

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

Location/ Well Pairs	Middle of Screen Elevation[1] (feet)	Static Water Level Elevation (feet)															
		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	11/13/2018	4/23/2019	10/22/2019	5/11/2020	10/5/2020	4/12/2021	10/18/2021
Shallow Well MW-177 and MW-70																	
MW-177	462.00	466.94	469.09	465.34	469.97	469.00	465.19	461.78	NM	467.56	467.47	467.69	467.31	468.55	468.41	468.44	467.18
MW-70	451.53	464.17	465.33	465.15	464.77	464.59	462.70	462.38	462.93	462.85	463.26	463.48	464.06	463.54	464.34	463.52	462.59
MW-177/MW-70																	
Shallow Well MW-176 and MW-46R[4]																	
MW-176	451.74	463.81	464.66	464.49	464.38	464.18	462.30	461.99	462.93	462.49	462.86	463.22	463.82	463.35	463.89	463.15	463.27
MW-46R	446.69	462.85	464.88	464.67	464.40	464.21	462.34	462.03	462.55	462.53	462.87	463.16	463.74	463.31	463.91	463.30	463.33
MW-176/MW-46R																	
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	462.08	462.44	464.17	462.90	463.14	463.67	462.79
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	461.78	462.28	462.75	462.51	462.98	462.52	462.02
MW-175/Ave. of MW-46R & MW-56/56R																	
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	458.69	460.45	460.32	461.85	460.52	460.12	460.16
MW-63/MW-63R	445.37	459.36	462.29	462.08	460.93	460.79	460.05	458.56	459.92	458.22	459.35	458.94	460.96	459.57	461.06	459.58	460.81
MW-174/MW-63																	
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	471.37	471.62	470.99	471.38	471.08	471.36	467.79
MW-83	450.98	464.02	465.25	465.01	464.72	464.47	462.64	462.32	462.86	462.69	463.10	463.33	463.88	463.37	463.99	463.12	463.47
MW-178/MW-83																	

Notes:

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

Location/ Well Pairs	Middle of Screen Elevation[1] (feet)	Vertical Hydraulic Gradient[2,3] (feet/feet)															
		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	11/13/2018	4/23/2019	10/22/2019	5/11/2020	10/5/2020	4/12/2021	10/18/2021
Shallow Well MW-177 and MW-70																	
MW-177	462.00																
MW-70	451.53																
MW-177/MW-70		-0.26	-0.36	-0.02	-0.50	-0.42	-0.24	0.06	NM	-0.45	-0.40	-0.40	-0.31	-0.48	-0.39	-0.47	-0.44
Shallow Well MW-176 and MW-46R[4]																	
MW-176	451.74																
MW-46R	446.69																
MW-176/MW-46R		-0.19	0.04	0.04	0.004	0.005	0.01	0.01	-0.08	0.01	0.001	-0.01	-0.02	-0.01	0.00	0.03	0.01
Shallow Well MW-175																	
MW-175	450.17																
Ave. of MW-46R & MW-56/56R	446.46																
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	-0.06	-0.03	-0.30	-0.08	-0.03	-0.24	-0.16
Shallow Wells MW-173 and MW-174																	
MW-174	451.95																
MW-63/MW-63R	445.37																
MW-174/MW-63		0.26	0.43	0.06	0.22	0.14	0.05	0.13	1.24	0.03	0.12	-0.27	0.12	-0.41	0.10	-0.10	0.12
Shallow Wells MW-178, MW-179 and MW																	
MW-178	467.90																
MW-83	450.98																
MW-178/MW-83		-0.49	-0.40	-0.38	-0.43	-0.45	-0.46	-0.54	-0.50	-0.52	-0.49	-0.49	-0.42	-0.47	-0.42	-0.49	-0.26

Notes:

[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

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TABLE 6A
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-1R	ITMW-5	ITMW-6	ITMW-7	ITMW-9	ITMW-10	ITMW-18	ITMW-19	ITMW-21	ITMW-21	MW-25R	MW-38	MW-83	MW-84	MW-87	MW-89	MW-91	MW-93
Field Sample ID		ITMW-1R-202110	ITMW-5-202110	ITMW-6-202110	ITMW-7-202110	ITMW-9-202110	ITMW-10-202110	ITMW-18-202110	ITMW-19-202110	ITMW-21-202110	DUP-04-202110	MW-25R-202110	MW-38-202110	MW-83-202110	MW-84-202110	MW-87-202110	MW-89-202110	MW-91-202110	MW-93-202110
Lab Sample ID(s)		60383878022	60383996006	60383996005	60383878011	60383996037; 075SJ-5	60383996026	60383996021	60383996024	60383878013	60383878014	60384461001	60383996033; 075SJ-1	60383878017	60383996007	60383996035; 075SJ-3	60383878008; 070SJ-1	60383996041	60383996016
Sample Date		10/20/2021	10/21/2021	10/21/2021	10/20/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/20/2021	10/20/2021	10/22/2021	10/21/2021	10/20/2021	10/21/2021	10/21/2021	10/20/2021	10/21/2021	10/21/2021
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	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments											Field Duplicate								
Volatile Organic Compounds																			
Acetone	12000	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	42.8 J (25.4)	U (2.5)	U (2.5)	4.5 J (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	5.0	0.23 J (0.14)	U (0.14)	U (0.14)	0.15 J (0.14)	1.4 (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	1.8 J (1.4)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.27 J (0.14)	U (0.14)
Bromodichloromethane	80	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	0.52 J (0.16)	1.4 (0.16)	U (0.16)	U (0.16)	U (1.6)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
Bromoform	80	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	1.2 (0.68)	12.9 (0.68)	U (0.68)	U (0.68)	U (6.8)	1.2 (0.68)	2.6 (0.68)	2.7 (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)
Carbon Tetrachloride	5	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)	U (0.17)	U (1.7)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Chlorobenzene	100	U (0.089)	U (0.089)	U (0.089)	5.5 (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.89)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloroethane	12000	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (3.7)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)
Chloroform	80	U (0.22)	0.63 J (0.22)	0.41 J (0.22)	U (0.22)	1.0 (0.22)	U (0.22)	2.0 (0.22)	2.3 (0.22)	U (0.22)	U (0.22)	3.6 J (2.2)	1.1 (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	1.9 (0.22)
Chloromethane	190	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (2.8)	U (0.28)	U (0.28)	2.1 (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
Dibromochloromethane	80	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	1.1 (0.30)	U (0.30)	U (0.30)	U (3.0)	U (0.30)	0.35 J (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)
1,1-Dichloroethane	2.4	10.5 (0.12)	0.83 J (0.12)	0.34 J (0.12)	U (0.12)	3.7 (0.12)	0.19 J (0.12)	0.54 J (0.12)	U (0.12)	U (0.12)	U (0.12)	1.3 J (1.2)	0.48 J (0.12)	U (0.12)	U (0.12)	0.85 J (0.12)	U (0.12)	U (0.12)	0.16 J (0.12)
1,1-Dichloroethene	7.0	0.48 J (0.22)	5.2 (0.22)	2.9 (0.22)	U (0.22)	15.4 (0.22)	0.55 J (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	8.2 J (2.2)	3.2 (0.22)	U (0.22)	U (0.22)	3.1 (0.22)	U (0.22)	0.43 J (0.22)	10.8 (0.22)
cis-1,2-Dichloroethene	70	51.1 (0.13)	27.9 (0.13)	18.2 (0.13)	7.3 (0.13)	101 (0.13)	4.4 (0.13)	192 (0.13)	13.6 (0.13)	0.26 J (0.13)	0.22 J (0.13)	2840 (6.4)	1060 (3.2)	0.52 J (0.13)	U (0.13)	20.6 (0.13)	0.30 J (0.13)	70.3 (0.13)	62.3 (0.13)
trans-1,2-Dichloroethene	100	0.31 J (0.10)	0.32 J (0.10)	0.27 J (0.10)	U (0.10)	5.4 (0.10)	U (0.10)	37.7 (0.10)	2.4 (0.10)	U (0.10)	U (0.10)	64.0 (1.0)	13.9 (0.10)	U (0.10)	U (0.10)	0.51 J (0.10)	U (0.10)	0.16 J (0.10)	4.8 (0.10)
Ethyl Benzene	700	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 (1.2)	0.12 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
4-Methyl-2-pentanone	1000	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (7.4)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	5.0	U (0.39)	U (0.39)	U (0.39)	U (0.39)	0.56 J (0.39)	U (0.39)	1.4 (0.39)	0.46 J (0.39)	U (0.39)	U (0.39)	4.6 J (3.9)	0.44 J (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	0.26 J (0.15)	U (0.15)	U (0.15)	3.0 J (1.5)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5.0	0.39 J (0.33)	1.3 (0.33)	0.70 J (0.33)	U (0.33)	3.6 (0.33)	U (0.33)	1.1 (0.33)	0.85 J (0.33)	U (0.33)	U (0.33)	U (3.3)	3.2 (0.33)	U (0.33)	U (0.33)	3.1 (0.33)	U (0.33)	0.45 J (0.33)	3.1 (0.33)
Toluene	1000	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	0.29 J (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	7.1 J (2.5)	1.6 (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	1.4 (0.25)	U (0.25)
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 (1.1)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	0.11 J (0.11)
1,1,2-Trichloroethane	5.0	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.20 J (0.14)	U (0.14)	0.23 J (0.14)	0.21 J (0.14)	U (0.14)	U (0.14)	U (1.4)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.47 J (0.14)
Trichloroethene	5.0	31.1 (0.21)	2420 (4.2)	1980 (4.2)	17.7 (0.21)	3620 (10.5)	302 (2.1)	2090 (5.2)	1350 (2.1)	4.9 (0.21)	5.8 (0.21)	7440 (10.5)	5830 (10.5)	27.8 (0.21)	7.8 (0.21)	276 (2.1)	3.9 (0.21)	9.5 (0.21)	8560 (42.0)
Vinyl Chloride	2.0	U (0.17)	1.1 (0.17)	1.1 (0.17)	U (0.17)	2.1 (0.17)	0.24 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	54.2 (1.7)	204 (4.2)	U (0.17)	U (0.17)	0.17 J (0.17)	U (0.17)	0.39 J (0.17)	0.90 J (0.17)
Metals																			
Iron	NE	NM	NM	NM	NM	32.4 J (50.0)	NM	NM	NM	NM	NM	8790 (50.0)	988 (50.0)	NM	NM	341 (50.0)	55.1 (50.0)	17200 (50.0)	NM
Iron, Ferrous	NE	2610	30	150	U	220	100	140	NM	60	NM	NM	40	120	10	280	U	NM	300
Monitored Natural Attenuation Parameters (Laboratory)																			
Organic Carbon (total)	NE	NM	NM	NM	NM	810 J (1000)	NM	NM	NM	NM	NM	710 J (1000)	370 J (1000)	NM	NM	330 J (1000)	1000 (1000)	15000 (5000)	NM
Organic Carbon (dissolved)	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	8800 (1000)	NM
Chloride	NE	NM	NM	NM	NM	97600 (20000)	NM	NM	NM	NM	NM	329000 (50000)	221000 (20000)	NM	NM	82800 B (20000)	NM	92700 (20000)	NM
Nitrogen	NE	NM	NM	NM	NM	6400 (500)	NM	NM	NM	NM	NM	NM	730 (100)	NM	NM	1500 (100)	53800 (2000)	U (100)	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	NM	6400 (500)	NM	NM	NM	NM	NM	NM	730 (100)	NM	NM	1500 (100)	53800 (2000)	U (100)	NM
Nitrogen, Nitrite	NE	NM	NM	NM	NM	U (500)	NM	NM	NM	NM	NM	NM	U (100)	NM	NM	U (100)	U (2000)	U (100)	NM
Nitrate/Nitrite	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (100)	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	NE	NM	NM	NM	NM	U (50)	NM	NM	NM	NM	NM	U (50)	U (50)	NM	NM	U (50)	U (50)	NM	NM
Sulfate	NE	NM	NM	NM	NM	27900 (5000)	NM	NM	NM	NM	NM	716000 (50000)	558000 (50000)	NM	NM	12900 (2000)	2400 (1000)	1900 (1000)	NM
1-Butanecarboxylic Acid	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	980 J (500)	NM
Sodium Persulfate	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2100	NM	3500	NM	NM	NM	NM
Acetic acid	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2200 J (500)	NM
Butyric acid	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	UJ (500)	NM
Formic acid	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	5800 J (500)	NM
n-Hexanoic acid	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	UJ (500)	NM
Lactic Acid	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3800 J (500)	NM
Gasses																			
Acetylene	NE	NM	NM	NM	NM	0.29 J (0.50)	NM	NM	NM	NM	NM	0.34 J (0.50)	0.15 J (0.50)	NM	NM	UJ (0.50)	U (0.50)	UJ (0.50)	NM
Methane	NE	NM	NM	NM	NM	18 J (5.0)	NM	NM	NM	NM	NM	340 (5.0)	6.5 J (5.0)	NM	NM	UJ (5.0)	56 (5.0)	6100 J (5.0)	NM
Ethane	NE	NM	NM	NM	NM	0.22 J (1.0)	NM	NM	NM	NM	NM	3.5 (1.0)	0.28 J (1.0)	NM	NM	UJ (1.0)	U (1.0)	0.84 J (1.0)	NM
Ethene	NE	NM	NM	NM	NM	UJ (1.0)	NM	NM	NM	NM	NM	0.43 J (1.0)	2.3 J (1.0)	NM	NM	UJ (1.0)	U (1.0)	1.1 J (1.0)	NM
HYDROGEN (H2) [nM]	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses																			
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	0.263 J (0.5)	NM	NM	U (0.5)	1.8 (0.5)	NM	NM
Dehalocaccoides (DHC) [cells/mL]	NE	NM	NM	NM	NM	1.95 (0.5)	NM	NM	NM	NM	NM	NM	1.2 J (0.5)	NM	NM	2.2 (0.5)	70.2 (0.5)	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	U (0.5)	NM	NM	U (0.5)	U (0.5)	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	U (0.5)	NM	NM	0.12 J (0.5)	0.7 (0.5)	NM	NM
Field Parameters																			
Dissolved Oxygen	NE	1870	190	80	110	120	310	200	2740	190	NM	4110	70	270	90	40	490	160	360
Oxidation Reduction Potential [mV]	NE	328.6	-3.5	-59.6	148.9	134.1	502	213.8	259.3	316.4	NM	192.7	175.4	116	33.8	206.8	180.3	-108.1	234.3
pH (Field Analysis) [SU]	NE	6.32	5.79	7.5	5.03	5.94	5.83	5.84	6.12	4.82	NM	6.16	5.77	7.05	6.94	5.73	5.33	6.75	4.97
Specific Conductivity (Field Analysis) [uS/cm]	NE	686	883	1205	651	634	1136	3492	3929	2714	NM	2737	2194	2629	4875	479.9	630	1145	1462
Temperature (Field) [C]	NE	20	22.3	18.5	19.7	19.6	19.7	20.6	19.1	21.2	NM	18.9	21	25.4	23.7	23.7	24.1	25.7	20.7
Turbidity (Field Parameters) [NTU]	NE	175	28	1.63	0.91	1.74	1.4	4	1.6	0.76	NM	NM	6.67	3.24	3.1	7.42	5.72	11.4	5.9

Notes:

1 All concentrations are presented in µg/L (ppb) except where otherwise noted.
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitation limit.
4 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued

µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection limit for other analyses.
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

Color Key
Onsite Wells
Offsite Wells
Plume Boundary Wells

RAMBOLL

TABLE 6A
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-95	MW-182	MW-182	MW-198	ITMW-2R	ITMW-16	ITMW-20	ITMW-20	MW-22	MW-26	MW-27	MW-28	MW-29	MW-39R	MW-40R	MW-50R	MW-60R	MW-61R	MW-62R
Field Sample ID	MW-95-202110	MW-182-202110	DUP-10-202110	MW-198-202110	ITMW-2R-202110	ITMW-16-202110	ITMW-20-202110	DUP-03-202110	MW-22-202110	MW-26-202110	MW-27-202110	MW-28-202110	MW-29-202110	MW-39R-202110	MW-40R-202110	MW-50R-202110	MW-60R-202110	MW-61R-202110	MW-62R-202110
Lab Sample ID(s)	60383996040; 075SJ-8	60383996025	60383996029	60383996036; 075SJ-4	60383737014	60383737016	60383737038	60383737039	60383878009	60383737017	60383737033	60383737037	60383737020	60383737031	60383737024	60383737042; 060SJ-2	60383737013	60383878003	60383737036
Sample Date	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/20/2021	10/19/2021	10/18/2021	10/18/2021	10/19/2021	10/18/2021	10/19/2021	10/19/2021	10/19/2021	10/20/2021	10/18/2021
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	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments			Field Duplicate					Field Duplicate											
Volatile Organic Compounds																			
Acetone	U (508)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (27.2)	0.15 J (0.14)	0.14 J (0.14)	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)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Bromodichloromethane	U (31.0)	U (0.16)	U (0.16)	0.44 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	UJ (0.16)	U (0.16)	U (0.16)
Bromoform	U (135)	U (0.68)	U (0.68)	1.4 (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)
Carbon Tetrachloride	U (34.4)	U (0.17)	U (0.17)	0.56 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)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	UJ (0.17)	U (0.17)	U (0.17)
Chlorobenzene	U (17.7)	5.9 (0.089)	6.0 (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	5.5 (0.089)	U (0.089)	U (0.089)	U (0.089)	UJ (0.089)	U (0.089)	U (0.089)
Chloroethane	U (74.8)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)
Chloroform	U (44.0)	U (0.22)	U (0.22)	8.5 (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	UJ (0.22)	U (0.22)	U (0.22)
Chloromethane	U (56.6)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
Dibromochloromethane	U (61.0)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	UJ (0.30)	U (0.30)	U (0.30)
1,1-Dichloroethane	U (24.4)	U (0.12)	U (0.12)	1.1 (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	U (43.8)	U (0.22)	U (0.22)	32.2 (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	402 (25.8)	1.2 (0.13)	1.3 (0.13)	1540 (32.2)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	1.6 (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	2.0 (0.13)	U (0.13)
trans-1,2-Dichloroethene	30.3 J (20.4)	U (0.10)	U (0.10)	57.7 (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.27 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)
Ethyl Benzene	U (24.0)	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)	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)
4-Methyl-2-pentanone	U (147)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (78.2)	U (0.39)	U (0.39)	2.5 (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
1,1,2,2-Tetrachloroethane	U (30.8)	U (0.15)	U (0.15)	10.6 (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	U (66.0)	U (0.33)	U (0.33)	8.9 (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (50.6)	U (0.25)	U (0.25)	0.93 J (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,1-Trichloroethane	U (21.8)	U (0.11)	U (0.11)	24.9 (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	U (28.4)	U (0.14)	U (0.14)	0.67 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)	U (0.14)	U (0.14)
Trichloroethene	28600 (42.0)	19.2 (0.21)	19.6 (0.21)	22800 (52.5)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	56.3 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	0.61 J (0.21)	U (0.21)	6.9 (0.21)	U (0.21)
Vinyl Chloride	U (33.4)	U (0.17)	U (0.17)	86.5 (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)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	0.53 J (0.17)	U (0.17)
Metals																			
Iron	U (50.0)	NM	NM	25.6 J (50.0)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	529 (50.0)	NM	13900 (50.0)	NM
Iron, Ferrous	U	170	NM	U	U	100	90	NM	200	NM	U	2150	50	1620	3000	70	U	4200	NM
Monitored Natural Attenuation Parameters (Laborato																			
Organic Carbon (total)	U (1000)	NM	NM	440 J (1000)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	670 J (1000)	NM	690 J (1000)	NM
Organic Carbon (dissolved)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	860 J (1000)	NM
Chloride	331000 (20000)	NM	NM	293000 (20000)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	121000 (20000)	NM
Nitrogen	780 (100)	NM	NM	1100 (100)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	140 (100)	NM	U (100)	NM
Nitrogen, Nitrate (As N)	780 (100)	NM	NM	1000 (100)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	140 (100)	NM	U (100)	NM
Nitrogen, Nitrite	U (100)	NM	NM	130 (100)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (100)	NM	U (100)	NM
Nitrate/Nitrite	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	U (50)	NM	NM	U (50)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (50)	NM	NM	NM
Sulfate	127000 (20000)	NM	NM	217000 (20000)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	16000 (2000)	NM	5300 (1000)	NM
1-Butanecarboxylic Acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (5000)	NM
Sodium Persulfate	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Acetic acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2600 J (5000)	NM
Butyric acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (5000)	NM
Formic acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	54000 (5000)	NM
n-Hexanoic acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (5000)	NM
Lactic Acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2600 J (5000)	NM
Gasses																			
Acetylene	UJ (0.50)	NM	NM	0.60 J (0.50)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (0.50)	NM	NM	NM
Methane	2.8 J (5.0)	NM	NM	13 J (5.0)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.1 (5.0)	NM	2400 (5.0)	NM
Ethane	0.59 J (1.0)	NM	NM	3.7 J (1.0)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (1.0)	NM	U (1.0)	NM
Ethene	UJ (1.0)	NM	NM	1.0 J (1.0)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (1.0)	NM	U (1.0)	NM
HYDROGEN (H2) [nM]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses																			
BAV1 Vinyl Chloride Reductase [cells/mL]	U (0.5)	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (0.5)	NM	NM	NM
Dehalocaccoides (DHC) [cells/mL]	U (0.5)	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2.5 (0.5)	NM	NM	NM
tceA Reductase [cells/mL]	U (0.5)	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (0.5)	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	U (0.5)	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (0.5)	NM	NM	NM
Field Parameters																			
Dissolved Oxygen	190	20	NM	150	390	3610	840	NM	220	130	190	100	350	170	100	430	360	120	520
Oxidation Reduction Potential [mV]	238.1	62	NM	177.7	-9.1	90.6	243.9	NM	222	8.4	248.4	-17.9	487.1	132.3	-15.3	111.4	108.7	-74.4	1.6
pH (Field Analysis) [SU]	5.13	6.39	NM	5.81	6.92	7.32	5.34	NM	5.39	5.14	5.41	6.21	4.99	5.15	5.24	6.14	6.72	6.47	5.53
Specific Conductivity (Field Analysis) [uS/cm]	1430	439.6	NM	1686	468.5	283.5	602	NM	93.4	1162	1503	296.9	527.4	1246	643	1050	1307	1019	747
Temperature (Field) [C]	20.9	17.5	NM	21.4	22.7	22.5	19.5	NM	19.7	19.9	23.7	23.6	21.1	21.7	20.6	21.8	22	23.8	20.3
Turbidity (Field Parameters) [NTU]	7.11	0.57	NM	4.89	1.71	10.47	0.9	NM	2.09	0.2	4.82	12.07	4.11	5.88	1.29	4.29	13.9	2.94	4.8

Notes:
1 All concentrations are presented in µg/L (ppb) except whe
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitat
4 Concentrations that exceed the Remedial Action Levels p
µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection lim
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

RAMBOLL

TABLE 6A
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-63R	MW-68	MW-96	MW-96	MW-97	MW-98	MW-99	MW-183R	MW-184	MW-184	MW-185	MW-186	MW-187	MW-188	MW-189	MW-190	MW-191	MW-192	MW-194
Field Sample ID	MW-63R-202110	MW-68-202110	MW-96-202110	DUP-02-202110	MW-97-202110	MW-98-202110	MW-99-202110	MW-183R-202110	MW-184-202110	DUP-01-202110	MW-185-202110	MW-186-202110	MW-187-202110	MW-188-202110	MW-189-202110	MW-190-202110	MW-191-202110	MW-192-202110	MW-194-202110
Lab Sample ID(s)	60383878020	60383737023	60383737025	60383737026	60383737040	60383737035	60383737047	60383737009	60383737011	60383737012	60383996043	60383737044	60383737001	60383737004	60383996018	60383996003	60383737032	60383878010	60383878004
Sample Date	10/20/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/18/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/21/2021	10/19/2021	10/19/2021	10/19/2021	10/21/2021	10/21/2021	10/18/2021	10/20/2021	10/20/2021
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	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments				Field Duplicate						Field Duplicate									
Volatile Organic Compounds																			
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.16 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Bromodichloromethane	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
Bromoform	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)
Carbon Tetrachloride	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)	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)	U (0.17)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	0.12 J (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloroethane	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)
Chloroform	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	0.52 J (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
Dibromochloromethane	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)
1,1-Dichloroethane	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)	0.70 J (0.12)	U (0.12)	0.67 J (0.12)	U (0.12)	0.56 J (0.12)	0.34 J (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	1.6 (0.22)	U (0.22)	0.39 J (0.22)	U (0.22)	0.48 J (0.22)	0.71 J (0.22)	U (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	0.81 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	2.0 (0.13)	U (0.13)	U (0.13)	U (0.13)	11.7 (0.13)	0.66 J (0.13)	3.8 (0.13)	0.14 J (0.13)	6.1 (0.13)	4.6 (0.13)	U (0.13)	U (0.13)	1.8 (0.13)
trans-1,2-Dichloroethene	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)	U (0.10)	U (0.10)	U (0.10)
Ethyl Benzene	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)	U (0.12)	U (0.12)	U (0.12)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	1.9 J (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
1,1,2,2-Tetrachloroethane	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)	U (0.15)	U (0.15)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	0.34 J (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	0.31 J (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	0.33 J (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,1-Trichloroethane	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)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	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)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	3.9 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	0.26 J (0.21)	0.67 J (0.21)	U (0.21)	U (0.21)	182 (1.0)	0.49 J (0.21)	16.8 (0.21)	1.1 (0.21)	238 (2.1)	199 (0.21)	0.62 J (0.21)	U (0.21)	4.1 (0.21)
Vinyl Chloride	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)	U (0.17)	0.25 J (0.17)	0.45 J (0.17)	U (0.17)	U (0.17)	0.25 J (0.17)	0.22 J (0.17)	U (0.17)	U (0.17)	U (0.17)
Metals																			
Iron	NM	NM	NM	NM	NM	NM	12200 (50.0)	NM	NM	NM	105 (50.0)	14200 (50.0)	NM	NM	NM	NM	NM	NM	8860 (50.0)
Iron, Ferrous	NM	2310	3030	NM	90	U	4800	U	170	NM	70	1730	U	2450	U	60	U	90	2100
Monitored Natural Attenuation Parameters (Laborato																			
Organic Carbon (total)	NM	NM	NM	NM	NM	NM	56400 (25000)	NM	NM	NM	460 J (1000)	17100 (10000)	NM	NM	NM	NM	NM	NM	460 J (1000)
Organic Carbon (dissolved)	NM	NM	NM	NM	NM	NM	55600 J+ (25000)	NM	NM	NM	740 J (1000)	8300 (1000)	NM	NM	NM	NM	NM	NM	740 J (1000)
Chloride	NM	NM	NM	NM	NM	NM	91600 (20000)	NM	NM	NM	40200 (5000)	118000 (20000)	NM	NM	NM	NM	NM	NM	142000 (20000)
Nitrogen	NM	NM	NM	NM	NM	NM	U (100)	NM	NM	NM	5500 (500)	66 J (100)	NM	NM	NM	NM	NM	NM	84 J (100)
Nitrogen, Nitrate (As N)	NM	NM	NM	NM	NM	NM	U (100)	NM	NM	NM	5500 (500)	U (100)	NM	NM	NM	NM	NM	NM	84 J (100)
Nitrogen, Nitrite	NM	NM	NM	NM	NM	NM	U (100)	NM	NM	NM	U (500)	U (100)	NM	NM	NM	NM	NM	NM	U (100)
Nitrate/Nitrite	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfate	NM	NM	NM	NM	NM	NM	3200 (1000)	NM	NM	NM	8700 (1000)	940 J (1000)	NM	NM	NM	NM	NM	NM	9100 (1000)
1-Butanecarboxylic Acid	NM	NM	NM	NM	NM	NM	U (5000)	NM	NM	NM	UJ (500)	U (5000)	NM	NM	NM	NM	NM	NM	U (5000)
Sodium Persulfate	NM	NM	NM	NM	NM	14000	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Acetic acid	NM	NM	NM	NM	NM	NM	8400 (5000)	NM	NM	NM	250 J (500)	5400 (5000)	NM	NM	NM	NM	NM	NM	2800 J (5000)
Butyric acid	NM	NM	NM	NM	NM	NM	U (5000)	NM	NM	NM	UJ (500)	U (5000)	NM	NM	NM	NM	NM	NM	U (5000)
Formic acid	NM	NM	NM	NM	NM	NM	54000 (5000)	NM	NM	NM	5600 J (500)	52000 (5000)	NM	NM	NM	NM	NM	NM	51000 (5000)
n-Hexanoic acid	NM	NM	NM	NM	NM	NM	U (5000)	NM	NM	NM	UJ (500)	U (5000)	NM	NM	NM	NM	NM	NM	U (5000)
Lactic Acid	NM	NM	NM	NM	NM	NM	7800 (5000)	NM	NM	NM	2200 J (500)	4600 J (5000)	NM	NM	NM	NM	NM	NM	3100 J (5000)
Gasses																			
Acetylene	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	UJ (0.50)	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NM	NM	NM	NM	NM	NM	7400 (5.0)	NM	NM	NM	3.4 J (5.0)	7700 (5.0)	NM	NM	NM	NM	NM	NM	2700 (5.0)
Ethane	NM	NM	NM	NM	NM	NM	1.1 (1.0)	NM	NM	NM	UJ (1.0)	0.39 J (1.0)	NM	NM	NM	NM	NM	NM	0.31 J (1.0)
Ethene	NM	NM	NM	NM	NM	NM	U (1.0)	NM	NM	NM	UJ (1.0)	0.26 J (1.0)	NM	NM	NM	NM	NM	NM	U (1.0)
HYDROGEN (H2) [nM]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses																			
BAV1 Vinyl Chloride Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Dehalocaccoides (DHC) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Field Parameters																			
Dissolved Oxygen	150	70	80	NM	3470	640	400	1150	220	NM	500	160	110	240	4880	610	210	780	70
Oxidation Reduction Potential [mV]	-118.6	76.8	28.5	NM	174.5	196.9	-143.4	125.5	220.5	NM	115.3	-295.9	138.1	-39.4	172.9	-51.9	131	264.3	-199.9
pH (Field Analysis) [SU]	5.48	5.32	5.68	NM	3.99	5.62	7.12	5.98	6.16	NM	5.94	7.01	5.87	6.26	6.72	6.78	6.03	5.14	6.38
Specific Conductivity (Field Analysis) [uS/cm]	582	921	207.9	NM	239.9	193	3237	295.1	138.7	NM	344.5	1894	665	595	1068	741	212.9	132.6	1101
Temperature (Field) [C]	20.4	19	22	NM	19.7	23.4	22	23.5	21.4	NM	22.7	20.6	17.8	18.1	19.9	24	24.1	22.9	24.3
Turbidity (Field Parameters) [NTU]	23.6	2.95	5.44	NM	5.8	0.94	11.4	7.27	44.7	NM	10.07	35	12.7	5.86	0.84	25.2	3.13	3.42	4.5

Notes:
1 All concentrations are presented in µg/L (ppb) except whe
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitat
4 Concentrations that exceed the Remedial Action Levels p
µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection lim
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

RAMBOLL

TABLE 6A
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-195	MW-195	MW-196	MW-203	MW-205	MW-206	MW-46R	MW-55R	MW-56R	MW-57R	MW-58R	MW-82	MW-198	MW-199	MW-200	MW-201	MW-202	MW-204	RW-69
Field Sample ID	MW-195-202110	DUP-05-202110	MW-196-202110	MW-203-202110	MW-205-202110	MW-206-202110	MW-46R-202110	MW-55R-202110	MW-56R-202110	MW-57R-202110	MW-58R-202110	MW-82-202110	MW-198-202110	MW-199-202110	MW-200-202110	MW-201-202110	MW-202-202110	MW-204-202110	RW-69-202110
Lab Sample ID(s)	60383737021	60383737022	60383737015	60383737002	60383996017	60383878012	60383996008	60383737005	60383996013	60383996015	60383996039; 075SJ-7	60384461004	60383996036; 075SJ-4	60383996022	60383737010	60383737019	60383878018	60383878021	60383996034; 075SJ-2
Sample Date	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/21/2021	10/20/2021	10/21/2021	10/19/2021	10/21/2021	10/21/2021	10/21/2021	10/22/2021	10/21/2021	10/21/2021	10/19/2021	10/19/2021	10/20/2021	10/20/2021	10/21/2021
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	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments		Field Duplicate																	
Volatile Organic Compounds																			
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (12.7)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	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 (0.68)	U (0.14)	0.20 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Bromodichloromethane	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 (0.78)	U (0.16)	0.44 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
Bromoform	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (3.4)	U (0.68)	1.4 (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)
Carbon Tetrachloride	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)	U (0.17)	U (0.86)	U (0.17)	0.56 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.44)	U (0.089)	U (0.089)	0.79 J (0.089)	U (0.089)	U (0.089)	U (0.089)	0.77 J (0.089)	U (0.089)
Chloroethane	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (1.9)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)
Chloroform	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (1.1)	U (0.22)	8.5 (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (1.4)	0.52 J (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
Dibromochloromethane	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (1.5)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	0.23 J (0.12)	0.97 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.61)	U (0.12)	1.1 (0.12)	0.16 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	U (0.22)	0.50 J (0.22)	3.0 (0.22)	U (0.22)	1.3 J- (0.22)	0.37 J (0.22)	1.5 (0.22)	1.8 (0.22)	1.4 J (1.1)	U (0.22)	32.2 (0.22)	0.27 J (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	1.5 (0.22)
cis-1,2-Dichloroethene	U (0.13)	U (0.13)	U (0.13)	2.9 (0.13)	135 (0.13)	0.41 J (0.13)	30.8 (0.13)	1.2 (0.13)	14.8 (0.13)	22.1 (0.13)	8.2 (0.64)	0.83 J (0.13)	1540 (32.2)	10.2 (0.13)	0.13 J (0.13)	U (0.13)	6.1 (0.13)	3.2 (0.13)	49.3 (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.58 J (0.10)	U (0.10)	0.42 J (0.10)	U (0.10)	0.27 J (0.10)	0.21 J (0.10)	U (0.51)	U (0.10)	57.7 (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.25 J (0.10)
Ethyl Benzene	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 (0.60)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (3.7)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)	0.61 J (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (2.0)	2.1 (0.39)	2.5 (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
1,1,2,2-Tetrachloroethane	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 (0.77)	U (0.15)	10.6 (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)	0.94 J (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (1.6)	U (0.33)	8.9 (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (1.3)	U (0.25)	0.93 J (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,1-Trichloroethane	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 (0.54)	U (0.11)	24.9 (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.26 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.71)	U (0.14)	0.67 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	0.49 J (0.21)	0.40 J (0.21)	U (0.21)	102 (0.21)	400 (2.1)	1.2 (0.21)	461 (2.1)	29.9 (0.21)	619 (4.2)	286 (4.2)	208 (1.0)	40.0 (0.21)	22800 (52.5)	82.3 (0.21)	1.0 (0.21)	U (0.21)	67.3 (0.21)	49.6 (0.21)	44.4 (0.21)
Vinyl Chloride	U (0.17)	U (0.17)	U (0.17)	U (0.17)	0.74 J (0.17)	U (0.17)	0.63 J (0.17)	0.19 J (0.17)	0.20 J (0.17)	0.38 J (0.17)	U (0.84)	U (0.17)	86.5 (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	0.69 J (0.17)
Metals																			
Iron	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	318 (50.0)	NM	25.6 J (50.0)	NM	NM	NM	NM	NM	16900 (50.0)
Iron, Ferrous	20	NM	280	U	30	10	80	320	580	1630	180	440	U	800	10	U	U	110	6100
Monitored Natural Attenuation Parameters (Laborato																			
Organic Carbon (total)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (1000)	NM	440 J (1000)	NM	NM	NM	NM	NM	U (1000)
Organic Carbon (dissolved)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Chloride	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	223000 (20000)	NM	293000 (20000)	NM	NM	NM	NM	NM	247000 (20000)
Nitrogen	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (100)	NM	1100 (100)	NM	NM	NM	NM	NM	U (100)
Nitrogen, Nitrate (As N)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (100)	NM	1000 (100)	NM	NM	NM	NM	NM	U (100)
Nitrogen, Nitrite	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (100)	NM	130 (100)	NM	NM	NM	NM	NM	U (100)
Nitrate/Nitrite	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (50)	NM	U (50)	NM	NM	NM	NM	NM	100 (50)
Sulfate	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2300 (1000)	NM	217000 (20000)	NM	NM	NM	NM	NM	1900 (1000)
1-Butanecarboxylic Acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sodium Persulfate	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Acetic acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Butyric acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Formic acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
n-Hexanoic acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Lactic Acid	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gasses																			
Acetylene	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	UJ (0.50)	NM	0.60 J (0.50)	NM	NM	NM	NM	NM	0.19 J (0.50)
Methane	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	22 J (5.0)	NM	13 J (5.0)	NM	NM	NM	NM	NM	290 J (5.0)
Ethane	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.36 J (1.0)	NM	3.7 J (1.0)	NM	NM	NM	NM	NM	UJ (1.0)
Ethene	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.25 J (1.0)	NM	1.0 J (1.0)	NM	NM	NM	NM	NM	0.46 J (1.0)
HYDROGEN (H2) [nM]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses																			
BAV1 Vinyl Chloride Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (0.5)	NM	U (0.5)	NM	NM	NM	NM	NM	0.987 (0.5)
Dehalocaccoides (DHC) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	6.5 (0.5)	NM	U (0.5)	NM	NM	NM	NM	NM	24.0 (0.5)
tceA Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	U (0.5)	NM	U (0.5)	NM	NM	NM	NM	NM	U (0.5)
Vinyl Chloride Reductase (vrcA) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.176 J (0.5)	NM	U (0.5)	NM	NM	NM	NM	NM	U (0.5)
Field Parameters																			
Dissolved Oxygen	200	NM	210	180	210	100	90	30	210	60	230	100	150	170	210	160	700	1020	180
Oxidation Reduction Potential [mV]	65.6	NM	122.5	153.5	232.2	144.6	153.4	139.9	165	67.1	153.1	212.7	177.7	58.9	117.8	34.1	78.9	55.4	-1.5
pH (Field Analysis) [SU]	6.61	NM	6.72	5.68	6.11	6.07	4.99	6.54	5.65	5.47	5.05	5.33	5.81	6.29	6.52	5.92	6.33	6.61	5.83
Specific Conductivity (Field Analysis) [uS/cm]	914	NM	1705	394.6	328	570	713	871	689	763	830	1294	1686	731	196.4	417.8	206	734	958
Temperature (Field) [C]	23.8	NM	27.8	20	23.9	19.5	22	19.4	19.5	22.5	19.8	18.3	21.4	19.7	20	19.8	20.9	18.1	19.3
Turbidity (Field Parameters) [NTU]	2.63	NM	48.4	4.47	6.73	5.04	4.94	1.63	3.4	4	2.98	3.14	4.89	189	21.6	2.82	12	46.2	3.62

Notes:

1 All concentrations are presented in µg/L (ppb) except whe
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitat
4 Concentrations that exceed the Remedial Action Levels p

µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection lim
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

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TABLE 6A
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-24	MW-24	MW-175	MW-176	MW-178	MW-179	RW-1	TMW-10	TMW-11	TMW-12	TMW-12	TMW-14	TMW-16	TMW-19	TMW-20	TMW-21	TMW-22R	TMW-23	TMW-24
Field Sample ID	MW-24-202110	DUP-07-202110	MW-175-202110	MW-176-202110	MW-178-202110	MW-179-202110	RW-1-202110	TMW-10-202110	TMW-11-202110	TMW-12-202110	DUP-08-202110	TMW-14-202110	TMW-16-202110	TMW-19-202110	TMW-20-202110	TMW-21-202110	TMW-22R-202110	TMW-23-202110	TMW-24-202110
Lab Sample ID(s)	60383996023	60383996030	60383878029	60383878015	60383996019	60383996020	60384461003	60383737041; 060SJ-1	60383878007; 070SJ-2	60383996027	60383996028	60383878016	60383737043	60384461006	60383737028	60383878002	60383996042	60383878023	60383996014
Sample Date	10/21/2021	10/21/2021	10/20/2021	10/20/2021	10/21/2021	10/21/2021	10/22/2021	10/19/2021	10/20/2021	10/21/2021	10/21/2021	10/20/2021	10/19/2021	10/22/2021	10/19/2021	10/20/2021	10/21/2021	10/20/2021	10/21/2021
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	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments		Field Duplicate									Field Duplicate								
Volatile Organic Compounds																			
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	2.8 J (2.5)	U (2.5)	U (12.7)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.68)	0.20 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.18 J (0.14)	U (0.14)	U (0.14)	0.19 J (0.14)	0.17 J (0.14)	U (0.14)	U (0.14)
Bromodichloromethane	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.78)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
Bromoform	0.73 J (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (3.4)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)
Carbon Tetrachloride	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.86)	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)	U (0.17)	U (0.17)	U (0.17)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.44)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloroethane	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (1.9)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	3.9 (0.37)	U (0.37)	U (0.37)
Chloroform	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	4.9 J (1.1)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (1.4)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
Dibromochloromethane	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (1.5)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	0.79 J (0.61)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	0.32 J+ (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	U (0.22)	1.8 (0.22)	U (0.22)	U (0.22)	36.0 (1.1)	U (0.22)	U (0.22)	1.3 (0.22)	1.4 (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	0.32 J (0.22)	U (0.22)	1.6 (0.22)
cis-1,2-Dichloroethene	0.24 J (0.13)	U (0.13)	1.9 (0.13)	17.0 (0.13)	0.19 J (0.13)	1.1 (0.13)	2580 (25.8)	0.46 J (0.13)	0.22 J (0.13)	8.9 (0.13)	9.6 (0.13)	0.64 J (0.13)	1.2 (0.13)	2.6 (0.13)	0.28 J (0.13)	2.1 (0.13)	24.7 (0.13)	2.9 (0.13)	11.3 (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	U (0.10)	0.38 J (0.10)	U (0.10)	U (0.10)	4.1 J (0.51)	0.15 J (0.10)	U (0.10)	0.12 J (0.10)	0.19 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.16 J (0.10)	1.1 (0.10)	U (0.10)	0.19 J (0.10)
Ethyl Benzene	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.60)	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)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (3.7)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	4.9 J (2.0)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	2.5 (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
1,1,2,2-Tetrachloroethane	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	1.4 J (0.77)	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	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	12.0 (1.6)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	3.5 J (1.3)	0.29 J (0.25)	0.58 J (0.25)	U (0.25)	U (0.25)	U (0.25)	0.37 J (0.25)	U (0.25)	U (0.25)	1.7 (0.25)	0.28 J (0.25)	U (0.25)	U (0.25)
1,1,1-Trichloroethane	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	8.4 (0.54)	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	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	1.5 J (0.71)	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)
Trichloroethene	10.4 (0.21)	10.0 (0.21)	91.1 (0.21)	310 (2.1)	U (0.21)	20.1 (0.21)	36000 (42.0)	0.59 J (0.21)	U (0.21)	366 (2.1)	359 (2.1)	0.55 J (0.21)	0.31 J (0.21)	40.4 (0.21)	U (0.21)	5.2 (0.21)	21.9 (0.21)	186 (0.21)	487 (2.1)
Vinyl Chloride	U (0.17)	U (0.17)	U (0.17)	19.3 (0.17)	U (0.17)	U (0.17)	12.7 (0.84)	2.2 (0.17)	U (0.17)	0.20 J (0.17)	0.23 J (0.17)	U (0.17)	0.77 J (0.17)	U (0.17)	U (0.17)	1.7 (0.17)	12.8 (0.17)	U (0.17)	0.24 J (0.17)
Metals																			
Iron	NM	NM	NM	NM	NM	NM	NM	14400 (50.0)	5580 (50.0)	NM	NM	NM	9900 (50.0)	3270 (50.0)	NM	11400 (50.0)	14700 (50.0)	NM	NM
Iron, Ferrous	40	NM	U	60	NM	NM	U	6800	2280	NM	NM	1580	1840	2670	1810	2300	2750	NM	NM
Monitored Natural Attenuation Parameters (Laborato																			
Organic Carbon (total)	NM	NM	NM	NM	NM	NM	NM	2300 (1000)	4000 (2000)	NM	NM	NM	12000 (2000)	1400 (1000)	NM	670 J (1000)	780 J (1000)	NM	NM
Organic Carbon (dissolved)	NM	NM	NM	NM	NM	NM	NM	2600 (1000)	4000 (1000)	NM	NM	NM	7100 (1000)	1400 (1000)	NM	720 J (1000)	1200 (1000)	NM	NM
Chloride	NM	NM	NM	NM	NM	NM	NM	153000 (20000)	87400 B (20000)	NM	NM	NM	240000 (20000)	81100 J+ (20000)	NM	187000 (20000)	188000 (20000)	NM	NM
Nitrogen	NM	NM	NM	NM	NM	NM	NM	U (100)	U (100)	NM	NM	NM	R (100)	NM	NM	82 J (100)	U (100)	NM	NM
Nitrogen, Nitrate (As N)	NM	NM	NM	NM	NM	NM	NM	U (100)	U (100)	NM	NM	NM	R (100)	NM	NM	82 J (100)	U (100)	NM	NM
Nitrogen, Nitrite	NM	NM	NM	NM	NM	NM	NM	U (100)	U (100)	NM	NM	NM	R (100)	NM	NM	U (100)	U (100)	NM	NM
Nitrate/Nitrite	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	130 (100)	NM	NM	NM	NM	NM
Sulfide (total)	NM	NM	NM	NM	NM	NM	NM	64 (50)	30 J (50)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfate	NM	NM	NM	NM	NM	NM	NM	1300 (1000)	1400 (1000)	NM	NM	NM	3100 (1000)	11700 J+ (1000)	NM	10300 (2000)	2000 (1000)	NM	NM
1-Butanecarboxylic Acid	NM	NM	NM	NM	NM	NM	NM	UJ (5000)	U (5000)	NM	NM	NM	U (5000)	J (500)	NM	U (5000)	UJ (5000)	NM	NM
Sodium Persulfate	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Acetic acid	NM	NM	NM	NM	NM	NM	NM	3200 J (5000)	3000 J (5000)	NM	NM	NM	5400 (5000)	270 J (500)	NM	2800 J (5000)	3400 J (5000)	NM	NM
Butyric acid	NM	NM	NM	NM	NM	NM	NM	UJ (5000)	U (5000)	NM	NM	NM	U (5000)	J (500)	NM	U (5000)	UJ (5000)	NM	NM
Formic acid	NM	NM	NM	NM	NM	NM	NM	51000 J (5000)	53000 (5000)	NM	NM	NM	52000 (5000)	5400 J (500)	NM	54000 (5000)	47000 J (5000)	NM	NM
n-Hexanoic acid	NM	NM	NM	NM	NM	NM	NM	UJ (5000)	U (5000)	NM	NM	NM	U (5000)	120 J (500)	NM	U (5000)	UJ (5000)	NM	NM
Lactic Acid	NM	NM	NM	NM	NM	NM	NM	5200 J (5000)	6800 (5000)	NM	NM	NM	4600 J (5000)	1100 J (500)	NM	3200 J (5000)	3900 J (5000)	NM	NM
Gasses																			
Acetylene	NM	NM	NM	NM	NM	NM	NM	U (0.50)	U (0.50)	NM	NM	NM	NM	NM	NM	NM	UJ (0.50)	NM	NM
Methane	NM	NM	NM	NM	NM	NM	NM	11000 (5.0)	4400 (5.0)	NM	NM	NM	7600 (5.0)	U (5.0)	NM	4400 (5.0)	4100 J (5.0)	NM	NM
Ethane	NM	NM	NM	NM	NM	NM	NM	1.0 (1.0)	0.60 J (1.0)	NM	NM	NM	2.4 (1.0)	0.20 J+ (1.0)	NM	0.43 J (1.0)	3.4 J (1.0)	NM	NM
Ethene	NM	NM	NM	NM	NM	NM	NM	1.7 (1.0)	U (1.0)	NM	NM	NM	1.9 (1.0)	U (1.0)	NM	1.5 (1.0)	13 J (1.0)	NM	NM
HYDROGEN (H2) [nM]	NM	NM	NM	NM	NM	NM	NM	1.9 (1.9)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses																			
BAV1 Vinyl Chloride Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	290 (0.5)	1 (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Dehalocaccoides (DHC) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	1140 (0.5)	214 (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	325 (0.5)	13.8 (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	U (0.5)	12.1 (0.5)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Field Parameters																			
Dissolved Oxygen	120	NM	2060	430	210	460	90	90	40	190	NM	60	20	170	200	60	130	180	140
Oxidation Reduction Potential [mV]	312.6	NM	63.7	52.8	-39.6	164.1	-4.7	-121.7	-145.3	81.6	NM	-27.1	-250.2	8	-102.6	-125.5	-102.4	-175.1	-65.4
pH (Field Analysis) [SU]	5.01	NM	7.57	7.19	6.56	5.63	6.74	6.75	6.89	5.37	NM	6.13	7.12	6.1	6.68	6.33	6.89	6.33	5.79
Specific Conductivity (Field Analysis) [uS/cm]	1335	NM	1364	887	214.1	136	1415	1583	1217	533.2	NM	174	1991	452.2	1461	1231	1624	962	812
Temperature (Field) [C]	21.2	NM	21.1	21.3	30.5	28.5	21.8	21.9	20.6	19.5	NM	20.3	19.6	19.1	22	21.6	21.4	21.9	21.5
Turbidity (Field Parameters) [NTU]	1.6	NM	1.9	17.9	41.1	86.4	10.25	9.24	7.1	15.6	NM	12.47	43.5	16	3.48	7.2	13.9	3.6	9.4

Notes:
1 All concentrations are presented in µg/L (ppb) except whe
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitat
4 Concentrations that exceed the Remedial Action Levels p
µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection lim
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

RAMBOLL

TABLE 6A
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	TMW-25	TMW-26	TMW-27	TMW-29	TMW-30	TMW-30	TMW-32	TMW-34	TMW-35	TMW-35	TMW-36	TMW-36B
Field Sample ID	TMW-25-202110	TMW-26-202110	TMW-27-202110	TMW-29-202110	TMW-30-202110	DUP-11-202110	TMW-32-202110	TMW-34-202110	TMW-35-202110	DUP-06-202110	TMW-36-202110	TMW-36B-202110
Lab Sample ID(s)	60383878001	60383737048	60383737018	60383737027	60383996011	60383996012	60383878005	60383878006	60383737029	60383737030	60383737045	60383737046
Sample Date	10/20/2021	10/19/2021	10/19/2021	10/19/2021	10/21/2021	10/21/2021	10/20/2021	10/20/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
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
Comments						Field Duplicate				Field Duplicate		
Volatile Organic Compounds												
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (50.8)	U (50.8)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (2.7)	U (2.7)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Bromodichloromethane	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (3.1)	U (3.1)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
Bromoform	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (13.5)	U (13.5)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)	U (0.68)
Carbon Tetrachloride	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (3.4)	U (3.4)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Chlorobenzene	2.7 (0.089)	U (0.089)	U (0.089)	U (0.089)	U (1.8)	U (1.8)	1.7 (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloroethane	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (7.5)	U (7.5)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)	U (0.37)
Chloroform	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (4.4)	U (4.4)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (5.7)	U (5.7)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
Dibromochloromethane	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (6.1)	U (6.1)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)	U (0.30)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (2.4)	U (2.4)	U (0.12)	0.55 J (0.12)	U (0.12)	U (0.12)	0.53 J (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (4.4)	U (4.4)	U (0.22)	1.4 (0.22)	U (0.22)	U (0.22)	0.94 J (0.22)	U (0.22)
cis-1,2-Dichloroethene	1.4 (0.13)	0.88 J (0.13)	U (0.13)	U (0.13)	3.5 J (2.6)	2.7 J (2.6)	5.2 (0.13)	65.5 (0.13)	U (0.13)	U (0.13)	64.3 (0.13)	U (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (2.0)	U (2.0)	U (0.10)	0.14 J (0.10)	U (0.10)	U (0.10)	0.24 J (0.10)	U (0.10)
Ethyl Benzene	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (2.4)	U (2.4)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (14.7)	U (14.7)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (7.8)	U (7.8)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
1,1,2,2-Tetrachloroethane	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (3.1)	U (3.1)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (6.6)	U (6.6)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	2.0 (0.25)	0.31 J (0.25)	U (0.25)	U (5.1)	U (5.1)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,1-Trichloroethane	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (2.2)	U (2.2)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (2.8)	U (2.8)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	6.8 (0.21)	2.7 (0.21)	U (0.21)	U (0.21)	8.7 J (4.2)	7.8 J (4.2)	24.9 (0.21)	126 (0.21)	U (0.21)	U (0.21)	110 (0.21)	U (0.21)
Vinyl Chloride	0.45 J (0.17)	0.44 J (0.17)	U (0.17)	U (0.17)	U (3.3)	U (3.3)	0.36 J (0.17)	U (0.17)	U (0.17)	U (0.17)	0.27 J (0.17)	U (0.17)
Metals												
Iron	20500 (50.0)	20600 (50.0)	NM	NM	NM	NM	7110 (50.0)	1550 (50.0)	NM	NM	3490 (50.0)	5450 (50.0)
Iron, Ferrous	5600	3400	U	U	2690	NM	4200	1480	50	NM	2360	1940
Monitored Natural Attenuation Parameters (Laborato												
Organic Carbon (total)	6200 (2000)	44600 (25000)	NM	NM	NM	NM	650 J (1000)	610 J (1000)	NM	NM	680 J (1000)	610 J (1000)
Organic Carbon (dissolved)	3800 (1000)	40100 (10000)	NM	NM	NM	NM	1100 (1000)	460 J (1000)	NM	NM	940 J (1000)	570 J (1000)
Chloride	98300 (20000)	172000 (20000)	NM	NM	NM	NM	89400 B (20000)	38400 (5000)	NM	NM	105000 (20000)	384000 (20000)
Nitrogen	450 (100)	U (100)	NM	NM	NM	NM	U (100)	1600 (100)	NM	NM	290 (100)	1300 J (100)
Nitrogen, Nitrate (As N)	450 (100)	U (100)	NM	NM	NM	NM	U (100)	1600 (100)	NM	NM	290 (100)	1300 J (100)
Nitrogen, Nitrite	U (100)	U (100)	NM	NM	NM	NM	U (100)	U (100)	NM	NM	U (100)	R (100)
Nitrate/Nitrite	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfate	16100 (2000)	3400 (1000)	NM	NM	NM	NM	45400 (20000)	8200 (2000)	NM	NM	15300 (1000)	17700 (2000)
1-Butanecarboxylic Acid	U (5000)	U (5000)	NM	NM	NM	NM	U (5000)	U (5000)	NM	NM	U (5000)	U (5000)
Sodium Persulfate	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Acetic acid	4000 J (5000)	5600 (5000)	NM	NM	NM	NM	2900 J (5000)	3100 J (5000)	NM	NM	5500 (5000)	6000 (5000)
Butyric acid	U (5000)	710 J (5000)	NM	NM	NM	NM	U (5000)	U (5000)	NM	NM	U (5000)	U (5000)
Formic acid	52000 (5000)	55000 (5000)	NM	NM	NM	NM	57000 (5000)	52000 (5000)	NM	NM	53000 (5000)	55000 (5000)
n-Hexanoic acid	U (5000)	U (5000)	NM	NM	NM	NM	U (5000)	U (5000)	NM	NM	U (5000)	U (5000)
Lactic Acid	4600 J (5000)	3800 J (5000)	NM	NM	NM	NM	2700 J (5000)	2700 J (5000)	NM	NM	U (5000)	2500 J (5000)
Gasses												
Acetylene	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	6700 (5.0)	4500 (5.0)	NM	NM	NM	NM	5300 (5.0)	1600 (5.0)	NM	NM	1500 (5.0)	34 (5.0)
Ethane	1.6 (1.0)	0.58 J (1.0)	NM	NM	NM	NM	0.41 J (1.0)	U (1.0)	NM	NM	0.53 J (1.0)	U (1.0)
Ethene	0.55 J (1.0)	U (1.0)	NM	NM	NM	NM	U (1.0)	U (1.0)	NM	NM	0.36 J (1.0)	U (1.0)
HYDROGEN (H2) [nM]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses												
BAV1 Vinyl Chloride Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Field Parameters												
Dissolved Oxygen	60	80	60	70	20	NM	200	100	60	NM	130	180
Oxidation Reduction Potential [mV]	-124.3	-210.4	169.4	44.7	-243.7	NM	-25.6	-16.4	229.4	NM	-19	-52.8
pH (Field Analysis) [SU]	6.89	6.79	5.13	6.47	7.6	NM	6.37	6.43	4.91	NM	6.58	6.41
Specific Conductivity (Field Analysis) [uS/cm]	1053	2315	241.4	1139	3077	NM	792	422.8	239.3	NM	920	1596
Temperature (Field) [C]	17.2	20.3	18.7	20.8	19.1	NM	20.3	23.8	18.5	NM	20.5	21.6
Turbidity (Field Parameters) [NTU]	18.9	24.2	30.1	109	NM	NM	4.27	4.51	2.68	NM	9.14	14.3

Notes:
1 All concentrations are presented in µg/L (ppb) except whe
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitat
4 Concentrations that exceed the Remedial Action Levels p
µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection lim
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

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TABLE 6B
SUMMARY OF INJECTION WELL GROUNDWATER SAMPLING ANALYTICAL RESULTS
(OCTOBER 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	IW-73	IW-77	IW-78
Field Sample ID		IW-73-202110	IW-77-202110	DUP-09-202110
Lab Sample ID(s)		60383996038; 075SJ-6	60384461002	60383878026
Sample Date		10/21/2021	10/22/2021	10/20/2021
Sample Method		Low Flow	Low Flow	Low Flow
Comments				
Volatile Organic Compounds				
Acetone	12000	U (12.7)	U (12.7)	6.6 J (2.5)
Bromoform	80	U (3.4)	U (3.4)	6.7 (0.68)
Chloromethane	190	U (1.4)	U (1.4)	0.34 J (0.28)
Dibromochloromethane	80	U (1.5)	U (1.5)	0.35 J (0.30)
cis-1,2-Dichloroethene	70	6.8 (0.64)	7.6 (0.64)	0.45 J (0.13)
Methylene Chloride	5.0	U (2.0)	2.6 J (2.0)	U (0.39)
Toluene	1000	2.7 J (1.3)	2.4 J (1.3)	U (0.25)
Trichloroethene	5.0	198 (1.0)	176 (1.0)	15.1 (0.21)
Vinyl Chloride	2.0	1.7 J (0.84)	U (0.84)	U (0.17)
Metals				
Iron	NE	360 (50.0)	NM	NM
Iron, Ferrous	NE	330	80	U
Monitored Natural Attenuation Parameters (Laboratory)				
Organic Carbon (total)	NE	U (1000)	NM	NM
Chloride	NE	178000 J+ (20000)	NM	NM
Nitrogen	NE	230 (100)	NM	NM
Nitrogen, Nitrate (As N)	NE	230 (100)	NM	NM
Nitrogen, Nitrite	NE	U (100)	NM	NM
Sulfide (total)	NE	U (50)	NM	NM
Sulfate	NE	3200 (1000)	NM	NM
Gasses				
Acetylene	NE	UJ (0.50)	NM	NM
Methane	NE	2.9 J (5.0)	NM	NM
Ethane	NE	0.20 J (1.0)	NM	NM
Ethene	NE	UJ (1.0)	NM	NM
Molecular Analyses				
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	1.92 (0.5)	NM	NM
Dehalocaccoides (DHC) [cells/mL]	NE	106 (0.5)	NM	NM
tceA Reductase [cells/mL]	NE	U (0.5)	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	U (0.5)	NM	NM
Field Parameters				
Dissolved Oxygen	NE	140	100	1290
Oxidation Reduction Potential [mV]	NE	180	184.5	137.7
pH (Field Analysis) [SU]	NE	5.49	7.26	6.69
Specific Conductivity (Field Analysis) [uS/cm]	NE	719	1656	4472
Temperature (Field) [C]	NE	20.5	19.1	22.3
Turbidity (Field Parameters) [NTU]	NE	4.91	5.13	8.12

Notes:

1 All concentrations are presented in µg/L (ppb) except where otherwise noted.
2 Only compounds with at least one detection are shown.
3 The detection limit for other VOCs is the sample quantitation limit.
4 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued

µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
VOC = Volatile organic compound
U = Not detected
J = Estimated concentration
( ) = Method detection limit for VOCs; reporting detection limit for other analyses.
RAD = Remedial action decision document
ADEQ = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter
NE = Not established
NM = Not measured

Color Key
Onsite Wells
Offsite Wells
Plume Boundary Wells

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
DP-02	DP-02-20131220	12/20/2013	N	270	8.2	0.33 J
DP-02	DP-02-20131220-FD	12/20/2013	FD	270	8.7	0.34 J
DP-03	DP-03-20131218	12/18/2013	N	120	5.1	0.14 J
DP-04	DP-04-20131218	12/18/2013	N	57	2.3 J	0.15 J
DP-05	DP-05-20131217	12/17/2013	N	2.2 J	< 5.0 U	< 2.0 U
DP-07	DP-07-20131217	12/17/2013	N	12000	97	21
DP-12	DP-12-20140111	1/11/2014	N	390	140	1.6 J
DP-12	DP-12-20140111-FD	1/11/2014	FD	490	140	1.3 J
DP-14	DP-14-20140109	1/9/2014	N	17000	150	16 J
DP-16	DP-16-20140110	1/10/2014	N	390	48	3.6
DP-18	DP-18-20140110	1/10/2014	N	2800	170	< 20 U
DP-22	DP-22-20140111	1/11/2014	N	170	3.0 J	< 2.0 U
DP-38	DP-38-082014	8/5/2014	N	1.5 J	2.9 J	< 2.0 U
DP-39	DP-39 - 082014	8/6/2014	N	18.1	0.78 J	< 2.0 U
DP-40	DP-40 - 082014	8/11/2014	N	3.2 J	0.55 J	< 2.0 U
DP-41	DP-41 - 082014	8/11/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-42	DP-42 - 082014	8/11/2014	N	6.4	< 5.0 U	< 2.0 U
DP-43	DP-43 - 082014	8/11/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-44	DP-44 - 082014	8/11/2014	N	< 25.0 U	< 25.0 U	< 10.0 U
DP-45	DP-45 - 082014	8/11/2014	N	6.8	1.3 J	< 2.0 U
DP-46	DP-46-082014	8/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-47	DP-47-082014	8/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-48	DP-48-082014	8/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-49	DP-49-GW-20140817	8/17/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-50	DP-50-082014	8/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-51	DP-51-GW-082014	8/20/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-52	DP-52-GW-082014	8/19/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-53	DP-53-GW-082014	8/20/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-57	DP-57-GW-20140825	8/25/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-58	DP-58-GW-082014	8/26/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-59	DP-59-GW-082014	8/26/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-60	DP-60-GW-082014	8/26/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-61	DP-61-GW-082014	8/26/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
DP-62	DP-62-GW-082014	8/27/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
HM-HP-01	HM-HP-01-WG-39.5	7/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
HM-HP-02	HM-HP-02-WG-31	7/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
HM-HP-03	HM-HP-03-WG-37	7/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
HM-HP-04	HM-HP-04-WG-38	7/15/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
HP-02	HP-02-20180404	4/4/2018	N	63.4	5.9	0.16 J
HP-03	HP-03-20180404	4/4/2018	N	244	7.9	0.29 J
HP-04	HP-04-20180404	4/4/2018	N	6.6	2.2	< 1.0 U
HP-05	HP-05-20180404	4/4/2018	N	10.9	5.8	< 1.0 U
HP-06	HP-06-20180404	4/4/2018	N	7.4	2.7	< 1.0 U
HP-07	HP-07-20180405	4/5/2018	N	4.6	3.2	0.14 J
HP-08	HP-08-20180405	4/5/2018	N	0.30 J	0.34 J	< 1.0 U
HP-16D	HP-16D-WG-20210803	8/3/2021	N	179	13.2	0.29 J
HP-17D	HP-17D-WG-20210803	8/3/2021	N	398	134	0.89 J
HP-17S	HP-17S-WG-20210803	8/3/2021	N	321	120	0.70 J
HP-18D	HP-18D-WG-20210803	8/3/2021	N	0.33 J	< 1.0 U	< 1.0 U
HP-19	HP-19-WG-20210804	8/4/2021	N	0.35 J	0.24 J	< 1.0 U
HP-20	HP-20-WG-20210805	8/5/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
HP-21	HP-21-WG-202109	9/20/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
HP-22	HP-22-WG-202109	9/21/2021	N	27.4	4.6	< 1.0 U
HP-23	HP-23-WG-202109	9/22/2021	N	97.9	9.9	< 1.0 U
HP-23	HP-23-WG-20210923	9/23/2021	N	45.6	5.0	< 1.0 U
HP-24	HP-24-WG-202109	9/22/2021	N	0.90 J	0.21 J	< 1.0 U
HP-24	HP-24-WG-20210923	9/23/2021	N	1.8	0.36	< 1.0 U
HP-25	HP-25-WG-202109	9/22/2021	N	127	11.6	< 1.0 U
HP-26	HP-26-WG-202109	9/22/2021	N	321	25.4	< 1.0 U
HP-27	HP-27-WG-202109	9/22/2021	N	154	3.8	0.34 J
ITMW-1	ITMW-1-20010327	3/27/2001	N	30	6	< 10 U
ITMW-1	ITMW-1-20010911	9/11/2001	N	27	9	< 10 U
ITMW-1	ITMW-1-20020910	9/10/2002	N	35	9	< 10 U
ITMW-1	ITMW-1-20030227	2/27/2003	N	29.6	7.14	< 10 U
ITMW-1	ITMW-1-20030923	9/23/2003	N	25	12	< 10 U
ITMW-1	ITMW-1-20040413	4/13/2004	N	42.2	11.1	< 10 U
ITMW-1	ITMW-1-20040921	9/21/2004	N	26	16.7	< 10 U
ITMW-1	ITMW-1-20040921-FD	9/21/2004	FD	26.1	15.8	< 10 U
ITMW-1	ITMW-1-20050928	9/28/2005	N	34.7	11.3	< 10 U
ITMW-1	ITMW-1-20061014	10/14/2006	N	20	11	< 10 UJ
ITMW-1	ITMW-1-20070920	9/20/2007	N	18	13	< 10 U
ITMW-1	ITMW-1-20081209	12/9/2008	N	14	7.3	< 5 U
ITMW-1	ITMW-1-20111027	10/27/2011	N	17	8.2	< 5 U
ITMW-1	ITMW-1-20120418	4/18/2012	N	32	13	< 5 U
ITMW-1	ITMW-1-20121019	10/19/2012	N	10	8.3	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-1	ITMW-1-20130424	4/24/2013	N	26	9.1	< 2.0 U
ITMW-1	ITMW-1-101513	10/15/2013	N	7.2	5.8	< 2.0 U
ITMW-1	ITMW-1-201403	3/8/2014	N	23.4	8.9	< 2.0 U
ITMW-1	ITMW-1-201405	5/13/2014	N	21.3	8.7	< 2.0 U
ITMW-1	ITMW-1-201407	7/30/2014	N	8.9	5.4	< 2.0 U
ITMW-1	DUP-5-201407	7/30/2014	FD	9.2	5.7	< 2.0 U
ITMW-1	ITMW-1-201410	10/15/2014	N	6.1	4.5 J	< 2.0 U
ITMW-1	ITMW-1-201501	1/14/2015	N	22.7	9.7	< 1.0 U
ITMW-1	ITMW-1-201504	4/15/2015	N	19.2	9.7	< 1.0 U
ITMW-1	ITMW-1-201507	7/22/2015	N	10.5	5.3	< 1.0 U
ITMW-1	ITMW-1-201510	10/7/2015	N	7.8	4.4	< 1.0 U
ITMW-1	ITMW-1-201601	1/13/2016	N	19.9	8.9	< 1.0 U
ITMW-1	ITMW-1-201605	5/5/2016	N	17.2	8.0	< 1.0 U
ITMW-1	DUP-05-201605	5/5/2016	FD	17.6	8.1	< 1.0 U
ITMW-1	ITMW-1-201611	11/10/2016	N	7.6	3.1	< 1.0 U
ITMW-1	DUP-04-201611	11/10/2016	FD	7.0	3.4	< 1.0 U
ITMW-1	ITMW-1-201710	10/25/2017	N	8.9	3.8	< 1.0 U
ITMW-1	ITMW-1-201811	11/15/2018	N	12.7	5.4	< 1.0 U
ITMW-1R	ITMW-1R-201910	10/23/2019	N	11.4	8.9	0.14 J
ITMW-1R	ITMW-1R-202010	10/8/2020	N	28.4	45.9	< 1.0 U
ITMW-10	ITMW-10-202110	10/21/2021	N	302	4.4	0.24 J
ITMW-2	ITMW-2-20010327	3/27/2001	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20010913	9/13/2001	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20020911	9/11/2002	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20030923	9/23/2003	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040413	4/13/2004	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040413-FD	4/13/2004	FD	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040921	9/21/2004	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040921-FD	9/21/2004	FD	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20050929	9/29/2005	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20061014	10/14/2006	N	4 J	< 5 U	< 10 U
ITMW-2	ITMW-2-20070920	9/20/2007	N	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20081209	12/9/2008	N	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20101103	11/3/2010	N	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20120417	4/17/2012	N	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-2	ITMW-2-20130424	4/24/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-2	ITMW-2-101413	10/14/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-2	ITMW-2-201403	3/6/2014	N	0.23 J	0.40 J	< 2.0 U
ITMW-2	ITMW-2-201403-FD	3/6/2014	FD	0.28 J	0.51 J	< 2.0 U
ITMW-2	ITMW-2-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-2	ITMW-2-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-2	ITMW-2-201410	10/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-2	ITMW-2-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-2	ITMW-2-201504	4/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-2	ITMW-2-201507	7/22/2015	N	0.24 J	0.26 J	< 1.0 U
ITMW-2	ITMW-2-201510	10/6/2015	N	0.22 J	0.21 J	< 1.0 U
ITMW-2	ITMW-2-201601	1/12/2016	N	0.21 J	0.42 J	< 1.0 U
ITMW-2	ITMW-2-201605	5/5/2016	N	0.25 J	0.29 J	< 1.0 U
ITMW-2	ITMW-2-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-2	ITMW-2-201710	10/25/2017	N	< 1.0 U	0.29 J	< 1.0 U
ITMW-2	ITMW-2-201811	11/13/2018	N	0.71 J	0.57 J	< 1.0 U
ITMW-2R	ITMW-2R-201910	10/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-2R	ITMW-2R-202010	10/8/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-2R	DUP-09-202010	10/8/2020	FD	0.32 J	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-3	ITMW-3-20010327	3/27/2001	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20010911	9/11/2001	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20020910	9/10/2002	N	15	< 5 U	< 10 U
ITMW-3	ITMW-3-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20030923	9/23/2003	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20040413	4/13/2004	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20040921	9/21/2004	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20050928	9/28/2005	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20061014	10/14/2006	N	< 5 U	< 5 U	< 10 UJ
ITMW-3	ITMW-3-20070920	9/20/2007	N	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20081209	12/9/2008	N	< 5 U	< 5 U	< 5 U
ITMW-3	ITMW-3-20101104	11/4/2010	N	190	3.9 J	< 5 U
ITMW-3	ITMW-3-20111027	10/27/2011	N	4.1 J	< 5 U	< 5 U
ITMW-3	ITMW-3-20120417	4/17/2012	N	< 5 U	< 5 U	< 5 U
ITMW-3	ITMW-3-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-3	ITMW-3-20130423	4/23/2013	N	< 5.0 U	< 5.0 U	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-3	ITMW-3-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-4	ITMW-4-20010328	3/28/2001	N	9	< 5 U	< 10 U
ITMW-4	ITMW-4-20010913	9/13/2001	N	6	8	< 10 U
ITMW-4	ITMW-4-20020910	9/10/2002	N	9	< 5 U	< 10 U
ITMW-4	ITMW-4-20030228	2/28/2003	N	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20030923	9/23/2003	N	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20040414	4/14/2004	N	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20050927	9/27/2005	N	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20061011	10/11/2006	N	6	8	< 10 U
ITMW-4	ITMW-4-20070920	9/20/2007	N	5 J	5 J	< 10 U
ITMW-4	ITMW-4-20081209	12/9/2008	N	< 5 U	3.2 J	< 5 U
ITMW-4	ITMW-4-20111025	10/25/2011	N	4.8 J	5.1	< 5 U
ITMW-4	ITMW-4-20121017	10/17/2012	N	3.3 J	4.5 J	7.9
ITMW-4	ITMW-4-101413	10/14/2013	N	3.7 J	6.1	< 2.0 U
ITMW-4	ITMW-4-201403	3/6/2014	N	1.4 J	2.0 J	0.19 J
ITMW-4	ITMW-4-201405	5/13/2014	N	2.0 J	2.1 J	0.18 J
ITMW-4	ITMW-4-201407	7/30/2014	N	2.8 J	4.6 J	< 2.0 U
ITMW-4	ITMW-4-201410	10/16/2014	N	3.4 J	4.9 J	< 2.0 U
ITMW-4	ITMW-4-201501	1/13/2015	N	1.7	2.3	< 1.0 U
ITMW-4	ITMW-4-201504	4/14/2015	N	1.6	2.6	0.84 J
ITMW-4	ITMW-4-201507	7/22/2015	N	2.0	2.6	0.17 J
ITMW-4	ITMW-4-201510	10/7/2015	N	2.3	2.8	0.23 J
ITMW-4	ITMW-4-201601	1/12/2016	N	1.5	2.5	< 1.0 U
ITMW-4	ITMW-4-201605	5/5/2016	N	1.3	< 1.0 U	0.15 J
ITMW-4	ITMW-4-202005	5/13/2020	N	12.4	< 1.0 U	< 1.0 U
ITMW-5	ITMW-5-20010328	3/28/2001	N	100	46	< 10 U
ITMW-5	ITMW-5-20010913	9/13/2001	N	72	64	< 10 U
ITMW-5	ITMW-5-20020910	9/10/2002	N	108	72	< 10 U
ITMW-5	ITMW-5-20030228	2/28/2003	N	90.4	68.7	< 10 U
ITMW-5	ITMW-5-20030924	9/24/2003	N	97.3	73.7	< 10 U
ITMW-5	ITMW-5-20040414	4/14/2004	N	83.9	55.4	< 10 U
ITMW-5	ITMW-5-20040922	9/22/2004	N	105	75.8	< 10 U
ITMW-5	ITMW-5-20050406	4/6/2005	N	93.2	72.6	< 10 U
ITMW-5	ITMW-5-20050406-FD	4/6/2005	FD	87	71	< 10 U
ITMW-5	ITMW-5-20050928	9/28/2005	N	79	53.5	< 10 U
ITMW-5	ITMW-5-20050928-FD	9/28/2005	FD	82.1	54.4	< 10 U
ITMW-5	ITMW-5-20060314	3/14/2006	N	92	66.1	< 10 U
ITMW-5	ITMW-5-20060314-FD	3/14/2006	FD	98.4	66.1	< 10 U
ITMW-5	ITMW-5-20061010	10/10/2006	N	110	51	4 J
ITMW-5	ITMW-5-20070418	4/18/2007	N	115	39.3	< 10 U
ITMW-5	ITMW-5-20070920	9/20/2007	N	120	49	4 J
ITMW-5	ITMW-5-20080429	4/29/2008	N	120 0	43 0	< 10 U
ITMW-5	ITMW-5-20081209	12/9/2008	N	200 E	42	< 5 U
ITMW-5	ITMW-5-20090427	4/27/2009	N	160	34	< 5 U
ITMW-5	ITMW-5-20100511	5/11/2010	N	190 EF	40	< 5 U
ITMW-5	ITMW-5-20101106	11/6/2010	N	350	50	< 5 U
ITMW-5	ITMW-5-20110322	3/22/2011	N	370	39	< 5 U
ITMW-5	ITMW-5-20111025	10/25/2011	N	150	35	< 5 U
ITMW-5	ITMW-5-20120417	4/17/2012	N	290	26	< 5 U
ITMW-5	ITMW-5-20121018	10/18/2012	N	260	33	0.64 J
ITMW-5	ITMW-5-20130425	4/25/2013	N	220	20	0.50 J
ITMW-5	ITMW-5-101613	10/16/2013	N	260	27	0.55 J
ITMW-5	ITMW-5-201611	11/10/2016	N	507	38.9	2.8 J
ITMW-5	DUP-06-201611	11/10/2016	FD	441	33.5	1.5 J
ITMW-5	ITMW-5-201704	4/28/2017	N	608	30.7	0.93 J
ITMW-5	DUP-06-201704	4/28/2017	FD	664	27.8	0.82 J
ITMW-5	ITMW-5-201710	10/25/2017	N	1470	38.2	1.6
ITMW-5	ITMW-5-201804	4/19/2018	N	1590	34.2	1.4
ITMW-5	ITMW-5-201811	11/15/2018	N	2250	36.9	2.0
ITMW-5	ITMW-5-201904	4/24/2019	N	3660	37.0	1.6
ITMW-5	ITMW-5-201910	10/24/2019	N	3700	42.1	2.0
ITMW-5	ITMW-5-202005	5/13/2020	N	3050	30.3	1.3
ITMW-5	ITMW-5-202010	10/8/2020	N	2560	29.5	1.4
ITMW-5	ITMW-5-202104	4/14/2021	N	2170	22.1	0.81 J
ITMW-18	ITMW-18-202110	10/21/2021	N	2090	192	< 1.0 U
ITMW-6	ITMW-6-20010328	3/28/2001	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20010913	9/13/2001	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20020910	9/10/2002	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20020910-FD	9/10/2002	FD	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20030924	9/24/2003	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20040414	4/14/2004	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-6	ITMW-6-20050928	9/28/2005	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20061011	10/11/2006	N	< 5 U	4 J	< 10 U
ITMW-6	ITMW-6-20070920	9/20/2007	N	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
ITMW-6	ITMW-6-20091028	10/28/2009	N	< 5 U	2.1 J	< 5 U
ITMW-6	ITMW-6-20100510	5/10/2010	N	< 5 U	1.9 J	< 5 U
ITMW-6	ITMW-6-20111025-FD	10/25/2011	FD	< 5 U	2.7 J	< 5 U
ITMW-6	ITMW-6-20111025	10/25/2011	N	< 5 U	2.4 J	< 5 U
ITMW-6	ITMW-6-20120417	4/17/2012	N	< 5 U	2.9 J	< 5 U
ITMW-6	ITMW-6-20121017	10/17/2012	N	< 5.0 U	3.1 J	< 2.0 U
ITMW-6	ITMW-6-20130422	4/22/2013	N	< 5.0 U	2.1 J	0.33 J
ITMW-6	ITMW-6-101413	10/14/2013	N	3.4 J	5.5	0.18 J
ITMW-6	ITMW-6-201403	3/6/2014	N	2.7 J	4.9 J	0.18 J
ITMW-6	ITMW-6-201405	5/13/2014	N	3.6 J	5.3	0.17 J
ITMW-6	ITMW-6-201407	7/30/2014	N	4.4 J	6.7	< 2.0 U
ITMW-6	ITMW-6-201410	10/15/2014	N	3.1 J	5.2	< 2.0 U
ITMW-6	ITMW-6-201501	1/13/2015	N	3.7	5.7	< 1.0 U
ITMW-6	ITMW-6-201504	4/14/2015	N	3.7	5.3 J	< 1.0 U
ITMW-6	ITMW-6-201507	7/22/2015	N	4.7	6.3	0.31 J
ITMW-6	ITMW-6-201510	10/7/2015	N	3.1	5.5	0.21 J
ITMW-6	ITMW-6-201601	1/12/2016	N	4.2	6.2	0.32 J
ITMW-6	ITMW-6-201605	5/5/2016	N	4.4	5.3	0.22 J
ITMW-6	ITMW-6-202005	5/13/2020	N	2070	19.5	0.99 J
ITMW-6	ITMW-6-202010	10/8/2020	N	2110	20.6	1.4
ITMW-19	ITMW-19-202110	10/21/2021	N	1350	13.6	< 1.0 U
ITMW-7	ITMW-7-20010328	3/28/2001	N	161	66	< 10 U
ITMW-7	ITMW-7-20010913	9/13/2001	N	139	68	< 10 U
ITMW-7	ITMW-7-20020910	9/10/2002	N	137	56	< 10 U
ITMW-7	ITMW-7-20020910-FD	9/10/2002	FD	128	54	< 10 U
ITMW-7	ITMW-7-20030227	2/27/2003	N	172	92.5	< 10 U
ITMW-7	ITMW-7-20030924	9/24/2003	N	125	57.3	< 10 U
ITMW-7	ITMW-7-20040414	4/14/2004	N	201	80.7	< 10 U
ITMW-7	ITMW-7-20040922	9/22/2004	N	132	48.4	< 10 U
ITMW-7	ITMW-7-20050407	4/7/2005	N	122	39	< 10 U
ITMW-7	ITMW-7-20050928	9/28/2005	N	100	30.5	< 10 U
ITMW-7	ITMW-7-20060314	3/14/2006	N	153	59.5	< 10 U
ITMW-7	ITMW-7-20061010	10/10/2006	N	140	44	1 J
ITMW-7	ITMW-7-20070417	4/17/2007	N	83	29.4	< 10 U
ITMW-7	ITMW-7-20070921	9/21/2007	N	72	22	< 10 U
ITMW-7	ITMW-7-20080430	4/30/2008	N	70 0	18 0	< 10 U
ITMW-7	ITMW-7-20081211	12/11/2008	N	66	19	< 5 U
ITMW-7	ITMW-7-20090427	4/27/2009	N	87	26	< 5 U
ITMW-7	ITMW-7-20091028	10/28/2009	N	60	20	< 5 U
ITMW-7	ITMW-7-20100510	5/10/2010	N	73	18	< 5 U
ITMW-7	ITMW-7-20110323	3/23/2011	N	225 EF	93.2	56.5
ITMW-7	ITMW-7-20111025	10/25/2011	N	99	26	< 5 U
ITMW-7	ITMW-7-20120418	4/18/2012	N	100	20	< 5 U
ITMW-7	ITMW-7-20121018	10/18/2012	N	63	17	< 2.0 U
ITMW-7	ITMW-7-20130425	4/25/2013	N	69	16	0.27 J
ITMW-7	ITMW-7-101713	10/17/2013	N	47	12	< 2.0 U
ITMW-7	ITMW-7-201403	3/8/2014	N	37.4	10	0.24 J
ITMW-7	ITMW-7-201405	5/14/2014	N	37.0	11.1	0.22 J
ITMW-7	ITMW-7-201407	7/30/2014	N	36.7	11.2	< 2.0 U
ITMW-7	ITMW-7-201410	10/15/2014	N	33.7	10.3	< 2.0 U
ITMW-7	ITMW-7-201501	1/14/2015	N	34.7	10.5	< 1.0 U
ITMW-7	ITMW-7-201504	4/14/2015	N	29.3	9.2	< 1.0 U
ITMW-7	ITMW-7-201507	7/22/2015	N	26.4	8.3	0.19 J
ITMW-7	ITMW-7-201510	10/8/2015	N	27.6	8.8	0.19 J
ITMW-7	ITMW-7-201601	1/13/2016	N	44.2	13.0	0.23 J
ITMW-7	ITMW-7-201605	5/5/2016	N	33.8	8.7	< 1.0 U
ITMW-7	DUP-06-201605	5/5/2016	FD	33.9	9.0	0.18 J
ITMW-7	ITMW-7-201611	11/10/2016	N	33.2	10	0.26 J
ITMW-7	ITMW-07-201704	4/27/2017	N	29.2	9.3	0.14 J
ITMW-7	ITMW-7-201710	10/25/2017	N	23.4	7.5	0.20 J
ITMW-7	ITMW-7-201804	4/19/2018	N	24.2	8.3	0.13 J
ITMW-7	ITMW-7-201811	11/15/2018	N	22.8	7.3	< 1.0 U
ITMW-7	ITMW-7-201904	4/24/2019	N	19.4	6.5	< 1.0 U
ITMW-7	ITMW-7-201910	10/22/2019	N	20.5	6.7	0.13 J
ITMW-7	ITMW-7-202005	5/13/2020	N	14.1	6.3	< 1.0 U
ITMW-7	ITMW-7-202010	10/8/2020	N	16.4	6.4	< 1.0 U
ITMW-7	ITMW-7-202104	4/14/2021	N	17.9	7.3	< 1.0 U
ITMW-1R	ITMW-1R-202110	10/20/2021	N	31.1	51.1	< 1.0 U
ITMW-9	ITMW-9-20010328	3/28/2001	N	40	12	< 10 U
ITMW-9	ITMW-9-20010913	9/13/2001	N	40	12	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-9	ITMW-9-20020910	9/10/2002	N	61	21	< 10 U
ITMW-9	ITMW-9-20030228	2/28/2003	N	54.2	37.2	< 10 U
ITMW-9	ITMW-9-20030923	9/23/2003	N	91	49.5	< 10 U
ITMW-9	ITMW-9-20030923-FD	9/23/2003	FD	97.6	53.9	< 10 U
ITMW-9	ITMW-9-20040414	4/14/2004	N	71.8	38.8	< 10 U
ITMW-9	ITMW-9-20040922	9/22/2004	N	80.7	21.1	< 10 U
ITMW-9	ITMW-9-20050406	4/6/2005	N	79	30.4	< 10 U
ITMW-9	ITMW-9-20050927	9/27/2005	N	98.8	54.6	< 10 U
ITMW-9	ITMW-9-20060314	3/14/2006	N	101	78.7	< 10 U
ITMW-9	ITMW-9-20061011	10/11/2006	N	110	77	6 J
ITMW-9	ITMW-9-20070417	4/17/2007	N	79	39.6	< 10 U
ITMW-9	ITMW-9-20070920	9/20/2007	N	76	26	< 10 U
ITMW-9	ITMW-9-20080428	4/28/2008	N	82 0	37 0	< 10 U
ITMW-9	ITMW-9-20081209	12/9/2008	N	90	62	< 5 U
ITMW-9	ITMW-9-20090427	4/27/2009	N	110	51	< 5 U
ITMW-9	ITMW-9-20091027	10/27/2009	N	120	67	5.7
ITMW-9	ITMW-9-20091027-FD	10/27/2009	FD	120	71	6.1
ITMW-9	ITMW-9-20100511	5/11/2010	N	130	38	< 5 U
ITMW-9	ITMW-9-20110322	3/22/2011	N	120	48	2.4 J
ITMW-9	ITMW-9-20111025	10/25/2011	N	90	57	< 5 U
ITMW-9	ITMW-9-20120417	4/17/2012	N	150	50	2.5 J
ITMW-9	ITMW-9-20121018	10/18/2012	N	120	53	5.2
ITMW-9	ITMW-9-20130424	4/24/2013	N	140	44	1.6 J
ITMW-9	ITMW-9-101713	10/17/2013	N	83	42	16
ITMW-9	ITMW-9-201403	3/8/2014	N	112	40.4	0.41 J
ITMW-9	ITMW-9-201405	5/14/2014	N	113	42.2	0.64 J
ITMW-9	ITMW-9-201407	7/30/2014	N	141	44.4	0.53 J
ITMW-9	DUP-6-201407	7/30/2014	FD	143	43.9	0.54 J
ITMW-9	ITMW-9-201410	10/15/2014	N	76.9	39.1	1.8 J
ITMW-9	DUP-02-201410	10/15/2014	FD	75.3	38.8	1.7 J
ITMW-9	ITMW-9-201501	1/13/2015	N	89.6	39.1	1.4
ITMW-9	DUP-02-201501	1/13/2015	FD	89.4	39.1	1.4
ITMW-9	ITMW-9-201504	4/15/2015	N	100	35.4	< 1.0 U
ITMW-9	ITMW-9-201507	7/21/2015	N	142	35.5	0.40 J
ITMW-9	ITMW-9-201510	10/7/2015	N	55.6	26.6	1.0
ITMW-9	DUP-09-201510	10/7/2015	FD	55.2	26.8	1.1
ITMW-9	ITMW-9-201601	1/13/2016	N	92.4	35.3	1.1
ITMW-9	DUP-04-201601	1/13/2016	FD	91.3	34.1	1.1
ITMW-9	ITMW-9-201605	5/5/2016	N	97.3	31.6	0.48 J
ITMW-9	ITMW-9-201611	11/8/2016	N	2550	73.0 J	0.17 J
ITMW-9	ITMW-9-201612	12/14/2016	N	193	40.1	1
ITMW-9	ITMW-9-201710	10/25/2017	N	797	60.8	1.7
ITMW-9	ITMW-9-201811	11/15/2018	N	1390	77.1	2.0
ITMW-9	ITMW-9-201910	10/23/2019	N	2720	96.3	2.0
ITMW-9	DUP-07-201910	10/23/2019	FD	2810	95.0	2.0
ITMW-9	ITMW-9-202005	5/13/2020	N	1900	72.5	1.4
ITMW-9	ITMW-9-202010	10/7/2020	N	1770	67.6	1.2
ITMW-9	ITMW-9-202104	4/13/2021	N	3060	87.6	1.7
ITMW-20	ITMW-20-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-10	ITMW-10-20010328	3/28/2001	N	40	21	< 10 U
ITMW-10	ITMW-10-20010913	9/13/2001	N	29	28	< 10 U
ITMW-10	ITMW-10-20010913-FD	9/13/2001	FD	30	27	< 10 U
ITMW-10	ITMW-10-20020910	9/10/2002	N	55	38	< 10 U
ITMW-10	ITMW-10-20030228	2/28/2003	N	57.6	50.9	< 10 U
ITMW-10	ITMW-10-20030716	7/16/2003	N	55.3	49.2	< 10 U
ITMW-10	ITMW-10-20030923	9/23/2003	N	65.9	56.5	< 10 U
ITMW-10	ITMW-10-20040414	4/14/2004	N	80	57.4	< 10 U
ITMW-10	ITMW-10-20040922	9/22/2004	N	59.6	50	< 10 U
ITMW-10	ITMW-10-20050406	4/6/2005	N	72.1	57.7	< 10 U
ITMW-10	ITMW-10-20050928	9/28/2005	N	57.6	41.6	< 10 U
ITMW-10	ITMW-10-20060314	3/14/2006	N	82	67.2	< 10 U
ITMW-10	ITMW-10-20061010	10/10/2006	N	88	54	5 J
ITMW-10	ITMW-10-20070417	4/17/2007	N	76	52.4	< 10 U
ITMW-10	ITMW-10-20070920	9/20/2007	N	67	48	5 J
ITMW-10	ITMW-10-20080428	4/28/2008	N	61 0	46 0	< 10 U
ITMW-10	ITMW-10-20081209	12/9/2008	N	78	50	< 5 U
ITMW-10	ITMW-10-20090427	4/27/2009	N	87	52	4.4 J
ITMW-10	ITMW-10-20091027	10/27/2009	N	110	50	4.2 J
ITMW-10	ITMW-10-20100511	5/11/2010	N	85	46	2.4 J
ITMW-10	ITMW-10-20110322	3/22/2011	N	92	42	2.7 J
ITMW-10	ITMW-10-20111025	10/25/2011	N	94	39	2.5 J
ITMW-10	ITMW-10-20121018	10/18/2012	N	100	37	2.5
ITMW-10	ITMW-10-101513	10/15/2013	N	100	32	3.1
ITMW-10	ITMW-10-201403	3/6/2014	N	166	32.3	1.2 J

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-10	ITMW-10-201405	5/14/2014	N	184	32.4	1.4 J
ITMW-10	ITMW-10-201407	7/30/2014	N	273	38.3	1.8 J
ITMW-10	ITMW-10-201410	10/15/2014	N	243	32.3	1.7 J
ITMW-10	ITMW-10-201501	1/14/2015	N	403	38.9	1.4
ITMW-10	ITMW-10-201504	4/15/2015	N	258	34.8	0.98 J
ITMW-10	DUP-08-201504	4/16/2015	FD	303	36.1	1.2
ITMW-10	ITMW-10-201507	7/22/2015	N	504	36.2	1.3
ITMW-10	DUP-01-201507	7/22/2015	FD	501	36.7	1.5
ITMW-10	ITMW-10-201510	10/7/2015	N	437	37.5	1.5
ITMW-10	DUP-04-201510	10/7/2015	FD	445	37.9	1.6
ITMW-10	ITMW-10-201601	1/13/2016	N	761	44.4	1.6
ITMW-10	DUP-01-201601	1/13/2016	FD	735	45.5	1.7
ITMW-10	ITMW-10-201605	5/5/2016	N	743	36.6	1.1
ITMW-10	DUP-01-201605	5/5/2016	FD	673	34.0	1.1
ITMW-10	ITMW-10-201611	11/10/2016	N	113	12.5	0.52 J
ITMW-10	ITMW-10-201704	4/28/2017	N	132	18.3	0.71 J
ITMW-10	ITMW-10-201710	10/25/2017	N	72.9	13.3	0.82 J
ITMW-10	ITMW-10-201804	4/19/2018	N	65.4	12.2	0.65 J
ITMW-10	ITMW-10-201811	11/14/2018	N	45.0	10.9	0.77 J
ITMW-10	ITMW-10-201904	4/25/2019	N	60.5	8.1	0.39 J
ITMW-10	DUP-07-201904	4/25/2019	FD	59.4	7.9	0.32 J
ITMW-10	ITMW-10-201910	10/24/2019	N	127	6.3	0.40 J
ITMW-10	ITMW-10-202005	5/13/2020	N	246	6.4	0.33 J
ITMW-10	ITMW-10-202010	10/8/2020	N	286	6.5	0.36 J
ITMW-21	ITMW-21-202110	10/20/2021	N	4.9	0.26 J	< 1.0 U
ITMW-11	ITMW-11-20010327	3/27/2001	N	7000	200	< 10 U
ITMW-11	ITMW-11-20010913	9/13/2001	N	6000	183	< 10 U
ITMW-11	ITMW-11-20011120	11/20/2001	N	< 5 U	< 5 U	< 10 U
ITMW-11	ITMW-11L-20020909	9/9/2002	N	7100	206	10
ITMW-11	ITMW-11T-20020909	9/9/2002	N	800	72	< 10 U
ITMW-11	ITMW-11-20030226	2/26/2003	N	4110	346	58.8
ITMW-11	ITMW-11-20030226-FD	2/26/2003	FD	3630	306	60.7
ITMW-11	ITMW-11-20030924	9/24/2003	N	3990	269	11.8
ITMW-11	ITMW-11-20040413	4/13/2004	N	3160	240	37.8
ITMW-11	ITMW-11-20040921	9/21/2004	N	3450	204	< 10 U
ITMW-11	ITMW-11-20050407	4/7/2005	N	4210	282	66.7
ITMW-11	ITMW-11-20050929	9/29/2005	N	3910	199	18
ITMW-11	ITMW-11-20060316	3/16/2006	N	14600	1290	482
ITMW-11	ITMW-11-20060316-FD	3/16/2006	FD	12800	1210	381
ITMW-11	ITMW-11-20061013	10/13/2006	N	8000	340	47
ITMW-11	ITMW-11-20070419	4/19/2007	N	3970	199	< 200 U
ITMW-11	ITMW-11-20070921	9/21/2007	N	7600	180	21
ITMW-11	ITMW-11-20080430	4/30/2008	N	4500 0	210 0	58 0
ITMW-11	ITMW-11-20081210	12/10/2008	N	5800	190	27
ITMW-11	ITMW-11-20090427	4/27/2009	N	2500	200	24
ITMW-11	ITMW-11-20100511-FD	5/11/2010	FD	6200	290	28
ITMW-11	ITMW-11-20100511	5/11/2010	N	6200	290	45
ITMW-11	ITMW-11-20110323	3/23/2011	N	9700	520	130
ITMW-11	ITMW-11-20111026	10/26/2011	N	8800	310	16
ITMW-11	ITMW-11-20121019	10/19/2012	N	1400	34	2.4
ITMW-11	ITMW-11-101713	10/17/2013	N	180	8.7	2.9
ITMW-11	ITMW-11-201403	3/8/2014	N	2980	187 M1	22.5
ITMW-11	ITMW-11-201405	5/15/2014	N	1590	99.5	5.5
ITMW-11	DUP-4-201405	5/15/2014	FD	1470	107	4.9
ITMW-11	ITMW-11-201407	7/31/2014	N	7380	156	6.9
ITMW-11	ITMW-11-201410	10/15/2014	N	2050	70.4	3.5
ITMW-11	ITMW-11-20141204	12/4/2014	N	1530	55.0	6.4
ITMW-11	ITMW-11-201501	1/15/2015	N	68.3	9.8	1.9
ITMW-11	ITMW-11-201504	4/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-11	ITMW-11-201507	7/22/2015	N	33.2	5.9	< 1.0 U
ITMW-11	ITMW-11-201510	10/7/2015	N	721	57.9	0.96 J
ITMW-11	ITMW-11-201601	1/13/2016	N	605	100	13.1
ITMW-11	DUP-03-201601	1/13/2016	FD	2100	199	65.3
ITMW-11	ITMW-11-201605	5/5/2016	N	4630	173	11.2
ITMW-11	ITMW-11-201904	4/25/2019	N	3670	89.9	0.19 J
ITMW-11	DUP-05-201904	4/25/2019	FD	4060	93.2	2.0
ITMW-11	ITMW-11-201910	10/24/2019	N	9.9	0.39 J	< 1.0 U
ITMW-11	ITMW-11-202005	5/13/2020	N	3460	134	< 1.0 U
ITMW-11	ITMW-11-202010	10/8/2020	N	894	18.7	< 1.0 U
ITMW-12	ITMW-12-20010327	3/27/2001	N	3900	200	20
ITMW-12	ITMW-12-20010913	9/13/2001	N	3100	159	< 10 U
ITMW-12	ITMW-12-20011120	11/20/2001	N	2400	300	20
ITMW-12	ITMW-12-20020911	9/11/2002	N	4200	300	< 10 U
ITMW-12	ITMW-12-20030226	2/26/2003	N	3460	287	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-12	ITMW-12-20030226-FD	2/26/2003	FD	3940	308	< 10 U
ITMW-12	ITMW-12-20030924	9/24/2003	N	2920	242	< 10 U
ITMW-12	ITMW-12-20040413	4/13/2004	N	2410	245	< 10 U
ITMW-12	ITMW-12-20040921	9/21/2004	N	1780	238	< 10 U
ITMW-12	ITMW-12-20050929	9/29/2005	N	2120	273	< 10 U
ITMW-12	ITMW-12-20061013	10/13/2006	N	3500	310	9 J
ITMW-12	ITMW-12-20070921	9/21/2007	N	2100	220	< 10 U
ITMW-12	ITMW-12-20081209	12/9/2008	N	1500	180	< 5 U
ITMW-12	ITMW-12-20111026	10/26/2011	N	1600	230	1.8 J
ITMW-12	ITMW-12-20121019	10/19/2012	N	2500	200	3.6
ITMW-12	ITMW-12-101713	10/17/2013	N	2300	190	3.2
ITMW-12	ITMW-12-20131017-FD	10/17/2013	FD	2300	160	4.1
ITMW-12	ITMW-12-201403	3/8/2014	N	1910	148	3.4
ITMW-12	ITMW-12-201403-FD	3/8/2014	FD	2400	207	3.4
ITMW-12	ITMW-12-201405	5/14/2014	N	2740	164	14.0
ITMW-12	ITMW-12-201407	7/31/2014	N	2710	173	13.6
ITMW-12	ITMW-12-201410	10/15/2014	N	2570	188	3.5
ITMW-12	DUP-04-201410	10/15/2014	FD	2950	192	3.7
ITMW-12	ITMW-12-20141204	12/4/2014	N	468	51.1	0.88 J
ITMW-12	ITMW-12-201501	1/15/2015	N	57.1	4.2	< 1.0 U
ITMW-12	DUP-04-201501	1/15/2015	FD	59.3	4.8	< 1.0 U
ITMW-12	ITMW-12-201504	4/15/2015	N	2260	149	< 1.0 U
ITMW-12	ITMW-12-201507	7/23/2015	N	652	46.2	0.58 J
ITMW-12	ITMW-12-201510	10/7/2015	N	314	34.6	0.42 J
ITMW-12	ITMW-12-201601	1/13/2016	N	465	70.5	< 1.0 U
ITMW-12	ITMW-12-201605	5/5/2016	N	675	78.9	< 1.0 U
ITMW-12R	ITMW-12R-201910	10/24/2019	N	11800	275	7.1
ITMW-12R	ITMW-12R-202010	10/8/2020	N	11400	284	7.0
ITMW-13	ITMW-13-20010328	3/28/2001	N	44	92	40
ITMW-13	ITMW-13-20010913	9/13/2001	N	35	111	80
ITMW-13	ITMW-13L-20020909	9/9/2002	N	99	110	10
ITMW-13	ITMW-13T-20020909	9/9/2002	N	81	86	20
ITMW-13	ITMW-13-20030226	2/26/2003	N	70.2	85.5	< 10 U
ITMW-13	ITMW-13-20030924	9/24/2003	N	159	130	< 10 U
ITMW-13	ITMW-13-20040413	4/13/2004	N	48.4	87.2	< 10 U
ITMW-13	ITMW-13-20040921	9/21/2004	N	25.5	71.6	< 10 U
ITMW-13	ITMW-13-20050407	4/7/2005	N	71.8	103	< 10 U
ITMW-13	ITMW-13-20050930	9/30/2005	N	72.7	114	17.9
ITMW-13	ITMW-13-20060316	3/16/2006	N	141	187	< 10 U
ITMW-13	ITMW-13-20061014	10/14/2006	N	100	150	17
ITMW-13	ITMW-13-20070418	4/18/2007	N	83.1	78	4.3 J
ITMW-13	ITMW-13-20070920	9/20/2007	N	28	40	< 10 U
ITMW-13	ITMW-13-20080429	4/29/2008	N	69 0	72 0	< 10 U
ITMW-13	ITMW-13-20081210	12/10/2008	N	26	23	< 5 U
ITMW-13	ITMW-13-20090427	4/27/2009	N	79	78	< 5 U
ITMW-13	ITMW-13-20091027	10/27/2009	N	18	22	< 5 U
ITMW-13	ITMW-13-20100512	5/12/2010	N	97	72	< 5 U
ITMW-13	ITMW-13-20110323	3/23/2011	N	130	83	< 5 U
ITMW-13	ITMW-13-20111027-FD	10/27/2011	FD	64	40	< 5 U
ITMW-13	ITMW-13-20111027	10/27/2011	N	65	41	< 5 U
ITMW-13	ITMW-13-20120419	4/19/2012	N	97	63	< 5 U
ITMW-13	ITMW-13-20121018	10/18/2012	N	400	260	1.0 J
ITMW-13	ITMW-13-20130425	4/25/2013	N	86	52	0.14 J
ITMW-13	ITMW-13-101613	10/16/2013	N	150	74	< 2.0 U
ITMW-13	ITMW-13-201403	3/8/2014	N	69.3	45.3	< 2.0 U
ITMW-13	ITMW-13-201405	5/14/2014	N	54.0	34.7	0.17 J
ITMW-13	ITMW-13-201407	7/30/2014	N	36.5	27.5	< 2.0 U
ITMW-13	ITMW-13-201410	10/15/2014	N	40.8	25.9	< 2.0 U
ITMW-13	ITMW-13-201501	1/14/2015	N	45.8	28.5	< 1.0 U
ITMW-13	ITMW-13-201504	4/15/2015	N	43.1	26.5	< 1.0 U
ITMW-13	DUP-03-201504	4/15/2015	FD	47.7	26.7	< 1.0 U
ITMW-13	ITMW-13-201507	7/22/2015	N	37.3	20.1	0.18 J
ITMW-13	DUP-02-201507	7/22/2015	FD	36.1	20.8	0.17 J
ITMW-13	ITMW-13-201510	10/7/2015	N	29.9	17.8	0.20 J
ITMW-13	DUP-01-201510	10/7/2015	FD	25.5	17.6	0.18 J
ITMW-13	ITMW-13-201601	1/13/2016	N	47.6	26.7	0.17 J
ITMW-13	DUP-02-201601	1/13/2016	FD	51.6	26.1	< 1.0 U
ITMW-13	ITMW-13-201605	5/5/2016	N	41.9	20.8	0.17 J
ITMW-14	ITMW-14-20010327	3/27/2001	N	< 5 U	24	10
ITMW-14	ITMW-14-20010913	9/13/2001	N	< 5 U	5	< 10 U
ITMW-14	ITMW-14-20020911	9/11/2002	N	41	6	< 10 U
ITMW-14	ITMW-14-20030226	2/26/2003	N	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20030924	9/24/2003	N	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20040413	4/13/2004	N	< 5 U	< 5 U	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-14	ITMW-14-20040921	9/21/2004	N	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20061014	10/14/2006	N	4 J	8	< 10 UJ
ITMW-14	ITMW-14-20070921	9/21/2007	N	5 J	9	< 10 U
ITMW-14	ITMW-14-20081210	12/10/2008	N	5.7	9.3	< 5 U
ITMW-14	ITMW-14-20101104	11/4/2010	N	110	14	< 5 U
ITMW-14	ITMW-14-20111027	10/27/2011	N	6.3	11	< 5 U
ITMW-14	ITMW-14-20120419	4/19/2012	N	7.6	16	< 5 U
ITMW-14	ITMW-14-20121019	10/19/2012	N	5.4	11	< 2.0 U
ITMW-14	ITMW-14-20130425	4/25/2013	N	6.8	14	< 2.0 U
ITMW-14	ITMW-14-101613	10/16/2013	N	2.9 J	4.9 J	< 2.0 U
ITMW-14	ITMW-14-201403	3/8/2014	N	6.1	11.9	< 2.0 U
ITMW-14	ITMW-14-201405	5/14/2014	N	5.3	11.3	< 2.0 U
ITMW-14	ITMW-14-201407	7/30/2014	N	4.0 J	9.2	< 2.0 U
ITMW-14	ITMW-14-201410	10/15/2014	N	4.1 J	9.4	< 2.0 U
ITMW-14	ITMW-14-201501	1/14/2015	N	4.9	11.5	< 1.0 U
ITMW-14	ITMW-14-201504	4/15/2015	N	5.0	10.7	< 1.0 U
ITMW-14	ITMW-14-201507	7/22/2015	N	4.3	9.6	< 1.0 U
ITMW-14	ITMW-14-201510	10/7/2015	N	4.6	9.8	< 1.0 U
ITMW-14	ITMW-14-201601	1/12/2016	N	4.3	10	< 1.0 U
ITMW-14	ITMW-14-201605	5/5/2016	N	3.9	8.6	< 1.0 U
ITMW-15	ITMW-15-20010328	3/28/2001	N	290	57	< 10 U
ITMW-15	ITMW-15-20010913	9/13/2001	N	380	87	< 10 U
ITMW-15	ITMW-15-20010913-FD	9/13/2001	FD	370	80	< 10 U
ITMW-15	ITMW-15-20011120	11/20/2001	N	157	30	< 10 U
ITMW-15	ITMW-15-20020911	9/11/2002	N	320	75	< 10 U
ITMW-15	ITMW-15-20030226	2/26/2003	N	301	98.7	< 10 U
ITMW-15	ITMW-15-20030925	9/25/2003	N	490	91.9	< 10 U
ITMW-15	ITMW-15-20040414	4/14/2004	N	334	126	< 10 U
ITMW-15	ITMW-15-20040921	9/21/2004	N	774	118	< 10 U
ITMW-15	ITMW-15-20050407	4/7/2005	N	685	133	< 10 U
ITMW-15	ITMW-15-20050929	9/29/2005	N	862	189	< 10 U
ITMW-15	ITMW-15-20060316	3/16/2006	N	908	183	12
ITMW-15	ITMW-15-20061013	10/13/2006	N	680	140	7 J
ITMW-15	ITMW-15-20070419	4/19/2007	N	591	110	8.5 J
ITMW-15	ITMW-15-20070921	9/21/2007	N	1000	190	27
ITMW-15	ITMW-15-20080429	4/29/2008	N	100 0	18 0	< 10 U
ITMW-15	ITMW-15-20081210	12/10/2008	N	1100	150	< 5 U
ITMW-15	ITMW-15-20090427	4/27/2009	N	2800	130	17
ITMW-15	ITMW-15-20100511	5/11/2010	N	2800	160	11
ITMW-15	ITMW-15-20111026	10/26/2011	N	1100	74	< 5 U
ITMW-15	ITMW-15-20121019	10/19/2012	N	240	14	1.1 J
ITMW-15	ITMW-15-101613	10/16/2013	N	2800	170	14
ITMW-15	ITMW-15-201403	3/8/2014	N	1630	152	11.6
ITMW-15	DUP2-201405	5/14/2014	FD	899	61.7	4.4
ITMW-15	ITMW-15-201405	5/14/2014	N	729	60.7	4.1
ITMW-15	ITMW-15-201407	7/30/2014	N	1820	82.5	3.1
ITMW-15	DUP-4-201407	7/30/2014	FD	1850	82.8	3.0
ITMW-15	ITMW-15-201410	10/16/2014	N	1490	63.0	2.0
ITMW-15	DUP-05-201410	10/16/2014	FD	1660	66.4	1.8 J
ITMW-15	ITMW-15-20141205	12/5/2014	N	63.0	< 5.0 U	< 2.0 U
ITMW-15	ITMW-15-201501	1/15/2015	N	56.5	2.9	< 1.0 U
ITMW-15	DUP-05-201501	1/15/2015	FD	61.7	3.8	< 1.0 U
ITMW-15	ITMW-15-201504	4/15/2015	N	101	7.5	< 1.0 U
ITMW-15	ITMW-15-201507	7/22/2015	N	110	22.4	1.3
ITMW-15	ITMW-15-201510	10/8/2015	N	38.9	2.4	< 1.0 U
ITMW-15	ITMW-15-201601	1/13/2016	N	797	67.0	4.9
ITMW-15	ITMW-15-201605	5/5/2016	N	659	48.8	5.8
ITMW-16	ITMW-16-20010326	3/26/2001	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20010913	9/13/2001	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20020911	9/11/2002	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20040923	9/23/2004	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20050929	9/29/2005	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20050929-FD	9/29/2005	FD	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20061014	10/14/2006	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20070920	9/20/2007	N	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
ITMW-16	ITMW-16-20101106	11/6/2010	N	17	< 5 U	< 5 U
ITMW-16	ITMW-16-20111027	10/27/2011	N	< 5 U	< 5 U	< 5 U
ITMW-16	ITMW-16-20120418	4/18/2012	N	< 5 U	< 5 U	< 5 U
ITMW-16	ITMW-16-20121018	10/18/2012	N	< 5.0 U	< 5.0 U	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-16	ITMW-16-20130424	4/24/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-16	ITMW-16-101613	10/16/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-16	ITMW-16-201403	3/7/2014	N	0.30 J	< 5.0 U	< 2.0 U
ITMW-16	ITMW-16-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-16	ITMW-16-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-16	ITMW-16-201410	10/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-16	ITMW-16-201501	1/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201507	7/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201601	1/13/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201605	5/5/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	ITMW-16-201910	10/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-16	DUP-10-201910	10/24/2019	FD	< 1.0 U	0.31 J	< 1.0 U
ITMW-16	ITMW-16-202010	10/8/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-2R	ITMW-2R-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-17	ITMW-17-20010105	1/5/2001	N	8310	179	< 10 U
ITMW-17	ITMW-17-20010328	3/28/2001	N	6700	134	< 10 U
ITMW-17	ITMW-17-20010913	9/13/2001	N	6300	158	< 10 U
ITMW-17	ITMW-17-20020911	9/11/2002	N	6500	153	< 10 U
ITMW-17	ITMW-17-20030226	2/26/2003	N	4380	134	< 10 U
ITMW-17	ITMW-17-20030925	9/25/2003	N	6090	136	< 10 U
ITMW-17	ITMW-17-20040414	4/14/2004	N	5050	184	< 10 U
ITMW-17	ITMW-17-20040414-FD	4/14/2004	FD	4920	182	< 10 U
ITMW-17	ITMW-17-20040921	9/21/2004	N	5760	156	< 10 U
ITMW-17	ITMW-17-20050407	4/7/2005	N	5750	156	< 10 U
ITMW-17	ITMW-17-20050929	9/29/2005	N	5460	111	< 10 U
ITMW-17	ITMW-17-20060315	3/15/2006	N	15900	211 E	26.3
ITMW-17	ITMW-17-20061012	10/12/2006	N	19000	220	21
ITMW-17	ITMW-17-20070418	4/18/2007	N	13000	298	< 10 U
ITMW-17	ITMW-17-20070921	9/21/2007	N	11000	210	3 J
ITMW-17	ITMW-17-20080429	4/29/2008	N	6200 0	140 0	< 10 U
ITMW-17	ITMW-17-20081210	12/10/2008	N	5600	130	< 5 U
ITMW-17	ITMW-17-20090427	4/27/2009	N	5200	130	< 5 U
ITMW-17	ITMW-17-20100511	5/11/2010	N	4500	85	< 5 U
ITMW-17	ITMW-17-20101104	11/4/2010	N	5400	110	< 5 U
ITMW-17	ITMW-17-20110322	3/22/2011	N	5300	100	< 5 U
ITMW-17	ITMW-17-20111026	10/26/2011	N	4500	98	< 5 U
ITMW-17	ITMW-17-20120419	4/19/2012	N	4700	110	< 5 U
ITMW-17	ITMW-17-20121019	10/19/2012	N	3500	100	0.48 J
ITMW-17	ITMW-17-20130425	4/25/2013	N	5600	130	0.90 J
ITMW-17	ITMW-17-101713	10/17/2013	N	4800	79	< 2.0 U
ITMW-17	ITMW-17-201403	3/8/2014	N	3770	86.1	0.57 J
ITMW-17	ITMW-17-201403-FD	3/8/2014	FD	4040	87.3	0.74 J
ITMW-17	ITMW-17-201405	5/15/2014	N	3630	82.9	1.3 J
ITMW-17	DUP-3-201405	5/15/2014	FD	3370	88.5	1.1 J
ITMW-17	ITMW-17-201407	7/30/2014	N	2260	64.7	< 2.0 U
ITMW-17	ITMW-17-201410	10/16/2014	N	3510	70.5	3.2
ITMW-17	ITMW-17-20141205	12/5/2014	N	4630	210 J	7.7
ITMW-17	ITMW-17-201501	1/15/2015	N	3840	110	1.5
ITMW-17	ITMW-17-201504	4/15/2015	N	3920	142	< 1.0 U
ITMW-17	ITMW-17-201507	7/22/2015	N	5350	116	0.51 J
ITMW-17	ITMW-17-201510	10/8/2015	N	3970	77.2	2.5
ITMW-17	ITMW-17-201601	1/13/2016	N	2600	44.7	2.2
ITMW-17	ITMW-17-201605	5/5/2016	N	2720	77.7	< 50.0 U
ITMW-18	ITMW-18-20010327	3/27/2001	N	4000	400	< 10 U
ITMW-18	ITMW-18-20010327-FD	3/27/2001	FD	4200	370	< 100 U
ITMW-18	ITMW-18-20010911	9/11/2001	N	4100	300	< 10 U
ITMW-18	ITMW-18-20020911	9/11/2002	N	6700	300	< 10 U
ITMW-18	ITMW-18-20030226	2/26/2003	N	5110	290	< 10 U
ITMW-18	ITMW-18-20030924	9/24/2003	N	7700	415	< 10 U
ITMW-18	ITMW-18-20040413	4/13/2004	N	7740	410	< 10 U
ITMW-18	ITMW-18-20040921	9/21/2004	N	7050	380	< 10 U
ITMW-18	ITMW-18-20050408	4/8/2005	N	7080	389	< 10 U
ITMW-18	ITMW-18-20050929	9/29/2005	N	4660	241	< 10 U
ITMW-18	ITMW-18-20060315	3/15/2006	N	5750	373	< 50 U
ITMW-18	ITMW-18-20061013	10/13/2006	N	6600	300	< 10 U
ITMW-18	ITMW-18-20070418	4/18/2007	N	15000	387	< 10 U
ITMW-18	ITMW-18-20070921	9/21/2007	N	8300	310	< 100 U
ITMW-18	ITMW-18-20080430	4/30/2008	N	9000 0	350 0	< 10 U
ITMW-18	ITMW-18-20081209	12/9/2008	N	7200	320	< 5 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-18	ITMW-18-20090427	4/27/2009	N	7100	320	< 5 U
ITMW-18	ITMW-18-20091027	10/27/2009	N	7800	360	< 5 U
ITMW-18	ITMW-18-20100511	5/11/2010	N	11000	360	< 5 U
ITMW-18	ITMW-18-20111026	10/26/2011	N	8500	290	< 5 U
ITMW-18	ITMW-18-20120419	4/19/2012	N	9800	360	2.9 J
ITMW-18	ITMW-18-20121019	10/19/2012	N	7600	260	1.2 J
ITMW-18	ITMW-18-20130425	4/25/2013	N	7200	270	0.90 J
ITMW-18	ITMW-18-101713	10/17/2013	N	7000	280	0.64 J
ITMW-18	ITMW-18-201403	3/8/2014	N	9380	285	< 100 U
ITMW-18	ITMW-18-201403-FD	3/8/2014	FD	8550	242 J	1.7 J
ITMW-18	ITMW-18-201405	5/15/2014	N	2940	101	< 2.0 U
ITMW-18	DUP-5-201405	5/15/2014	FD	2500	108	< 2.0 U
ITMW-18	ITMW-18-201407	7/31/2014	N	5360	139	1.6 J
ITMW-18	ITMW-18-201410	10/15/2014	N	3540	68.5	< 2.0 U
ITMW-18	ITMW-18-20141204	12/4/2014	N	3690	74.3	< 2.0 U
ITMW-18	ITMW-18-201501	1/15/2015	N	488	26.5	< 1.0 U
ITMW-18	ITMW-18-201504	4/16/2015	N	43.5	1.6	< 1.0 U
ITMW-18	DUP-04-201504	4/16/2015	FD	42.8	1.7	< 1.0 U
ITMW-18	ITMW-18-201507	7/23/2015	N	22.9	0.69 J	< 1.0 U
ITMW-18	DUP-07-201507	7/23/2015	FD	24.7	0.81 J	< 1.0 U
ITMW-18	ITMW-18-201510	10/8/2015	N	12.9	0.40 J	< 1.0 U
ITMW-18	DUP-06-201510	10/8/2015	FD	12.4	0.41 J	< 1.0 U
ITMW-18	ITMW-18-201601	1/13/2016	N	48.8	4.6	< 1.0 U
ITMW-18	ITMW-18-201605	5/5/2016	N	13.9	0.49 J	< 1.0 U
ITMW-18	ITMW-18-201611	11/9/2016	N	10.1	< 1.0 U	< 1.0 U
ITMW-18	ITMW-18-201710	10/26/2017	N	15.0	0.47 J	< 1.0 U
ITMW-18	FD-07-201710	10/26/2017	FD	16.0	0.50 J	< 1.0 U
ITMW-18	ITMW-18-201811	11/14/2018	N	641	55.3	< 1.0 U
ITMW-18	ITMW-18-201910	10/24/2019	N	769	68.4	< 1.0 U
ITMW-18	ITMW-18-202010	10/8/2020	N	1210	94.5	0.43 J
ITMW-5	ITMW-5-202110	10/21/2021	N	2420	27.9	1.1
ITMW-19	ITMW-19-20010105	1/5/2001	N	34000	166	< 10 U
ITMW-19	ITMW-19-20010328	3/28/2001	N	38000	119	< 10 U
ITMW-19	ITMW-19-20010913	9/13/2001	N	19000	132	< 10 U
ITMW-19	ITMW-19-20020911	9/11/2002	N	27000	167	< 10 U
ITMW-19	ITMW-19-20030226	2/26/2003	N	16200	126	< 10 U
ITMW-19	ITMW-19-20030924	9/24/2003	N	27300	186	< 10 U
ITMW-19	ITMW-19-20040413	4/13/2004	N	19400	186	< 10 U
ITMW-19	ITMW-19-20040921	9/21/2004	N	20000	148	< 10 U
ITMW-19	ITMW-19-20050407	4/7/2005	N	18300	146	< 10 U
ITMW-19	ITMW-19-20050407-FD	4/7/2005	FD	16200	145	< 10 U
ITMW-19	ITMW-19-20050929	9/29/2005	N	25700	144	< 10 U
ITMW-19	ITMW-19-20060315	3/15/2006	N	21300	177	< 100 U
ITMW-19	ITMW-19-20061012	10/12/2006	N	16000	150	2 J
ITMW-19	ITMW-19-20070418	4/18/2007	N	20000	131	< 10 U
ITMW-19	ITMW-19-20070921	9/21/2007	N	19000	110	< 200 U
ITMW-19	ITMW-19-20080429	4/29/2008	N	17000 0	98 0	< 100 U
ITMW-19	ITMW-19-20081210	12/10/2008	N	11000	93	< 5 U
ITMW-19	ITMW-19-20090427	4/27/2009	N	13000	100	< 5 U
ITMW-19	ITMW-19-20100511	5/11/2010	N	19000	130	< 5 U
ITMW-19	ITMW-19-20101104-FD	11/4/2010	FD	19000	150	< 5 U
ITMW-19	ITMW-19-20101104	11/4/2010	N	18000	140	< 5 U
ITMW-19	ITMW-19-20110322	3/22/2011	N	16000	110	1 J
ITMW-19	ITMW-19-20111026	10/26/2011	N	17000	120	< 5 U
ITMW-19	ITMW-19-20120419-FD	4/19/2012	FD	15000	110	< 5 U
ITMW-19	ITMW-19-20120419	4/19/2012	N	18000	110	< 5 U
ITMW-19	ITMW-19-20121019	10/19/2012	N	15000	110	0.89 J
ITMW-19	ITMW-19-20130425	4/25/2013	N	13000	110	0.57 J
ITMW-19	ITMW-19-101813	10/18/2013	N	16000	91 J	< 2.0 U
ITMW-19	ITMW-19-10182013-FD	10/18/2013	FD	14000	100 J	< 2.0 U
ITMW-19	ITMW-19-201403	3/8/2014	N	8850	66.7	0.57 J
ITMW-19	ITMW-19-201403-FD	3/8/2014	FD	8270	60.8 J	< 100 U
ITMW-19	ITMW-19-201405	5/15/2014	N	9780 J	65.8	0.85 J
ITMW-19	DUP-6-201405	5/15/2014	FD	15300 J	67.2	0.87 J
ITMW-19	ITMW-19-201407	7/31/2014	N	13300	85.5	0.96 J
ITMW-19	ITMW-19-201410	10/16/2014	N	12800	76.7	1.9 J
ITMW-19	ITMW-19-20141205	12/5/2014	N	33.5	< 5.0 U	< 2.0 U
ITMW-19	ITMW-19-201501	1/15/2015	N	17.4	< 1.0 U	< 1.0 U
ITMW-19	ITMW-19-201504	4/15/2015	N	594	2.2	< 1.0 U
ITMW-19	ITMW-19-201507	7/23/2015	N	15.2	< 1.0 U	< 1.0 U
ITMW-19	ITMW-19-201510	10/8/2015	N	87.1	0.41 J	< 1.0 U
ITMW-19	ITMW-19-201601	1/13/2016	N	336	1.2	< 1.0 U
ITMW-19	ITMW-19-201605	5/5/2016	N	105	0.28 J	< 1.0 U
ITMW-19	ITMW-19-201611	11/9/2016	N	137	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-19	ITMW-19-201710	10/26/2017	N	165	0.52 J	< 1.0 U
ITMW-19	ITMW-19-201811	11/15/2018	N	204	1.3	< 1.0 U
ITMW-19	ITMW-19-201910	10/24/2019	N	240 J	1.8	< 1.0 U
ITMW-19	ITMW-19-202010	10/8/2020	N	435	4.8	< 1.0 U
ITMW-6	ITMW-6-202110	10/21/2021	N	1980	18.2	1.1
ITMW-20	MW-20-20010327-FS	3/27/2001	N	< 5 U	< 5 U	< 10 U
ITMW-20	MW-20-20010911-FS	9/11/2001	N	21	< 5 U	< 10 U
ITMW-20	ITMW-20-20020910	9/10/2002	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20030924	9/24/2003	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20040414	4/14/2004	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20050929	9/29/2005	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20091029	10/29/2009	N	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20100512	5/12/2010	N	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20101105	11/5/2010	N	15	< 5 U	< 5 U
ITMW-20	ITMW-20-20111026-FD	10/26/2011	FD	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20120418	4/18/2012	N	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20121018	10/18/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-20	ITMW-20-20130423	4/23/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-20	ITMW-20-101413	10/14/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-20	ITMW-20-201403	3/5/2014	N	< 5.0 U	< 5.0 U	0.15 J
ITMW-20	ITMW-20-201405	5/12/2014	N	0.21 J	< 5.0 U	< 2.0 U
ITMW-20	ITMW-20-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-20	ITMW-20-201410	10/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
ITMW-20	ITMW-20-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0
ITMW-20	ITMW-20-201504	4/13/2015	N	< 1.0 U	< 1.0 U	< 1.0
ITMW-20	ITMW-20-201507	7/22/2015	N	0.20 J	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201605	5/2/2016	N	< 1.0	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201811	11/14/2018	N	< 1.0	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	DUP-05-201910	10/23/2019	FD	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-202005	5/13/2020	N	0.68 J	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	ITMW-20-202104	4/12/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-20	DUP-02-202104	4/12/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-7	ITMW-7-202110	10/20/2021	N	17.7	7.3	< 1.0 U
ITMW-20	DUP-03-202110	10/19/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
ITMW-21	ITMW-21-20010328	3/28/2001	N	123	< 5 U	< 10 U
ITMW-21	ITMW-21-20010913	9/13/2001	N	116	< 5 U	< 10 U
ITMW-21	ITMW-21-20020910	9/10/2002	N	13	< 5 U	< 10 U
ITMW-21	ITMW-21-20030226	2/26/2003	N	39.5	< 5 U	< 10 U
ITMW-21	ITMW-21-20030923	9/23/2003	N	9.09	< 5 U	< 10 U
ITMW-21	ITMW-21-20040414	4/14/2004	N	52.9	< 5 U	< 10 U
ITMW-21	ITMW-21-20040922	9/22/2004	N	7.8	< 5 U	< 10 U
ITMW-21	ITMW-21-20050928	9/28/2005	N	6.45	< 5 U	< 10 U
ITMW-21	ITMW-21-20061012	10/12/2006	N	9	< 5 U	< 10 U
ITMW-21	ITMW-21-20070921	9/21/2007	N	10	< 5 U	< 10 U
ITMW-21	ITMW-21-20081209	12/9/2008	N	15	< 5 U	< 5 U
ITMW-21	ITMW-21-20091027	10/27/2009	N	14	< 5 U	< 5 U
ITMW-21	ITMW-21-20101104	11/4/2010	N	1100	4.4 J	< 5 U
ITMW-21	ITMW-21-20110322	3/22/2011	N	24	< 5 U	< 5 U
ITMW-21	ITMW-21-20111025	10/25/2011	N	11	< 5 U	< 5 U
ITMW-21	ITMW-21-20120417	4/17/2012	N	30	< 5 U	< 5 U
ITMW-21	ITMW-21-20121019	10/19/2012	N	7.7	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-20130424	4/24/2013	N	18	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-101513	10/15/2013	N	20	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-201403	3/6/2014	N	14.8	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-201405	5/14/2014	N	17.6	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-201407	7/30/2014	N	9.4	< 5.0 U	< 2.0 U
ITMW-21	DUP-3-201407	7/30/2014	FD	9.3	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-201410	10/15/2014	N	6.0	< 5.0 U	< 2.0 U
ITMW-21	ITMW-21-201501	1/14/2015	N	10.8	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-21	ITMW-21-201504	4/14/2015	N	12.7	< 1.0 U	< 1.0 U
ITMW-21	ITMW-21-201507	7/22/2015	N	7.6	0.20 J	< 1.0 U
ITMW-21	ITMW-21-201510	10/8/2015	N	7.2	0.29 J	< 1.0 U
ITMW-21	ITMW-21-201601	1/13/2016	N	9.8	0.27 J	< 1.0 U
ITMW-21	ITMW-21-201605	5/5/2016	N	11.1	0.30 J	< 1.0 U
ITMW-21	ITMW-21-201611	11/9/2016	N	8.1	< 1.0 U	< 1.0 U
ITMW-21	ITMW-21-201704	4/28/2017	N	11.9	0.31 J	< 1.0 U
ITMW-21	ITMW-21-201710	10/25/2017	N	7.9	0.25 J	< 1.0 U
ITMW-21	ITMW-21-201804	4/19/2018	N	13.2	0.38 J	< 1.0 U
ITMW-21	ITMW-21-201811	11/15/2018	N	8.0	< 1.0 U	< 1.0 U
ITMW-21	ITMW-21-201904	4/24/2019	N	12.3	0.36 J	< 1.0 U
ITMW-21	ITMW-21-201910	10/24/2019	N	6.0	0.30 J	< 1.0 U
ITMW-21	ITMW-21-202005	5/13/2020	N	7.8	0.42 J	< 1.0 U
ITMW-21	ITMW-21-202010	10/8/2020	N	5.4	0.32 J	< 1.0 U
ITMW-21	ITMW-21-202104	4/13/2021	N	8.0	0.25 J	< 1.0 U
ITMW-21	DUP-07-202104	4/13/2021	FD	7.7	0.28 J	< 1.0 U
ITMW-9	ITMW-9-202110	10/21/2021	N	3620	101	2.1
ITMW-21	DUP-04-202110	10/20/2021	FD	5.8	0.22 J	< 1.0 U
MCP-HP-01	MCP-HP-01-WG-29.5	7/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MCP-HP-02	MCP-HP-02-WG-31	7/13/2020	N	1.2	0.60 J	< 1.0 U
MCP-HP-03	MCP-HP-03-WG-28	7/13/2020	N	52.8	4.4	0.11 J
MCP-HP-04	MCP-HP-04-WG-27	7/13/2020	N	3.5 J	< 5.0 U	< 5.0 U
MCP-HP-05	MCP-HP-05	7/14/2020	N	6.4	0.91 J	< 1.0 U
MCP-HP-07	MCP-HP-07-WG-23	7/16/2020	N	14.9	1.1	< 1.0 U
MCP-HP-08	MCP-HP-08-WG-20200923	9/23/2020	N	< 5.0 U	< 5.0 U	< 5.0 U
MCP-HP-09	MCP-HP-09-WG-20200923	9/23/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MCP-HP-10	MCP-HP-10-WG-20200923	9/23/2020	N	30.2	2.8 J	< 5.0 U
MCP-HP-11	MCP-HP-11-WG-20200924	9/24/2020	N	18.1	2.9 J	< 5.0 U
MCP-HP-12	MCP-HP-12-WG-20200925	9/25/2020	N	3.9	0.45 J	< 1.0 U
MCP-HP-13	MCP-HP-13-WG-20200925	9/25/2020	N	55.7	6.5	0.31 J
MW-22	MW-22-20010327	3/27/2001	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20010913	9/13/2001	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20020910	9/10/2002	N	9	< 5 U	< 10 U
MW-22	MW-22-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20030923	9/23/2003	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20030923-FD	9/23/2003	FD	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20040413	4/13/2004	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20040921	9/21/2004	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20061014	10/14/2006	N	< 5 U	< 5 U	< 10 UJ
MW-22	MW-22-20070920	9/20/2007	N	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20081209	12/9/2008	N	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20091027	10/27/2009	N	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20101103	11/3/2010	N	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20111027	10/27/2011	N	2.1 J	< 5 U	< 5 U
MW-22	MW-22-20120418	4/18/2012	N	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-20130423	4/23/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-101413	10/14/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-201403	3/5/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-201405	5/12/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-201410	10/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-22	MW-22-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201504	4/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201507	7/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	MW-22-202010	10/8/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-22	DUP-07-202010	10/8/2020	FD	0.59 J	< 1.0 U	< 1.0 U
MW-175	MW-175-202110	10/20/2021	N	91.1	1.9	< 1.0 U
MW-23	ITMW-23-20010105	1/5/2001	N	137	< 5 U	< 10 U
MW-23	ITMW-23-20010326	3/26/2001	N	87	< 5 U	< 10 U
MW-23	ITMW-23-20010911	9/11/2001	N	23	< 5 U	< 10 U
MW-23	ITMW-23-20020911	9/11/2002	N	111	< 5 U	< 10 U
MW-23	MW-23-20020911-FD	9/11/2002	FD	105	< 5 U	< 10 U
MW-23	ITMW-23-20030227	2/27/2003	N	54	< 5 U	< 10 U
MW-23	ITMW-23-20030925	9/25/2003	N	83.9	< 5 U	< 10 U
MW-23	ITMW-23-20040415	4/15/2004	N	70.3	< 5 U	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-23	ITMW-23-20040922	9/22/2004	N	73.4	< 5 U	< 10 U
MW-23	ITMW-23-20050405	4/5/2005	N	55.5	< 5 U	< 10 U
MW-23	ITMW-23-20050929	9/29/2005	N	65.8	< 5 U	< 10 U
MW-23	ITMW-23-20060317	3/17/2006	N	47.1	< 5 U	< 10 U
MW-23	ITMW-23-20061014	10/14/2006	N	59	< 5 U	< 10 UJ
MW-23	ITMW-23-20070419	4/19/2007	N	39.9	9.79	< 10 U
MW-23	ITMW-23-20070919	9/19/2007	N	47	< 5 U	< 10 U
MW-23	ITMW-23-20080429	4/29/2008	N	29 0	< 5 U	< 10 U
MW-23	ITMW-23-20081210	12/10/2008	N	69	< 5 U	< 5 U
MW-23	ITMW-23-20090427	4/27/2009	N	32	< 5 U	< 5 U
MW-23	ITMW-23-20091029	10/29/2009	N	45	< 5 U	< 5 U
MW-23	MW-23-20100512-FD	5/12/2010	FD	55	< 5 U	< 5 U
MW-23	ITMW-23-20100512	5/12/2010	N	52	< 5 U	< 5 U
MW-23	ITMW-23-20101105	11/5/2010	N	76	< 5 U	< 5 U
MW-23	ITMW-23-20110323	3/23/2011	N	46	< 5 U	< 5 U
MW-23	ITMW-23-20111027	10/27/2011	N	41	< 5 U	< 5 U
MW-23	ITMW-23-20120418	4/18/2012	N	36	< 5 U	< 5 U
MW-23	ITMW-23-20121019	10/19/2012	N	43	< 5.0 U	< 2.0 U
MW-23	ITMW-23-20130425	4/25/2013	N	20	< 5.0 U	< 2.0 U
MW-23	MW-23-101613	10/16/2013	N	54	< 5.0 U	< 2.0 U
MW-23	MW-23-20140522	5/22/2014	N	22.8	< 5.0 U	< 2.0 U
MW-23	20140708-GW-MW-23	7/8/2014	N	27.8	0.68 J	< 2.0 U
MW-23	MW-23-201409	9/12/2014	N	62.1	1.8 J	< 2.0 U
MW-23	MW-23-20141023	10/23/2014	N	189	3.5 J	< 2.0 U
MW-23	MW-23-201501	1/15/2015	N	115	2.2	< 1.0 U
MW-23	MW-23-201504	4/14/2015	N	57.5	1.1	< 1.0 U
MW-23	MW-23-201507	7/23/2015	N	37.8	0.95 J	< 1.0 U
MW-23	MW-23-201510	10/8/2015	N	0.65 J	< 1.0 U	< 1.0 U
MW-23	MW-23-201511	11/5/2015	N	0.40 J	< 1.0 U	< 1.0 U
MW-23	MW-23-201512	12/1/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-23	MW-23-201601	1/7/2016	N	0.48 J	< 1.0 U	< 1.0 U
MW-23	MW-23-201605	5/5/2016	N	0.90 J	< 1.0 U	< 1.0 U
MW-24	MW-24-20010105	1/5/2001	N	247	12	< 10 U
MW-24	MW-24-20010326	3/26/2001	N	330	11	< 10 U
MW-24	MW-24-20010911	9/11/2001	N	124	6	< 10 U
MW-24	MW-24-20020911	9/11/2002	N	199	6	< 10 U
MW-24	MW-24-20030227	2/27/2003	N	253	7.01	< 10 U
MW-24	MW-24-20030925	9/25/2003	N	155	< 5 U	< 10 U
MW-24	MW-24-20040415	4/15/2004	N	181	5.12	< 10 U
MW-24	MW-24-20040923	9/23/2004	N	116	< 5 U	< 10 U
MW-24	MW-24-20050406	4/6/2005	N	152	6.04	< 10 U
MW-24	MW-24-20050929	9/29/2005	N	161	< 5 U	< 10 U
MW-24	MW-24-20060316	3/16/2006	N	347	7.57	< 10 U
MW-24	MW-24-20061014	10/14/2006	N	620	11	2 J
MW-24	MW-24-20070419	4/19/2007	N	196	11.6	< 10 U
MW-24	MW-24-20070920	9/20/2007	N	140	< 5 U	< 10 U
MW-24	MW-24-20070920-FD	9/20/2007	FD	150	< 5 U	< 10 U
MW-24	MW-24-20080429	4/29/2008	N	150 0	3 J	< 10 U
MW-24	MW-24-20081210	12/10/2008	N	150	3.4 J	< 5 U
MW-24	MW-24-20081210-FD	12/10/2008	FD	130	3.4 J	< 5 U
MW-24	MW-24-20090427	4/27/2009	N	120	< 5 U	< 5 U
MW-24	MW-24-20091029	10/29/2009	N	110	2.6 J	< 5 U
MW-24	MW-24-20100512	5/12/2010	N	150	4.3 J	< 5 U
MW-24	MW-24-20110323	3/23/2011	N	170	3.6 J	< 5 U
MW-24	MW-24-20111027	10/27/2011	N	170	1.9 J	< 5 U
MW-24	MW-24-20111027-FD	10/27/2011	FD	170	1.4 J	< 5 U
MW-24	MW-24-20120418	4/18/2012	N	150	2.9 J	< 5 U
MW-24	MW-24-20121019	10/19/2012	N	190	3.7 J	< 2.0 U
MW-24	MW-24-20130425	4/25/2013	N	110	3.5 J	0.23 J
MW-24	MW-24-20140522	5/22/2014	N	79.7	1.2 J	< 2.0 U
MW-24	20140708-GW-MW-24	7/8/2014	N	102	1.4 J	< 2.0 U
MW-24	MW-24-201409	9/12/2014	N	55.7	0.66 J	< 2.0 U
MW-24	MW-24-20141023	10/23/2014	N	33.1	< 5.0 U	< 2.0 U
MW-24	MW-24-201501	1/15/2015	N	26.9	< 1.0 U	< 1.0 U
MW-24	MW-24-201504	4/16/2015	N	18.8	< 1.0 U	< 1.0 U
MW-24	MW-24-201507	7/23/2015	N	178	3.1	< 1.0 U
MW-24	MW-24-201510	10/8/2015	N	44.1	0.83 J	< 1.0 U
MW-24	MW-24-201511	11/5/2015	N	75.8	0.20 J	< 1.0 U
MW-24	MW-24-201512	12/2/2015	N	84.1	0.59 J	< 1.0 U
MW-24	MW-24-201601	1/7/2016	N	49.3	0.48 J	< 1.0 U
MW-24	MW-24-201605	5/4/2016	N	23.8 J	0.27 J	< 1.0 U
MW-24	MW-24-201611	11/8/2016	N	4.2	< 1.0 U	< 1.0 U
MW-24	MW-24-201710	10/25/2017	N	20.9	< 1.0 U	< 1.0 U
MW-24	DUP-02-201811	11/15/2018	FD	12.5	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-24	MW-24-201811	11/15/2018	N	12.6	< 1.0 U	< 1.0 U
MW-24	MW-24-2019110	10/23/2019	N	19.0	0.24 J	< 1.0 U
MW-24	MW-24-202010	10/8/2020	N	144	2.2	< 1.0 U
MW-24	DUP-08-202010	10/8/2020	FD	148	2.3	< 1.0 U
MW-176	MW-176-202110	10/20/2021	N	310	17.0	19.3
MW-24	DUP-07-202110	10/21/2021	FD	10.0	< 1.0 U	< 1.0 U
MW-25	MW-25-20010328	3/28/2001	N	34000	117	60
MW-25	MW-25-20010913	9/13/2001	N	60000	300	< 200 U
MW-25	MW-25L-20020909	9/9/2002	N	157000	440	180
MW-25	MW-25T-20020909	9/9/2002	N	56000	370	200
MW-25	MW-25-20030226	2/26/2003	N	45900	557	75.7
MW-25	MW-25-20030717	7/17/2003	N	62200	621	243
MW-25	MW-25-20030924	9/24/2003	N	103000	775	< 500 U
MW-25	MW-25-20040414	4/14/2004	N	25600	255	31.8
MW-25	MW-25-20040921	9/21/2004	N	85200	819	422
MW-25	MW-25-20050407	4/7/2005	N	21100	353	61.1
MW-25	MW-25-20050928	9/28/2005	N	136000	837	< 500 U
MW-25	MW-25-20060315	3/15/2006	N	36300	774	< 200 U
MW-25	MW-25-20061012	10/12/2006	N	64000	1300	610
MW-25	MW-25-20061012-FD	10/12/2006	FD	65000	1400	600
MW-25	MW-25-20070418	4/18/2007	N	19000	321	20
MW-25	MW-25-20070418-FD	4/18/2007	FD	18000	319	20
MW-25	MW-25-20070921	9/21/2007	N	54000	1200	800
MW-25	MW-25-20070921-FD	9/21/2007	FD	55000	1200	780
MW-25	MW-25-20080429	4/29/2008	N	23000 0	470 0	10 J
MW-25	MW-25-20080429-FD	4/29/2008	FD	25000 0	510 0	10 J
MW-25	MW-25-20081210	12/10/2008	N	100000	1200	430
MW-25	MW-25-20090427	4/27/2009	N	36000	2100	140
MW-25	MW-25-20090427-FD	4/27/2009	FD	39000	2000	190
MW-25	MW-25-20091027	10/27/2009	N	140000	1500	570
MW-25	MW-25-20100511	5/11/2010	N	81000	1400	11
MW-25	MW-25-20101104	11/4/2010	N	270000	1500	400
MW-25	MW-25-20110322	3/22/2011	N	57000	2400	34
MW-25	MW-25-20111026	10/26/2011	N	120000	2100	< 250 U
MW-25	MW-25-20120417	4/17/2012	N	18000	690	18
MW-25	MW-25-20121019	10/19/2012	N	56000	4200	1500
MW-25	MW-25-20121019-FD	10/19/2012	FD	49000	3600	1500
MW-25	MW-25-20130425	4/25/2013	N	9100	330	7.9
MW-25	MW-25-20130425-FD	4/25/2013	FD	9500	380	11
MW-25	MW-25-101813	10/18/2013	N	43000	2900	1300
MW-25	MW-25-201403	3/8/2014	N	14500	625	33.6 J
MW-25	MW-25-201405	5/15/2014	N	18500	600 J	30.3
MW-25	20140709-GW-MW-25	7/9/2014	N	49900	1750	< 2.0 U
MW-25	MW-25-201407	7/31/2014	N	71700	2310 J	< 2000 U
MW-25	MW-25-201410	10/16/2014	N	42500	2870 J	540 J
MW-25	MW-25-20141024	10/24/2014	N	59800	2650 J	0.66 J
MW-25	MW-25-20141205	12/5/2014	N	2620 J	31.5	2.1
MW-25	MW-25-201501	1/15/2015	N	2510	126	1.6
MW-25	MW-25-201504	4/16/2015	N	4650	204	6.4
MW-25	MW-25-201507	7/23/2015	N	39800	580 J	66.4
MW-25	MW-25-201510	10/8/2015	N	68700	957 J	< 1.0 U
MW-25	MW-25-201601	1/13/2016	N	43400	608 J	55.0
MW-25	MW-25-201605	5/5/2016	N	53000	83.6	< 1.0 U
MW-25	MW-25-201611	11/9/2016	N	36900	509 J	< 1000 U
MW-25	MW-25-201710	10/26/2017	N	97400	22900	< 1.0 U
MW-25	FD-08-201710	10/26/2017	FD	95900	20900	< 1.0 U
MW-25	MW-25-201811	11/16/2018	N	94300	18200	762 J
MW-25R	MW-25R-201910	10/25/2019	N	5410	1880	113
MW-25R	MW-25R-202010	10/8/2020	N	3130	1050	21.4
MW-178	MW-178-202110	10/21/2021	N	< 1.0 U	0.19 J	< 1.0 U
MW-26	MW-26-20010326	3/26/2001	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20010911	9/11/2001	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20010911-FD	9/11/2001	FD	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20020910	9/10/2002	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20030924	9/24/2003	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20040414	4/14/2004	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20050929	9/29/2005	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20091029	10/29/2009	N	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20100512	5/12/2010	N	< 5 U	< 5 U	< 5 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-26	MW-26-20101105	11/5/2010	N	22	< 5 U	< 5 U
MW-26	MW-26-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20120418	4/18/2012	N	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20121018	10/18/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-26	MW-26-20130423	4/23/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-26	MW-26-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-26	MW-26-201403	3/5/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-26	MW-26-201405	5/12/2014	N	0.25 J	< 5.0 U	< 2.0 U
MW-26	MW-26-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-26	MW-26-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-26	MW-26-201501	1/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201504	4/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201507	7/22/2015	N	0.18 J	< 1.0 U	< 1.0 U
MW-26	MW-26-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201601	1/13/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201704	4/28/2017	N	0.28 J	< 1.0 U	< 1.0 U
MW-26	MW-26-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201804	4/18/2018	N	1.0	< 1.0 U	< 1.0 U
MW-26	MW-26-201811	11/14/2018	N	< 1.0	< 1.0 U	< 1.0 U
MW-26	DUP-09-201811	11/14/2018	FD	0.46 J	< 1.0 U	< 1.0 U
MW-26	MW-26-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-202005	5/13/2020	N	0.65 J	< 1.0 U	< 1.0 U
MW-26	MW-26-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-179	MW-179-202110	10/21/2021	N	20.1	1.1	< 1.0 U
MW-27	MW-27-20010105	1/5/2001	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20010105-FD	1/5/2001	FD	5.55	< 5 U	< 10 U
MW-27	MW-27-20010326	3/26/2001	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20010911	9/11/2001	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20020911	9/11/2002	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20020911-FD	9/11/2002	FD	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20050929	9/29/2005	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20061014	10/14/2006	N	2 J	< 5 U	< 10 U
MW-27	MW-27-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-27	MW-27-20100512	5/12/2010	N	3.1 J	< 5 U	< 5 U
MW-27	MW-27-20101105	11/5/2010	N	42	< 5 U	< 5 U
MW-27	MW-27-20111027	10/27/2011	N	< 5 U	< 5 U	< 5 U
MW-27	MW-27-20120418	4/18/2012	N	2.6 J	< 5 U	< 5 U
MW-27	MW-27-20121018	10/18/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-27	MW-27-20130424	4/24/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-27	MW-27-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-27	MW-27-201403	3/7/2014	N	0.31 J	< 5.0 U	< 2.0 U
MW-27	MW-27-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-27	MW-27-201407	7/30/2014	N	0.63 J	< 5.0 U	< 2.0 U
MW-27	MW-27-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-27	MW-27-201501	1/14/2015	N	0.84 J	0.59 J	< 1.0 U
MW-27	MW-27-201504	4/13/2015	N	0.59 J	< 1.0 U	< 1.0 U
MW-27	MW-27-201507	7/22/2015	N	0.18 J	< 1.0 U	< 1.0 U
MW-27	MW-27-201510	10/7/2015	N	0.55 J	0.33 J	< 1.0 U
MW-27	MW-27-201601	1/12/2016	N	0.61 J	0.42 J	< 1.0 U
MW-27	MW-27-201605	5/4/2016	N	0.35 J	0.18 J	< 1.0 U
MW-27	MW-27-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-27	MW-27-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-27	MW-27-201811	11/13/2018	N	0.92 J	0.27 J	< 1.0 U
MW-27	MW-27-201910	10/24/2019	N	1.9	0.40 J	< 1.0 U
MW-27	MW-27-202010	10/7/2020	N	10.2	0.42 J	< 1.0 U
MW-182	MW-182-202110	10/21/2021	N	19.2	1.2	< 1.0 U
MW-28	MW-28-20010327	3/27/2001	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20010327-FD	3/27/2001	FD	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20010911	9/11/2001	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20020911	9/11/2002	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-28	MW-28-20061014	10/14/2006	N	< 5 U	< 5 U	< 10 UJ
MW-28	MW-28-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20091029	10/29/2009	N	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20100512	5/12/2010	N	2.6 J	< 5 U	< 5 U
MW-28	MW-28-20101105	11/5/2010	N	54	< 5 U	< 5 U
MW-28	MW-28-20110323	3/23/2011	N	1.6 J	< 5 U	< 5 U
MW-28	MW-28-20111027	10/27/2011	N	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20120419	4/19/2012	N	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-28	MW-28-20130424	4/24/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-28	MW-28-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-28	MW-28-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-28	MW-28-201405	5/13/2014	N	0.30 J	< 5.0 U	< 2.0 U
MW-28	MW-28-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-28	MW-28-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-28	MW-28-201501	1/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201504	4/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201507	7/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-28	MW-28-202010	10/8/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-183R	MW-183R-202110	10/19/2021	N	0.67 J	< 1.0 U	< 1.0 U
MW-29	MW-29-20010327	3/27/2001	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20010911	9/11/2001	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20020910	9/10/2002	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20030227	2/27/2003	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20030924	9/24/2003	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20040414	4/14/2004	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20040922	9/22/2004	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20050928	9/28/2005	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20081210-FD	12/10/2008	FD	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20091029	10/29/2009	N	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20111025	10/25/2011	N	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20120418	4/18/2012	N	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20121018	10/18/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-29	MW-29-20130423	4/23/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-29	MW-29-101413	10/14/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-29	MW-29-201403	3/5/2014	N	0.52 J	< 5.0 U	< 2.0 U
MW-29	MW-29-201405	5/13/2014	N	0.18 J	< 5.0 U	< 2.0 U
MW-29	MW-29-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-29	MW-29-201410	10/15/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-29	MW-29-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201507	7/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201601	1/13/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201710	10/25/2017	N	< 1.0 U	0.16 J	< 1.0 U
MW-29	MW-29-201804	4/19/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201811	11/15/2018	N	< 1.0	< 1.0 U	< 1.0 U
MW-29	MW-29-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-202005	5/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-29	MW-29-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-30	MW-30-20010327	3/27/2001	N	43	11	< 10 U
MW-30	MW-30-20010911	9/11/2001	N	63	18	< 10 U
MW-30	MW-30-20020910	9/10/2002	N	48	14	< 10 U
MW-30	MW-30-20030227	2/27/2003	N	60	20.3	< 10 U
MW-30	MW-30-20030924	9/24/2003	N	46.8	13.7	< 10 U
MW-30	MW-30-20040414	4/14/2004	N	36.6	11.8	< 10 U
MW-30	MW-30-20040922	9/22/2004	N	36.2	12.1	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-30	MW-30-20050928	9/28/2005	N	59.6	15.6	< 10 U
MW-30	MW-30-20061012	10/12/2006	N	53	15	< 10 U
MW-30	MW-30-20070920	9/20/2007	N	39	11	< 10 U
MW-30	MW-30-20081210	12/10/2008	N	37	11	< 5 U
MW-30	MW-30-20101103	11/3/2010	N	50	15	< 5 U
MW-30	MW-30-20111026	10/26/2011	N	57	16	< 5 U
MW-30	MW-30-20120418	4/18/2012	N	150	32	< 5 U
MW-30	MW-30-20121018	10/18/2012	N	65	19	< 2.0 U
MW-30	MW-30-20130425	4/25/2013	N	49	18	0.49 J
MW-30	MW-30-101413	10/14/2013	N	40	16	< 2.0 U
MW-31	MW-31-20010105	1/5/2001	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20010326	3/26/2001	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20010913	9/13/2001	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20020911	9/11/2002	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20030228	2/28/2003	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20040923	9/23/2004	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20050405	4/5/2005	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20050927	9/27/2005	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20060315	3/15/2006	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20061011	10/11/2006	N	3 J	< 5 U	< 10 U
MW-31	MW-31-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20070918	9/18/2007	N	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20080430	4/30/2008	N	2 J	< 5 U	< 10 U
MW-31	MW-31-20081211	12/11/2008	N	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20090425	4/25/2009	N	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20100512	5/12/2010	N	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20101107	11/7/2010	N	48	< 5 U	< 5 U
MW-31	MW-31-20110323	3/23/2011	N	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20121019	10/19/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	MW-31-101813	10/18/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	MW-31-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	MW-31-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	DUP-1-201407	7/30/2014	FD	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	MW-31-201407	7/30/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	MW-31-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-31	MW-31-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-31R	MW-31R-GW-20150119	1/19/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-31R	MW-31R-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-31R	MW-31R-201507	7/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-31R	MW-31R-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-31R	MW-31R-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-31R	MW-31R-201604	4/18/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-32	MW-32-20010105	1/5/2001	N	108	< 5 U	< 10 U
MW-32	MW-32-20010327	3/27/2001	N	174	< 5 U	< 10 U
MW-32	MW-32-20010913	9/13/2001	N	95	< 5 U	< 10 U
MW-32	MW-32-20020911	9/11/2002	N	109	< 5 U	< 10 U
MW-32	MW-32-20030228	2/28/2003	N	133	< 5 U	< 10 U
MW-32	MW-32-20030925	9/25/2003	N	32.3	< 5 U	< 10 U
MW-32	MW-32-20040415	4/15/2004	N	76.9	< 5 U	< 10 U
MW-32	MW-32-20040923	9/23/2004	N	51.4	< 5 U	< 10 U
MW-32	MW-32-20050405	4/5/2005	N	158	< 5 U	< 10 U
MW-32	MW-32-20050927	9/27/2005	N	97.6	< 5 U	< 10 U
MW-32	MW-32-20060315	3/15/2006	N	111	< 5 U	< 10 U
MW-32	MW-32-20061012	10/12/2006	N	85	4 J	< 10 U
MW-32	MW-32-20070419	4/19/2007	N	66.3	10.1	< 10 U
MW-32	MW-32-20070918	9/18/2007	N	78	< 5 U	< 10 U
MW-32	MW-32-20080430	4/30/2008	N	70 0	2 J	< 10 U
MW-32	MW-32-20081211	12/11/2008	N	60	< 5 U	< 5 U
MW-32	MW-32-20090425	4/25/2009	N	47	< 5 U	< 5 U
MW-32	MW-32-20091028	10/28/2009	N	68	1.8 J	< 5 U
MW-32	MW-32-20100512	5/12/2010	N	58	< 5 U	< 5 U
MW-32	MW-32-20101106	11/6/2010	N	120	< 5 U	< 5 U
MW-32	MW-32-20110324	3/24/2011	N	66	1.4 J	< 5 U
MW-32	MW-32-20111026	10/26/2011	N	73	< 5 U	< 5 U
MW-32	MW-32-20121019	10/19/2012	N	61	1.2 J	< 2.0 U
MW-32	MW-32-101813	10/18/2013	N	48	1.4 J	< 2.0 U
MW-32	MW-32-201403	3/8/2014	N	36.8	1.1 J	< 2.0 U
MW-32	MW-32-201405	5/13/2014	N	33.1	0.19 J	< 2.0 U
MW-32	MW-32-201407	7/29/2014	N	37.2	1.0 J	< 2.0 U
MW-32	MW-32-201410	10/14/2014	N	29.7	0.80 J	< 2.0 U
MW-32	MW-32-201501	1/14/2015	N	20.2	0.55 J	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-32R	MW-32R-GW-20150119	1/19/2015	N	12.9	< 1.0 U	< 1.0 U
MW-32R	MW-32R-201504	4/15/2015	N	11.2	< 1.0 U	< 1.0 U
MW-32R	MW-32R-201507	7/21/2015	N	7.4	0.29 J	< 1.0 U
MW-32R	MW-32R-201510	10/7/2015	N	8.2	0.37 J	< 1.0 U
MW-32R	MW-32R-201601	1/12/2016	N	13.1	0.45 J	< 1.0 U
MW-32R	MW-32R-201604	4/18/2016	N	8.8	< 1.0 U	< 1.0 U
MW-33	MW-33-20010105	1/5/2001	N	120	< 5 U	< 10 U
MW-33	MW-33-20010327	3/27/2001	N	260	7	< 10 U
MW-33	MW-33-20010913	9/13/2001	N	310	8	< 10 U
MW-33	MW-33-20020911	9/11/2002	N	450	8	< 10 U
MW-33	MW-33-20030228	2/28/2003	N	274	6.62	< 10 U
MW-33	MW-33-20030925	9/25/2003	N	198	5.95	< 10 U
MW-33	MW-33-20040415	4/15/2004	N	871	21.3	< 10 U
MW-33	MW-33-20040923	9/23/2004	N	798	15.3	< 10 U
MW-33	MW-33-20050405	4/5/2005	N	1430	24.5	< 10 U
MW-33	MW-33-20050927	9/27/2005	N	1030	15.2	< 10 U
MW-33	MW-33-20060315	3/15/2006	N	1610	20.5	< 10 U
MW-33	MW-33-20061012	10/12/2006	N	1300	19	< 10 U
MW-33	MW-33-20070419	4/19/2007	N	1430	9.2 J	< 50 U
MW-33	MW-33-20070918	9/18/2007	N	1700	25	< 10 U
MW-33	MW-33-20080430	4/30/2008	N	1100 0	16 0	< 10 U
MW-33	MW-33-20081211	12/11/2008	N	1200	18	< 5 U
MW-33	MW-33-20090425	4/25/2009	N	1200	19	< 5 U
MW-33	MW-33-20090527	5/27/2009	N	1000	19	< 5 U
MW-33	MW-33-20091028	10/28/2009	N	1200	20	< 5 U
MW-33	MW-33-20100512	5/12/2010	N	1100	21	< 5 U
MW-33	MW-33-20101106	11/6/2010	N	1200	17	< 5 U
MW-33	MW-33-20110304-FS	3/4/2011	N	500	14	< 5.0 U
MW-33	MW-33-20110523-FS	5/23/2011	N	1300	18	
MW-33	MW-33-20111026	10/26/2011	N	1000	16	< 5 U
MW-33	MW-33-20121019	10/19/2012	N	1300	18	0.56 J
MW-33	MW-33-101813	10/18/2013	N	1100	19	< 2.0 U
MW-33	MW-33-201403	3/8/2014	N	918	15.9	0.56 J
MW-33	MW-33-201405	5/14/2014	N	954	15.1	0.56 J
MW-33	MW-33-201407	7/29/2014	N	1600	20.8	0.59 J
MW-33	MW-33-201410	10/15/2014	N	1290	15.3	< 2.0 U
MW-33	MW-33-201501	1/14/2015	N	1080	13.9	< 1.0 U
MW-33R	MW-33R-GW-20150118	1/18/2015	N	799	9.9	< 1.0 U
MW-33R	MW-33R-201504	4/15/2015	N	570	12.2	0.37 J
MW-33R	DUP-01-201504	4/15/2015	FD	624	10.5	< 1.0 U
MW-33R	MW-33R-201507	7/22/2015	N	488	6.8	< 1.0 U
MW-33R	DUP-04-201507	7/22/2015	FD	447	6.1	< 1.0 U
MW-33R	MW-33R-201510	10/8/2015	N	562	6.1	0.31 J
MW-33R	DUP-05-201510	10/8/2015	FD	460	6.3	0.28 J
MW-33R	MW-33R-201511	11/5/2015	N	752	8.0	0.39 J
MW-33R	MW-33R-201512	12/2/2015	N	675	6.5	0.30 J
MW-33R	MW-33R-201601	1/8/2016	N	724	7.6	< 1.0 U
MW-33R	MW-33R-201604	4/18/2016	N	776	6.7	0.23 J
MW-34	MW-34-20010328	3/28/2001	N	83	< 5 U	< 10 U
MW-34	MW-34-20010913	9/13/2001	N	61	< 5 U	< 10 U
MW-34	MW-34L-20020909	9/9/2002	N	84	< 5 U	< 10 U
MW-34	MW-34-20030228	2/28/2003	N	< 5 U	< 5 U	< 10 U
MW-34	MW-34-20030925	9/25/2003	N	28.4	< 5 U	< 10 U
MW-34	MW-34-20031114	11/14/2003	N	121	< 5 U	< 10 U
MW-34	MW-34-20040415	4/15/2004	N	119	< 5 U	< 10 U
MW-34	MW-34-20040923	9/23/2004	N	81.1	< 5 U	< 10 U
MW-34	MW-34-20041209	12/9/2004	N	93.3	< 5 U	< 10 U
MW-34	MW-34-20050405	4/5/2005	N	65.8	< 5 U	< 10 U
MW-34	MW-34-20050930	9/30/2005	N	83.7	< 5 U	< 10 U
MW-34	MW-34-20060314	3/14/2006	N	77.1	< 5 U	< 10 U
MW-34	MW-34-20061011	10/11/2006	N	63	4 J	< 10 U
MW-34	MW-34-20070418	4/18/2007	N	41	9.79	< 10 U
MW-34	MW-34-20070919	9/19/2007	N	61	< 5 U	< 10 U
MW-34	MW-34-20080430	4/30/2008	N	32 0	< 5 U	< 10 U
MW-34	MW-34-20081210	12/10/2008	N	53	< 5 U	< 5 U
MW-34	MW-34-20090424	4/24/2009	N	43	< 5 U	< 5 U
MW-34	MW-34-20090527	5/27/2009	N	12	< 5 U	< 5 U
MW-34	MW-34-20091028	10/28/2009	N	34	< 5 U	< 5 U
MW-34	MW-34-20100512	5/12/2010	N	38	< 5 U	< 5 U
MW-34	MW-34-20101107-FD	11/7/2010	FD	70	< 5 U	< 5 U
MW-34	MW-34-20101107	11/7/2010	N	73	< 5 U	< 5 U
MW-34	MW-34-20110324-FD	3/24/2011	FD	40	< 5 U	< 5 U
MW-34	MW-34-20110324	3/24/2011	N	42	< 5 U	< 5 U
MW-34	MW-34-20111026	10/26/2011	N	56	< 5 U	< 5 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-34	MW-34-20121020	10/20/2012	N	90	1.6 J	< 2.0 U
MW-34	MW-34-101713	10/17/2013	N	43	0.90 J	< 2.0 U
MW-34	MW-34-201403	3/8/2014	N	28.7	0.61 J	< 2.0 U
MW-34	MW-34-201405	5/13/2014	N	19.9	< 5.0 U	< 2.0 U
MW-34	MW-34-201407	7/29/2014	N	78.2	1.7 J	< 2.0 U
MW-34	MW-34-201410	10/15/2014	N	47.7	0.96 J	< 2.0 U
MW-34	MW-34-201501	1/13/2015	N	22.0	< 1.0 U	< 1.0 U
MW-34	MW-34-201504	4/14/2015	N	13.8	< 1.0 U	< 1.0 U
MW-34R	MW-34R-201507	7/21/2015	N	3.5	< 1.0 U	< 1.0 U
MW-34R	MW-34R-201510	10/8/2015	N	4.5	0.16 J	< 1.0 U
MW-34R	MW-34R-201601	1/11/2016	N	2.6	0.30 J	< 1.0 U
MW-34R	MW-34R-201605	5/3/2016	N	2.5	0.56 J	< 1.0 U
MW-35R	MW-35R-20010328	3/28/2001	N	960	34	< 10 U
MW-35R	MW-35R-20010913	9/13/2001	N	1030	40	< 20 U
MW-35R	MW-35L-20020909	9/9/2002	N	900	31	< 10 U
MW-35R	MW-35R-20030228	2/28/2003	N	246	15.1	< 10 U
MW-35R	MW-35R-20030925	9/25/2003	N	297	19.8	< 10 U
MW-35R	MW-35R-20031114	11/14/2003	N	990	34.9	< 10 U
MW-35R	MW-35R-20040415	4/15/2004	N	1150	45.8	< 10 U
MW-35R	MW-35R-20040923	9/23/2004	N	685	28.4	< 10 U
MW-35R	MW-35R-20041209	12/9/2004	N	880	42	< 10 U
MW-35R	MW-35R-20050406	4/6/2005	N	886	35	< 10 U
MW-35R	MW-35R-20050930	9/30/2005	N	804	29.3	< 10 U
MW-35R	MW-35R-20060314	3/14/2006	N	858	24.2	< 10 U
MW-35R	MW-35R-20060406	4/6/2006	N	1540	52.5	< 10 U
MW-35R	MW-35R-20061011	10/11/2006	N	910	29	< 10 U
MW-35R	MW-35R-20070418	4/18/2007	N	900	27.6	< 10 U
MW-35R	MW-35R-20070919	9/19/2007	N	1100	28	< 10 U
MW-35R	MW-35R-20080430	4/30/2008	N	1100 0	33 0	< 10 U
MW-35R	MW-35R-20081211	12/11/2008	N	790	27	< 5 U
MW-35R	MW-35R-20090424	4/24/2009	N	1100	37	< 5 U
MW-35R	MW-35R-20090507	5/7/2009	N	< 5 U	< 5 U	< 5 U
MW-35R	MW-35R-20090527	5/27/2009	N	< 5 U	< 5 U	< 5 U
MW-35R	MW-35R-20101105	11/5/2010	N	240	9.9	< 5 U
MW-35R	MW-35R-20110304-FS	3/4/2011	N	180	8.4	< 5.0 U
MW-35R	MW-35R-20110523-FS	5/23/2011	N	260	13	
MW-35R	MW-35R-20111025	10/25/2011	N	280	12	< 5 U
MW-35R	MW-35R-20121020	10/20/2012	N	280	10	< 2.0 U
MW-35R	MW-35R-101713	10/17/2013	N	200	12	< 2.0 U
MW-35R	MW-35R-20131017-FD	10/17/2013	FD	220	13	< 2.0 U
MW-35R	MW-35R-201403	3/8/2014	N	345	14.9	< 2.0 U
MW-35R	MW-35R-201405	5/13/2014	N	183	6.1	< 2.0 U
MW-35R	MW-35R-201407	7/30/2014	N	64.7	2.8 J	< 2.0 U
MW-35R	MW-35R-201410	10/14/2014	N	79.2	2.6 J	< 2.0 U
MW-35R	MW-35R-201501	1/13/2015	N	10.9	< 1.0 U	< 1.0 U
MW-35R	MW-35R-201504	4/14/2015	N	39.5	1.3	< 1.0 U
MW-35R	MW-35R-201507	7/21/2015	N	33.7	1.0	< 1.0 U
MW-35R	MW-35R-201510	10/7/2015	N	15.4	0.58 J	< 1.0 U
MW-35R	MW-35R-201511	11/4/2015	N	23.6	0.36 J	< 1.0 U
MW-35R	MW-35R-201512	12/2/2015	N	0.89 J	< 1.0 U	< 1.0 U
MW-35R	MW-35R-201601	1/11/2016	N	13.2	0.34 J	< 1.0 U
MW-35R	MW-35R-201605	5/3/2016	N	19.3	0.49 J	< 1.0 U
MW-36	MW-36-20010328	3/28/2001	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20010913	9/13/2001	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36L-20020909	9/9/2002	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20030228	2/28/2003	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20031114	11/14/2003	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20040923	9/23/2004	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20050406	4/6/2005	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20060317	3/17/2006	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20061011	10/11/2006	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20070418	4/18/2007	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20070920	9/20/2007	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20080430	4/30/2008	N	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20081211	12/11/2008	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090507	5/7/2009	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090508	5/8/2009	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090528	5/28/2009	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20091028	10/28/2009	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20100512	5/12/2010	N	< 5 U	< 5 U	< 5 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-36	MW-36-20101107	11/7/2010	N	9.9	< 5 U	< 5 U
MW-36	MW-36-20110324	3/24/2011	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20121019	10/19/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-36	MW-36-101713	10/17/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-36	MW-36-201403	3/6/2014	N	0.22 J	< 5.0 U	< 2.0 U
MW-36	MW-36-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-36	MW-36-201407	7/29/2014	N	0.61 J	< 5.0 U	< 2.0 U
MW-36	MW-36-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-36	MW-36-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-36	MW-36-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-36R	MW-36R-201507	7/20/2015	N	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
MW-36R	MW-36R-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-36R	MW-36R-201601	1/11/2016	N	0.31 J	< 1.0 U	< 1.0 U
MW-36R	MW-36R-201605	5/3/2016	N	1.7	< 1.0 U	< 1.0 U
MW-37	MW-37-20010914	9/14/2001	N	5000	340	< 100 U
MW-37	MW-37-20011120	11/20/2001	N	< 5 U	< 5 U	< 10 U
MW-37	MW-37-20020911	9/11/2002	N	1400	10000	300
MW-37	MW-37-20030227	2/27/2003	N	4050	5660	2500
MW-37	MW-37-20030717	7/17/2003	N	2560	1710	316
MW-37	MW-37-20030924	9/24/2003	N	3700	7020	973
MW-37	MW-37-20040413	4/13/2004	N	5190	3160	1180
MW-37	MW-37-20040921	9/21/2004	N	5030	5650	1370
MW-37	MW-37-20050405	4/5/2005	N	5310	2360	1030 E
MW-37	MW-37-20050929	9/29/2005	N	6780	3210	910 E
MW-37	MW-37-20060316	3/16/2006	N	11200	5020	1730
MW-37	MW-37-20061013	10/13/2006	N	13000	5300	1200
MW-37	MW-37-20061013-FD	10/13/2006	FD	13000	5000	1200
MW-37	MW-37-20070419	4/19/2007	N	9490	3010	780
MW-37	MW-37-20070921	9/21/2007	N	22000	9100	2800
MW-37	MW-37-20080430	4/30/2008	N	16000 0	3300 0	1800 0
MW-37	MW-37-20081210	12/10/2008	N	24000	6300	1800
MW-37	MW-37-20090427	4/27/2009	N	11000	3200	1200
MW-37	MW-37-20091027	10/27/2009	N	37000	7400	2200
MW-37	MW-37-20100511	5/11/2010	N	33000	7200	2400
MW-37	MW-37-20101104	11/4/2010	N	54000	10000	2200
MW-37	MW-37-20110322	3/22/2011	N	36000	6000	2300
MW-37	MW-37-20111026	10/26/2011	N	57000	9700	2500
MW-37	MW-37-20120418	4/18/2012	N	29000	5300	2100
MW-37	MW-37-20121019	10/19/2012	N	4800	1100	230
MW-37	MW-37-20130425	4/25/2013	N	1700	900	230
MW-37	MW-37-101713	10/17/2013	N	1100	1500	1300
MW-37	MW-37-201904	4/24/2019	N	8080	1410	375
MW-37	MW-37-201910	10/24/2019	N	12100	1950	662
MW-37	MW-37-202005	5/13/2020	N	4210	< 1.0 U	499
MW-37	MW-37-202010	10/8/2020	N	3990	648	186
MW-38	MW-38-20010914	9/14/2001	N	620	90	< 20 U
MW-38	MW-38-20050929	9/29/2005	N	< 5 U	98.9	2150
MW-38	MW-38-20061013	10/13/2006	N	26	130	2000 J
MW-38	MW-38-20081210	12/10/2008	N	44	110	1400
MW-38	MW-38-20111026	10/26/2011	N	580	870	1100
MW-38	MW-38-20121018	10/18/2012	N	1000	750	700
MW-38	MW-38-101613	10/16/2013	N	2300	1200	560
MW-38	MW-38-201403	3/8/2014	N	1790	535	68.4
MW-38	DUP1-201405	5/14/2014	FD	2040	426 J	98.2
MW-38	MW-38-201405	5/14/2014	N	1650	428	97.9
MW-38	MW-38-201407	7/31/2014	N	1720	637	197
MW-38	MW-38-201410	10/16/2014	N	6750	781	321
MW-38	DUP-06-201410	10/16/2014	FD	6970	869	370
MW-38	MW-38-20141204	12/4/2014	N	3190	697	193
MW-38	MW-38-201501	1/15/2015	N	5440	1900	133
MW-38	DUP-06-201501	1/15/2015	FD	3910	1190	143
MW-38	MW-38-201504	4/16/2015	N	3060	2060	33.7
MW-38	MW-38-201507	7/23/2015	N	3420	1340	119
MW-38	MW-38-201510	10/8/2015	N	2740	1340	190
MW-38	MW-38-201601	1/13/2016	N	3680	1180	84.3
MW-38	MW-38-201605	5/5/2016	N	3040	950	18.1
MW-38	MW-38-201611	11/10/2016	N	2860	1070	597
MW-38	MW-38-201704	4/28/2017	N	2550	949	23.9
MW-38	MW-38-201710	10/26/2017	N	2240	823	< 1.0 U
MW-38	MW-38-201804	4/19/2018	N	2560	777	23.6
MW-38	MW-38-201811	11/15/2018	N	2340	675	360
MW-38	MW-38-201904	4/25/2019	N	1760	388	15.9
MW-38	DUP-02-201904	4/25/2019	FD	1890	416	14.1

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-38	MW-38-201910	10/23/2019	N	2180	542	307
MW-38	MW-38-202005	5/14/2020	N	10500	295	5.2
MW-38	MW-38-202010	10/7/2020	N	1110	353	237
MW-38	MW-38-202104	4/13/2021	N	1280	260	7.3
MW-38	DUP-06-202104	4/13/2021	FD	1340	265	6.8
MW-185	MW-185-202110	10/21/2021	N	182	11.7	0.25 J
MW-39	MW-39-20030718	7/18/2003	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20031114	11/14/2003	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20040923	9/23/2004	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20050408	4/8/2005	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20060317	3/17/2006	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20061011	10/11/2006	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20070418	4/18/2007	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20080430	4/30/2008	N	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20081209	12/9/2008	N	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20091027	10/27/2009	N	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20101107	11/7/2010	N	20	< 5 U	< 5 U
MW-39	MW-39-20110324	3/24/2011	N	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20121019	10/19/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-39	MW-39-101813	10/18/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-39	MW-39-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-39	MW-39-201405	5/13/2014	N	0.23 J	< 5.0 U	< 2.0 U
MW-39	MW-39-201407	7/29/2014	N	0.79 J	< 5.0 U	< 2.0 U
MW-39	MW-39-201410	10/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-39	MW-39-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39	MW-39-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201507	7/20/2015	N	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
MW-39R	MW-39R-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201611	11/7/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	FD-05-201710	10/25/2017	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201811	11/15/2018	N	< 1.0	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	DUP-05-202005	5/12/2020	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-39R	MW-39R-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-186	MW-186-202110	10/19/2021	N	0.49 J	0.66 J	0.45 J
MW-40	MW-40-20030718	7/18/2003	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20030925	9/25/2003	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20031114	11/14/2003	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20031114-FD	11/14/2003	FD	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20040415	4/15/2004	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20040923	9/23/2004	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20050407	4/7/2005	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20050929	9/29/2005	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20060314	3/14/2006	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20061010	10/10/2006	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20070418	4/18/2007	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20070918	9/18/2007	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20080428	4/28/2008	N	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20081211	12/11/2008	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20090527	5/27/2009	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20091029	10/29/2009	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20100512	5/12/2010	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20101104	11/4/2010	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20110323	3/23/2011	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20120418	4/18/2012	N	3.9 J	< 5 U	< 5 U
MW-40	MW-40-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-40	MW-40-20130423	4/23/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-40	MW-40-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-40	MW-40-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-40	MW-40-201405	5/12/2014	N	0.76 J	< 5.0 U	< 2.0 U
MW-40	MW-40-201407	7/29/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-40	MW-40-201410	10/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-40	MW-40-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40	MW-40-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201507	7/20/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201510	10/6/2015	N	0.30 J	0.23 J	< 1.0 U
MW-40R	DUP-03-201510	10/6/2015	FD	0.83 J	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	DUP-06-201601	1/12/2016	FD	0.28 J	0.22 J	< 1.0 U
MW-40R	MW-40R-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201611	11/7/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201710	10/24/2017	N	0.31 J	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-40R	MW-40R-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-187	MW-187-202110	10/19/2021	N	16.8	3.8	< 1.0 U
MW-41	MW-41-20030718	7/18/2003	N	972	50.6	< 10 U
MW-41	MW-41-20030718-FD	7/18/2003	FD	964	45.5	< 10 U
MW-41	MW-41-20030925	9/25/2003	N	722	37.8	< 10 U
MW-41	MW-41-20031114	11/14/2003	N	331	205	< 10 U
MW-41	MW-41-20040415	4/15/2004	N	760	54.2	< 10 U
MW-41	MW-41-20040923	9/23/2004	N	1060	48	< 10 U
MW-41	MW-41-20050407	4/7/2005	N	1170	58	< 10 U
MW-41	MW-41-20050930	9/30/2005	N	1120	55.8	< 10 U
MW-41	MW-41-20060317	3/17/2006	N	917	52.5	< 10 U
MW-41	MW-41-20061013	10/13/2006	N	970	43	< 10 UJ
MW-41	MW-41-20070418	4/18/2007	N	900	30.1	< 10 U
MW-41	MW-41-20070920	9/20/2007	N	850	32	< 10 U
MW-41	MW-41-20080430	4/30/2008	N	730 0	31 0	< 10 U
MW-41	MW-41-20081211	12/11/2008	N	820	29	< 5 U
MW-41	MW-41-20090424	4/24/2009	N	660	25	< 5 U
MW-41	MW-41-20090507	5/7/2009	N	180	4.7 J	< 5 U
MW-41	MW-41-20090508	5/8/2009	N	180	4.7 J	< 5 U
MW-41	MW-41-20090527	5/27/2009	N	230	16	< 5 U
MW-41	MW-41-20091028	10/28/2009	N	180	4 J	< 5 U
MW-41	MW-41-20100513	5/13/2010	N	610	19	< 5 U
MW-41	MW-41-20101105	11/5/2010	N	930	31	< 5 U
MW-41	MW-41-20110304-FS	3/4/2011	N	120	20	< 5.0 U
MW-41	MW-41-20110523-FS	5/23/2011	N	370	15	
MW-41	MW-41-20111025	10/25/2011	N	420	18	< 5 U
MW-41	MW-41-20121020	10/20/2012	N	620	23	< 2.0 U
MW-41	MW-41-20121020-FD	10/20/2012	FD	550	21	< 2.0 U
MW-41	MW-41-101613	10/16/2013	N	520	24	< 2.0 U
MW-41	MW-41-201403	3/7/2014	N	501	19.7	0.68 J
MW-41	MW-41-201405	5/14/2014	N	518	18.0	0.50 J
MW-41	MW-41-201407	7/30/2014	N	480	19.7	< 2.0 U
MW-41	DUP-2-201407	7/30/2014	FD	511	19.1	< 2.0 U
MW-41	MW-41-201410	10/15/2014	N	491	16.9	< 2.0 U
MW-41	MW-41-201501	1/14/2015	N	425	15.6	< 1.0 U
MW-41	MW-41-201504	4/15/2015	N	386	15.2	0.27 J
MW-41	DUP-02-201504	4/15/2015	FD	410	13.5	< 1.0
MW-41R	MW-41R-201507	7/21/2015	N	40.4	3.3	< 1.0 U
MW-41R	DUP-03-201507	7/21/2015	FD	43.0	2.8	< 1.0 U
MW-41R	MW-41R-201510	10/6/2015	N	48.7	36.7	0.39 J
MW-41R	DUP-07-201510	10/6/2015	FD	46.4	35.2	0.33 J
MW-41R	MW-41R-201601	1/12/2016	N	59.9	40.9	0.38 J
MW-41R	DUP-07-201601	1/12/2016	FD	56.6	40.1	0.35 J
MW-41R	MW-41R-201605	5/3/2016	N	87.8	17.3	0.18 J
MW-41R	DUP-03-201605	5/3/2016	FD	82.9	17.5	0.20 J
MW-42B	MW-42B-20031114	11/14/2003	N	481	21.1	< 10 U
MW-42B	MW-42B-20040415	4/15/2004	N	856	29.3	< 10 U
MW-42B	MW-42B-20040923	9/23/2004	N	400	19.8	< 10 U
MW-42B	MW-42B-20050405	4/5/2005	N	1310	32	< 10 U
MW-42B	MW-42B-20050927	9/27/2005	N	1470	27.3	< 10 U
MW-42B	MW-42B-20060315	3/15/2006	N	2270	37.2	< 10 U
MW-42B	MW-42B-20061010	10/10/2006	N	2000	35	2 J
MW-42B	MW-42B-20070417	4/17/2007	N	1600	36.8	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-42B	MW-42B-20070918	9/18/2007	N	2100	39	4 J
MW-42B	MW-42B-20080429	4/29/2008	N	1600 0	33 0	3 J
MW-42B	MW-42B-20081209	12/9/2008	N	1100	30	< 5 U
MW-42B	MW-42B-20090425	4/25/2009	N	1500	35	< 5 U
MW-43	MW-43-20031114	11/14/2003	N	223	18.5	< 10 U
MW-43	MW-43-20040415	4/15/2004	N	510	12.1	< 10 U
MW-43	MW-43-20040923	9/23/2004	N	64.7	6.31	< 10 U
MW-43	MW-43-20050405	4/5/2005	N	304	11.9	< 10 U
MW-43	MW-43-20050927	9/27/2005	N	518	21.3	< 10 U
MW-43	MW-43-20060315	3/15/2006	N	1300	35	< 10 U
MW-43	MW-43-20061011	10/11/2006	N	920	30	< 10 U
MW-43	MW-43-20070417	4/17/2007	N	220	14.1	< 10 U
MW-43	MW-43-20070918	9/18/2007	N	350	13	< 10 U
MW-43	MW-43-20080428	4/28/2008	N	120 0	4 J	< 10 U
MW-43	MW-43-20081209	12/9/2008	N	150	5.3	< 5 U
MW-43	MW-43-20090425	4/25/2009	N	120	< 5 U	< 5 U
MW-43	MW-43-20090507	5/7/2009	N	180	6	< 5 U
MW-43	MW-43-20090508	5/8/2009	N	180	6	< 5 U
MW-46R	MW-46R-20031114	11/14/2003	N	39.9	< 5 U	< 10 U
MW-46R	MW-46R-20040415	4/15/2004	N	77.1	27.2	< 10 U
MW-46R	MW-46R-20040923	9/23/2004	N	142	21.2	< 10 U
MW-46R	MW-46R-20050406	4/6/2005	N	210	28.4	< 10 U
MW-46R	MW-46R-20050928	9/28/2005	N	222	15.6	< 10 U
MW-46R	MW-46R-20060316	3/16/2006	N	111	6.37	< 10 U
MW-46R	MW-46R-20060406	4/6/2006	N	300	< 5 U	< 10 U
MW-46R	MW-46R-20061011	10/11/2006	N	450	8	< 10 U
MW-46R	MW-46R-20070417	4/17/2007	N	440	12.5	< 10 U
MW-46R	MW-46R-20070918	9/18/2007	N	420	9	< 10 U
MW-46R	MW-46R-20080429	4/29/2008	N	430 0	8 0	< 10 U
MW-46R	MW-46R-20081209	12/9/2008	N	310	19	< 5 U
MW-46R	MW-46R-20090425	4/25/2009	N	460	11	< 5 U
MW-46R	MW-46R-20090527	5/27/2009	N	< 5 U	< 5 U	< 5 U
MW-46R	MW-46R-20091027	10/27/2009	N	390	12	< 5 U
MW-46R	MW-46R-20091221-FS	12/21/2009	N	410	10	< 5.0 U
MW-46R	MW-46R-20100511	5/11/2010	N	610	13	< 5 U
MW-46R	MW-46R-20101105	11/5/2010	N	650	12	< 5 U
MW-46R	MW-46R-20110307-FS	3/7/2011	N	670	14	< 5.0 U
MW-46R	MW-46R-20110322	3/22/2011	N	680	11	< 5 U
MW-46R	MW-46R-20110523-FS	5/23/2011	N	610	13	
MW-46R	MW-46R-20111026	10/26/2011	N	460	10	< 5 U
MW-46R	MW-46R-20120418	4/18/2012	N	680	14	< 5 U
MW-46R	MW-46R-20121020	10/20/2012	N	410	7.9	0.44 J
MW-46R	MW-46R-20130423	4/23/2013	N	470	7.6	0.91 J
MW-46R	MW-46R-101813	10/18/2013	N	410	11	< 2.0 U
MW-46R	MW-46R-201403	3/7/2014	N	469	12.8	0.46 J
MW-46R	MW-46R-201405	5/14/2014	N	471	12.8	0.76 J
MW-46R	MW-46R-201407	7/29/2014	N	472	13.7	0.64 J
MW-46R	MW-46R-201410	10/16/2014	N	410	24.6	< 2.0 U
MW-46R	DUP-03-201410	10/16/2014	FD	373	25.2	< 2.0 U
MW-46R	MW-46R-201501	1/13/2015	N	452	11.6	0.71 J
MW-46R	DUP-03-201501	1/13/2015	FD	428	12.0	0.90 J
MW-46R	MW-46R-201504	4/14/2015	N	220 J	13.8	0.47 J
MW-46R	DUP-07-201504	4/14/2015	FD	482	13.9	0.51 J
MW-46R	MW-46R-201507	7/21/2015	N	460	11.2	0.37 J
MW-46R	DUP-05-201507	7/21/2015	FD	444	10.3	0.40 J
MW-46R	MW-46R-201510	10/7/2015	N	371	10.2	0.43 J
MW-46R	MW-46R-201601	1/12/2016	N	432	10.9	0.56 J
MW-46R	MW-46R-201605	5/3/2016	N	445	12.6	0.40 J
MW-46R	DUP-10-201605	5/3/2016	FD	461	11.1	0.52 J
MW-46R	MW-46R-201611	11/8/2016	N	411	10.3	0.79 J
MW-46R	MW-46R-201704	4/27/2017	N	486	12.4	0.47 J
MW-46R	MW-46R-201710	10/24/2017	N	408	10.7	0.51 J
MW-46R	MW-46R-201804	4/18/2018	N	520	12.6	0.56 J
MW-46R	MW-46R-201811	11/14/2018	N	603	14.4	1.2
MW-46R	MW-46R-201904	4/24/2019	N	560 M1	13.4 J-	0.46 J
MW-46R	MW-46R-201910	10/23/2019	N	555	22.1	0.69 J
MW-46R	DUP-03-201910	10/23/2019	FD	560	16.5	0.56 J
MW-46R	MW-46R-202005	5/12/2020	N	483	14.2	0.54 J
MW-46R	MW-46R-202010	10/8/2020	N	460	14.6	2.1
MW-46R	MW-46R-202104	4/14/2021	N	466	16.2	1.1
MW-188	MW-188-202110	10/19/2021	N	1.1	0.14 J	< 1.0 U
MW-50	MW-50-20040415	4/15/2004	N	6.51	< 5 U	< 10 U
MW-50	MW-50-20040923	9/23/2004	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20041210	12/10/2004	N	< 5 U	< 5 U	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-50	MW-50-20050406	4/6/2005	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20050928	9/28/2005	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20060317	3/17/2006	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20091027	10/27/2009	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20101105	11/5/2010	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20110323	3/23/2011	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20111025	10/25/2011	N	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-50	MW-50-101613	10/16/2013	N	1.6 J	< 5.0 U	< 2.0 U
MW-50	MW-50-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-50	MW-50-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-50	MW-50-201407	7/28/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-50	MW-50-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-50	MW-50-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-50	MW-50-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-50	MW-50-201710	10/23/2017	N	0.26 J	< 1.0 U	< 1.0 U
MW-50	MW-50-202104	4/14/2021	N	1.3	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201507	7/21/2015	N	0.22 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201510	10/6/2015	N	0.35 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201601	1/11/2016	N	0.42 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201605	5/2/2016	N	0.46 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201611	11/7/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201804	4/17/2018	N	0.61 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201811	11/13/2018	N	0.73 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201904	4/23/2019	N	0.72 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-201910	10/23/2019	N	0.61 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-202005	5/12/2020	N	0.66 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-202010	10/5/2020	N	0.98 J	< 1.0 U	< 1.0 U
MW-189	MW-189-202110	10/21/2021	N	238	6.1	0.25 J
MW-55	MW-55-20041209	12/9/2004	N	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20050408	4/8/2005	N	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20050928	9/28/2005	N	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20060316	3/16/2006	N	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20061013	10/13/2006	N	2 J	< 5 U	< 10 UJ
MW-55	MW-55-20070419	4/19/2007	N	2.6 J	< 5 U	< 10 U
MW-55	MW-55-20070919	9/19/2007	N	5 J	< 5 U	< 10 U
MW-55	MW-55-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-55	MW-55-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-55	MW-55-20091027	10/27/2009	N	3.6 J	< 5 U	< 5 U
MW-55	MW-55-20100512	5/12/2010	N	4.2 J	< 5 U	< 5 U
MW-55	MW-55-20101106	11/6/2010	N	14	< 5 U	< 5 U
MW-55	MW-55-20110323	3/23/2011	N	5.5	< 5 U	< 5 U
MW-55	MW-55-20111025	10/25/2011	N	7	< 5 U	< 5 U
MW-55	MW-55-20121020	10/20/2012	N	9.2	< 5.0 U	< 2.0 U
MW-55	MW-55-101613	10/16/2013	N	13	< 5.0 U	< 2.0 U
MW-55R	MW-55R-201507	7/20/2015	N	8.2	0.42 J	0.13 J
MW-55R	MW-55R-201510	10/6/2015	N	4.4	0.53 J	0.14 J
MW-55R	MW-55R-201601	1/12/2016	N	0.26 J	< 1.0 U	< 1.0 U
MW-55R	MW-55R-201605	5/2/2016	N	2.1	< 1.0 U	< 1.0 U
MW-55R	MW-55R-201611	11/7/2016	N	3.1	< 1.0 U	< 1.0 U
MW-55R	MW-55R-201704	4/27/2017	N	7.0	0.58 J	< 1.0 U
MW-55R	MW-55R-201710	10/25/2017	N	10.9	0.77 J	0.15 J
MW-55R	MW-55R-201804	4/18/2018	N	17.0	0.77 J	< 1.0 U
MW-55R	DUP-05-201804	4/18/2018	FD	18.1	0.82 J	0.16 J
MW-55R	MW-55R-201811	11/15/2018	N	22.3	0.91 J	< 1.0 U
MW-55R	DUP-08-201811	11/15/2018	FD	23.1	0.85 J	< 1.0 U
MW-55R	MW-55R-201904	4/25/2019	N	10.9	0.60 J	< 1.0 U
MW-55R	MW-55R-201910	10/23/2019	N	26.4	0.98 J	0.16 J
MW-55R	DUP-04-2019110	10/23/2019	FD	27.7	1.2	0.18 J
MW-55R	MW-55R-202005	5/12/2020	N	23.9	0.94 J	0.19 J
MW-55R	MW-55R-202010	10/6/2020	N	29.9	1.0	< 1.0 U
MW-55R	MW-55R-202104	4/14/2021	N	23.9	0.96 J	< 1.0 U
MW-190	MW-190-GW-091415	9/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-56	MW-56-20041210	12/10/2004	N	90.2	< 5 U	< 10 U
MW-56	MW-56-20050408	4/8/2005	N	88.2	< 5 U	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-56	MW-56-20050928	9/28/2005	N	207	< 5 U	< 10 U
MW-56	MW-56-20060316	3/16/2006	N	8.7	< 5 U	< 10 U
MW-56	MW-56-20061014	10/14/2006	N	110	2 J	< 10 UJ
MW-56	MW-56-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-56	MW-56-20070919	9/19/2007	N	38	< 5 U	< 10 U
MW-56	MW-56-20080429	4/29/2008	N	4 J	< 5 U	< 10 U
MW-56	MW-56-20081210	12/10/2008	N	93	< 5 U	< 5 U
MW-56	MW-56-20090424	4/24/2009	N	14	< 5 U	< 5 U
MW-56	MW-56-20091027	10/27/2009	N	8.7	< 5 U	< 5 U
MW-56	MW-56-20100512	5/12/2010	N	230	6.4	< 5 U
MW-56	MW-56-20110323	3/23/2011	N	71	2.6 J	< 5 U
MW-56	MW-56-20111025	10/25/2011	N	150	11	1.9 J
MW-56	MW-56-20121020	10/20/2012	N	470	11	< 2.0 U
MW-56	MW-56-101713	10/17/2013	N	590	17	< 2.0 U
MW-56	MW-56-201403	3/7/2014	N	618	15.3	0.15 J
MW-56	MW-56-201405	6/11/2014	N	307	17.6	0.16 J
MW-56	MW-56-201407	7/29/2014	N	516	19.3	< 2.0 U
MW-56	MW-56-201410	10/15/2014	N	408	12.1	< 2.0 U
MW-56	MW-56-201501	1/13/2015	N	326	10	< 1.0 U
MW-56	MW-56-201504	4/16/2015	N	495	8.2	< 1.0 U
MW-56R	MW-56R-201507	7/20/2015	N	156	8.0	0.31 J
MW-56R	MW-56R-201510	10/6/2015	N	278	18.1	0.42 J
MW-56R	MW-56R-201601	1/11/2016	N	408	19.2	0.32 J
MW-56R	MW-56R-201605	5/3/2016	N	734	19.7	0.52 J
MW-56R	MW-56R-201611	11/8/2016	N	679	27.8	0.37 J
MW-56R	MW-56R-201710	10/24/2017	N	815	33.8	< 1.0 U
MW-56R	MW-56R-201811	11/14/2018	N	902	21.1	0.38 J
MW-56R	MW-56R-201904	4/25/2019	N	803	20.0	0.36 J
MW-56R	DUP-03-201904	4/25/2019	FD	798	20.3	0.31 J
MW-56R	MW-56R-201910	10/23/2019	N	649	16.9	0.32 J
MW-56R	MW-56R-202005	5/12/2020	N	619	17.3	0.28 J
MW-56R	MW-56R-202010	10/6/2020	N	706	16.8	0.36 J
MW-191	MW-191-202110	10/18/2021	N	0.62 J	< 1.0 U	< 1.0 U
MW-57	MW-57-20041210	12/10/2004	N	207	6.72	< 10 U
MW-57	MW-57-20050408	4/8/2005	N	282	6.83	< 10 U
MW-57	MW-57-20050928	9/28/2005	N	96	< 5 U	< 10 U
MW-57	MW-57-20060316	3/16/2006	N	254	7.56	< 10 U
MW-57	MW-57-20061013	10/13/2006	N	64	< 5 U	< 10 UJ
MW-57	MW-57-20070419	4/19/2007	N	201	3.77 J	< 10 U
MW-57	MW-57-20070920	9/20/2007	N	250	5 J	< 10 U
MW-57	MW-57-20080430	4/30/2008	N	14 0	< 5 U	< 10 U
MW-57	MW-57-20081210	12/10/2008	N	130	7.4	< 5 U
MW-57	MW-57-20090424	4/24/2009	N	96	4.2 J	< 5 U
MW-57	MW-57-20091027	10/27/2009	N	100	2.6 J	< 5 U
MW-57	MW-57-20100512	5/12/2010	N	210	6	< 5 U
MW-57	MW-57-20110323	3/23/2011	N	110	2.3 J	< 5 U
MW-57	MW-57-20111025	10/25/2011	N	59	2 J	< 5 U
MW-57	MW-57-20121020	10/20/2012	N	120	5.1	< 2.0 U
MW-57	MW-57-101713	10/17/2013	N	210	7.4	< 2.0 U
MW-57	MW-57-201403	3/7/2014	N	134	3.0 J	0.14 J
MW-57	MW-57-201405	6/11/2014	N	167	4.4 J	< 2.0 U
MW-57	MW-57-201407	7/29/2014	N	308	8.2	< 2.0 U
MW-57	MW-57-201410	10/15/2014	N	172	4.2 J	< 2.0 U
MW-57	MW-57-201501	1/13/2015	N	177	5.4	< 1.0 U
MW-57	MW-57-201504	4/16/2015	N	194	4.8	< 1.0 U
MW-57R	MW-57R-201507	7/20/2015	N	409	10.6	0.53 J
MW-57R	MW-57R-201510	10/6/2015	N	400	13.0	0.42 J
MW-57R	MW-57R-201601	1/11/2016	N	422	15.7	0.48 J
MW-57R	MW-57R-201605	5/3/2016	N	425	12.8	0.51 J
MW-57R	MW-57R-201611	11/8/2016	N	441	23.0	0.44 J
MW-57R	DUP-07-201611	11/8/2016	FD	453	24.3	0.45 J
MW-57R	MW-57R-201710	10/24/2017	N	441	17.5	< 1.0 U
MW-57R	MW-57R-201811	11/14/2018	N	286	7.7	0.21 J
MW-57R	MW-57R-201904	4/25/2019	N	393	10.4	0.45 J
MW-57R	MW-57R-201910	10/23/2019	N	317	12.4	0.39 J
MW-57R	MW-57R-202005	5/12/2020	N	61.0	1.4	< 1.0 U
MW-57R	MW-57R-202010	10/7/2020	N	327	14.2	0.41 J
MW-57R	DUP-02-202010	10/7/2020	FD	326	14.4	0.37 J
MW-57R	MW-57R-202104	4/15/2021	N	349	13.7	0.46 J
MW-192	MW-192-202110	10/20/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-58	MW-58-20041209	12/9/2004	N	526	14.5	< 10 U
MW-58	MW-58-20050407	4/7/2005	N	809	18.8	< 10 U
MW-58	MW-58-20050928	9/28/2005	N	486	10.9	< 10 U
MW-58	MW-58-20060316	3/16/2006	N	421	8.66	< 10 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-58	MW-58-20061013	10/13/2006	N	620	14	< 10 UJ
MW-58	MW-58-20070419	4/19/2007	N	784	30.7	< 25 U
MW-58	MW-58-20070419-FD	4/19/2007	FD	717	9.54 J	< 25 U
MW-58	MW-58-20070919	9/19/2007	N	650	17	< 10 U
MW-58	MW-58-20070919-FD	9/19/2007	FD	640	16	< 10 U
MW-58	MW-58-20080430	4/30/2008	N	630 0	15 0	< 10 U
MW-58	MW-58-20080430-FD	4/30/2008	FD	580 0	14 0	< 10 U
MW-58	MW-58-20081211	12/11/2008	N	530	12	< 5 U
MW-58	MW-58-20081211-FD	12/11/2008	FD	510	13	< 5 U
MW-58	MW-58-20090425	4/25/2009	N	590	14	< 5 U
MW-58	MW-58-20090425-FD	4/25/2009	FD	580	15	< 5 U
MW-58	MW-58-20091028	10/28/2009	N	480	11	< 5 U
MW-58	MW-58-20091028-FD	10/28/2009	FD	480	11	< 5 U
MW-58	MW-58-20100512	5/12/2010	N	660	14	< 5 U
MW-58	MW-58-20101106-FD	11/6/2010	FD	560	11	< 5 U
MW-58	MW-58-20101106	11/6/2010	N	580	12	< 5 U
MW-58	MW-58-20110324	3/24/2011	N	710	12	< 5 U
MW-58	MW-58-20110324-FD	3/24/2011	FD	700	14	1.1 J
MW-58	MW-58-20121020	10/20/2012	N	440	18	0.84 J
MW-58	MW-58-101713	10/17/2013	N	410	13	1.5 J
MW-58	MW-58-20131017-FD	10/17/2013	FD	420	12	1.1 J
MW-58	MW-58-201403	3/7/2014	N	293	22.3	0.93 J
MW-58	MW-58-201405	5/12/2014	N	397	12.1	0.72 J
MW-58	MW-58-201407	7/29/2014	N	399	12.7	0.76 J
MW-58	MW-58-201410	10/15/2014	N	360	10.8	0.68 J
MW-58	MW-58-201501	1/14/2015	N	385	14.7	0.71 J
MW-58	MW-58-201504	4/16/2015	N	356	19.7	1.5
MW-58R	MW-58R-201507	7/21/2015	N	337	9.5	0.57 J
MW-58R	MW-58R-201510	10/8/2015	N	299	10.5	0.55 J
MW-58R	MW-58R-201601	1/12/2016	N	312	28.7	0.67 J
MW-58R	DUP-10-201601	1/12/2016	FD	319	29.4	0.66 J
MW-58R	MW-58R-201605	5/4/2016	N	352	29.7	0.81 J
MW-58R	DUP-04-201605	5/4/2016	FD	308	25.2	0.64 J
MW-58R	MW-58R-201611	11/10/2016	N	< 1.0 U	28.5	0.85 J
MW-58R	MW-58R-201612	12/14/2016	N	265	30.3	0.61 J
MW-58R	MW-58R-201710	10/24/2017	N	360	10.0	0.65 J
MW-58R	MW-58R-201811	11/15/2018	N	312	10.2	0.43 J
MW-58R	DUP-05-201811	11/15/2018	FD	319	9.8	0.47 J
MW-58R	MW-58R-201904	4/25/2019	N	305	9.8	0.48 J
MW-58R	MW-58R-201910	10/23/2019	N	299	9.1	0.51 J
MW-58R	DUP-01-201910	10/23/2019	FD	311	9.6	0.55 J
MW-58R	MW-58R-202005	5/12/2020	N	258	8.7	0.50 J
MW-58R	MW-58R-202010	10/7/2020	N	298	9.7	0.61 J
MW-194	MW-194-202110	10/20/2021	N	4.1	1.8	< 1.0 U
MW-60	MW-60-20050401	4/1/2005	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20060317	3/17/2006	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20091027	10/27/2009	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20101104	11/4/2010	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20110323	3/23/2011	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20111025	10/25/2011	N	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-60	MW-60-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-60	MW-60-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-60	MW-60-201405	5/13/2014	N	0.21 J	< 5.0 U	< 2.0 U
MW-60	MW-60-201407	7/28/2014	N	1.0 J	< 5.0 U	< 2.0 U
MW-60	MW-60-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-60	MW-60-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60	MW-60-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201507	7/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201601	1/11/2016	N	0.22 J	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201710	10/24/2017	N	0.83 J	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-60R	MW-60R-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-60R	MW-60R-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-202110	10/19/2021	N	0.49 J	< 1.0 U	< 1.0 U
MW-61	MW-61-20050401	4/1/2005	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20050401-FD	4/1/2005	FD	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20060317	3/17/2006	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20090424	4/24/2009	N	4 J	< 5 U	< 5 U
MW-61	MW-61-20091027	10/27/2009	N	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20101104	11/4/2010	N	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20110323	3/23/2011	N	1.8 J	< 5 U	< 5 U
MW-61	MW-61-20111025	10/25/2011	N	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20121017	10/17/2012	N	2.4 J	< 5.0 U	< 2.0 U
MW-61	MW-61-101613	10/16/2013	N	4.0 J	< 5.0 U	< 2.0 U
MW-61	MW-61-201403	3/6/2014	N	4.7 J	< 5.0 U	< 2.0 U
MW-61	MW-61-201405	5/13/2014	N	6.6	< 5.0 U	< 2.0 U
MW-61	MW-61-201407	7/28/2014	N	8.1	< 5.0 U	< 2.0 U
MW-61	MW-61-201410	10/14/2014	N	7.9	< 5.0 U	< 2.0 U
MW-61	MW-61-201501	1/13/2015	N	10.2	< 1.0 U	< 1.0 U
MW-61	MW-61-201504	4/14/2015	N	10.9	< 1.0 U	< 1.0 U
MW-61R	MW-61R-201507	7/21/2015	N	14.7	< 1.0 U	< 1.0 U
MW-61R	MW-61R-GW-091815	9/18/2015	N	16.5	< 1.0 U	< 1.0 U
MW-61R	MW-61R-201510	10/8/2015	N	11.7	< 1.0 U	< 1.0 U
MW-61R	DUP-02-201510	10/8/2015	FD	13.3	< 1.0 U	< 1.0 U
MW-61R	MW-61R-201511	11/4/2015	N	9.2	1.1	< 1.0 U
MW-61R	MW-61R-201512	12/1/2015	N	5.0	4.6	< 1.0 U
MW-61R	MW-61R-201601	1/8/2016	N	3.9	4.6	< 1.0 U
MW-61R	MW-61R-201605	5/3/2016	N	5.3	3.8	< 1.0 U
MW-61R	MW-61R-201611	11/7/2016	N	2.3	2.9	< 1.0 U
MW-61R	MW-61R-201704	4/27/2017	N	2.4	2.6	< 1.0 U
MW-61R	MW-61R-201710	10/23/2017	N	2.9	2.1	< 1.0 U
MW-61R	MW-61R-201804	4/17/2018	N	4.0	1.9	< 1.0 U
MW-61R	MW-61R-201807	7/31/2018	N	7.0	1.8	< 1.0 U
MW-61R	MW-61R-201811	11/13/2018	N	7.7	1.9	< 1.0 U
MW-61R	DUP-06-201811	11/13/2018	FD	7.7	1.8	< 1.0 U
MW-61R	MW-61R-201904	4/25/2019	N	14.9	1.1	< 1.0 U
MW-61R	MW-61R-201910	10/23/2019	N	20.8	1.7	< 1.0 U
MW-61R	MW-61R-202005	5/14/2020	N	15.6	1.0	< 1.0 U
MW-61R	MW-61R-202010	10/6/2020	N	15.8	1.1	< 1.0 U
MW-61R	MW-61R-202104	4/14/2021	N	15.3	1.3	< 1.0 U
MW-61R	DUP-10-202104	4/14/2021	FD	14.2	1.3	< 1.0 U
MW-196	MW-196-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62	MW-62-20050401	4/1/2005	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20060316	3/16/2006	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20061012	10/12/2006	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20070919	9/19/2007	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20091027	10/27/2009	N	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20110323	3/23/2011	N	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20111025	10/25/2011	N	1.9 J	< 5 U	< 5 U
MW-62	MW-62-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-62	MW-62-101713	10/17/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-62	MW-62-201403	3/7/2014	N	0.18 J	< 5.0 U	< 2.0 U
MW-62	MW-62-201405	5/14/2014	N	0.62 J	< 5.0 U	< 2.0 U
MW-62	MW-62-201407	7/29/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-62	MW-62-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-62	MW-62-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62	MW-62-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201507	7/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-62R	MW-62R-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201611	11/7/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	FD-02-201710	10/24/2017	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201710	10/25/2017	N	< 1.0 U	0.17 J	< 1.0 U
MW-62R	MW-62R-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-202005	5/12/2020	N	0.21 J	< 1.0 U	< 1.0 U
MW-62R	MW-62R-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-62R	MW-62R-202104	4/12/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-198	MW-198-202110	10/21/2021	N	22800	1540	86.5
MW-63	MW-63-20050401	4/1/2005	N	8.14	< 5 U	< 10 U
MW-63	MW-63-20050930	9/30/2005	N	< 5 U	< 5 U	< 10 U
MW-63	MW-63-20060316	3/16/2006	N	9.76	< 5 U	< 10 U
MW-63	MW-63-20060406	4/6/2006	N	11.6	< 5 U	< 10 U
MW-63	MW-63-20061012	10/12/2006	N	4 J	< 5 U	< 10 U
MW-63	MW-63-20070419	4/19/2007	N	4.08 J	< 5 U	< 10 U
MW-63	MW-63-20070919	9/19/2007	N	8	< 5 U	< 10 U
MW-63	MW-63-20080430	4/30/2008	N	3 J	< 5 U	< 10 U
MW-63	MW-63-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-63	MW-63-20090424	4/24/2009	N	4.3 J	< 5 U	< 5 U
MW-63	MW-63-20091027	10/27/2009	N	7.7	< 5 U	< 5 U
MW-63	MW-63-20100511	5/11/2010	N	7.6	< 5 U	< 5 U
MW-63	MW-63-20101106	11/6/2010	N	11	< 5 U	< 5 U
MW-63	MW-63-20110323	3/23/2011	N	12	< 5 U	< 5 U
MW-63	MW-63-20111025	10/25/2011	N	9.8	< 5 U	< 5 U
MW-63	MW-63-20121019	10/19/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-63	MW-63-101713	10/17/2013	N	7.5	< 5.0 U	< 2.0 U
MW-63	MW-63-201403	3/7/2014	N	9.4	1.3 J	< 2.0 U
MW-63	MW-63-201405	5/14/2014	N	12.2	0.61 J	0.13 J
MW-63	MW-63-201407	7/28/2014	N	8.3	0.99 J	< 2.0 U
MW-63	MW-63-201410	10/14/2014	N	9.4	0.98 J	< 2.0 U
MW-63	MW-63-201501	1/13/2015	N	8.2	1.0	< 1.0 U
MW-63	MW-63-201504	4/14/2015	N	9.2	0.99 J	< 1.0 U
MW-63R	MW-63R-201507	7/21/2015	N	5.6	0.70 J	< 1.0 U
MW-63R	MW-63R-201510	10/8/2015	N	3.9	0.70 J	< 1.0 U
MW-63R	MW-63R-201601	1/12/2016	N	3.2	0.39 J	< 1.0 U
MW-63R	MW-63R-201605	5/2/2016	N	3.3	0.55 J	< 1.0 U
MW-63R	MW-63R-201611	11/7/2016	N	2.9	0.21 J	< 1.0 U
MW-63R	MW-63R-201704	4/26/2017	N	3.8 B	< 1.0 U	< 1.0 U
MW-63R	MW-63R-201710	10/23/2017	N	4.4	0.85 J	< 1.0 U
MW-63R	MW-63R-201804	4/17/2018	N	4.8	0.44 J	< 1.0 U
MW-63R	DUP-01-201804	4/17/2018	FD	4.9	0.38 J	< 1.0 U
MW-63R	MW-63R-201811	11/14/2018	N	4.5	0.66 J	< 1.0 U
MW-63R	MW-63R-201904	4/23/2019	N	4.1	0.52 J	< 1.0 U
MW-63R	MW-63R-201910	10/22/2019	N	7.4	0.59 J	< 1.0 U
MW-63R	MW-63R-202005	5/12/2020	N	7.2	0.76 J	< 1.0 U
MW-63R	MW-63R-202010	10/6/2020	N	7.1	0.81 J	< 1.0 U
MW-63R	MW-63R-202104	4/14/2021	N	7.9	0.86 J	< 1.0 U
MW-199	MW-199-202110	10/21/2021	N	82.3	10.2	< 1.0 U
MW-65	MW-65-20061011	10/11/2006	N	470	19	< 10 U
MW-65	MW-65-20061011-FD	10/11/2006	FD	560	18	< 10 U
MW-65	MW-65-20070419	4/19/2007	N	1350	23.4	< 10 U
MW-65	MW-65-20070920	9/20/2007	N	580	17	< 10 U
MW-65	MW-65-20080430	4/30/2008	N	570 0	16 0	< 10 U
MW-65	MW-65-20081211	12/11/2008	N	460	11	< 5 U
MW-65	MW-65-20090424	4/24/2009	N	620	19	< 5 U
MW-65	MW-65-20101107	11/7/2010	N	400	11	< 5 U
MW-65	MW-65-20110304-FS	3/4/2011	N	370	13	< 5.0 U
MW-65	MW-65-20111025	10/25/2011	N	310	10	< 5 U
MW-65	MW-65-20121020	10/20/2012	N	280	8.9	< 2.0 U
MW-65	MW-65-101713	10/17/2013	N	220	8.6	< 2.0 U
MW-65	MW-65-201403	3/8/2014	N	199	6.6	< 2.0 U
MW-65	MW-65-201405	5/14/2014	N	195	6.9	< 2.0 U
MW-65	MW-65-201407	7/30/2014	N	17.1	< 5.0 U	< 2.0 U
MW-65	MW-65-201410	10/14/2014	N	30.8	0.54 J	< 2.0 U
MW-65	MW-65-201501	1/13/2015	N	19.2	< 1.0 U	< 1.0 U
MW-65	MW-65-201504	4/15/2015	N	16.0	< 1.0 U	< 1.0 U
MW-65	MW-65-201507	7/20/2015	N	26.3	0.38 J	< 1.0 U
MW-65	MW-65-201510	10/7/2015	N	0.28 J	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-65	MW-65-201511	11/4/2015	N	7.7	< 1.0 U	< 1.0 U
MW-65	MW-65-201512	12/2/2015	N	6.6	< 1.0 U	< 1.0 U
MW-65	MW-65-201601	1/11/2016	N	14.5	0.32 J	< 1.0 U
MW-65	MW-65-201605	5/3/2016	N	21.5	0.35 J	< 1.0 U
MW-66	MW-66-20060406	4/6/2006	N	< 5 U	< 5 U	< 10 U
MW-66	MW-66-20061012	10/12/2006	N	2 J	< 5 U	< 10 U
MW-66	MW-66-20070418	4/18/2007	N	< 5 U	< 5 U	< 10 U
MW-66	MW-66-20070919	9/19/2007	N	4 J	< 5 U	< 10 U
MW-66	MW-66-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-66	MW-66-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20090425	4/25/2009	N	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20091028	10/28/2009	N	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20101103	11/3/2010	N	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20110324	3/24/2011	N	1.6 J	< 5 U	< 5 U
MW-66	MW-66-20111026	10/26/2011	N	1.8 J	< 5 U	< 5 U
MW-66	MW-66-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-66	MW-66-101713	10/17/2013	N	2.1 J	< 5.0 U	< 2.0 U
MW-66	MW-66-201403	3/7/2014	N	3.5 J	< 5.0 U	< 2.0 U
MW-66	MW-66-201405	5/13/2014	N	3.1 J	< 5.0 U	< 2.0 U
MW-66	MW-66-201407	7/28/2014	N	2.6 J	< 5.0 U	< 2.0 U
MW-66	MW-66-201410	10/13/2014	N	2.3 J	< 5.0 U	< 2.0 U
MW-66	MW-66-201501	1/14/2015	N	2.4	< 1.0 U	< 1.0 U
MW-66	MW-66-201504	4/15/2015	N	2.6	< 1.0 U	< 1.0 U
MW-66	MW-66-201507	7/20/2015	N	3.3	0.22 J	< 1.0 U
MW-66	MW-66-201510	10/6/2015	N	2.3	0.18 J	< 1.0 U
MW-66	MW-66-201601	1/11/2016	N	0.53 J	< 1.0 U	< 1.0 U
MW-66	MW-66-201605	5/2/2016	N	2.6	0.20 J	< 1.0 U
MW-67	MW-67-20060406	4/6/2006	N	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20061012	10/12/2006	N	1 J	< 5 U	< 10 U
MW-67	MW-67-20070419	4/19/2007	N	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20070918	9/18/2007	N	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20080429	4/29/2008	N	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20081210	12/10/2008	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20090425	4/25/2009	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20091028	10/28/2009	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20100511	5/11/2010	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20101103	11/3/2010	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20110324	3/24/2011	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-67	MW-67-101713	10/17/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-67	MW-67-201403	3/7/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-67	MW-67-201405	5/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-67	MW-67-201407	7/28/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-67	MW-67-201410	10/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-67	MW-67-201501	1/12/2015	N	1.3	< 1.0 U	< 1.0 U
MW-67	MW-67-201504	4/15/2015	N	0.77 J	< 1.0 U	< 1.0 U
MW-67R	MW-67R-201507	7/20/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-67R	MW-67R-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-67R	MW-67R-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-67R	MW-67R-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-20090115	1/15/2009	N	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20090424	4/24/2009	N	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20091028	10/28/2009	N	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20100513	5/13/2010	N	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20101106	11/6/2010	N	9.5	< 5 U	< 5 U
MW-68	MW-68-20111026	10/26/2011	N	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20121017	10/17/2012	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-68	MW-68-101613	10/16/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-68	MW-68-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-68	MW-68-201405	5/14/2014	N	0.49 J	< 5.0 U	< 2.0 U
MW-68	MW-68-201407	7/29/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-68	MW-68-201410	10/14/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-68	MW-68-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201504	4/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201507	7/20/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201611	11/7/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201704	4/27/2017	N	0.22 J	< 1.0 U	< 1.0 U
MW-68	MW-68-201710	10/24/2017	N	0.31 J	< 1.0 U	< 1.0 U
MW-68	MW-68-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-68	MW-68-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-202010	10/6/2020	N	0.57 J	< 1.0 U	< 1.0 U
MW-68	MW-68-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-200	MW-200-202110	10/19/2021	N	1.0	0.13 J	< 1.0 U
MW-70	MW-70-20101104	11/4/2010	N	540	14	< 5 U
MW-70	MW-70-20110322	3/22/2011	N	170	9.2	1.2 J
MW-70	MW-70-20111026	10/26/2011	N	320	7.7	< 5 U
MW-70	MW-70-20120418	4/18/2012	N	330	11	< 5 U
MW-70	MW-70-20121018	10/18/2012	N	200	11	< 2.0 U
MW-70	MW-70-20130423	4/23/2013	N	180	3.6 J	0.32 J
MW-70	MW-70-101613	10/16/2013	N	270	7.2	0.30 J
MW-71	MW-71-20091028	10/28/2009	N	190	6.3	< 5 U
MW-71	MW-71-20100513	5/13/2010	N	160	7.4	< 5 U
MW-71	MW-71-20101104	11/4/2010	N	250	7.2	< 5 U
MW-71	MW-71-20110322	3/22/2011	N	76	1.6 J	< 5 U
MW-71	MW-71-20111026	10/26/2011	N	130	2.7 J	< 5 U
MW-71	MW-71-20120418	4/18/2012	N	160	5.3	< 5 U
MW-71	MW-71-20121020	10/20/2012	N	210	7.3	< 2.0 U
MW-71	MW-71-20130423	4/23/2013	N	220	4.8 J	0.23 J
MW-71	MW-71-101613	10/16/2013	N	160	6.1	0.57 J
MW-71	MW-71-201403	3/7/2014	N	166	5.8	0.19 J
MW-71	MW-71-201405	5/13/2014	N	164	5.3	0.33 J
MW-71	MW-71-201407	7/29/2014	N	181	6.4	< 2.0 U
MW-71	MW-71-201410	10/14/2014	N	185	6.0	< 2.0 U
MW-71	MW-71-201501	1/14/2015	N	170	6.0	< 1.0 U
MW-71	MW-71-201504	4/14/2015	N	156	5.7	< 1.0 U
MW-71	MW-71-201507	7/20/2015	N	165	5.3	0.48 J
MW-71	MW-71-201510	10/6/2015	N	179	6.5	0.43 J
MW-71	MW-71-201601	1/11/2016	N	171	6.1	0.40 J
MW-71	MW-71-201605	5/3/2016	N	140	5.3	0.23 J
MW-81	MW-81-201405	5/29/2014	N	512	14.3	0.21 J
MW-81	20140708-GW-MW-81	7/9/2014	N	518	11.4	< 2.0 U
MW-81	MW-81-201409	9/11/2014	N	463	13.5	< 2.0 U
MW-81	MW-81-201501	1/13/2015	N	385	9.9	< 1.0 U
MW-81	MW-81-201504	4/15/2015	N	198	4.2	< 1.0 U
MW-81	MW-81-201507	7/22/2015	N	275	7.7	< 1.0 U
MW-81	MW-81-201510	10/8/2015	N	160	3.8	< 1.0 U
MW-81	MW-81-201511	11/5/2015	N	233	6.5	< 1.0 U
MW-81	MW-81-201512	12/2/2015	N	56.1	0.84 J	< 1.0 U
MW-81	MW-81-201601	1/11/2016	N	157	3.9	< 1.0 U
MW-81	MW-81-201605	5/4/2016	N	256	8.3	< 1.0 U
MW-82	MW-82-201405	5/28/2014	N	285	4.8 J	0.14 J
MW-82	20140708-GW-MW-82	7/9/2014	N	48.2	1.2 J	< 2.0 U
MW-82	MW-82-201409	9/11/2014	N	50.0	1.1 J	< 2.0 U
MW-82	MW-82-201501	1/13/2015	N	66.0	1.2	< 1.0 U
MW-82	MW-82-201504	4/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-82	MW-82-201507	7/22/2015	N	5.3	< 1.0 U	< 1.0 U
MW-82	MW-82-201510	10/6/2015	N	4.2	< 1.0 U	< 1.0 U
MW-82	MW-82-201601	1/11/2016	N	5.6	0.18 J	< 1.0 U
MW-82	MW-82-201605	5/4/2016	N	31.7	0.81 J	< 1.0 U
MW-82	MW-82-201611	11/9/2016	N	36.2	0.24 J	< 1.0 U
MW-82	MW-82-201710	10/24/2017	N	34.3	0.80 J	< 1.0 U
MW-82	FD-03-201710	10/24/2017	FD	34.1	0.80 J	< 1.0 U
MW-82	MW-82-201811	11/15/2018	N	60.3	1.2	< 1.0 U
MW-82	MW-82-201910	10/23/2019	N	55.6	1.1	< 1.0 U
MW-82	DUP-02-201910	10/23/2019	FD	55.9	0.99 J	< 1.0 U
MW-82	MW-82-202010	10/7/2020	N	55.1	1.3	< 1.0 U
MW-201	MW-201-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-83	MW-83-20140523	5/23/2014	N	470	8.3	< 2.0 U
MW-83	MW-83-201409	9/12/2014	N	213	4.9 J	< 2.0 U
MW-83	MW-83-20141023	10/23/2014	N	210	5.2	< 2.0 U
MW-83	MW-83-201501	1/15/2015	N	101	1.8	< 1.0 U
MW-83	MW-83-201504	4/16/2015	N	151	2.8	< 1.0 U
MW-83	MW-83-201507	7/22/2015	N	27.9	0.49 J	< 1.0 U
MW-83	MW-83-201510	10/8/2015	N	9.8	0.25 J	< 1.0 U
MW-83	MW-83-201511	11/5/2015	N	3.2	< 1.0 U	< 1.0 U
MW-83	MW-83-201512	12/2/2015	N	1.3	< 1.0 U	< 1.0 U
MW-83	MW-83-201601	1/7/2016	N	1.1	< 1.0 U	< 1.0 U
MW-83	MW-83-201605	5/4/2016	N	3.3	< 1.0 U	< 1.0 U
MW-83	MW-83-201611	11/9/2016	N	0.63 J	< 1.0 U	< 1.0 U
MW-83	MW-83-201710	10/25/2017	N	4.8	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-83	MW-83-201811	11/14/2018	N	34.2	0.63 J	< 1.0 U
MW-83	MW-83-201910	10/24/2019	N	41.9	0.85 J	< 1.0 U
MW-83	MW-83-202010	10/7/2020	N	40.5	0.81 J	< 1.0 U
MW-83	DUP-01-202010	10/7/2020	FD	40.9	0.82 J	< 1.0 U
MW-202	MW-202-202110	10/20/2021	N	67.3	6.1	< 1.0 U
MW-84	MW-84-201405	5/27/2014	N	214	4.6 J	0.16 J
MW-84	MW-84-201409A	9/12/2014	N	0.93 J	< 5.0 U	< 2.0 U
MW-84	MW-84-20141023	10/23/2014	N	0.68 J	< 5.0 U	< 2.0 U
MW-84	MW-84-201501	1/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201504	4/16/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201507	7/23/2015	N	0.29 J	< 1.0 U	< 1.0 U
MW-84	MW-84-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201601	1/7/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201605	5/5/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-201804	4/18/2018	N	0.54 J	< 1.0 U	< 1.0 U
MW-84	MW-84-201811	11/14/2018	N	1.5	< 1.0 U	< 1.0 U
MW-84	MW-84-201904	4/23/2019	N	0.61 J	< 1.0 U	< 1.0 U
MW-84	DUP-01-201904	4/23/2019	FD	0.69 J	< 1.0 U	< 1.0 U
MW-84	MW-84-201910	10/23/2019	N	2.4	< 1.0 U	< 1.0 U
MW-84	MW-84-202005	5/13/2020	N	1.7	< 1.0 U	< 1.0 U
MW-84	MW-84-202010	10/6/2020	N	1.6	< 1.0 U	< 1.0 U
MW-84	MW-84-20201020	10/20/2020	N	1.7	< 1.0 U	< 1.0 U
MW-84	MW-84-202104	4/13/2021	N	1.4	< 1.0 U	< 1.0 U
MW-203	MW-203-202110	10/19/2021	N	102	2.9	< 1.0 U
MW-85	MW-85-201405	5/29/2014	N	1970	99.4	23.1
MW-85	20140708-GW-MW-85	7/8/2014	N	3780	133	3.9
MW-85	MW-85-201409	9/11/2014	N	5820	226 J	35.3
MW-85	MW-85-20141205	12/5/2014	N	27700	280	7.7
MW-85	MW-85-201501	1/15/2015	N	5940	167	1.1
MW-85	MW-85-201504	4/16/2015	N	256	16.8	< 1.0 U
MW-85	MW-85-201507	7/23/2015	N	132	6.3	< 1.0 U
MW-85	MW-85-201510	10/8/2015	N	12000	52.6	1.8
MW-85	MW-85-201601	1/13/2016	N	6980	32.8	0.70 J
MW-85	MW-85-201605	5/5/2016	N	678	12.0	0.82 J
MW-85R	MW-85R-201910	10/24/2019	N	68300	103	4.5
MW-85R	DUP-09-201910	10/24/2019	FD	74500	101	4.8
MW-85R	MW-85R-202010	10/8/2020	N	4860	76.0	1.7
MW-86	MW-86-201405	5/29/2014	N	533000	1220 J	341 J
MW-86	MW-86-201409	9/11/2014	N	129000	91.6	4.1
MW-86	MW-86-20141205	12/5/2014	N	169000	290 E	24.7
MW-86	MW-86-201501	1/15/2015	N	81200	128	4.5
MW-86	MW-86-201504	4/16/2015	N	46700	128	5.8
MW-86	MW-86-201507	7/23/2015	N	65100	292 J	46.7
MW-86	MW-86-201510	10/8/2015	N	131000	1020	127
MW-86	MW-86-201601	1/13/2016	N	95500	610 J	57.1
MW-86	MW-86-201605	5/5/2016	N	64900	348 J	35.7
MW-86	MW-86-201611	11/9/2016	N	75100	< 1000 U	65.4 J
MW-86	MW-86-201704	4/28/2017	N	29900	1330	< 1.0 U
MW-86	MW-86-201710	10/26/2017	N	61300	2210	< 1000 U
MW-86	MW-86-201804	4/19/2018	N	61200	2450	171
MW-86	MW-86-201811	11/16/2018	N	188000	19500	2780
MW-86	MW-86-201904	4/25/2019	N	75000	4350	264 J
MW-87	20140625-GW-MW-87	6/25/2014	N	564	41.8	< 2.0 U
MW-87	MW-87-201410	10/16/2014	N	594	47.8	< 2.0 U
MW-87	MW-87-201501	1/14/2015	N	661	51.3	< 1.0 U
MW-87	MW-87-201504	4/16/2015	N	758	58.6	0.33 J
MW-87	MW-87-201507	7/23/2015	N	758	56.5	0.34 J
MW-87	MW-87-201510	10/7/2015	N	708	54.5	0.31 J
MW-87	MW-87-201601	1/13/2016	N	757	61.9	0.47 J
MW-87	DUP-09-201601	1/13/2016	FD	781	63.2	0.40 J
MW-87	MW-87-201605	5/5/2016	N	839	51.6	0.36 J
MW-87	MW-87-201611	11/8/2016	N	701 J	51.9	0.25 J
MW-87	DUP-05-201611	11/8/2016	FD	948 J	49.0	0.39 J
MW-87	MW-87-201710	10/26/2017	N	486	36.4	< 1.0 U
MW-87	MW-87-201811	11/15/2018	N	397	28.3	0.77 J
MW-87	MW-87-201910	10/23/2019	N	315	22.4	0.21 J
MW-87	MW-87-202010	10/8/2020	N	320	22.3	< 1.0 U
MW-87	MW-87-202104	4/15/2021	N	233	18.0	< 1.0 U
MW-204	MW-204-202110	10/20/2021	N	49.6	3.2	< 1.0 U
MW-88	20140624-GW-MW-88	6/24/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-88	MW-88-201410	10/16/2014	N	< 5.0 U	< 5.0 U	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-88	MW-88-201501	1/13/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-88	MW-88-201504	4/16/2015	N	0.58 J	< 1.0 U	< 1.0
MW-88	MW-88-201507	7/23/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-88	MW-88-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-88	MW-88-201601	1/12/2016	N	0.58 J	< 1.0 U	< 1.0 U
MW-88	MW-88-201605	5/4/2016	N	0.25 J	< 1.0 U	< 1.0 U
MW-89	20140624-GW-MW-89	6/24/2014	N	19.5	< 5.0 U	< 2.0 U
MW-89	MW-89-201410	10/15/2014	N	11.3	< 5.0 U	< 2.0 U
MW-89	MW-89-201501	1/13/2015	N	11.4	< 1.0 U	< 1.0 U
MW-89	MW-89-201504	4/16/2015	N	15.9	< 1.0 U	< 1.0
MW-89	MW-89-201507	7/23/2015	N	14.5	0.18 J	< 1.0 U
MW-89	MW-89-201510	10/7/2015	N	12.7	0.24 J	< 1.0 U
MW-89	MW-89-201601	1/12/2016	N	11.6	0.20 J	< 1.0 U
MW-89	MW-89-201605	5/3/2016	N	14.0	0.30 J	< 1.0 U
MW-89	MW-89-201611	11/8/2016	N	13.4	< 1.0 U	< 1.0 U
MW-89	MW-89-201710	10/26/2017	N	11.3	0.48 J	< 1.0 U
MW-89	MW-89-201811	11/14/2018	N	9.7	0.53 J	< 1.0 U
MW-89	MW-89-201910	10/22/2019	N	9.0	0.51 J	< 1.0 U
MW-89	MW-89-202010	10/8/2020	N	6.4	0.48 J	< 1.0 U
MW-205	MW-205-202110	10/21/2021	N	400	135	0.74 J
MW-90	20140625-GW-MW-90	6/25/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-90	MW-90-201410	10/16/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-90	MW-90-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-90	MW-90-201504	4/15/2015	N	< 1.0 U	< 1.0 U	< 1.0
MW-90	MW-90-201507	7/22/2015	N	0.38 J	< 1.0 U	< 1.0 U
MW-90	MW-90-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-90	MW-90-201601	1/12/2016	N	0.25 J	< 1.0 U	< 1.0 U
MW-90	MW-90-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-91	20140625-GW-MW-91	6/25/2014	N	234	21.7	< 2.0 U
MW-91	MW-91-201410	10/16/2014	N	319	28.8	< 2.0 U
MW-91	MW-91-201501	1/13/2015	N	354	31.5	< 1.0 U
MW-91	DUP-07-201501	1/13/2015	FD	317	31.0	< 1.0 U
MW-91	MW-91-201504	4/16/2015	N	438	36.6	0.18 J
MW-91	MW-91-201507	7/23/2015	N	411	34.8	0.23 J
MW-91	MW-91-201510	10/7/2015	N	405	35.2	0.17 J
MW-91	DUP-08-201510	10/7/2015	FD	442	35.7	0.19 J
MW-91	MW-91-201601	1/13/2016	N	413	36.1	0.24 J
MW-91	DUP-08-201601	1/13/2016	FD	422	38.6	0.24 J
MW-91	MW-91-201605	5/4/2016	N	530	37.8	0.23 J
MW-91	DUP-02-201605	5/4/2016	FD	459	33.4	0.26 J
MW-91	MW-91-201611	11/10/2016	N	574	41.6	0.36 J
MW-91	DUP-03-201611	11/10/2016	FD	599	40.6	0.38 J
MW-91	MW-91-201704	4/27/2017	N	605	44.3	0.20 J
MW-91	DUP-04-201704	4/27/2017	FD	556	42.6	0.15 J
MW-91	MW-91-201710	10/25/2017	N	534	36.4	0.27 J
MW-91	MW-91-201804	4/19/2018	N	557	38.6	0.21 J
MW-91	MW-91-201811	11/15/2018	N	437	33.4	0.30 J
MW-91	MW-91-201904	4/25/2019	N	454	29.9	0.21 J
MW-91	MW-91-201910	10/24/2019	N	437	26.8	0.18 J
MW-91	MW-91-202005	5/14/2020	N	59.8	104	0.36 J
MW-91	MW-91-202010	10/6/2020	N	51.9	136	0.67 J
MW-91	MW-91-202104	4/14/2021	N	8.1	49.9	0.54 J
MW-206	MW-206-202110	10/20/2021	N	1.2	0.41 J	< 1.0 U
MW-92	MW-92-20141022	10/22/2014	N	2160	16.0	7.2
MW-92	MW-92-20141204	12/4/2014	N	2200	23.4	10.3
MW-92	MW-92-201501	1/15/2015	N	1410	10.4	4.6
MW-92	MW-92-201504	4/16/2015	N	736	5.4	2.1
MW-92	MW-92-201507	7/23/2015	N	617	6.7	1.0
MW-92	MW-92-201510	10/8/2015	N	1400	10.8	1.4
MW-92	MW-92-201601	1/13/2016	N	1840	7.1	0.66 J
MW-92	MW-92-201605	5/4/2016	N	2210	25.5	1.8
MW-92	DUP-08-201605	5/4/2016	FD	1840	25.7	1.7
MW-93	MW-93-20141022	10/22/2014	N	18200	145	5.0
MW-93	MW-93-20141204	12/4/2014	N	14600	85.7	2.5
MW-93	MW-93-201501	1/15/2015	N	18000	131	3.4
MW-93	MW-93-201504	4/16/2015	N	21500	160	3.9
MW-93	MW-93-201507	7/23/2015	N	20800	164	3.4
MW-93	MW-93-201510	10/8/2015	N	21100	120	3.3
MW-93	MW-93-201601	1/13/2016	N	21200	103	2.6
MW-93	MW-93-201605	5/5/2016	N	17300	127	7.6
MW-93	MW-93-201611	11/9/2016	N	18300	98.8	0.93 J
MW-93	MW-93-201704	4/28/2017	N	28200	127	5.8
MW-93	MW-93-201710	10/26/2017	N	16600	111	9.1
MW-93	MW-93-201804	4/19/2018	N	17000	97.9	4.5

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-93	MW-93-201811	11/15/2018	N	16300	106	3.6
MW-93	MW-93-201904	4/24/2019	N	13700	124	2.3
MW-93	MW-93-201910	10/24/2019	N	14700	93.2	2.1
MW-93	MW-93-202010	10/8/2020	N	9130	64.5	1.0
MW-93	MW-93-202104	4/14/2021	N	9260	62.8	0.96 J
MW-22	MW-22-202110	10/20/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-94	MW-94-20141022	10/22/2014	N	11100	309 J	2.5
MW-94	MW-94-20141204	12/4/2014	N	9570	250 J	3.0
MW-94	MW-94-201501	1/15/2015	N	9530	297	2.4
MW-94	MW-94-201504	4/16/2015	N	11800	325	1.3
MW-94	MW-94-201507	7/23/2015	N	3890	119	0.61 J
MW-94	MW-94-201510	10/8/2015	N	1990	59.5	0.25 J
MW-94	MW-94-201601	1/13/2016	N	936	30.3	< 1.0 U
MW-94	MW-94-201605	5/5/2016	N	424	15.6	< 1.0 U
MW-94	MW-94-WG-20200717	7/17/2020	N	2680	56.7	< 1.0 U
MW-95	MW-95-20141022	10/22/2014	N	22300	151	25.7
MW-95	MW-95-20141204	12/4/2014	N	20900	159	29.9
MW-95	MW-95-201501	1/15/2015	N	21100	177	25.6
MW-95	MW-95-201504	4/16/2015	N	26700	184	14.9
MW-95	MW-95-201507	7/23/2015	N	25200	181	17.1
MW-95	MW-95-201510	10/8/2015	N	26300	161	32.0
MW-95	MW-95-201601	1/13/2016	N	24700	161	31.0
MW-95	MW-95-201605	5/5/2016	N	21600	164	14.8
MW-95	MW-95-201611	11/9/2016	N	28700	191	46.9 J
MW-95	MW-95-201704	4/28/2017	N	36300	181	10.7
MW-95	MW-95-201710	10/26/2017	N	23900	198	51.2
MW-95	MW-95-201804	4/19/2018	N	24100	153	13.1
MW-95	MW-95-201811	11/15/2018	N	20300	152	39.6
MW-95	MW-95-201904	4/25/2019	N	22200	199	10.2
MW-95	DUP-06-201904	4/25/2019	FD	20400	194	8.3
MW-95	MW-95-201910	10/24/2019	N	24700	265	25.9
MW-95	MW-95-WG-20200717	7/17/2020	N	21200	314	10.0
MW-95	MW-95-202010	10/8/2020	N	21100	315	10.4
MW-95	MW-95-202104	4/14/2021	N	21600	278	4.7
MW-24	MW-24-202110	10/21/2021	N	10.4	0.24 J	< 1.0 U
MW-96	MW-96-20141022	10/22/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-96	MW-96-201501	1/15/2015	N	0.59 J	< 1.0 U	< 1.0 U
MW-96	MW-96-201504	4/16/2015	N	< 1.0 U	< 1.0 U	< 1.0
MW-96	DUP-06-201504	4/16/2015	FD	< 1.0 U	< 1.0 U	< 1.0
MW-96	MW-96-201507	7/23/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	DUP-06-201507	7/23/2015	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201804	4/19/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201811	11/15/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-202010	10/8/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	MW-96-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-96	DUP-01-202104	4/13/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-25R	MW-25R-202110	10/22/2021	N	7440	2840	54.2
MW-96	DUP-02-202110	10/19/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-20141022	10/22/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-97	MW-97-201501	1/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201504	4/16/2015	N	< 1.0 U	< 1.0 U	< 1.0
MW-97	MW-97-201507	7/23/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201605	5/5/2016	N	< 1.0 U	0.28 J	< 1.0 U
MW-97	MW-97-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201804	4/19/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201811	11/15/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-202005	5/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	MW-97-202010	10/8/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-97	DUP-10-202010	10/8/2020	FD	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-97	MW-97-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-26	MW-26-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-GW-2014 1029	10/29/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-98	MW-98-201501	1/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201504	4/16/2015	N	< 1.0 U	< 1.0 U	< 1.0
MW-98	MW-98-201507	7/23/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201704	4/27/2017	N	0.21 J	0.23 J	< 1.0 U
MW-98	MW-98-201710	10/24/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-201811	11/14/2018	N	0.29 J	< 1.0 U	< 1.0 U
MW-98	MW-98-201904	4/24/2019	N	0.22 J	< 1.0 U	< 1.0 U
MW-98	MW-98-201910	10/23/2019	N	0.38 J	< 1.0 U	< 1.0 U
MW-98	MW-98-202005	5/12/2020	N	0.18 J	< 1.0 U	< 1.0 U
MW-98	DUP-4-202005	5/12/2020	FD	0.23 J	< 1.0 U	< 1.0 U
MW-98	MW-98-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-202104	4/12/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-27	MW-27-202110	10/18/2021	N	56.3	1.6	< 1.0 U
MW-99	MW-99-20141022	10/22/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
MW-99	MW-99-201501	1/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-201504	4/16/2015	N	< 1.0 U	< 1.0 U	< 1.0
MW-99	MW-99-201507	7/23/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-201601	1/11/2016	N	0.21 J	< 1.0 U	< 1.0 U
MW-99	MW-99-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-201710	10/24/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-201804	4/18/2018	N	1.3	0.12 J	< 1.0 U
MW-99	MW-99-201811	11/13/2018	N	8.1	0.64 J	< 1.0 U
MW-99	MW-99-201904	4/24/2019	N	23.6	1.6	< 1.0 U
MW-99	MW-99-201910	10/23/2019	N	72.6	4.8	< 1.0 U
MW-99	MW-99-202005	5/14/2020	N	1.5	10.7	< 1.0 U
MW-99	MW-99-202010	10/7/2020	N	0.85 J	5.0	< 1.0 U
MW-99	MW-99-202104	4/13/2021	N	0.34 J	3.3	< 1.0 U
MW-28	MW-28-202110	10/18/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-172	MW-172-20141022	10/22/2014	N	3010	21.4	2.4
MW-172	MW-172-20141205	12/5/2014	N	1810	15.6	1.3 J
MW-172	MW-172-201501	1/15/2015	N	3600	22.4	1.2
MW-172	MW-172-201504	4/16/2015	N	1740	11.9	0.92 J
MW-172	MW-172-201507	7/23/2015	N	2140	12.4	0.69 J
MW-172	MW-172-201510	10/8/2015	N	2110	12.4	0.51 J
MW-172	MW-172-201601	1/13/2016	N	3190	13.5	< 1.0 U
MW-172	MW-172-201605	5/5/2016	N	2160	13.3	< 1.0 U
MW-173	MW-173-201504	4/15/2015	N	< 1.0 U	< 1.0 U	< 1.0
MW-173	MW-173-201507	7/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-173	MW-173-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-173	MW-173-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-173	MW-173-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-174	MW-174-GW-20150120	1/20/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-174	MW-174-201504	4/14/2015	N	0.68 J	< 1.0 U	< 1.0
MW-174	MW-174-201507	7/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-174	MW-174-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-174	MW-174-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-174	MW-174-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-175	MW-175-GW-20150120	1/20/2015	N	123	2.0	< 1.0 U
MW-175	MW-175-201504	4/15/2015	N	98.8	1.5	< 1.0
MW-175	MW-175-201507	7/21/2015	N	20.3	0.32 J	< 1.0 U
MW-175	MW-175-201510	10/7/2015	N	78.6	1.6	0.19 J
MW-175	MW-175-201601	1/11/2016	N	52.6	1.1	< 1.0 U
MW-175	MW-175-201605	5/3/2016	N	54.9	1.2	< 1.0 U
MW-175	MW-175-201611	11/8/2016	N	50.9	0.49 J	< 1.0 U
MW-175	MW-175-201704	4/28/2017	N	53.2	1.3	< 1.0 U
MW-175	MW-175-201710	10/24/2017	N	72.2	0.27 J	< 1.0 U
MW-175	MW-175-201804	4/18/2018	N	117	1.9	0.15 J
MW-175	MW-175-201811	11/13/2018	N	70.7	1.5	0.17 J
MW-175	MW-175-201904	4/23/2019	N	102	1.6	< 1.0 U
MW-175	MW-175-201910	10/23/2019	N	138	2.2	0.16 J
MW-175	MW-175-202005	5/13/2020	N	135	2.6	< 1.0 U
MW-175	MW-175-202010	10/6/2020	N	69.5	1.7	< 1.0 U
MW-175	MW-175-202104	4/13/2021	N	82.3	1.9	< 1.0 U
MW-29	MW-29-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-176	MW-176-GW-20150120	1/20/2015	N	720	16.8	0.57 J
MW-176	MW-176-201504	4/14/2015	N	528	16.7	0.69 J
MW-176	MW-176-201507	7/21/2015	N	575	21.5	0.79 J
MW-176	MW-176-201510	10/6/2015	N	420	111	1.2
MW-176	MW-176-201601	1/12/2016	N	306	125	1.3
MW-176	MW-176-201605	5/3/2016	N	389	93.7	0.45 J
MW-176	MW-176-201611	11/8/2016	N	320	202	1.6
MW-176	MW-176-201704	4/28/2017	N	355	140	0.63 J
MW-176	MW-176-201710	10/24/2017	N	281	187	0.29 J
MW-176	MW-176-201804	4/17/2018	N	426	105	1.1
MW-176	MW-176-201811	11/13/2018	N	397	127	2.1
MW-176	MW-176-201904	4/23/2019	N	503	67.0	1.6
MW-176	MW-176-201910	10/22/2019	N	317	28.8	16.5
MW-176	MW-176-202005	5/12/2020	N	323	32.0	27.7
MW-176	MW-176-202010	10/6/2020	N	359	28.2	29.4
MW-176	MW-176-202104	4/13/2021	N	369	22.3	24.0
MW-38	MW-38-202110	10/21/2021	N	5830	1060	204
MW-177	MW-177-GW-20150121	1/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-177	MW-177-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-177	MW-177-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-177	MW-177-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-177	MW-177-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-178	MW-178-GW-20150118	1/18/2015	N	5.2	0.99 J	< 1.0 U
MW-178	MW-178-201504	4/16/2015	N	5.0	1.3	< 1.0 U
MW-178	MW-178-201507	7/22/2015	N	4.6	1.1	< 1.0 U
MW-178	MW-178-201510	10/7/2015	N	5.8	1.4	< 1.0 U
MW-178	MW-178-201611	11/10/2016	N	3.2	0.15 J	< 1.0 U
MW-178	MW-178-201704	4/27/2017	N	4.6	1.3	< 1.0 U
MW-178	MW-178-201710	10/25/2017	N	3.9	0.97 J	< 1.0 U
MW-178	FD-06-201710	10/25/2017	FD	3.6	0.96 J	< 1.0 U
MW-178	MW-178-201804	4/18/2018	N	5.3	1.4	< 1.0 U
MW-178	MW-178-201811	11/14/2018	N	4.5	1.4	< 1.0 U
MW-178	MW-178-201904	4/24/2019	N	2.9	0.79 J	< 1.0 U
MW-178	MW-178-201910	10/23/2019	N	4.1	1.2	< 1.0 U
MW-178	MW-178-202005	5/13/2020	N	2.0	0.42 J	< 1.0 U
MW-178	MW-178-202010	10/7/2020	N	1.9	0.66 J	< 1.0 U
MW-178	MW-178-202104	4/15/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-178	DUP-03-202104	4/15/2021	FD	0.47 J	< 1.0 U	< 1.0 U
MW-39R	MW-39R-202110	10/18/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-179	MW-179-201504	4/16/2015	N	41.2	1.6	< 1.0
MW-179	MW-179-201507	7/22/2015	N	27.3	1.1	< 1.0 U
MW-179	MW-179-201601	1/13/2016	N	30.6	1.1	< 1.0 U
MW-179	MW-179-201605	5/4/2016	N	6.6	< 1.0 U	< 1.0 U
MW-179	MW-179-201704	4/28/2017	N	20.4	1.0	< 1.0 U
MW-179	MW-179-201710	10/26/2017	N	10.7	0.35 J	< 1.0 U
MW-179	MW-179-201804	4/19/2018	N	21.7	0.85 J	< 1.0 U
MW-179	MW-179-201811	11/13/2018	N	1.4	< 1.0 U	< 1.0 U
MW-179	MW-179-201904	4/24/2019	N	8.9	0.23 J	< 1.0 U
MW-179	MW-179-201910	10/24/2019	N	23.7	0.74 J	< 1.0 U
MW-179	MW-179-202005	5/15/2020	N	21.4	1.1	< 1.0 U
MW-179	MW-179-202010	10/8/2020	N	22.9	1.0	< 1.0 U
MW-179	MW-179-202104	4/15/2021	N	19.3	0.82 J	< 1.0 U
MW-40R	MW-40R-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-180	MW-180-GW-20150119	1/19/2015	N	23.7	3.4	< 1.0 U
MW-180	MW-180-201504	4/16/2015	N	21.4	3.8	< 1.0
MW-180	MW-180-201507	7/22/2015	N	22.1	3.0	< 1.0 U
MW-180	MW-180-201510	10/7/2015	N	18.5	3.0	< 1.0 U
MW-180	MW-180-201601	1/14/2016	N	10.6	1.5	< 1.0 U
MW-180	MW-180-201605	5/5/2016	N	10.3	1.4	< 1.0 U
MW-181	MW-181-GW-20150121	1/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-181	MW-181-201504	4/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-181	MW-181-201507	7/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-181	MW-181-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-181	MW-181-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-182	MW-182-201507	7/23/2015	N	193	17.8	0.28 J
MW-182	MW-182-201510	10/5/2015	N	196	17.2	0.25 J
MW-182	MW-182-201601	1/13/2016	N	258	19.9	0.30 J
MW-182	MW-182-201605	5/4/2016	N	283	18.9	0.31 J
MW-182	DUP-09-201605	5/4/2016	FD	271	16.6	0.32 J
MW-182	MW-182-201611	11/9/2016	N	192	14.6	0.28 J
MW-182	DUP-02-201611	11/9/2016	FD	204	15.5	0.20 J
MW-182	MW-182-201710	10/24/2017	N	92.2	5.7	< 1.0 U
MW-182	MW-182-201804	4/19/2018	N	58.3	3.9	< 1.0 U
MW-182	DUP-06-201804	4/19/2018	FD	59.3	4.1	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-182	MW-182-201811	11/15/2018	N	40.8	2.5	< 1.0 U
MW-182	MW-182-201904	4/24/2019	N	29.1	1.8	< 1.0 U
MW-182	MW-182-201910	10/23/2019	N	26.3	1.8	< 1.0 U
MW-182	MW-182-202005	5/13/2020	N	19.8	1.6	< 1.0 U
MW-182	DUP-08-202005	5/13/2020	FD	19.5	1.6	< 1.0 U
MW-182	MW-182-202010	10/7/2020	N	24.9	1.7	< 1.0 U
MW-46R	MW-46R-202110	10/21/2021	N	461	30.8	0.63 J
MW-182	DUP-10-202110	10/21/2021	FD	19.6	1.3	< 1.0 U
MW-183	MW-183-201510	10/6/2015	N	2.0	0.30 J	< 1.0 U
MW-183	MW-183-201601	1/12/2016	N	2.7	0.32 J	< 1.0 U
MW-183	MW-183-201605	5/4/2016	N	2.8	0.34 J	< 1.0 U
MW-183	MW-183-201611	11/9/2016	N	5.3	< 1.0 U	< 1.0 U
MW-183	MW-183-201704	4/26/2017	N	2.0	0.26 J	< 1.0 U
MW-183	DUP-03-201704	4/26/2017	FD	1.9	0.17 J	< 1.0 U
MW-183	MW-183-201710	10/25/2017	N	2.8	0.24 J	< 1.0 U
MW-183	MW-183-201804	4/18/2018	N	1.9	0.14 J	< 1.0 U
MW-183	MW-183R-201811	11/14/2018	N	1.1	< 1.0 U	< 1.0 U
MW-183	MW-183R-201904	4/24/2019	N	0.54 J	< 1.0 U	< 1.0 U
MW-183R	MW-183R-201910	10/23/2019	N	1.2	< 1.0 U	< 1.0 U
MW-183R	MW-183R-202005	5/13/2020	N	0.74 J	< 1.0 U	< 1.0 U
MW-183R	MW-183R-202010	10/7/2020	N	0.82 J	< 1.0 U	< 1.0 U
MW-183R	MW-183R-202104	4/13/2021	N	0.70 J	< 1.0 U	< 1.0 U
MW-50R	MW-50R-202110	10/19/2021	N	0.61 J	< 1.0 U	< 1.0 U
MW-184	MW-184-201510	10/5/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201704	4/28/2017	N	0.45	< 1.0 U	< 1.0 U
MW-184	MW-184-201710	10/24/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201811	11/14/2018	N	< 1.0	< 1.0 U	< 1.0 U
MW-184	MW-184-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	MW-184-202005	5/13/2020	N	0.25 J	< 1.0 U	< 1.0 U
MW-184	MW-184-202010	10/7/2020	N	0.40 J	< 1.0 U	< 1.0 U
MW-184	DUP-05-202010	10/7/2020	FD	0.29 J	< 1.0 U	< 1.0 U
MW-184	MW-184-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-184	DUP-05-202104	4/13/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-55R	MW-55R-202110	10/19/2021	N	29.9	1.2	0.19 J
MW-184	DUP-01-202110	10/19/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-185	MW-185-GW-091615	9/16/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-185	MW-185-201510	10/5/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-185	MW-185-201601	1/11/2016	N	0.87 J	< 1.0 U	< 1.0 U
MW-185	MW-185-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-185	MW-185-201611	11/8/2016	N	3.1	< 1.0 U	< 1.0 U
MW-185	MW-185-201704	4/26/2017	N	8.0	< 1.0 U	< 1.0 U
MW-185	MW-185-201710	10/24/2017	N	12.7	< 1.0 U	< 1.0 U
MW-185	MW-185-201804	4/19/2018	N	12.0	1.4	< 1.0 U
MW-185	DUP-07-201804	4/19/2018	FD	11.1	1.4	< 1.0 U
MW-185	MW-185-201807	7/31/2018	N	11.7	1.4	< 1.0 U
MW-185	MW-185-201811	11/14/2018	N	11.7	2.6	< 1.0 U
MW-185	MW-185-201904	4/25/2019	N	17.0	3.4	< 1.0 U
MW-185	MW-185-201910	10/24/2019	N	52.7	6.3	0.12 J
MW-185	MW-185-202005	5/13/2020	N	94.5	7.9	< 1.0 U
MW-185	DUP-07-202005	5/13/2020	FD	95.0	7.4	< 1.0 U
MW-185	MW-185-202010	10/7/2020	N	176	10.6	< 1.0 U
MW-185	MW-185-202104	4/15/2021	N	194	11.6	0.28 J
MW-56R	MW-56R-202110	10/21/2021	N	619	14.8	0.20 J
MW-186	MW-186-GW-091415	9/14/2015	N	< 1.0 U	0.37 J	< 1.0 U
MW-186	MW-186-201510	10/5/2015	N	1.2	2.4	< 1.0 U
MW-186	MW-186-201601	1/7/2016	N	3.0	3.2	< 1.0 U
MW-186	MW-186-201605	5/4/2016	N	4.0	3.0	< 1.0 U
MW-186	MW-186-201611	11/7/2016	N	5.2	3.3	0.16 J
MW-186	MW-186-201704	4/26/2017	N	4.7	2.7	< 1.0 U
MW-186	DUP-02-201704	4/26/2017	FD	5.0 B	2.8	< 1.0 U
MW-186	MW-186-201710	10/24/2017	N	7.8	4.1	0.14 J
MW-186	FD-04-201710	10/24/2017	FD	7.8	3.8	0.16 J
MW-186	MW-186-20180402	4/2/2018	N	13.1	4.2	0.22 J
MW-186	DUP-01-20180402	4/2/2018	FD	12.9	4.7	0.21 J
MW-186	MW-186-201804	4/19/2018	N	14.2	4.8	0.23 J
MW-186	MW-186-201807	8/3/2018	N	17.7	4.5	0.15 J
MW-186	MW-186-201811	11/14/2018	N	10.2 F1	6.5	< 5.0 U
MW-186	MW-186-201904	4/26/2019	N	5.6	8.8	0.14 J
MW-186	MW-186-201910	10/24/2019	N	2.9	3.0	2.2

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-186	MW-186-202005	5/14/2020	N	1.0 J+	0.62 J	0.36 J
MW-186	MW-186-202010	10/8/2020	N	0.43 J	0.40 J	0.33 J
MW-186	MW-186-202104	4/13/2021	N	0.40 J	0.42 J	0.43 J
MW-186	DUP-08-202104	4/13/2021	FD	0.33 J	0.58 J	0.45 J
MW-57R	MW-57R-202110	10/21/2021	N	286	22.1	0.38 J
MW-187	MW-187-GW-091415	9/14/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-187	MW-187-201510	10/5/2015	N	< 1.0 U	0.21 J	< 1.0 U
MW-187	MW-187-201601	1/8/2016	N	0.22 J	0.27 J	< 1.0 U
MW-187	MW-187-201605	5/4/2016	N	0.56 J	0.59 J	< 1.0 U
MW-187	MW-187-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-187	MW-187-201704	4/26/2017	N	0.46 J	0.55 J	< 1.0 U
MW-187	MW-187-201710	10/24/2017	N	0.65 J	0.73 J	< 1.0 U
MW-187	MW-187-201804	4/18/2018	N	< 1.0 U	0.77 J	< 1.0 U
MW-187	MW-187-201811	11/14/2018	N	0.86 J	0.81 J	< 1.0 U
MW-187	MW-187-201904	4/24/2019	N	1.4	1.3	< 1.0 U
MW-187	MW-187-201910	10/22/2019	N	3.5	2.2	< 1.0 U
MW-187	MW-187-202005	5/14/2020	N	5.2	3.0	< 1.0 U
MW-187	MW-187-202010	10/6/2020	N	9.8	3.7	< 1.0 U
MW-187	MW-187-202104	4/13/2021	N	22.4	3.8	< 1.0 U
MW-58R	MW-58R-202110	10/21/2021	N	208	8.2	< 5.0 U
MW-188	MW-188A-GW-091715	9/17/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201510	10/5/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201601	1/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201704	4/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201710	10/24/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201804	4/19/2018	N	0.20 J	< 1.0 U	< 1.0 U
MW-188	DUP-04-201804	4/19/2018	FD	0.18 J	< 1.0 U	< 1.0 U
MW-188	MW-188-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-201904	4/24/2019	N	0.88 J	0.33 J	< 1.0 U
MW-188	MW-188-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-188	MW-188-202005	5/13/2020	N	2.9	0.51 J	< 1.0 U
MW-188	MW-188-202010	10/6/2020	N	11.7	1.3	< 1.0 U
MW-188	MW-188-202104	4/14/2021	N	3.4	0.38 J	< 1.0 U
MW-60R	MW-60R-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-189	MW-189A-GW-091715	9/17/2015	N	2.4	3.1	< 1.0 U
MW-189	MW-189-201510	10/5/2015	N	4.1	4.5	0.14 J
MW-189	MW-189-201601	1/7/2016	N	4.5	5.4	0.19 J
MW-189	MW-189-201605	5/4/2016	N	5.5	6.1	0.19 J
MW-189	MW-189-201611	11/7/2016	N	10.2	9.7	0.31 J
MW-189	MW-189-201704	4/26/2017	N	30.1	11.1	0.29 J
MW-189	MW-189-201710	10/25/2017	N	195	9.5	0.40 J
MW-189	MW-189-201804	4/19/2018	N	385	11.1	0.48 J
MW-189	MW-189-201811	11/15/2018	N	670	11.3	0.64 J
MW-189	MW-189-201904	4/25/2019	N	188	3.1	0.14 J
MW-189	MW-189-201910	10/24/2019	N	510	8.9	0.47 J
MW-189	DUP-08-201910	10/24/2019	FD	506	8.7	0.50 J
MW-189	MW-189-202005	5/13/2020	N	183	4.0	< 1.0 U
MW-189	MW-189-202010	10/6/2020	N	359	7.2	0.44 J
MW-189	MW-189-202104	4/14/2021	N	66.8	1.7	< 1.0 U
MW-61R	MW-61R-202110	10/20/2021	N	6.9	2.0	0.53 J
MW-190	MW-190-201510	10/5/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201804	4/18/2018	N	0.58 J	< 1.0 U	< 1.0 U
MW-190	MW-190-201811	11/15/2018	N	< 1.0	< 1.0 U	< 1.0 U
MW-190	MW-190-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-190	MW-190-201910	10/22/2019	N	< 1.0 U	0.21 J	< 1.0 U
MW-190	MW-190-202005	5/13/2020	N	2.7	1.7	< 1.0 U
MW-190	MW-190-202010	10/7/2020	N	14.5	3.0	< 1.0 U
MW-190	MW-190-202104	4/13/2021	N	111	4.8	< 1.0 U
MW-190	MW-190-202110	10/21/2021	N	199	4.6	0.22 J
MW-62R	MW-62R-202110	10/18/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-GW-091515	9/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201510	10/5/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0
MW-191	MW-191-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-191	MW-191-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201811	11/14/2018	N	< 1.0	< 1.0 U	< 1.0 U
MW-191	MW-191-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-202005	5/13/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-191	MW-191-202104	4/12/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-63R	MW-63R-202110	10/20/2021	N	3.9	0.81 J	< 1.0 U
MW-192	MW-192-GW-091615	9/16/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201510	10/5/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201601	1/11/2016	N	0.30 J	< 1.0 U	< 1.0 U
MW-192	MW-192-201605	5/4/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201710	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	DUP-07-201811	11/14/2018	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	MW-192-202005	5/13/2020	N	0.58 J	< 1.0 U	< 1.0 U
MW-192	MW-192-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-192	DUP-04-202010	10/7/2020	FD	0.42 J	< 1.0 U	< 1.0 U
MW-192	MW-192-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-68	MW-68-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-193	MW-193-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-193	MW-193-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-193	MW-193-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-194	MW-194-GW-080516	8/5/2016	N	6.6	0.66 J	< 1.0 U
MW-194	MW-194-201611	11/7/2016	N	12.7	< 1.0 U	< 1.0 U
MW-194	MW-194-201704	4/26/2017	N	10.8	< 1.0 U	< 1.0 U
MW-194	MW-194-201710	10/23/2017	N	15.4	1.1	< 1.0 U
MW-194	MW-194-201804	4/17/2018	N	9.4	0.57 J	< 1.0 U
MW-194	MW-194-201807	7/31/2018	N	13.3	0.79 J	< 1.0 U
MW-194	MW-194-201811	11/14/2018	N	10.7	0.87 J	< 1.0 U
MW-194	MW-194-201904	4/25/2019	N	8.6	0.75 J	< 1.0 U
MW-194	MW-194-201910	10/23/2019	N	10.8	0.97 J	< 1.0 U
MW-194	MW-194-202005	5/14/2020	N	4.4	0.61 J	< 1.0 U
MW-194	MW-194-202010	10/7/2020	N	5.6	0.78 J	< 1.0 U
MW-194	MW-194-202104	4/14/2021	N	3.6	0.80 J	< 1.0 U
MW-82	MW-82-202110	10/22/2021	N	40.0	0.83 J	< 1.0 U
MW-195	MW-195-GW-080516	8/5/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201704	4/28/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201710	10/23/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	DUP-02-201804	4/17/2018	FD	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-195	MW-195-202005	5/12/2020	N	0.22 J	< 1.0 U	< 1.0 U
MW-195	MW-195-202010	10/6/2020	N	0.35 J	< 1.0 U	< 1.0 U
MW-195	MW-195-202104	4/13/2021	N	0.52 J	< 1.0 U	< 1.0 U
MW-83	MW-83-202110	10/20/2021	N	27.8	0.52 J	< 1.0 U
MW-195	DUP-05-202110	10/19/2021	FD	0.40 J	< 1.0 U	< 1.0 U
MW-196	MW-196-GW-080516	8/5/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201611	11/9/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201704	4/26/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201710	10/24/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-196	MW-196-202010	10/6/2020	N	0.54 J	< 1.0 U	< 1.0 U
MW-196	MW-196-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-84	MW-84-202110	10/21/2021	N	7.8	< 1.0 U	< 1.0 U
MW-197	MW-197-WG-2020922	9/22/2020	N	17.0	7.8	0.99 J
MW-197	MW-197-202010	10/6/2020	N	20.1	8.4	0.96 J
MW-197	MW-197-202104	4/14/2021	N	22.1	6.7	0.43 J
MW-198	MW-198-202010	10/8/2020	N	20600	1550	84.4
MW-198	MW-198-202104	4/14/2021	N	15900	1320	56.0
MW-87	MW-87-202110	10/21/2021	N	276	20.6	0.17 J
MW-199	MCP-HP-06-WG-22	7/15/2020	N	41.8	4.7	0.40 J

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-199	MW-199-WG-2020922	9/22/2020	N	66.7	5.1	0.35 J
MW-199	MW-199-202010	10/6/2020	N	92.3	6.7	0.35 J
MW-199	MW-199-202104	4/14/2021	N	84.1	7.4	0.32 J
MW-89	MW-89-202110	10/20/2021	N	3.9	0.30 J	< 1.0 U
MW-200	NE-HP-01	7/14/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-200	MW-200-202010	10/8/2020	N	0.25 J	< 1.0 U	< 1.0 U
MW-200	MW-200-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-91	MW-91-202110	10/21/2021	N	9.5	70.3	0.39 J
MW-201	HM-HP-05-WG-37	7/15/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-201	MW-201-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-201	MW-201-202104	4/13/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-93	MW-93-202110	10/21/2021	N	8560	62.3	0.90 J
MW-202	NE-HP-02-WG-24.7	7/15/2020	N	1.5	0.36 J	< 1.0 U
MW-202	MW-202-202010	10/8/2020	N	9.3	1.1	< 1.0 U
MW-202	MW-202-202104	4/14/2021	N	33.3	3.2	< 1.0 U
MW-95	MW-95-202110	10/21/2021	N	28600	402	< 200 U
MW-203	MW-203-WG-20200925	9/25/2020	N	0.57 J	< 1.0 U	< 1.0 U
MW-203	MW-203-202104	4/14/2021	N	3.7	0.22 J	< 1.0 U
MW-96	MW-96-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-204	MW-204-WG-20200925	9/25/2020	N	34.8	3.0	< 1.0 U
MW-204	MW-204-202010	10/8/2020	N	55.6	4.1	< 1.0 U
MW-204	MW-204-202104	4/13/2021	N	46.3	4.0	< 1.0 U
MW-97	MW-97-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-98	MW-98-202110	10/18/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
MW-99	MW-99-202110	10/19/2021	N	0.26 J	2.0	< 1.0 U
NE-HP-03	NE-HP-03-WG-24.3	7/15/2020	N	0.17 J	< 1.0 U	< 1.0 U
NE-Manhole-SW	NE-MANHOLE-SW-20140818	8/18/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
RW-1	RW-1-202110	10/22/2021	N	36000	2580	12.7
RW-69	RW-69-20090115	1/15/2009	N	170	7.1	< 5 U
RW-69	RW-69-20090424	4/24/2009	N	62	< 5 U	< 5 U
RW-69	RW-69-20090527	5/27/2009	N	290	10	< 5 U
RW-69	RW-69-20091221-FS	12/21/2009	N	200	6.3	< 5.0 U
RW-69	RW-69-20100513	5/13/2010	N	170	8.2	< 5 U
RW-69	RW-69-20101104	11/4/2010	N	320	9	< 5 U
RW-69	RW-69-20110303-FS	3/3/2011	N	200	7.1	< 5.0 U
RW-69	RW-69-20110523-FS	5/23/2011	N	130	3.0 J	
RW-69	RW-69-20111026	10/26/2011	N	210	5.7	< 5 U
RW-69	RW-69-20120418	4/18/2012	N	150	3.6 J	< 5 U
RW-69	RW-69-20121018	10/18/2012	N	180	5.0	< 2.0 U
RW-69	RW-69-20130423	4/23/2013	N	190	2.8 J	< 2.0 U
RW-69	RW-69-101613	10/16/2013	N	190	7.7	< 2.0 U
RW-69	RW-69-201403	3/7/2014	N	105	3.5 J	0.41 J
RW-69	RW-69-201405	5/13/2014	N	110	3.3 J	0.30 J
RW-69	RW-69-201407	7/29/2014	N	164	5.6	0.50 J
RW-69	RW-69-201410	10/14/2014	N	173	6.9	< 2.0 U
RW-69	RW-69-201501	1/14/2015	N	115	4.7	< 1.0 U
RW-69	RW-69-201504	4/14/2015	N	113	4.5	< 1.0 U
RW-69	RW-69-201507	7/21/2015	N	135	5.5	0.31 J
RW-69	RW-69-201510	10/6/2015	N	184	6.7	0.24 J
RW-69	RW-69-201601	1/12/2016	N	128	4.6	< 1.0 U
RW-69	RW-69-201605	5/3/2016	N	91.1	4.1	< 1.0 U
RW-69	RW-69-201611	11/9/2016	N	185	6.2	0.26 J
RW-69	RW-69-201704	4/27/2017	N	158	4.6	< 1.0 U
RW-69	RW-69-201710	10/24/2017	N	159	5.2	0.21 J
RW-69	RW-69-201804	4/18/2018	N	110	5.0	0.19 J
RW-69	RW-69-201811	11/14/2018	N	141 J+	5.4	0.53 J
RW-69	RW-69-201904	4/24/2019	N	99.9	4.4	0.16 J
RW-69	RW-69-201910	10/23/2019	N	150	5.6	0.53 J
RW-69	RW-69-202005	5/13/2020	N	102	4.4	0.30 J
RW-69	DUP-06-202005	5/13/2020	FD	101	4.3	0.23 J
RW-69	RW-69-202010	10/6/2020	N	101 J-	4.6	0.60 J
RW-69	RW-69-202104	4/13/2021	N	52.8	2.8	0.34 J
RW-69	RW-69-202110	10/21/2021	N	44.4	49.3	0.69 J
SLUG-01	SLUG-01-GW-20140108	1/8/2014	N	230	7.7	< 2.0 U
SLUG-02	SLUG-02-GW-20140108	1/8/2014	N	300	11	< 2.0 U
SLUG-06	SLUG-06-GW-20140112	1/12/2014	N	11000	620	31
SV-04D	SV-04D-20140916	9/16/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
TMW-01	TMW-01-062613-GW	6/26/2013	N	< 5.0 U	< 5.0 U	
TMW-01	TMW-01-062613-LL	6/26/2013	N			< 2.0 U
TMW-02	TMW-02-062613-GW	6/26/2013	N	< 5.0 U	< 5.0 U	
TMW-02	TMW-02-062613-LL	6/26/2013	N			< 2.0 U
TMW-04	TMW-04-062613-GW	6/26/2013	N	< 5.0 U	< 5.0 U	
TMW-04	TMW-04-062613-LL	6/26/2013	N			< 2.0 U
TMW-05	TMW-05-062613-GW	6/26/2013	N	< 5.0 U	< 5.0 U	

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
TMW-05	TMW-05-062613-LL	6/26/2013	N			< 2.0 U
TMW-10	TMW-10-GW-091815	9/18/2015	N	190	1.9	< 1.0 U
TMW-10	TMW-10-201510	10/8/2015	N	102	1.1	< 1.0 U
TMW-10	TMW-10-201511	11/4/2015	N	120	0.72 J	< 1.0 U
TMW-10	TMW-10-201512	12/1/2015	N	114	0.88 J	< 1.0 U
TMW-10	TMW-10-201601	1/8/2016	N	103	3.1	< 1.0 U
TMW-10	TMW-10-201605	5/4/2016	N	123	12.9	< 1.0 U
TMW-10	TMW-10-201611	11/8/2016	N	95.4	4.4	< 1.0 U
TMW-10	TMW-10-201704	4/27/2017	N	96.2	5.1	0.32 J
TMW-10	DUP-05-201704	4/27/2017	FD	102	5.9	0.38 J
TMW-10	TMW-10-201710	10/24/2017	N	89.5	4.5	0.91 J
TMW-10	TMW-10-201804	4/18/2018	N	85.0	5.2	0.46 J
TMW-10	TMW-10-201807	7/31/2018	N	91.1	5.9	0.66 J
TMW-10	TMW-10-201811	11/13/2018	N	14.3	15.0	6.2
TMW-10	TMW-10-201904	4/25/2019	N	11.5	2.4	3.7
TMW-10	TMW-10-201910	10/22/2019	N	8.6	1.4	2.4
TMW-10	TMW-10-202005	5/14/2020	N	2.5	0.67 J	2.8
TMW-10	TMW-10-202010	10/5/2020	N	4.8	0.86 J	3.8
TMW-10	TMW-10-202104	4/14/2021	N	0.90 J	0.53 J	3.8
TMW-10	TMW-10-202110	10/19/2021	N	0.59 J	0.46 J	2.2
TMW-11	TMW-11-GW-091815	9/18/2015	N	31.1	0.15 J	< 1.0 U
TMW-11	TMW-11-201510	10/8/2015	N	14.3	< 1.0 U	< 1.0 U
TMW-11	TMW-11-201511	11/4/2015	N	6.3	2.5	< 1.0 U
TMW-11	TMW-11-201512	12/1/2015	N	0.63 J	5.8	< 1.0 U
TMW-11	TMW-11-201601	1/8/2016	N	3.1	5.3	< 1.0 U
TMW-11	TMW-11-201605	5/3/2016	N	8.1	3.6	< 1.0 U
TMW-11	TMW-11-201611	11/8/2016	N	1.2	4.7	< 1.0 U
TMW-11	TMW-11-201704	4/27/2017	N	0.85 J	3.6	0.36 J
TMW-11	TMW-11-201710	10/23/2017	N	0.62 J	1.7	0.70 J
TMW-11	TMW-11-201804	4/17/2018	N	0.67 J	1.2	0.59 J
TMW-11	TMW-11-201811	11/13/2018	N	0.40 J	0.73 J	0.46 J
TMW-11	TMW-11-201904	4/25/2019	N	1.4	0.78 J	0.64 J
TMW-11	TMW-11-201910	10/22/2019	N	0.70 J	0.79 J	0.29 J
TMW-11	TMW-11-202005	5/14/2020	N	0.75 J	0.55 J	< 1.0 U
TMW-11	TMW-11-202010	10/5/2020	N	0.70 J	0.66 J	0.34 J
TMW-11	TMW-11-202104	4/14/2021	N	< 1.0 U	0.18 J	< 1.0 U
TMW-11	TMW-11-202110	10/20/2021	N	< 1.0 U	0.22 J	< 1.0 U
TMW-12	TMW-12-201704	4/27/2017	N	463	12.0	0.34 J
TMW-12	TMW-12-201804	4/18/2018	N	563	12.0	0.37 J
TMW-12	TMW-12-201811	11/15/2018	N	429	13.7	0.41 J
TMW-12	DUP-04-201811	11/15/2018	FD	470	12.8	0.37 J
TMW-12	TMW-12-201904	4/24/2019	N	470	11.9	0.37 J
TMW-12	TMW-12-201910	10/23/2019	N	471	10.1	0.26 J
TMW-12	TMW-12-202005	5/12/2020	N	372	10.3	0.21 J
TMW-12	TMW-12-202010	10/7/2020	N	415	11.1	0.32 J
TMW-12	TMW-12-202104	4/14/2021	N	335	10	0.33 J
TMW-12	TMW-12-202110	10/21/2021	N	366	8.9	0.20 J
TMW-12	DUP-08-202110	10/21/2021	FD	359	9.6	0.23 J
TMW-13	TMW-13-201704	4/27/2017	N	193	4.2	0.15 J
TMW-14	TMW-14-201704	4/27/2017	N	10.9	0.29 J	< 1.0 U
TMW-14	TMW-14-201804	4/18/2018	N	2.1	< 1.0 U	< 1.0 U
TMW-14	DUP-03-201804	4/18/2018	FD	2.0	< 1.0 U	< 1.0 U
TMW-14	TMW-14-201811	11/14/2018	N	0.24 J	< 1.0 U	< 1.0 U
TMW-14	TMW-14-201904	4/24/2019	N	10.1 J+	0.39 J	< 1.0 U
TMW-14	TMW-14-201910	10/23/2019	N	2.6	0.60 J	< 1.0 U
TMW-14	TMW-14-202005	5/11/2020	N	0.60 J	< 1.0 U	< 1.0 U
TMW-14	TMW-14-202010	10/7/2020	N	3.0	3.2	< 1.0 U
TMW-14	TMW-14-202110	10/20/2021	N	0.55 J	0.64 J	< 1.0 U
TMW-15	TMW-15-201704	4/26/2017	N	5.3	0.41 J	< 1.0 U
TMW-16	TMW-16-201704	4/25/2017	N	682	8.4	0.57 J
TMW-16	TMW-16-201710	10/24/2017	N	956	10.4	< 1.0 U
TMW-16	TMW-16-20180402	4/2/2018	N	985	11.5	0.78 J
TMW-16	TMW-16-201804	4/19/2018	N	1030	13.6	0.90 J
TMW-16	TMW-16-201807	8/2/2018	N	988	15.1	0.81 J
TMW-16	TMW-16-201811	11/16/2018	N	368	29.1	1.6 J
TMW-16	TMW-16-201904	4/25/2019	N	23.8	236	1.4
TMW-16	TMW-16-201910	10/23/2019	N	6.0	8.8	2.4
TMW-16	TMW-16-202005	5/14/2020	N	0.71 J	1.0 J	0.57 J
TMW-16	TMW-16-202010	10/8/2020	N	0.59 J	1.2 J+	0.38 J
TMW-16	TMW-16-202104	4/13/2021	N	0.68 J	0.45 J	0.52 J
TMW-16	TMW-16-202110	10/19/2021	N	0.31 J	1.2	0.77 J
TMW-17	TMW-17-201704	4/25/2017	N	154	7.6	0.37 J
TMW-18	TMW-18-201704	4/25/2017	N	0.60 J	0.72 J	< 1.0 U
TMW-188	MW-188-GW-091415	9/14/2015	N	2.0 J	2.4 J	< 5.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
TMW-189	MW-189-GW-091515	9/15/2015	N	2.6	4.7	0.22 J
TMW-19	TMW-19-201704	4/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-19	DUP-01-201704	4/25/2017	FD	0.30 J	< 1.0 U	< 1.0 U
TMW-19	TMW-19-201710	10/24/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-19	TMW-19-201804	4/19/2018	N	0.41 J	0.32 J	< 1.0 U
TMW-19	TMW-19-201811	11/14/2018	N	0.97 J	0.69 J	< 1.0 U
TMW-19	TMW-19-201904	4/24/2019	N	5.6	1.1	< 1.0 U
TMW-19	TMW-19-201910	10/23/2019	N	13.6	1.6	< 1.0 U
TMW-19	DUP-06-201910	10/23/2019	FD	12.2	1.5	< 1.0 U
TMW-19	TMW-19-202005	5/13/2020	N	7.8	0.97 J	< 1.0 U
TMW-19	TMW-19-202010	10/5/2020	N	16.0	1.7	< 1.0 U
TMW-19	TMW-19-202104	4/14/2021	N	9.5	0.63 J	< 1.0 U
TMW-19	TMW-19-202110	10/22/2021	N	40.4	2.6	< 1.0 U
TMW-20	TMW-20-201710	10/10/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-20171023	10/23/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	FD-01-201710	10/23/2017	FD	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	DUP-01-201811	11/13/2018	FD	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-202005	5/14/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-20	TMW-20-202110	10/19/2021	N	< 1.0 U	0.28 J	< 1.0 U
TMW-21	TMW-21-201710	10/10/2017	N	375	8.7	0.16 J
TMW-21	TMW-21-20171024	10/24/2017	N	461	9.2	< 1.0 U
TMW-21	TMW-21-201804	4/18/2018	N	340	7.4	< 1.0 U
TMW-21	TMW-21-20180419	4/19/2018	N	420	10.0	0.21 J
TMW-21	TMW-21-201807	7/31/2018	N	564	12.6	0.31 J
TMW-21	TMW-21-201811	11/15/2018	N	22.1 J-	86.3 J-	0.52 J
TMW-21	TMW-21-201904	4/25/2019	N	47.0	27.7	5.9
TMW-21	TMW-21-201910	10/22/2019	N	21.8	13.5	1.9
TMW-21	TMW-21-202005	5/14/2020	N	3.8	6.8	1.9
TMW-21	TMW-21-202010	10/6/2020	N	7.2	3.2	1.9
TMW-21	TMW-21-202104	4/14/2021	N	2.3	1.3	1.5
TMW-21	TMW-21-202110	10/20/2021	N	5.2	2.1	1.7
TMW-22	TMW-22-20171013	10/13/2017	N	636	13.9	< 1.0 U
TMW-22	TMW-22-201710	10/24/2017	N	486	9.8	< 1.0 U
TMW-22	TMW-22-201804	4/18/2018	N	224	20.1	< 1.0 U
TMW-22	TMW-22-201807	8/1/2018	N	460	28.7	0.20 J
TMW-22	TMW-22R-201811	11/15/2018	N	347	71.2	0.16 J
TMW-22	TMW-22R-201904	4/25/2019	N	202	184	8.3
TMW-22R	TMW-22R-201910	10/23/2019	N	146	126	7.9
TMW-22R	TMW-22R-202005	5/14/2020	N	61.1	94.6	26.3
TMW-22R	TMW-22R-202010	10/6/2020	N	56.6	70.3	15.4
TMW-22R	TMW-22R-202104	4/14/2021	N	67.6	129	57.7
TMW-22R	TMW-22R-202110	10/21/2021	N	21.9	24.7	12.8
TMW-23	TMW-23-20171013	10/13/2017	N	131	2.0	< 1.0 U
TMW-23	TMW-23-201710	10/25/2017	N	62.2	0.89 J	< 1.0 U
TMW-23	TMW-23-201804	4/18/2018	N	125	1.5	< 1.0 U
TMW-23	TMW-23-201811	11/16/2018	N	110	1.2	< 1.0 U
TMW-23	DUP-03-201811	11/16/2018	FD	116	1.6	< 1.0 U
TMW-23	TMW-23-201904	4/24/2019	N	190	2.3	< 1.0 U
TMW-23	TMW-23-2019110	10/23/2019	N	189	2.5	< 1.0 U
TMW-23	TMW-23-202005	5/11/2020	N	182	2.9	< 1.0 U
TMW-23	TMW-23-202010	10/7/2020	N	168	3.0	< 1.0 U
TMW-23	DUP-03-202010	10/7/2020	FD	164	2.9	< 1.0 U
TMW-23	TMW-23-202104	4/14/2021	N	179	3.1	< 1.0 U
TMW-23	DUP-09-202104	4/14/2021	FD	172	3.1	< 1.0 U
TMW-23	TMW-23-202110	10/20/2021	N	186	2.9	< 1.0 U
TMW-24	TMW-24-201710	10/10/2017	N	309	7.7	0.18 J
TMW-24	TMW-24-20171024	10/24/2017	N	385	8.1	< 1.0 U
TMW-24	TMW-24-201804	4/18/2018	N	601	11.9	0.25 J
TMW-24	TMW-24-201811	11/15/2018	N	540	10.9	0.25 J
TMW-24	TMW-24-201904	4/24/2019	N	565	12.3	0.47 J
TMW-24	TMW-24-2019110	10/23/2019	N	575	11.8	0.20 J
TMW-24	TMW-24-202005	5/12/2020	N	560	10.9	0.20 J
TMW-24	TMW-24-202010	10/6/2020	N	495	11.1	< 1.0 U
TMW-24	TMW-24-202104	4/14/2021	N	484	12.5	< 1.0 U
TMW-24	TMW-24-202110	10/21/2021	N	487	11.3	0.24 J
TMW-25	TMW-25-201710	10/11/2017	N	140	8.8	0.19 J
TMW-25	TMW-25-20171025	10/25/2017	N	245	11.2	0.41 J
TMW-25	TMW-25-201804	4/19/2018	N	240	10.9	0.29 J
TMW-25	TMW-25-201811	11/15/2018	N	58.6 J-	11.0 J-	< 5.0 UJ

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
TMW-25	TMW-25-201904	4/25/2019	N	38.6	47.7	0.39 J
TMW-25	TMW-25-201910	10/24/2019	N	23.6	39.9	0.41 J
TMW-25	TMW-25-202005	5/14/2020	N	17.0	5.5	1.2
TMW-25	TMW-25-202010	10/7/2020	N	3.1	1.1	< 1.0 U
TMW-25	TMW-25-202104	4/13/2021	N	3.2	1.0	0.74 J
TMW-25	TMW-25-202110	10/20/2021	N	6.8	1.4	0.45 J
TMW-26	TMW-26-201710	10/11/2017	N	185	4.2	0.23 J
TMW-26	TMW-26-20171024	10/24/2017	N	36.3	< 1.0 U	< 1.0 U
TMW-26	TMW-26-20180402	4/2/2018	N	35.4	0.98 J	< 1.0 U
TMW-26	TMW-26-201804	4/19/2018	N	28.3	1.1	< 1.0 U
TMW-26	TMW-26-201807	8/2/2018	N	96.1	2.5	0.23 J
TMW-26	TMW-26-201811	11/15/2018	N	54.4 J-	11.1 J-	< 5.0 UJ
TMW-26	TMW-26-201904	4/25/2019	N	128	46.3	0.29 J
TMW-26	TMW-26-201910	10/23/2019	N	42.9	53.3	2.9
TMW-26	TMW-26-202005	5/14/2020	N	4.1	2.5	0.71 J
TMW-26	TMW-26-202010	10/7/2020	N	3.7	1.1	0.99 J
TMW-26	TMW-26-202104	4/13/2021	N	1.9	0.68 J	0.56 J
TMW-26	TMW-26-202110	10/19/2021	N	2.7	0.88 J	0.44 J
TMW-27	TMW-27-201710	10/11/2017	N	0.20 J	< 1.0 U	< 1.0 U
TMW-27	TMW-27-20171025	10/25/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-20180402	4/2/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-201804	4/18/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-201811	11/14/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-202005	5/14/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	DUP-06-202010	10/7/2020	FD	< 1.0 U	< 1.0 U	< 1.0 U
TMW-27	TMW-27-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-28	TMW-28-20171010	10/12/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-20171010	10/12/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-201710	10/23/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-201804	4/17/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-201811	11/13/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-201904	4/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-202005	5/12/2020	N	0.12 J	< 1.0 U	< 1.0 U
TMW-29	TMW-29-202010	10/5/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-202104	4/12/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-29	TMW-29-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-30	TMW-30-20171013	10/13/2017	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-30	TMW-30-201710	10/24/2017	N	0.55 J	< 1.0 U	< 1.0 U
TMW-30	TMW-30-20180402	4/2/2018	N	1.5	0.49 J	< 1.0 U
TMW-30	TMW-30-201811	11/14/2018	N	< 25.0	< 25.0 U	< 25.0 U
TMW-30	TMW-30-201910	10/23/2019	N	2.5	2.3	0.12 J
TMW-30	TMW-30-202005	5/14/2020	N	< 5.0 U	2.9 J	< 5.0 U
TMW-30	TMW-30-202010	10/7/2020	N	12.7 J	< 20.0 U	< 20.0 U
TMW-30	TMW-30-202104	4/14/2021	N	34.3	76.4	< 10.0 U
TMW-30	TMW-30-202110	10/21/2021	N	8.7 J	3.5 J	< 20.0 U
TMW-30	DUP-11-202110	10/21/2021	FD	7.8 J	2.7 J	< 20.0 U
TMW-31	TMW-31-20180403	4/3/2018	N	< 5.0 U	< 5.0 U	< 5.0 U
TMW-32	TMW-32-20180403	4/3/2018	N	65.8	3.3	< 1.0 U
TMW-32	TMW-32-201804	4/18/2018	N	101	3.7	< 1.0 U
TMW-32	TMW-32-201807	8/3/2018	N	83.5	3.4	< 1.0 U
TMW-32	TMW-32-201811	11/16/2018	N	16.0	1.9	0.35 J
TMW-32	TMW-32-201904	4/25/2019	N	12.5	36.4	0.13 J
TMW-32	TMW-32-201910	10/24/2019	N	29.2	21.0	0.13 J
TMW-32	TMW-32-202005	5/14/2020	N	31.6	16.1	1.5
TMW-32	TMW-32-202010	10/8/2020	N	27.6	7.3	0.90 J
TMW-32	TMW-32-202104	4/14/2021	N	43.1	9.4	0.91 J
TMW-32	DUP-04-202104	4/14/2021	FD	43.2	9.1	0.79 J
TMW-32	TMW-32-202110	10/20/2021	N	24.9	5.2	0.36 J
TMW-33	TMW-33-20180403	4/3/2018	N	55.8	2.3	0.17 J
TMW-33	TMW-33-SHALLOW-2018040	4/5/2018	N	156	3.0	0.26 J
TMW-34	TMW-34-201811	11/14/2018	N	7.4	1.5	< 1.0 U
TMW-34	TMW-34-201904	4/25/2019	N	10.3	2.2	< 1.0 U
TMW-34	TMW-34-201910	10/24/2019	N	17.6	6.9	< 1.0 U
TMW-34	TMW-34-202005	5/14/2020	N	46.6	18.1	< 1.0 U
TMW-34	TMW-34-202010	10/7/2020	N	84.4	46.0	< 1.0 U
TMW-34	TMW-34-202104	4/15/2021	N	59.9	20.9	< 1.0 U
TMW-34	TMW-34-202110	10/20/2021	N	126	65.5	< 1.0 U
TMW-35	TMW-35-201910	10/22/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-35	TMW-35-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-35	DUP-01-202005	5/12/2020	FD	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
TMW-35	TMW-35-202010	10/6/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-35	TMW-35-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-35	DUP-06-202110	10/19/2021	FD	< 1.0 U	< 1.0 U	< 1.0 U
TMW-36	TMW-36-201910	10/24/2019	N	389	8.4	0.31 J
TMW-36	TMW-36-202005	5/13/2020	N	235	7.6	0.30 J
TMW-36	TMW-36-202010	10/5/2020	N	299	8.7	0.40 J
TMW-36	TMW-36-202104	4/13/2021	N	11.3	3.2	< 1.0 U
TMW-36	TMW-36-202110	10/19/2021	N	110	64.3	0.27 J
TMW-36B	TMW-36B-202007	7/15/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-36B	TMW-36B-202010	10/5/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-36B	TMW-36B-202104	4/12/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
TMW-36B	TMW-36B-202110	10/19/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-10	VP-10-GW-20150120	1/20/2015	N	636	18.8	0.61 J
VP-10	VP-10-20150422	4/22/2015	N	395	11.2	0.35 J
VP-10	VP-10-201507	7/30/2015	N	6.1	0.34 J	< 1.0 U
VP-10	VP-10-201510	10/6/2015	N	198	8.8	0.15 J
VP-10	VP-10-201601	1/12/2016	N	823	8.6	0.27 J
VP-10	VP-10-201605	5/3/2016	N	376	13.1	0.30 J
VP-10	VP-10-201611	11/8/2016	N	278	16.0	0.39 J
VP-10	VP-10-201704	5/3/2017	N	198	15.9	0.41 JB
VP-10	VP-10-201710	10/25/2017	N	211	12.7	0.42 J
VP-10	VP-10-201804	4/19/2018	N	357	14.9	0.40 J
VP-10	VP-10-201811	11/15/2018	N	250	14.4	0.55 J
VP-10	VP-10-201904	4/24/2019	N	211	12.6	0.36 J
VP-10	VP-10-201910	10/23/2019	N	3.3 J	11.9	0.52 J
VP-10	VP-10-202005	5/12/2020	N	27.5	1.4	0.24 J
VP-10	VP-10-202010	10/7/2020	N	110	12.5	0.48 J
VP-10	VP-10-202104	4/14/2021	N	169	10.2	0.39 J
VP-10	VP-10-202110	10/21/2021	N	177	12.4	0.33 J
VP-12	VP-12-GW-20150121	1/21/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-20150422	4/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201507	7/30/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201611	11/8/2016	N	0.55 J	< 1.0 U	< 1.0 U
VP-12	VP-12-201704	5/3/2017	N	< 1.0 U	0.25 JB	< 1.0 U
VP-12	VP-12-201710	10/25/2017	N	0.22 J	< 1.0 U	< 1.0 U
VP-12	VP-12-201804	4/19/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201811	11/15/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-202005	5/13/2020	N	0.62 J	< 1.0 U	< 1.0 U
VP-12	VP-12-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-202104	4/14/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-12	VP-12-202110	10/20/2021	N	0.31 J	< 1.0 U	< 1.0 U
VP-14	VP-14-201507	7/30/2015	N	55.6	2.1	< 1.0 U
VP-14	VP-14-201510	10/7/2015	N	59.3	2.3	< 1.0 U
VP-14	VP-14-201601	1/13/2016	N	65.6	2.3	< 1.0 U
VP-14	VP-14-201605	5/4/2016	N	54.5	2.4	< 1.0 U
VP-14	VP-14-201704	5/3/2017	N	62.9	3.7 B	0.18 JB
VP-14	VP-14-201710	10/25/2017	N	69.0	3.3	< 1.0 U
VP-14	VP-14-201804	4/19/2018	N	55.8	2.6	< 1.0 U
VP-14	VP-14-201811	11/15/2018	N	64.1	2.6	< 1.0 U
VP-14	VP-14-201904	4/24/2019	N	53.6	2.1	< 1.0 U
VP-14	VP-14-201910	10/23/2019	N	87.9	3.9	< 1.0 U
VP-14	VP-14-202005	5/12/2020	N	42.9	2.1	< 1.0 U
VP-14	VP-14-202010	10/8/2020	N	38.3	1.9	< 1.0 U
VP-14	VP-14-202104	4/14/2021	N	26.1	1.5	< 1.0 U
VP-14	VP-14-202110	10/21/2021	N	25.6	1.1	< 1.0 U
VP-15	VP-15-GW-20150701	7/1/2015	N	< 1.0 U	0.18 J	0.24 J
VP-15	VP-15-201510	10/7/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-15	VP-15-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-15	VP-15-201605	5/2/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-1S	VP-1-SHALLOW-20140916	9/16/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
VP-1S	VP-1-SHALLOW-201410	10/15/2014	N	8.3	1.4 J	< 2.0 U
VP-2D	SV-2-DEEP-201407	7/29/2014	N	56.1	8.2	< 2.0 U
VP-2D	VP-2-DEEP-20140916	9/16/2014	N	48.0	6.5	< 2.0 U
VP-2D	VP-2-DEEP-20140916-DUP	9/16/2014	FD	49.4	6.8	< 2.0 U
VP-2D	VP-2-DEEP-201410	10/15/2014	N	46.3	6.3	< 2.0 U
VP-2S	SV-2-SHALLOW-201407	7/29/2014	N	33.8	5.7	< 2.0 U
VP-2S	VP-2-SHALLOW-20140916	9/16/2014	N	36.4	5.6	< 2.0 U
VP-2S	VP-2-SHALLOW-201410	10/15/2014	N	51.2	5.2	< 2.0 U
VP-5	VP-05-20150422	4/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
VP-5	VP-05-201507	7/30/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-5	VP-05-201510	10/6/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-5	VP-05-201601	1/12/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-5	VP-05-201605	5/4/2016	N	0.66 J	< 1.0 U	< 1.0 U
VP-5	VP-05-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-6	VP-06-GW-20150120	1/20/2015	N	4.3	< 1.0 U	< 1.0 U
VP-6	VP-06-20150422	4/22/2015	N	2.3	0.30 J	< 1.0 U
VP-6	VP-06-201507	7/30/2015	N	0.76 J	0.20 J	< 1.0 U
VP-6	VP-06-201510	10/6/2015	N	0.75 J	< 1.0 U	< 1.0 U
VP-6	VP-06-201601	1/12/2016	N	1.3	0.20 J	< 1.0 U
VP-6	VP-06-201605	5/4/2016	N	0.78 J	0.17 J	< 1.0 U
VP-6	VP-06-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-07-201601	1/11/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-07-201605	5/3/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-07-201611	11/8/2016	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-07-201704	5/3/2017	N	< 1.0 U	0.33 JB	< 1.0 U
VP-7	VP-07-201710	10/25/2017	N	0.71 J	< 1.0 U	< 1.0 U
VP-7	VP-7-201804	4/19/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-7-201811	11/15/2018	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-7-201904	4/24/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-7-201910	10/23/2019	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-7-202005	5/12/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-07-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-7	VP-7-202104	4/14/2021	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-8	VP-08-20150422	4/22/2015	N	1.2	< 1.0 U	< 1.0 U
VP-8	VP-08-201507	7/30/2015	N	2.2	< 1.0 U	< 1.0 U
VP-8	VP-08-201510	10/7/2015	N	2.5 B	< 1.0 U	< 1.0 U
VP-8	VP-08-201601	1/11/2016	N	3.2	< 1.0 U	< 1.0 U
VP-8	VP-08-201605	5/3/2016	N	3.8	< 1.0 U	0.15 J
VP-8	VP-08-201611	11/8/2016	N	2.4	< 1.0 U	< 1.0 U
VP-8	VP-08-201704	5/3/2017	N	2.5	0.35 JB	0.20 JB
VP-8	VP-08-201710	10/25/2017	N	2.9	< 1.0 U	0.18 J
VP-8	VP-8-201804	4/19/2018	N	3.4	< 1.0 U	0.17 J
VP-8	VP-8-201811	11/15/2018	N	4.5	< 1.0 U	0.17 J
VP-8	VP-8-201904	4/24/2019	N	4.8	< 1.0 U	0.18 J
VP-8	VP-8-201910	10/23/2019	N	5.8	0.23 J	0.26 J
VP-8	VP-8-202005	5/12/2020	N	4.4	0.19 J	0.14 J
VP-8	VP-08-202010	10/7/2020	N	< 1.0 U	< 1.0 U	< 1.0 U
VP-8	VP-8-202104	4/14/2021	N	5.8	0.18 J	< 1.0 U
VP-8	VP-8-202110	10/21/2021	N	4.2	0.13 J	< 1.0 U
VP-9	VP-09-201507	7/30/2015	N	2.4	< 1.0 U	< 1.0 U
WEST-SW	WEST-SW-20140818	8/18/2014	N	< 5.0 U	< 5.0 U	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-72	IW-72-20090116	1/16/2009	N	27	< 5 U	< 5 U
IW-72	IW-72-20090423	4/23/2009	N	40	< 5 U	< 5 U
IW-72	IW-72-20090508	5/8/2009	N	40	< 5 U	< 5 U
IW-72	IW-72-20110303-FS	3/3/2011	N	3.1 J	< 5.0 U	< 5.0 U
IW-72	IW-72-20110519-FS	5/19/2011	N	< 5.0 U	< 5.0 U	
IW-72	IW-72-20111024	10/24/2011	N	< 5 U	< 5 U	< 5 U
IW-72	IW-72-20120417	4/17/2012	N	3.8 J	< 5 U	< 5 U
IW-72	IW-72-20121019	10/19/2012	N	< 25 U	< 25 U	< 10 U
IW-72	IW-72-20130424	4/24/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-72	IW-72-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-72	IW-72-201403	3/6/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-72	IW-72-201405	5/12/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-72	IW-72-201407	7/29/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-72	IW-72-201410	10/13/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-72	IW-72-201501	1/12/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
IW-72	IW-72-201504	4/15/2015	N	< 1.0 U	< 1.0 U	< 1.0 U
IW-72	IW-72-201507	7/20/2015	N	0.48 J	< 1.0 U	< 1.0 U
IW-72	IW-72-201510	10/6/2015	N	0.74 J	< 1.0 U	< 1.0 U
IW-72	IW-72-201601	1/12/2016	N	1.4	< 1.0 U	< 1.0 U
IW-72	IW-72-201605	5/3/2016	N	1.8	< 1.0 U	< 1.0 U
IW-73	IW-73-20090423	4/23/2009	N	400	16	< 5 U
IW-73	IW-73-20110519-FS	5/19/2011	N	160	3.6 J	
IW-73	IW-73-20111025	10/25/2011	N	250	4.9 J	< 5 U
IW-73	IW-73-20120417	4/17/2012	N	180	5.8	< 5 U
IW-73	IW-73-20121020	10/20/2012	N	170	7.0	< 2.0 U
IW-73	IW-73-20130424	4/24/2013	N	200	6.5	< 2.0 U
IW-73	IW-73-20130424-FD	4/24/2013	FD	180	6.4	< 2.0 U
IW-73	IW-73-101513	10/15/2013	N	140	47	6.3
IW-73	IW-73-201403	3/7/2014	N	183	20.9	4.6
IW-73	IW-73-201405	5/14/2014	N	31.9	0.81 J	< 2.0 U
IW-73	IW-73-201407	7/29/2014	N	138	24.3	26.1
IW-73	IW-73-201410	10/14/2014	N	8.5	0.84 J	1.1 J
IW-73	IW-73-201501	1/14/2015	N	70.8	6.3	4.1
IW-73	IW-73-201504	4/15/2015	N	96.8	6.8	1.6
IW-73	IW-73-201507	7/21/2015	N	143	9.0	1.5
IW-73	IW-73-201510	10/6/2015	N	154	7.8	0.59 J
IW-73	IW-73-201601	1/12/2016	N	103	4.3	0.24 J
IW-73	IW-73-201605	5/4/2016	N	125	4.9	0.35 J
IW-73	IW-73-201611	11/9/2016	N	113	2.5	0.16 J
IW-73	DUP-01-201611	11/9/2016	FD	116	2.8	0.21 J
IW-73	IW-73-201704	4/28/2017	N	108	3.8	< 1.0 U
IW-73	IW-73-201710	10/24/2017	N	126	3.3	< 1.0 U
IW-73	IW-73-201804	4/18/2018	N	176	4.0	< 1.0 U
IW-73	IW-73-201811	11/14/2018	N	208	7.3	< 1.0 U
IW-73	IW-73-201904	4/24/2019	N	216	8.0	0.35 J
IW-73	IW-73-201910	11/20/2019	N	215	7.0	0.16 J
IW-73	IW-73-202005	5/13/2020	N	173	6.4	0.21 J
IW-73	DUP-03-202005	5/13/2020	FD	193	6.0	< 1.0 U
IW-73	IW-73-202010	10/7/2020	N	211	7.6	0.27 J
IW-73	IW-73-202104	4/13/2021	N	227	7.8	0.33 J
IW-73	IW-73-202110	10/21/2021	N	198	6.8	1.7 J
IW-74	IW-74-20090423	4/23/2009	N	260	8.1	< 5 U
IW-74	IW-74-20110519-FS	5/19/2011	N	74	< 5.0 U	
IW-74	IW-74-20111025	10/25/2011	N	150	3.1 J	< 5 U
IW-74	IW-74-20120417	4/17/2012	N	130	2.4 J	< 5 U
IW-74	IW-74-20121020	10/20/2012	N	160	3.4 J	< 2.0 U
IW-74	IW-74-20130424	4/24/2013	N	160	4.8 J	< 2.0 U
IW-74	IW-74-101513	10/15/2013	N	190	5.7	< 2.0 U
IW-74	IW-74-201403	3/7/2014	N	135	4.3 J	1.5 J
IW-74	IW-74-201403-FD	3/7/2014	FD	151	4.5 J	2.2
IW-74	IW-74-201405	5/14/2014	N	169	4.3 J	0.80 J
IW-74	IW-74-201407	7/29/2014	N	177	5.8	0.91 J
IW-74	IW-74-201410	10/14/2014	N	144	3.3 J	< 2.0 U
IW-74	DUP-01-201410	10/14/2014	FD	143	3.3 J	< 2.0 U
IW-74	IW-74-201501	1/14/2015	N	141	3.8	< 1.0 U
IW-74	DUP-01-201501	1/14/2015	FD	139	3.5	< 1.0 U
IW-74	IW-74-201504	4/15/2015	N	147	5.0	< 1.0 U
IW-74	DUP-05-201504	4/15/2015	FD	153	4.8	< 1.0 U
IW-74	IW-74-201507	7/21/2015	N	168	4.6	1.4
IW-74	DUP-08-201507	7/21/2015	FD	168	4.2	1.3
IW-74	IW-74-201510	10/7/2015	N	121	3.8	0.36 J
IW-74	DUP-10-201510	10/7/2015	FD	122	3.8	0.33 J
IW-74	IW-74-201601	1/12/2016	N	135	3.2	0.17 J

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-74	DUP-05-201601	1/12/2016	FD	135	3.3	0.18 J
IW-74	IW-74-201605	5/4/2016	N	122	3.5	0.44 J
IW-74	DUP-07-201605	5/4/2016	FD	108	3.2	0.42 J
IW-75	IW-75-20090116	1/16/2009	N	140	2.4 J	< 5 U
IW-75	IW-75-20111025	10/25/2011	N	< 5 U	< 5 U	< 5 U
IW-75	IW-75-20120417	4/17/2012	N	2.9 J	< 5 U	< 5 U
IW-75	IW-75-20121018	10/18/2012	N	< 25 U	< 25 U	< 10 U
IW-75	IW-75-101513	10/15/2013	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-76	IW-76-20090423	4/23/2009	N	730	28	< 5 U
IW-76	IW-76-20090507	5/7/2009	N	460	28	< 5 U
IW-76	IW-76-20110304-FS	3/4/2011	N	380	11	< 5.0 U
IW-76	IW-76-20110523-FS	5/23/2011	N	460	12	
IW-76	IW-76-20111025	10/25/2011	N	130	2.2 J	< 5 U
IW-76	IW-76-20120417	4/17/2012	N	400	8.9	< 5 U
IW-76	IW-76-20121020	10/20/2012	N	610	16	< 2.0 U
IW-76	IW-76-20130424	4/24/2013	N	420	13	0.39 J
IW-76	IW-76-101513	10/15/2013	N	450	8.7	< 2.0 U
IW-76	IW-76-201403	3/8/2014	N	127	1.5 J	< 2.0 U
IW-76	IW-76-201405	5/14/2014	N	10.3	< 5.0 U	< 2.0 U
IW-76	IW-76-201407	7/29/2014	N	319	2.7 J	< 2.0
IW-76	IW-76-201410	10/15/2014	N	214	6.7	< 2.0 U
IW-76	IW-76-201501	1/14/2015	N	288	8.8	< 1.0 U
IW-76	IW-76-201504	4/15/2015	N	354	11.2	< 1.0 U
IW-76	IW-76-201507	7/21/2015	N	323	7.3	< 1.0 U
IW-76	IW-76-201510	10/6/2015	N	106	1.6	< 1.0 U
IW-76	IW-76-201601	1/12/2016	N	80.2 J	1.9	< 1.0 U
IW-76	IW-76-201605	5/4/2016	N	139 J	2.6	< 1.0 U
IW-77	IW-77-20090423	4/23/2009	N	570	20	< 5 U
IW-77	IW-77-20090507	5/7/2009	N	300	17	< 5 U
IW-77	IW-77-20090527	5/27/2009	N	250	13	< 5 U
IW-77	IW-77-20091028	10/28/2009	N	380	13	< 5 U
IW-77	IW-77-20091221-FS	12/21/2009	N	250	12	< 5.0 U
IW-77	IW-77-20100513	5/13/2010	N	260	11	< 5 U
IW-77	IW-77-20101105	11/5/2010	N	1400	41	< 5 U
IW-77	IW-77-20110304-FS	3/4/2011	N	430	14	< 5.0 U
IW-77	IW-77-20110523-FS	5/23/2011	N	440	15	
IW-77	IW-77-20111025	10/25/2011	N	1400	32	< 5 U
IW-77	IW-77-20120417-FD	4/17/2012	FD	520	20	< 5 U
IW-77	IW-77-20120417	4/17/2012	N	510	23	< 5 U
IW-77	IW-77-20121019	10/19/2012	N	1000	32	0.65 J
IW-77	IW-77-20130424	4/24/2013	N	530	21	< 2.0 U
IW-77	IW-77-101613	10/16/2013	N	1000	39	1.6 J
IW-77	IW-77-20131016-FD	10/16/2013	FD	990	39	0.49 J
IW-77	IW-77-201403	3/8/2014	N	546	24.4	0.22 J
IW-77	IW-77-201405	5/14/2014	N	1460	36.0	0.66 J
IW-77	20140709-GW-IW-77	7/9/2014	N	1200	21.1	< 2.0 U
IW-77	IW-77-201407	7/29/2014	N	1540	35.2	< 2.0 U
IW-77	IW-77-201410	10/15/2014	N	741	15.8	< 2.0 U
IW-77	IW-77-20141023	10/23/2014	N	554	11.9	< 2.0 U
IW-77	IW-77-201501	1/14/2015	N	201	4.8	< 1.0 U
IW-77	IW-77-201504	4/14/2015	N	153	2.9	< 1.0 U
IW-77	IW-77-201507	7/21/2015	N	130	2.4	< 1.0 U
IW-77	IW-77-201510	10/8/2015	N	24.3	0.54 J	< 1.0 U
IW-77	IW-77-201511	11/5/2015	N	95.1	1.1	< 1.0 U
IW-77	IW-77-201512	12/2/2015	N	87.8	1.3	< 1.0 U
IW-77	IW-77-201601	1/11/2016	N	95.3	1.3	< 1.0 U
IW-77	IW-77-201605	5/4/2016	N	101	1.7	< 1.0 U
IW-77	IW-77-201611	11/8/2016	N	137	2.1	< 1.0 U
IW-77	IW-77-201704	4/28/2017	N	113	1.8	< 1.0 U
IW-77	IW-77-201710	10/24/2017	N	161	2.9	< 1.0 U
IW-77	IW-77-201804	4/18/2018	N	181	3.6	< 1.0 U
IW-77	IW-77-201811	11/15/2018	N	218	5.1	< 1.0 U
IW-77	IW-77-201904	4/25/2019	N	188	4.1	< 1.0 U
IW-77	DUP-04-201904	4/25/2019	FD	198	4.3	< 1.0 U
IW-77	IW-77-201910	10/23/2019	N	180	6.8	< 1.0 U
IW-77	IW-77-202005	5/12/2020	N	196	4.3	< 1.0 U
IW-77	IW-77-202010	10/8/2020	N	171	5.7	< 1.0 U
IW-77	IW-77-202104	4/13/2021	N	184	5.4	< 1.0 U
IW-77	IW-77-202110	10/22/2021	N	176	7.6	< 5.0 U
IW-78	IW-78-20111025	10/25/2011	N	350	12	< 5 U
IW-78	IW-78-20120418	4/18/2012	N	120	2.3 J	< 5 U
IW-78	IW-78-20121020	10/20/2012	N	310	8.7	< 2.0 U

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-78	IW-78-20130424	4/24/2013	N	7.0	< 5.0 U	< 2.0 U
IW-78	IW-78-101713	10/17/2013	N	190	4.6 J	< 2.0 U
IW-78	IW-78-201405	5/28/2014	N	255	6.2	< 2.0 U
IW-78	IW-78-201409	9/11/2014	N	39.6	1.2 J	< 2.0 U
IW-78	IW-78-201601	1/11/2016	N	1.5	< 1.0 U	< 1.0 U
IW-78	IW-78-201605	5/3/2016	N	1.3	< 1.0 U	< 1.0 U
IW-78	IW-78-201611	11/8/2016	N	2.6	< 1.0 U	< 1.0 U
IW-78	IW-78-201710	10/25/2017	N	7.0	0.16 J	< 1.0 U
IW-78	IW-78-201811	11/15/2018	N	0.74 J	< 1.0 U	< 1.0 U
IW-78	IW-78-201910	10/23/2019	N	2.4	< 1.0 U	< 1.0 U
IW-78	IW-78-202010	10/7/2020	N	25.0	0.66 J	< 1.0 U
IW-78	DUP-09-202110	10/20/2021	N	15.1	0.45 J	< 1.0 U
IW-79	IW-79-20111025	10/25/2011	N	570	13	< 5 U
IW-79	IW-79-20120417	4/17/2012	N	430	2.1 J	< 5 U
IW-79	IW-79-20121020	10/20/2012	N	670	20	0.45 J
IW-79	IW-79-20121020-FD	10/20/2012	FD	480	16	< 2.0 U
IW-79	IW-79-20130424	4/24/2013	N	420	9.0	< 2.0 U
IW-79	IW-79-101713	10/17/2013	N	440	12	< 2.0 U
IW-79	IW-79-201405	5/28/2014	N	426	6.9	< 2.0 U
IW-79	IW-79-201409	9/11/2014	N	105	1.8 J	< 2.0 U
IW-79	IW-79-201601	1/11/2016	N	70.0	1.4	< 1.0 U
IW-79	IW-79-201605	5/4/2016	N	55.0	1.0	< 1.0 U
IW-80	IW-80-20090423	4/23/2009	N	170	4 J	< 5 U
IW-80	IW-80-20090507	5/7/2009	N	69	< 5 U	< 5 U
IW-80	IW-80-20110519-FS	5/19/2011	N	27	< 5.0 U	
IW-80	IW-80-20111025	10/25/2011	N	9.7	< 5 U	< 5 U
IW-80	IW-80-20120417	4/17/2012	N	55	2.2 J	< 5 U
IW-80	IW-80-20121019	10/19/2012	N	48	< 5.0 U	< 2.0 U
IW-80	IW-80-20130424	4/24/2013	N	40	< 5.0 U	< 2.0 U
IW-80	IW-80-101713	10/17/2013	N	58	2.4 J	< 2.0 U
IW-80	IW-80-20131017-FD	10/17/2013	FD	62	2.4 J	< 2.0 U
IW-80	IW-80-201403	3/8/2014	N	79.1 J	2.7 J	< 2.0 U
IW-80	IW-80-201405	5/13/2014	N	24.2	< 5.0 U	< 2.0 U
IW-80	IW-80-201407	7/30/2014	N	25.6	0.85 J	< 2.0 U
IW-80	IW-80-201410	10/14/2014	N	11.8	< 5.0 U	< 2.0 U
IW-80	IW-80-201501	1/13/2015	N	7.1	< 1.0 U	< 1.0 U
IW-80	IW-80-201504	4/14/2015	N	9.2	< 1.0 U	< 1.0 U
IW-80	IW-80-201507	7/21/2015	N	12.5	0.39 J	< 1.0 U
IW-80	IW-80-201510	10/6/2015	N	10.6	0.37 J	< 1.0 U
IW-80	IW-80-201511	11/5/2015	N	11.0	< 1.0 U	< 1.0 U
IW-80	IW-80-201512	12/2/2015	N	9.0	0.35 J	< 1.0 U
IW-80	IW-80-201601	1/7/2016	N	4.2	< 1.0 U	< 1.0 U
IW-80	IW-80-201605	5/3/2016	N	4.3	< 1.0 U	< 1.0 U
IW-101	IW-101-20140323	3/23/2014	N	314	7.5	0.21 J
IW-101	IW-101-20140430	4/30/2014	N	794	18.9	< 2.0 U
IW-101	IW-101-20140523	5/23/2014	N	509	11.2	< 2.0 U
IW-101	20140708-GW-IW-101	7/8/2014	N	150	4.5 J	< 2.0 U
IW-101	IW-101-201409	9/12/2014	N	139	3.4 J	< 2.0 U
IW-101	IW-101-201601	1/7/2016	N	42.9	1.1	< 1.0 U
IW-101	IW-101-201605	5/5/2016	N	20.3	0.54 J	< 1.0 U
IW-102	IW-102-20140323	3/23/2014	N	685	14.6	0.45 J
IW-102	IW-102-20140430	4/30/2014	N	239	5.4	< 2.0 U
IW-103	IW-103-20140323	3/23/2014	N	692	13.1	0.76 J
IW-103	IW-103-20140430	4/30/2014	N	729	22.8	0.83 J
IW-104	IW-104-20140323	3/23/2014	N	637	13.5	0.69 J
IW-104	IW-104-20140430	4/30/2014	N	527	12.6	< 2.0 U
IW-105	IW-105-20140323	3/23/2014	N	901	14.4	0.54 J
IW-105	IW-105-20140430	4/30/2014	N	185	4.9 J	< 2.0 U
IW-106	IW-106-20140323	3/23/2014	N	198	4.2 J	< 2 U
IW-106	IW-106-20140430	4/30/2014	N	163	6.8	< 2.0 U
IW-106	IW-106-20140523	5/23/2014	N	132	2.6 J	< 2.0 U
IW-107	IW-107-20140323	3/23/2014	N	198	4.3 J	0.14 J
IW-107	IW-107-20140430	4/30/2014	N	110	3.3 J	< 2.0 U
IW-108	IW-108-20140323	3/23/2014	N	1280	27.8	0.83 J
IW-108	IW-108-20140429	4/29/2014	N	72.1	4.1 J	< 2.0 U
IW-108	IW-108-20140523	5/23/2014	N	59.0	1.5 J	< 2.0 U
IW-109	IW-109-20140323	3/23/2014	N	362	7.4	0.23 J
IW-109	IW-109-20140429	4/29/2014	N	91.2	2.5 J	< 2.0 U
IW-109	IW-109-20140523	5/23/2014	N	110	1.9 J	< 2.0 U
IW-110	IW-110-20140323	3/23/2014	N	464	9.8	0.5 J
IW-110	IW-110	4/16/2014	N	397	9.4	0.17 J
IW-110	IW-110-20140430	4/30/2014	N	268	8.2	0.33 J

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-111	IW-111-20140323	3/23/2014	N	704	14	0.63 J
IW-111	IW-111-20140429	4/29/2014	N	260	6.4	< 2.0 U
IW-112	IW-112-20140323	3/23/2014	N	219	4.9 J	0.23 J
IW-112	IW-112	4/16/2014	N	200	4.8 J	< 2.0 U
IW-112	IW-112-20140430	4/30/2014	N	104	3.8 J	< 2.0 U
IW-113	IW-113-20140324	3/24/2014	N	510	11.1	0.43 J
IW-113	IW-113	4/14/2014	N	435	8.7	< 2.0 U
IW-114	IW-114-20140324	3/24/2014	N	397	9.7	0.25 J
IW-114	IW-114	4/14/2014	N	336	8.1	< 2.0 U
IW-115	IW-115-20140324	3/24/2014	N	622	14	0.25 J
IW-115	IW-115-20140407	4/7/2014	N	455	9.1 J	< 20.0 U
IW-115	IW-115	4/14/2014	N	449	9.3	< 2.0 U
IW-115	IW-115-201405	5/28/2014	N	504	11.2	0.27 J
IW-115	20140709-GW-IW-115	7/9/2014	N	352	7.4	< 2.0 U
IW-115	IW-115-201409	9/11/2014	N	355	8.0	< 2.0 U
IW-115	IW-115-201601	1/11/2016	N	169	3.6	< 1.0 U
IW-115	IW-115-201605	5/4/2016	N	51.9	1.1	< 1.0 U
IW-116	IW-116-20140324	3/24/2014	N	486	10.9	0.33 J
IW-116	IW-116	4/15/2014	N	546	10.8	0.34 J
IW-117	IW-117-20140324	3/24/2014	N	384	9.1	0.23 J
IW-117	IW-117	4/15/2014	N	384	9.9	< 2.0 U
IW-118	IW-118-20140324	3/24/2014	N	496	11.6	0.34 J
IW-118	IW-118	4/15/2014	N	395	9.7	< 2.0 U
IW-118	IW-118-201405	5/28/2014	N	437	9.3	< 2.0 U
IW-119	IW-119-20140324	3/24/2014	N	524	11.5	0.33 J
IW-119	IW-119-20140407	4/7/2014	N	478	9.1 J	< 20.0 U
IW-119	IW-119	4/15/2014	N	509	11.3	< 2.0 U
IW-120	IW-120-20140324	3/24/2014	N	289	7.9	0.14 J
IW-120	IW-120	4/15/2014	N	390	10.2	< 2.0 U
IW-121	IW-121-20140324	3/24/2014	N	402	8.9 J	< 10 U
IW-121	IW-121	4/15/2014	N	445	11.7	< 2.0 U
IW-122	IW-122-20140324	3/24/2014	N	473	11.5	0.29 J
IW-122	IW-122	4/15/2014	N	384	10.0	< 2.0 U
IW-123	IW-123-20140324	3/24/2014	N	532	12.2	0.40 J
IW-123	IW-123-20140407	4/7/2014	N	539	8.8 J	< 20.0 U
IW-123	IW-123	4/15/2014	N	488	10.0	< 2.0 U
IW-124	IW-124-20140324	3/24/2014	N	455	6.8 J	< 10 U
IW-124	IW-124	4/15/2014	N	448	8.7	0.26 J
IW-125	IW-125-20140325	3/25/2014	N	2140	207	3.1
IW-125	IW-125-201405	5/29/2014	N	17.1	2.9 J	< 2.0 U
IW-125	IW-125-201409	9/11/2014	N	7.3	1.0 J	< 2.0 U
IW-126	IW-126-20140325	3/25/2014	N	2020	197	10.4
IW-126	IW-126-201405	5/29/2014	N	787	59.1	< 2.0 U
IW-127	IW-127-20140324	3/24/2014	N	3700	219 J	7.6
IW-127	IW-127-201405	5/29/2014	N	639	34.7	< 2.0 U
IW-127	IW-127-201409	9/11/2014	N	1020	38.5	2.6
IW-127	IW-127-20141204	12/4/2014	N	182	7.2	< 2.0 U
IW-128	IW-128-20140325	3/25/2014	N	2980	178	11.7
IW-128	IW-128-20140429	4/29/2014	N	1250	68.4	4.9
IW-128	IW-128-201405	5/29/2014	N	1190	62.7	< 2.0 U
IW-129	IW-129-20140325	3/25/2014	N	2540	192	< 2.0 U
IW-129	IW-129-201405	5/29/2014	N	25.8	1.8 J	< 2.0 U
IW-130	IW-130-20140323	3/23/2014	N	358	7.6 J	< 10 U
IW-130	IW-130-20140523	5/23/2014	N	75.5	0.78 J	< 2.0 U
IW-131	IW-131-20140324	3/24/2014	N	526	11.5	0.35 J
IW-131	IW-131-20140430	4/30/2014	N	318	8.5	0.31 J
IW-131	IW-131-201405	5/28/2014	N	443	8.8	0.30 J
IW-132	IW-132-20141023	10/23/2014	N	714	3.5 J	< 2.0 U
IW-132	IW-132-201910	10/24/2019	N	292	0.57 J	< 1.0 U
IW-132	IW-132-202005	5/13/2020	N	180	0.63 J	< 1.0 U
IW-132	IW-132-202010	10/8/2020	N	210	0.63 J	< 1.0 U
IW-134	IW-134-201910	10/24/2019	N	1090	9.9	< 1.0 U
IW-134	IW-134-202005	5/13/2020	N	985	8.3	< 1.0 U
IW-134	DUP-02-202005	5/13/2020	FD	922	8.8	0.21 J
IW-134	IW-134-202010	10/8/2020	N	1110	10.6	0.38 J
IW-135	IW-135-20141023	10/23/2014	N	3840	43.3	2.0
IW-141	IW-141-20141023	10/23/2014	N	368000	< 10000 U	82.6
IW-141	IW-141-20141205	12/5/2014	N	46300	232 E	31.0
IW-143	IW-143-20141023	10/23/2014	N	13100	44.8	2.5
IW-147	IW-147-20141023	10/23/2014	N	199000	1640 J	< 4000 U
IW-147	IW-147-20141205	12/5/2014	N	91600	1420 J	176
IW-147	IW-147-201910	10/24/2019	N	95800	5420	376 J

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

Location	Sample ID	Date	Sample Type	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-147	IW-147-202005	5/13/2020	N	37500	4460	170
IW-147	IW-147-202010	10/7/2020	N	76800	8340	329 J
IW-152	IW-152-20141022	10/22/2014	N	17600	224 J	8.2
IW-152	IW-152-20141204	12/4/2014	N	< 5.0 U	< 5.0 U	< 2.0 U
IW-153	IW-153-20141023	10/23/2014	N	293	85.3	12.3
IW-153	IW-153-20141204	12/4/2014	N	1.6 J	< 5.0 U	< 2.0 U
IW-155	IW-155-20141023	10/23/2014	N	14600	36.4	5.8
IW-157	IW-157-20141023	10/23/2014	N	74200	712 J	195
IW-157	IW-157-20141205	12/5/2014	N	31700	391 E	66.8
IW-169	IW-169-20141022	10/22/2014	N	163	1.7 J	< 2.0 U

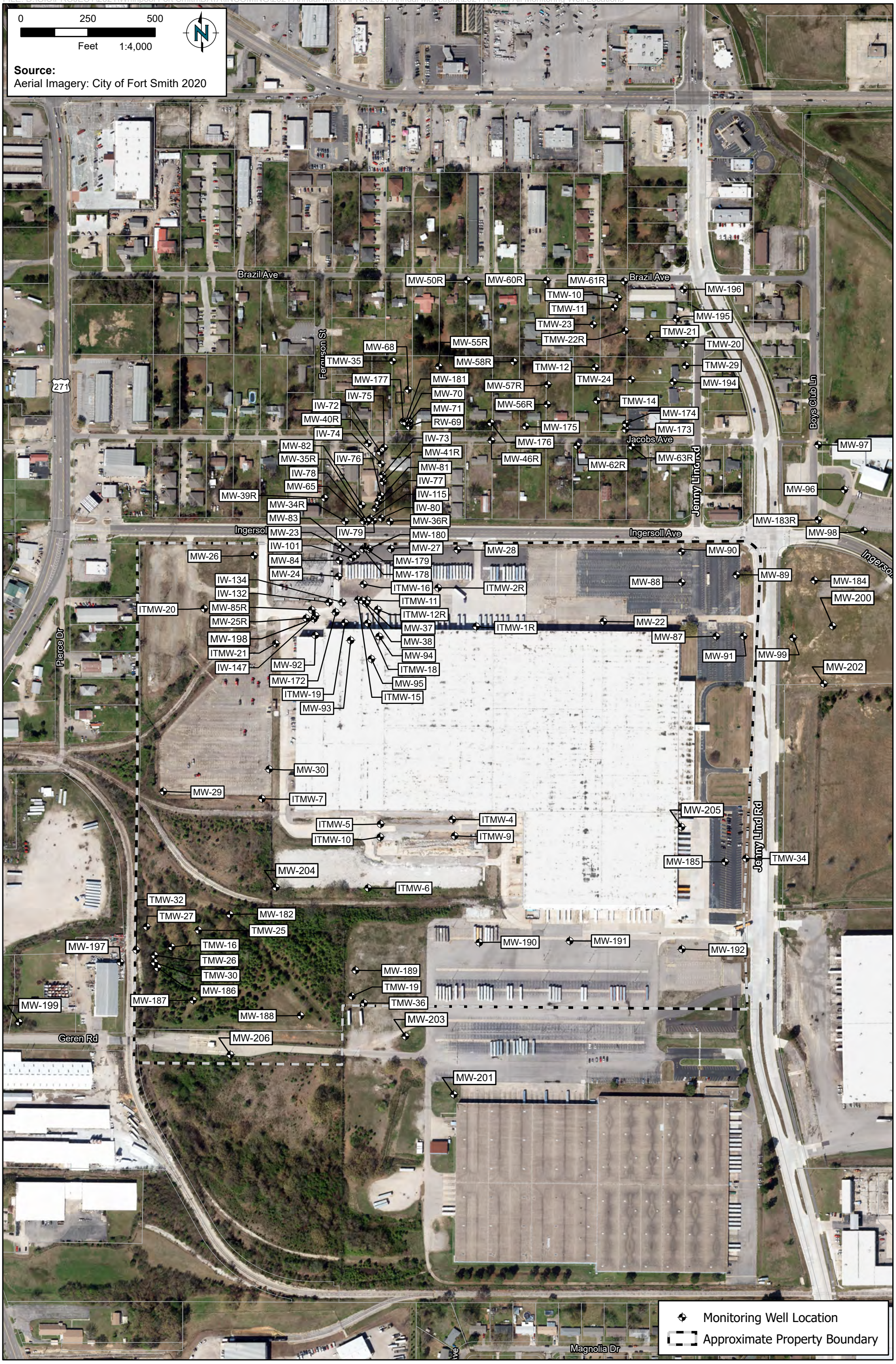
TABLE 8
SUMMARY OF STATISTICAL TEMPORAL TREND ANALYSIS (2009 - 2021)
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Grouping	Start Date	End Date	Number of Samples	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
Northern Plume Wells							
MW-24	Northern	04/27/09	10/21/21	26	Decreasing	Decreasing	<PQL
MW-27	Northern	05/12/10	10/18/21	23	No Trend	Increasing	ND
MW-28	Northern	10/29/09	10/18/21	25	Decreasing	ND	ND
MW-39/MW-39R	Northern	04/24/09	10/18/21	28	<PQL	ND	ND
MW-40/MW-40R	Northern	04/24/09	10/19/21	32	<PQL	<PQL	ND
MW-46R	Northern	04/25/09	10/21/21	35	Stable	Increasing	Increasing
MW-50/MW-50R	Northern	04/24/09	10/19/21	29	Increasing	ND	ND
MW-55/MW-55R	Northern	04/24/09	10/19/21	23	Increasing	Increasing	<PQL
MW-56/MW-56R	Northern	04/24/09	10/21/21	25	Increasing	Increasing	<PQL
MW-57/MW-57R	Northern	04/24/09	10/21/21	26	Increasing	Increasing	<PQL
MW-58/MW-58R	Northern	04/25/09	10/21/21	26	Decreasing	Decreasing	Stable
MW-60/MW-60R	Northern	04/24/09	10/19/21	29	<PQL	ND	ND
MW-61/MW-61R	Northern	04/24/09	10/20/21	33	Increasing	Increasing	<PQL
MW-62/MW-62R	Northern	04/24/09	10/18/21	28	<PQL	<PQL	ND
MW-63/MW-63R	Northern	04/24/09	10/20/21	29	Decreasing	Increasing	<PQL
MW-68	Northern	01/15/09	10/19/21	29	No Trend	ND	ND
RW-69	Northern	01/15/09	10/21/21	34	Decreasing	No Trend	<PQL
IW-73	Northern	04/23/09	10/21/21	28	Stable	No Trend	No Trend
IW-77	Northern	04/23/09	10/22/21	39	Decreasing	Decreasing	<PQL
IW-78	Northern	10/25/11	10/20/21	15	Decreasing	Decreasing	ND
MW-82	Northern	05/28/14	10/22/21	16	No Trend	No Trend	<PQL
MW-83	Northern	05/23/14	10/20/21	17	Decreasing	Decreasing	ND
MW-84	Northern	05/27/14	10/21/21	21	Increasing	<PQL	<PQL
MW-194	Northern	08/05/16	10/20/21	13	Decreasing	Increasing	ND
MW-195	Northern	08/05/16	10/19/21	12	<PQL	ND	ND
MW-196	Northern	08/05/16	10/19/21	12	<PQL	ND	ND
TMW-10	Northern	09/18/15	10/19/21	18	Decreasing	No Trend	Increasing
TMW-11	Northern	09/18/15	10/20/21	17	Decreasing	Decreasing	<PQL
Southern Plume Wells (includes Source Area Wells as indicated by bold font well ID)							
ITMW-1/ITMW-1R	Southern	10/27/11	10/20/21	21	Stable	No Trend	<PQL
ITMW-2/ITMW-2R	Southern	11/03/10	10/19/21	22	<PQL	<PQL	ND
ITMW-5	Southern	04/27/09	10/21/21	20	Increasing	Stable	Increasing
ITMW-7	Southern	04/27/09	10/20/21	30	Decreasing	Decreasing	No Trend
ITMW-9	Southern	04/27/09	10/21/21	28	Increasing	Stable	No Trend
ITMW-10	Southern	04/27/09	10/21/21	27	Increasing	Decreasing	Decreasing
ITMW-16	Southern	11/06/10	10/19/21	22	Decreasing	<PQL	ND
ITMW-18	Southern	04/27/09	10/21/21	26	Decreasing	Decreasing	<PQL
ITMW-19	Southern	04/27/09	10/21/21	26	Decreasing	Decreasing	<PQL
ITMW-20	Southern	10/29/09	10/19/21	29	No Trend	ND	<PQL
ITMW-21	Southern	10/27/09	10/20/21	29	Decreasing	<PQL	ND
MW-22	Southern	10/27/09	10/20/21	23	<PQL	ND	ND
MW-24	Southern	04/27/09	10/21/21	26	Decreasing	Decreasing	<PQL
MW-25/MW-25R	Southern	04/27/09	10/22/21	30	Decreasing	No Trend	No Trend
MW-26	Southern	10/29/09	10/19/21	29	No Trend	ND	ND
MW-29	Southern	10/29/09	10/19/21	27	<PQL	<PQL	ND
MW-38	Southern	10/26/11	10/21/21	25	Stable	Decreasing	Decreasing
MW-85/MW-85R	Southern	05/29/14	10/08/20	12	No Trend	Stable	No Trend
MW-93	Southern	10/22/14	10/21/21	18	Decreasing	Decreasing	Decreasing
MW-95	Southern	10/22/14	10/21/21	19	Stable	Increasing	Decreasing
MW-182	Southern	07/23/15	10/21/21	13	Decreasing	Decreasing	<PQL
MW-185	Southern	09/16/15	10/21/21	16	Increasing	Increasing	<PQL
MW-186	Southern	09/14/15	10/19/21	18	Stable	Stable	Increasing
MW-187	Southern	09/14/15	10/19/21	15	Increasing	Increasing	ND
MW-188	Southern	09/17/15	10/19/21	15	Increasing	Increasing	ND
MW-189	Southern	09/17/15	10/21/21	15	Increasing	Stable	<PQL
MW-190	Southern	09/14/15	10/21/21	15	Increasing	Increasing	<PQL
MW-191	Southern	09/15/15	10/18/21	15	<PQL	ND	ND
MW-192	Southern	09/16/15	10/20/21	15	<PQL	ND	ND
Northeast Plume Wells							
MW-87	Northeast	06/25/14	10/21/21	15	Decreasing	Decreasing	<PQL
MW-89	Northeast	06/24/14	10/20/21	14	Decreasing	<PQL	ND
MW-91	Northeast	06/25/14	10/21/21	19	Stable	Increasing	<PQL
MW-96	Northeast	10/22/14	10/19/21	18	<PQL	ND	ND
MW-97	Northeast	10/22/14	10/19/21	18	ND	<PQL	ND
MW-98	Northeast	10/29/14	10/18/21	18	<PQL	<PQL	ND
MW-99	Northeast	10/22/14	10/19/21	17	Increasing	Increasing	ND
MW-183/MW-183R	Northeast	10/06/15	10/19/21	14	Decreasing	<PQL	ND
MW-184	Northeast	10/05/15	10/19/21	14	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 above method detection limit but below reporting limit or mixture of estimated and non-detect results
Bolded text = source area well

Figures

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx\2021 Annual All Monitoring Well Locations



RAMBOLL

DRAFTED BY: DFM

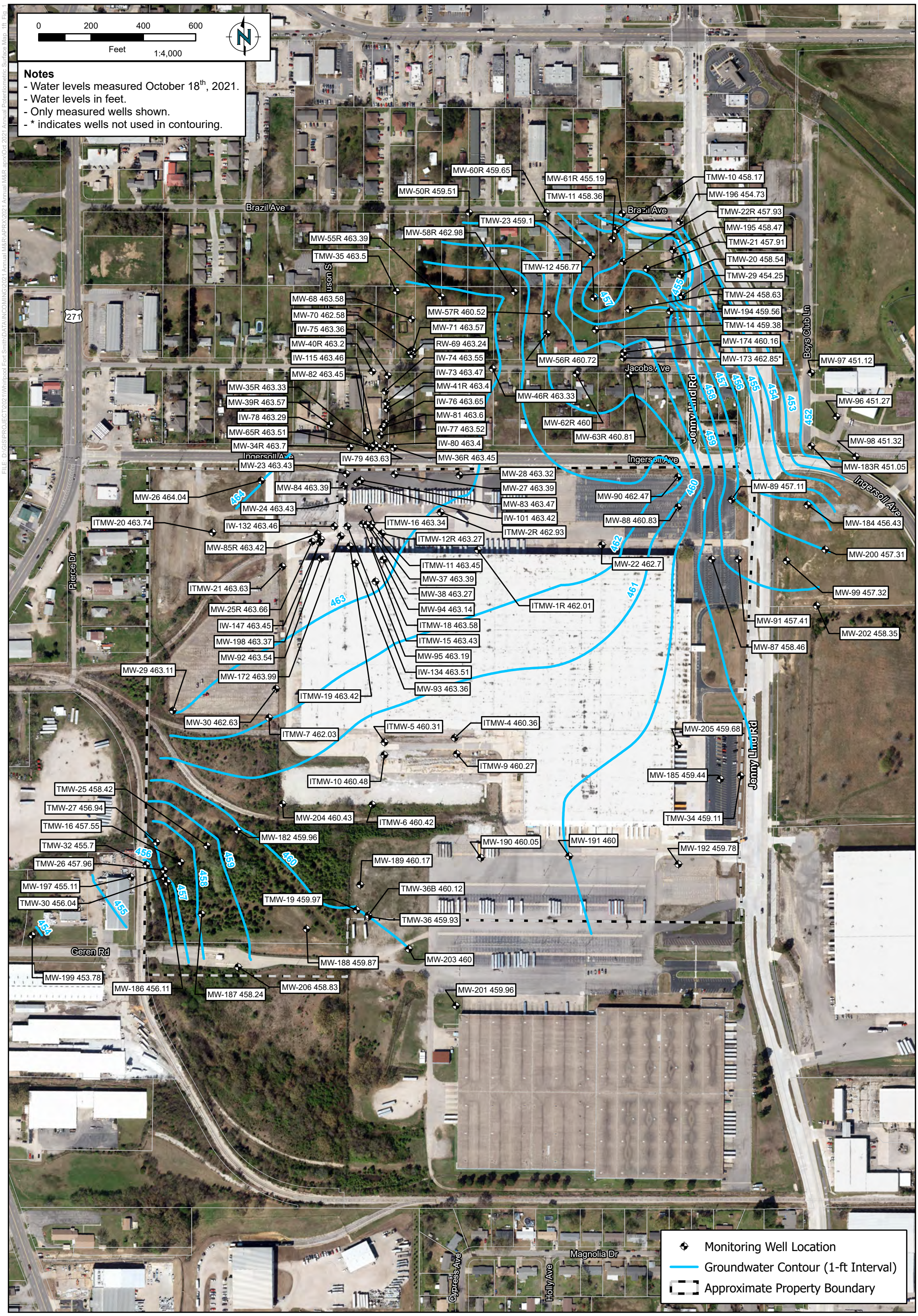
DATE: 12/14/2021

2021 MONITORING WELL LOCATIONS

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

PROJECT: 1690016820



RAMBOLL

2021 ANNUAL SAMPLING POTENTIOMETRIC SURFACE

Whirlpool Facility - Fort Smith, Arkansas

Figure 2A

DRAFTED BY: DFM | DATE: 12/02/2021 | PROJECT: 1690021278

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx\Oct 2021 Annual Potentiometric Surface Map_1ft_Fig_1

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx

RAMBOLL

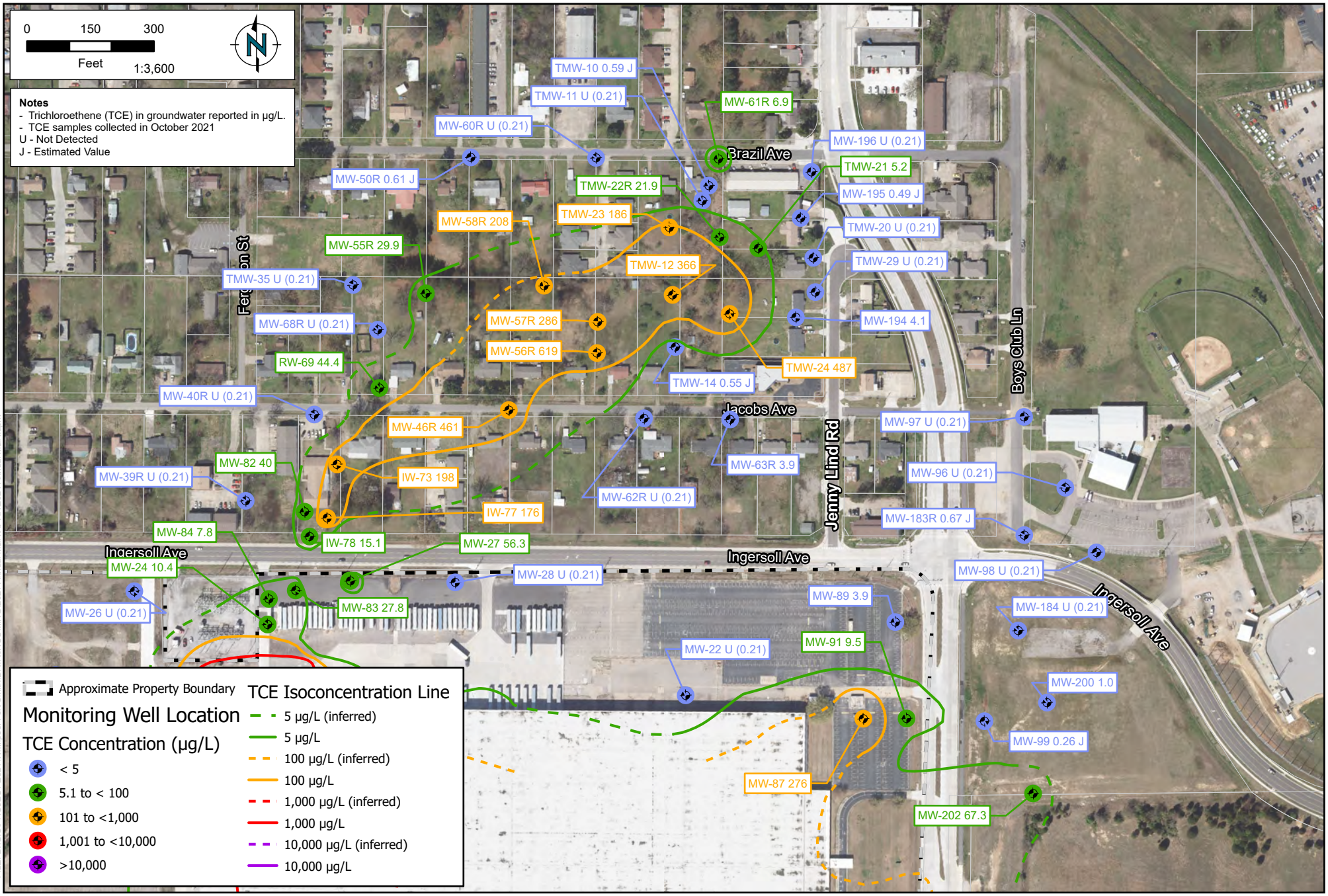
DRAFTED BY: DFM | DATE: 12/22/2021

VERTICAL GROUNDWATER GRADIENTS OBSERVED IN NESTED WELLS
OCTOBER 2021

Whirlpool Facility - Fort Smith, Arkansas

Figure 2B

PROJECT: 1690016820



RAMBOLL

DRAFTED BY: DFM | DATE: 01/13/2022

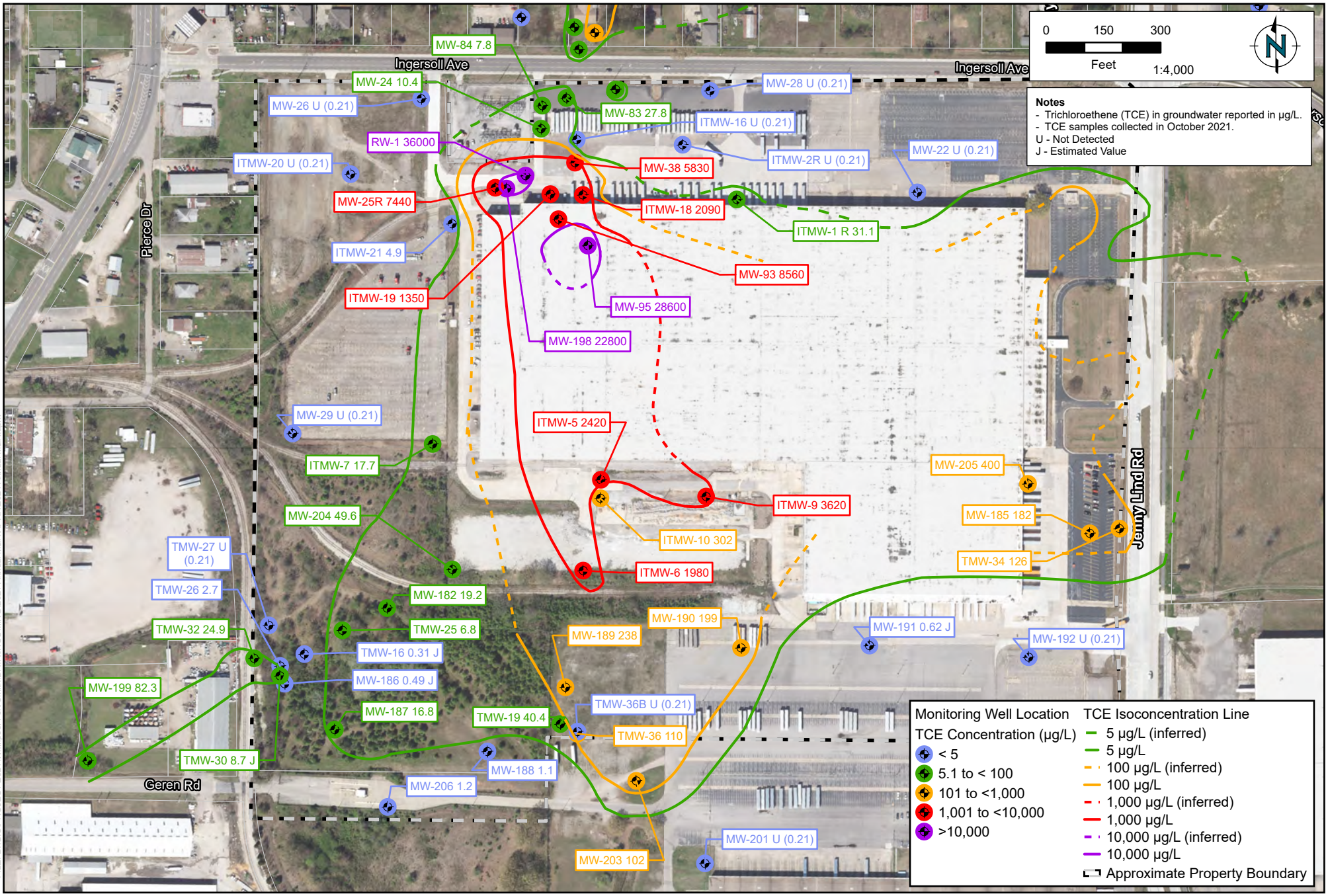
2021 ANNUAL TCE ISOCONCENTRATION MAP NORTH AND NORTHEAST PLUMES

Whirlpool Facility - Fort Smith, Arkansas

Figure 3A

PROJECT: 1690012820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx



RAMBOLL

DRAFTED BY: DFM | DATE: 01/03/2022

2021 ANNUAL TCE ISOCONCENTRATION MAP SOUTHERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 3B

PROJECT: 1690012820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Investigation\APRX\WP_2021_Investigation.aprx

RAMBOLL

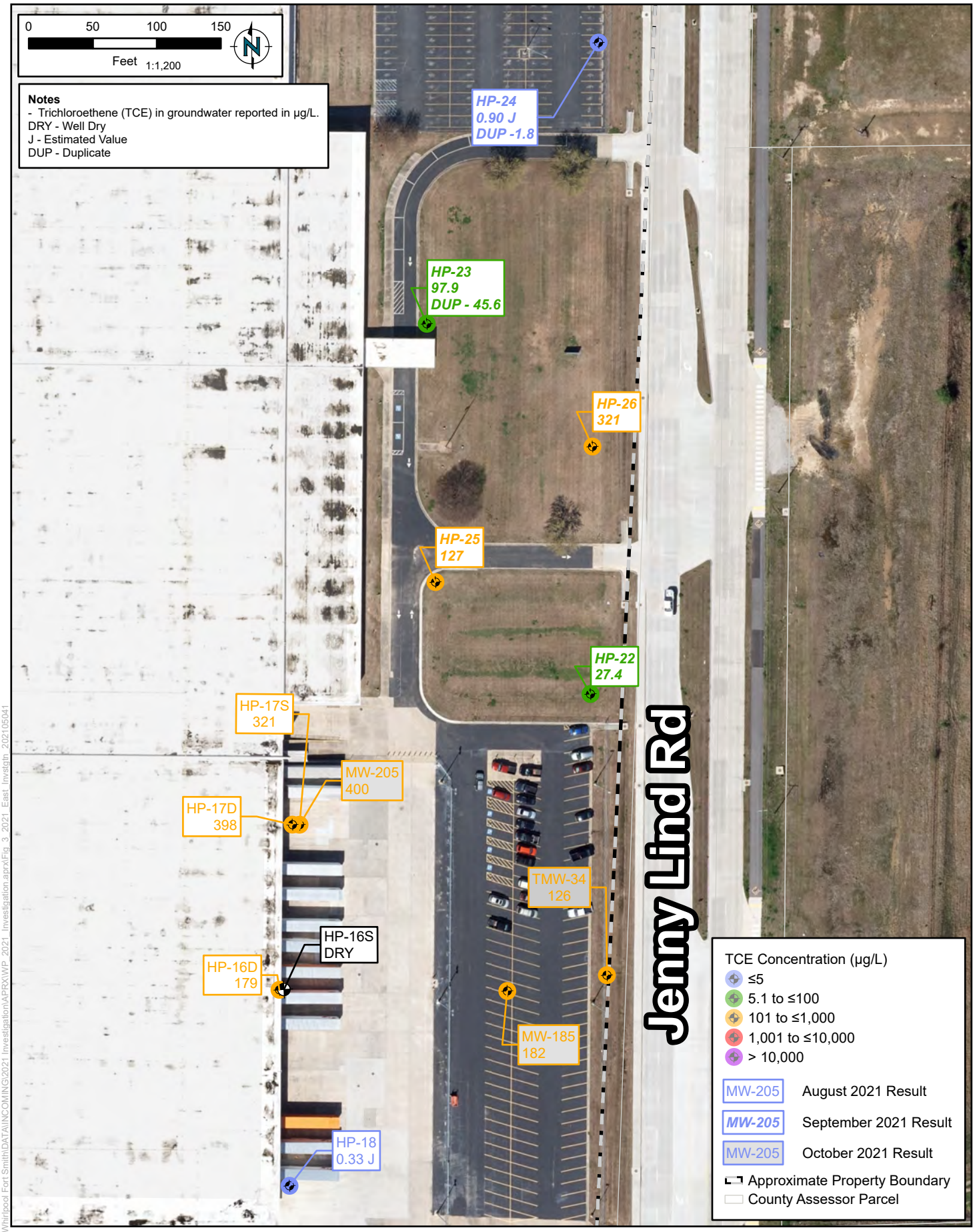
DRAFTED BY: DM | DATE: 12/22/2021

SOUTH PLUME INVESTIGATION - TCE CONCENTRATION MAP

Whirlpool Facility - Fort Smith, Arkansas

Figure
4

PROJECT: 1690017901



RAMBOLL

DRAFTED BY: DFM | DATE: 12/22/2021

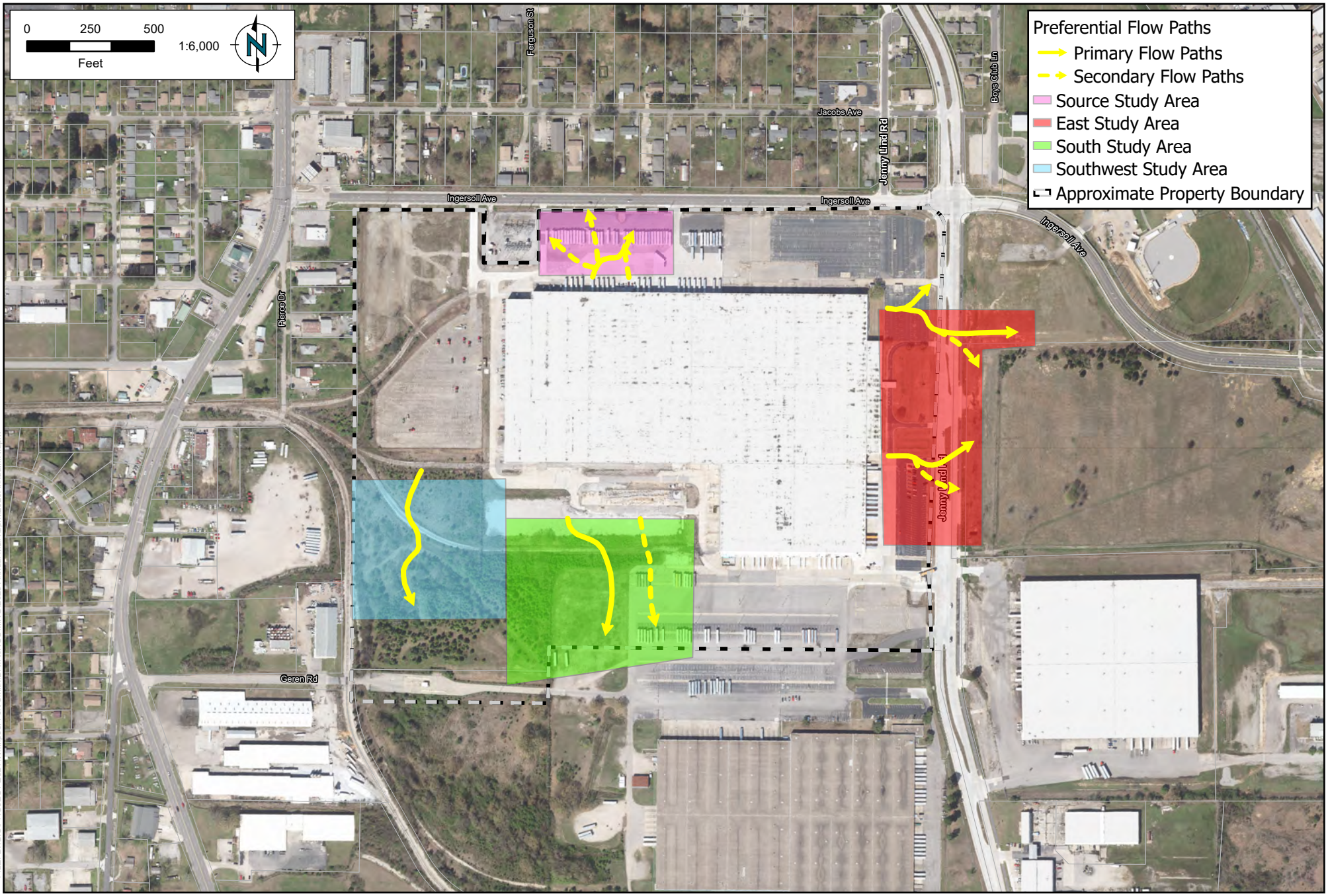
EAST PLUME INVESTIGATION
TCE CONCENTRATION MAP

Whirlpool Facility - Fort Smith, Arkansas

Figure 5

PROJECT: 1690016820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Investigation\APRX\WP_2021_Investigation.aprx\Fig_3_2021_East_Investgtn_20211504



RAMBOLL

DRAFTED BY: DFM | DATE: 01/12/2022

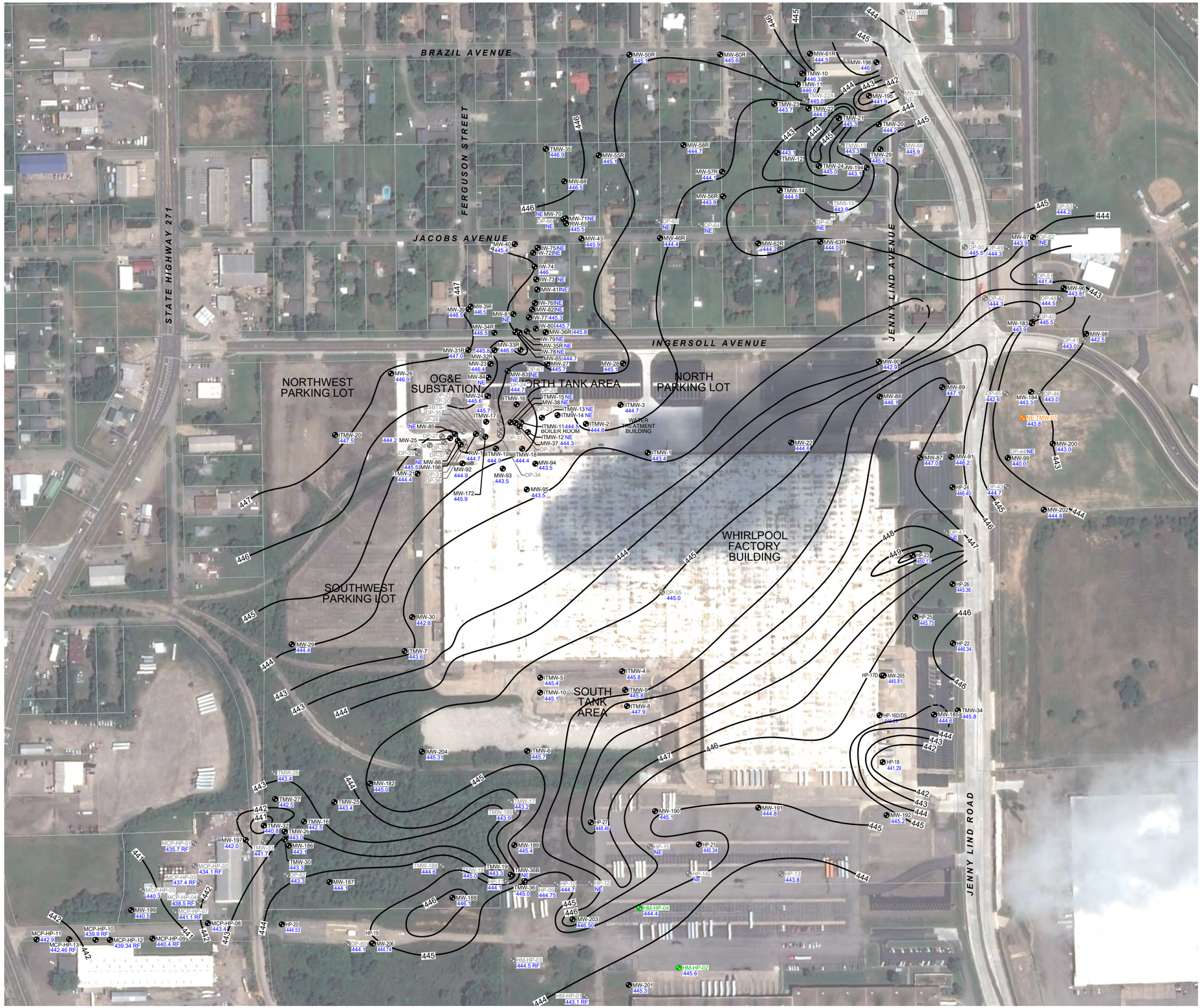
WILLOWSTICK GEOPHYSICAL SURVEY AREAS AND FLOW PATHS

Whirlpool Facility - Fort Smith, Arkansas

Figure 6

PROJECT: 1690012820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2020 Annual M&R\aprx\2020AnnualMR.aprx



AERIAL PHOTOGRAPH OBTAINED FROM AIRBUS IMAGERY DATED 7/31/2019.

LEGEND

- MONITORING WELL
- SOIL BORING
- TEMPORARY MONITORING WELL
- ABANDONED MONITORING WELL AND HYDROPUNCH
- 444 — TOP OF SHALE CONTOUR (1 FT INTERVAL)
- 443.8 — TOP OF SHALE (ELEVATION ABOVE MEAN SEA LEVEL FT)
- NE — NOT ENCOUNTERED
- RF — REFUSAL

0 320
SCALE IN FEET

TOP OF COMPETENT SHALE

WHIRLPOOL FACILITY
FORT SMITH, ARKANSAS

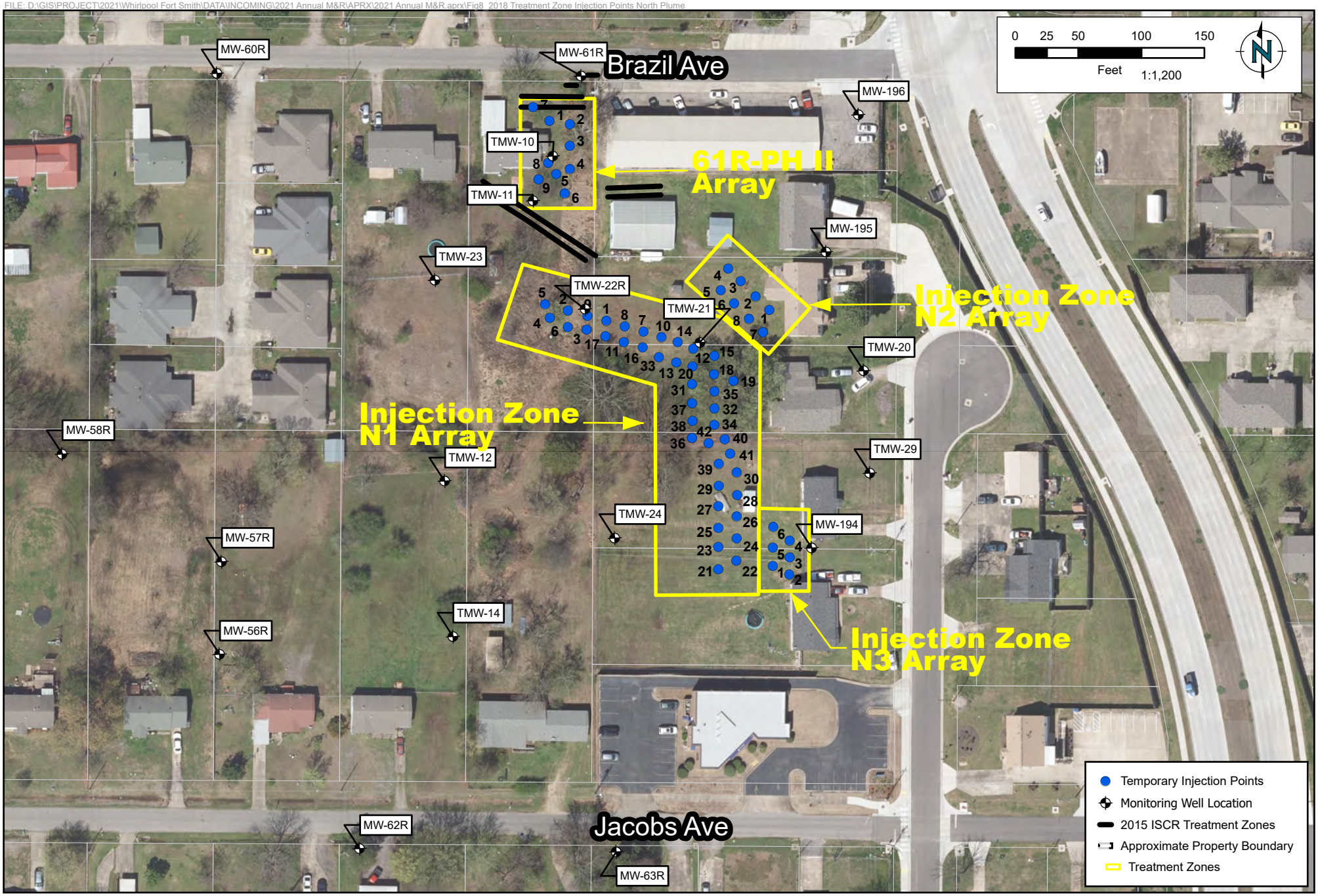
RAMBOLL

FIGURE 7

DRAFTED BY: CKL | DATE: 1/10/2022 | 1690023020

L:\Loop Project Files_CAD\1690023020_Whirlpool_Ft_Smith_2021_Tsk_1-Work_Plans\2-4_Top of Competent Shale (2021-10).dwg

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx\Fig8_2018 Treatment Zone Injection Points North Plume



RAMBOLL

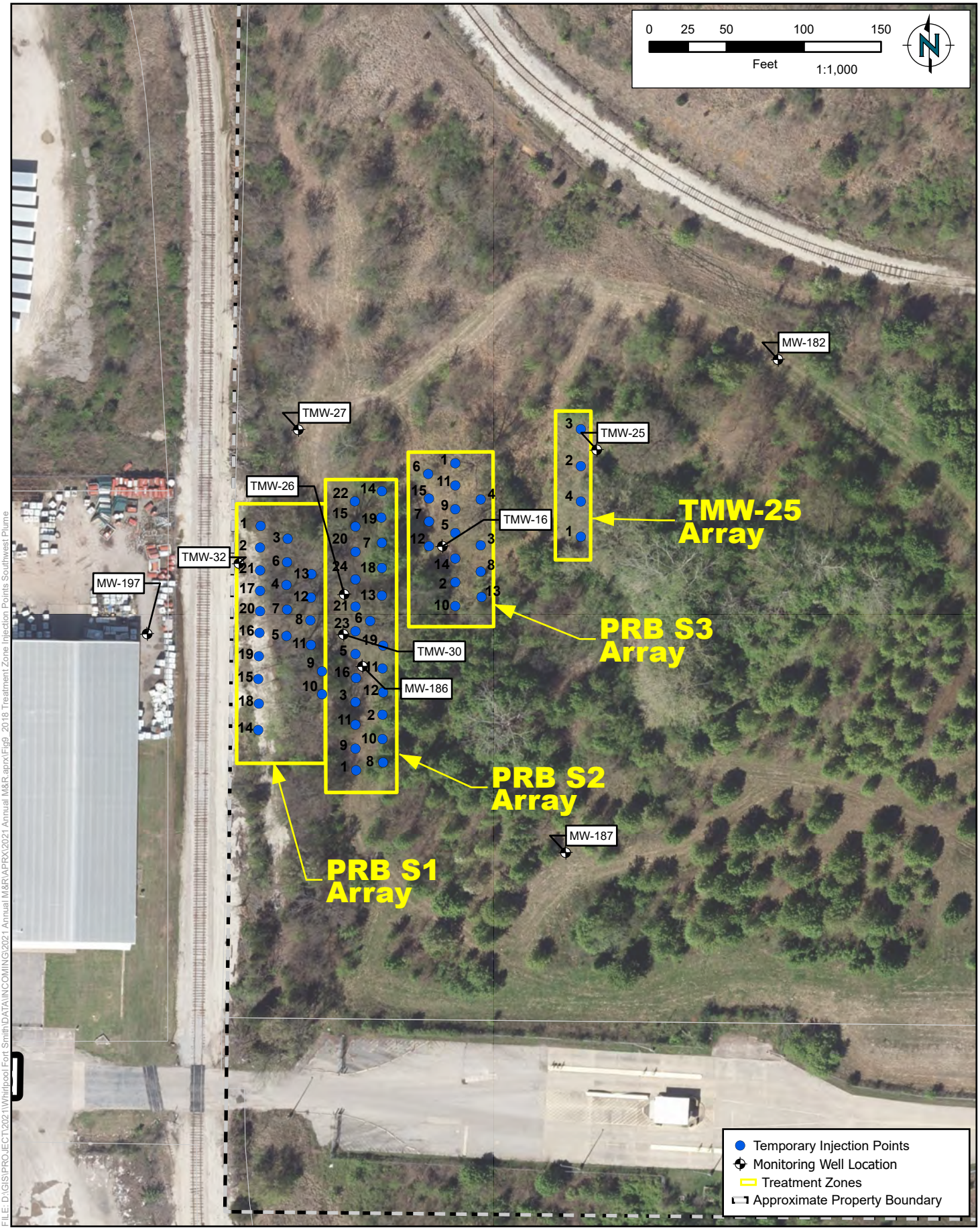
DRAFTED BY: DFM | DATE: 01/17/2022

2018 TREATMENT ZONE INJECTION POINTS
NORTH PLUME

Former Whirlpool Facility - Fort Smith, Arkansas

Figure 8

PROJECT: 1690016820



FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx\Fig9_2018 Treatment Zone Injection Points Southwest Plume

RAMBOLL

DRAFTED BY: DFM | DATE: 01/17/2022

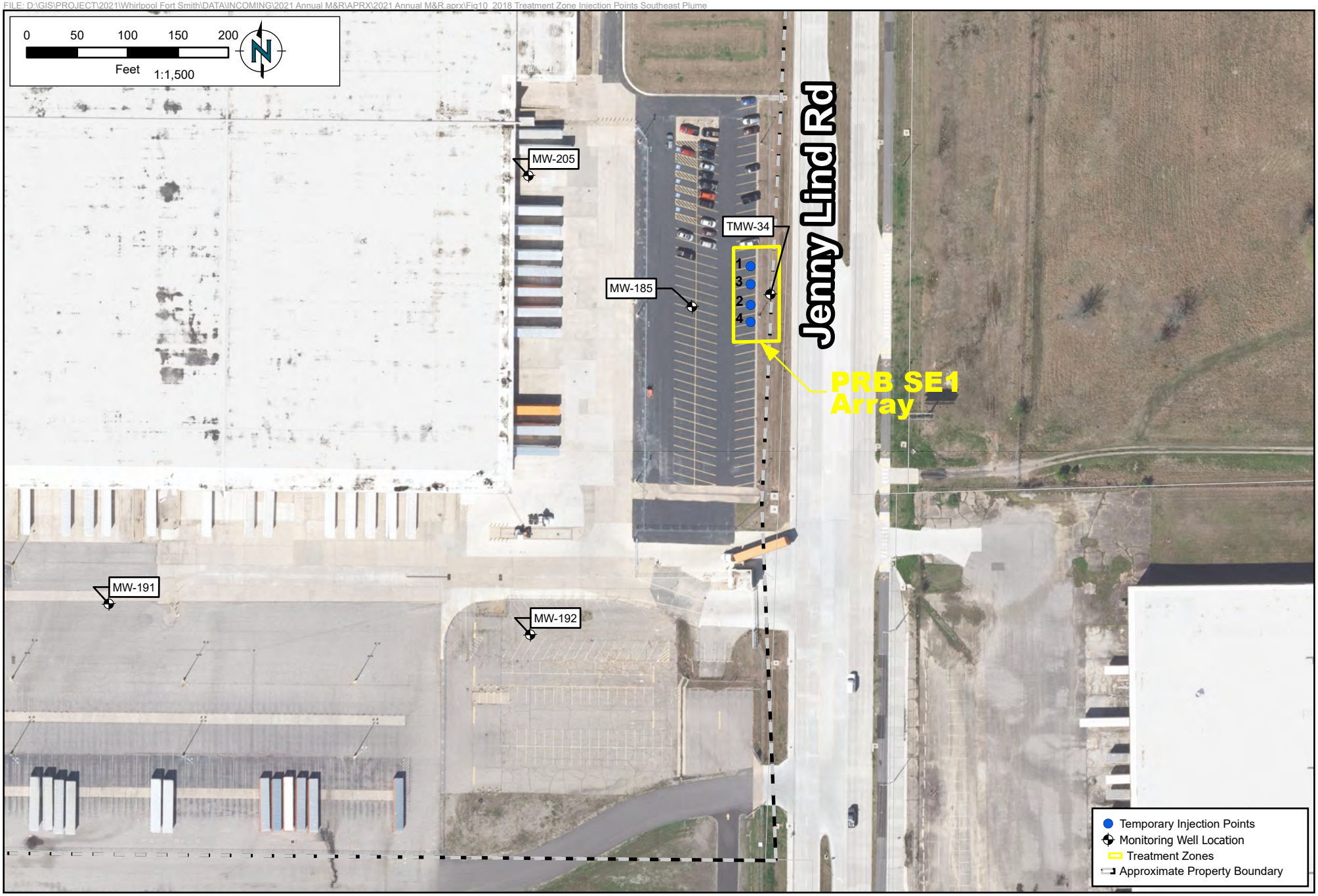
2018 TREATMENT ZONE INJECTION POINTS SOUTHWEST PLUME

Former Whirlpool Facility - Fort Smith, Arkansas

Figure 9

PROJECT: 1690016820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx\Fig10_2018 Treatment Zone Injection Points Southeast Plume



RAMBOLL

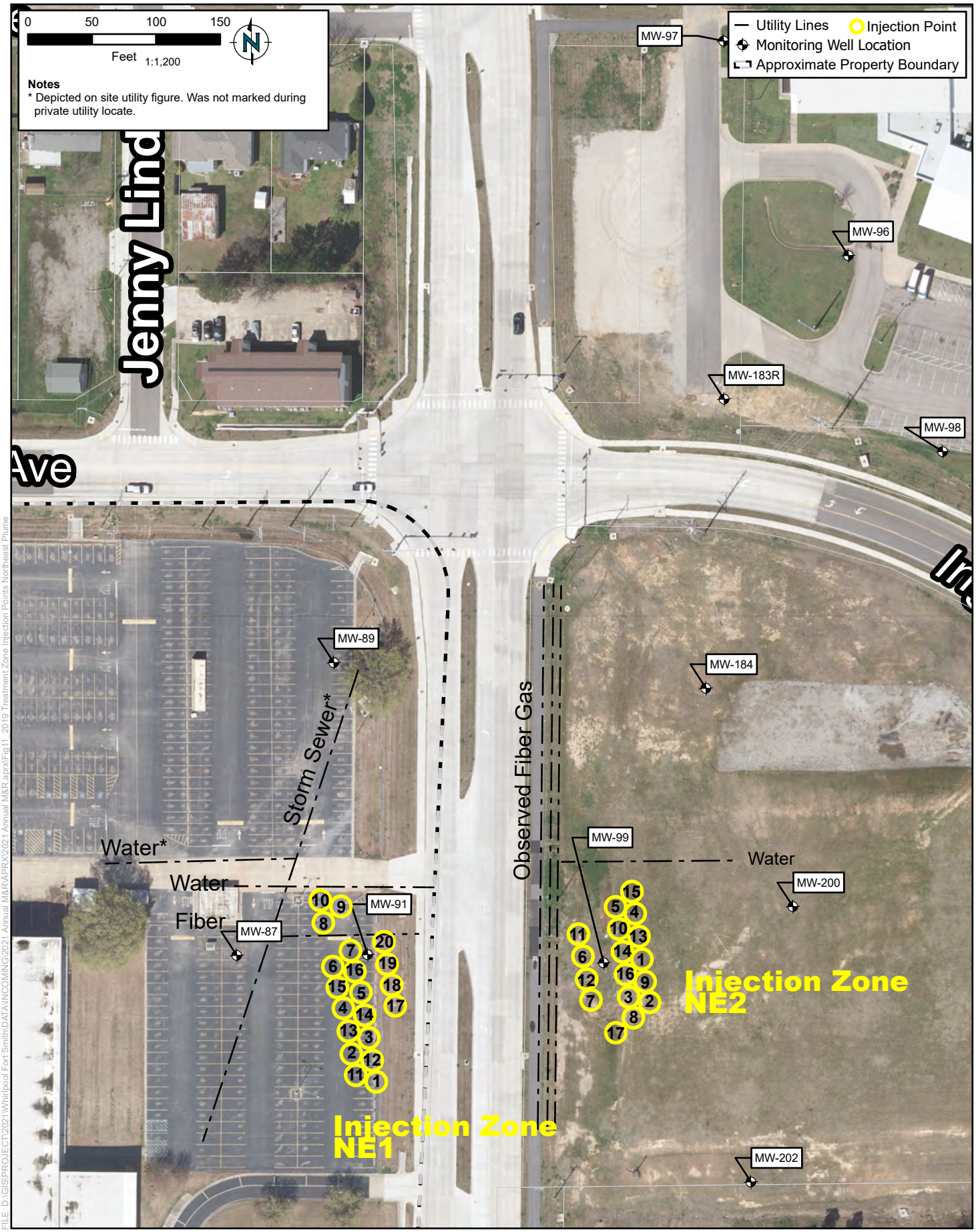
DRAFTED BY: DFM | DATE: 01/17/2022

2018 TREATMENT ZONE INJECTION POINTS
SOUTHEAST PLUME

Former Whirlpool Facility - Fort Smith, Arkansas

Figure 10

PROJECT: 1690016820



RAMBOLL

DRAFTED BY: DFM | DATE: 01/17/2022

2019 TREATMENT ZONE INJECTION POINTS NORTHEAST PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 11

PROJECT: 1690016820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx\Fig12_2020 Treatment Zone Injection Points South Plume

RAMBOLL

DRAFTED BY: DFM | DATE: 01/17/2022

2020 TREATMENT ZONE INJECTION POINTS
SOUTH PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 12

PROJECT: 1690012820

Attachment A

Calibration Logs

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CAU

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 0GK987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 1GH743 **Exp:** 8/31/23
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 #** 0GK138 **Exp:** 11/30/22
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 #** 0GJ821 **Exp:** 10/31/22
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: 1453 + 10min = 1503
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: FA03038

1. Specific Conductance: 7.04 mS/cm
2. ORP: 226.6 mV
3. pH:
   - Point 1: 3.96
   - Point 2: 6.99
   - Point 3: 10.00
4. DO: 106.1%

Turbidity Meter Model/Serial Number: FA01059

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/19/2021

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 #:** 06K983 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 16H743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 0730 + 10min = 0740
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.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.371 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: FA03788

1. Specific Conductance: 7.07 mS/m
2. ORP: 267.6 → 241.4 (267.6 mV = raw value; 241.4 mV is temp adjusted final cal value)
3. pH:
   - Point 1: 7.01 → 7.00
   - Point 2: 4.12 → 4.00
   - Point 3: 10.16 → 10.00
4. DO: 103.2% → 100%

Turbidity Meter Model/Serial Number: LaMotte 2020 We; FA03027

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/20/2021

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 #:** OGK 987 **Exp:** 11/30/21

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 #:** Item No 061320 21J00221 **Exp:** 09/16/2026

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 #** 1GW743 **Exp:** 8/31/23
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 #** OGK 138 **Exp:** 11/30/22
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 #** OGJ 821 **Exp:** 10/31/22
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: 0708 + 10min = 0718
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.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.371 mmHg (same pressure as yesterday)
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: FA03788

1. Specific Conductance: ~~7000~~ NJM 7000 → 7000 µS/cm
2. ORP: 235.4mV → 238.4mV
3. pH:
   - Point 1: 6.99 → 7.00
   - Point 2: 4.11 → 4.00
   - Point 3: 10.05 → 10.00
4. DO: Lamotte 2020WE; FA03027 DO: 97.1% → 100%

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/21/2021

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 #:** 0GK987 **Exp:** 11/30/21

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 #:** 21J00221 **Exp:** 9/16/2026

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 #** 6H743 **Exp:** 8/31/21
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 #** 0GK138 **Exp:** 11/30/22
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 #** 0GT821 **Exp:** 10/31/22
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: 0705 + 10min = 0715
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.16 in. x 25.4 = 766.064 mmHg - 15.169 = 750.895 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: FA037888

1. Specific Conductance: 6879 uS/cm → 7,000 uS/cm
2. ORP: 236.9 → 236.7 mVs
3. pH:
   - Point 1: 6.87 → 7.00
   - Point 2: 4.05 → 4.00
   - Point 3: 10.06 → 10.00
4. DO: 96.8% → 100%

Turbidity Meter Model/Serial Number: LaMotte 2020we: FA030277

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CAC

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** OGK987 **Exp:** 11/30/21

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 #:** 1658 **Exp:** 7/2026

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 #** 1GH743 **Exp:** 8/31/23
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 #** OGK138 **Exp:** 11/30/22
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 #** OGJ821 **Exp:** 10/31/22
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: 1352 + 10min = 1402
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: 1

YSI – Serial Number: FA017163

1. Specific Conductance: 7.01 mS/cm
2. ORP: 233.7 mV
3. pH:
   - Point 1: 3.99
   - Point 2: 6.85
   - Point 3: 10.04
4. DO: 99.5%

Turbidity Meter Model/Serial Number: FA00439

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/19/21

Calibrated by: MBS

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 16H743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 0739 + 10min = 0749
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.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.371 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: FA01763

1. Specific Conductance: 6.518 mS/cm
2. ORP: 264.5 mV
3. pH:
   - Point 1: 7.06
   - Point 2: 4.10
   - Point 3: 9.96
4. DO: ~~104.2%~~ 97.5%

Turbidity Meter Model/Serial Number: FA 00439

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/20/21

Calibrated by: MS

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** OGK987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 164743 **Exp:** 8/31/23
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 #** OGK138 **Exp:** 11/30/22
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 #** 061821 **Exp:** 10/31/22
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0725 + 10min = 0735
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.09 in. x 25.4 = 764.286 mmHg - 15.169 = 749.117 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: FA01763

1. Specific Conductance: 6.967 ms/cm
2. ORP: 245.7
3. pH:
   - Point 1: 6.97
   - Point 2: 4.08
   - Point 3: 9.52
4. DO: 98.7%

Turbidity Meter Model/Serial Number: FA00439

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CAV

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K187 **Exp:** 11/30/21

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 #:** 0658 **Exp:** 7/2026

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 #** 16H743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 1420 + 10min = 1430
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: 1

YSI – Serial Number: FA03039

1. Specific Conductance: 6.93 mS/cm
2. ORP: 233.7 mV
3. pH:
   - Point 1: 4.04
   - Point 2: 6.96
   - Point 3: 10.06
4. DO: 101.9%

Turbidity Meter Model/Serial Number: FA02903

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/19/21

Calibrated by: CAV

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 06K987 **Exp:** 11/30/21
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 934 + 10min = 944
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.)
   30.12 in. x 25.4 = 765.048 mmHg - 15.169 = 749.879 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: FA03039

1. Specific Conductance: 6.93 mS/cm
2. ORP: 226.7 mV
3. pH:
   - Point 1: 4.03
   - Point 2: 7.01
   - Point 3: 10.04
4. DO: 100.9%

Turbidity Meter Model/Serial Number: FA02903

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/21/21

Calibrated by: CAV

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 06658 **Exp:** 7/2026

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 #** 06K987 **Exp:** 11/30/21
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 713 + 10min = 723
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.16 in. x 25.4 = 766.064 mmHg - 15.169 = 750.895 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: FA01763

1. Specific Conductance: 6.93 mS/cm
2. ORP: 225.9 mV
3. pH:
   - Point 1: 4.10
   - Point 2: 6.97
   - Point 3: 9.98
4. DO: ~~102.30~~ 101.3%

Turbidity Meter Model/Serial Number: FA02903

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/22/21

Calibrated by: CPU

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 66658 **Exp:** 7/2026

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 #** 06K987 **Exp:** 11/30/21
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 #** 06K138 **Exp:** 11/30/22
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 #** 06W821 **Exp:** 10/31/22
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: 704 + 10min = 714
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.556 mmHg - 15.169 = 750.387 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: FA01743

1. Specific Conductance: 6.98 mS/cm
2. ORP: 230.29
3. pH:
   - Point 1: 3.98
   - Point 2: 6.94
   - Point 3: 9.99
4. DO: FA02903

Turbidity Meter Model/Serial Number: 100.92

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CAV

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 161743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 1325 + 10min = 1335
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: FA01763

1. Specific Conductance: 6.09 mS/cm
2. ORP: 223.2mV
3. pH:
   - Point 1: 3.89
   - Point 2: 6.90
   - Point 3: 10.04
4. DO: 100.1%

Turbidity Meter Model/Serial Number: FA02135

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CAC

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 1GH743 **Exp:** 8/31/23
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 #** 0GK138 **Exp:** 11/30/22
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 #** 0GJ821 **Exp:** 10/31/22
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: 12:25 + 10min = 12:35
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: 1

YSI – Serial Number: ~~FA03788~~ FA02114

1. Specific Conductance: ~~1.11 mS/cm~~ 7.00 mS/cm
2. ORP: 227.0mV
3. pH:
   - Point 1: 3.97
   - Point 2: 6.91
   - Point 3: 9.96
4. DO: 98.7%

Turbidity Meter Model/Serial Number: ~~FA02135~~ FA03027

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-19-21

Calibrated by: R. Meyer

Same as yesterday

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

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

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 #:** — **Exp:** —

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 #** — **Exp:** —
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 #** — **Exp:** —
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 #** — **Exp:** —
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: 0723 + 10min = 0733
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.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.371 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: FA 62114

1. Specific Conductance: 7000 uS/cm
2. ORP: 228.10
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: 749.371

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-20-21

Calibrated by: D. Meyer

Same as yesterday

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

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

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 #:** _____ **Exp:** _____

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 #** _____ **Exp:** _____
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 #** _____ **Exp:** _____
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 #** _____ **Exp:** _____
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: _____ + 10min = _____
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.321 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:

1. Specific Conductance: 7000 uS/cm
2. ORP: 237.7
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: 749.321

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-21-21

Calibrated by: D. Meyer

Turn on YSI. Note time in DO section Line 1. Same as yesterday

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** ✓ **Exp:** —

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 #:** ✓ **Exp:** —

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 #** ✓ **Exp:** —
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 #** ✓ **Exp:** —
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 #** ✓ **Exp:** —
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0740 + 10min = 0750
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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:

1. Specific Conductance: 7000 uS/cm
2. ORP: 237.7
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: 751.149 mmHg

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-22-21

Calibrated by: D. Meyer

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

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

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 #:**_____ **Exp:** _____

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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0725 + 10min = 0735
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.656 mmHg - 15.169 = 750.387 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:

1. Specific Conductance: 7000 uS/cm
2. ORP: 2
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: 750.387

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10.19.2021

Calibrated by: Liz Bonucki

Note: Lot # and Exp # not associated with Serial No FA02656. Missing Cal Sheet from rental agency. (10.19.2021 AM)

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** ~~06K987~~ JB **Exp:** 11/30/21 JB

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 #:** ~~6658~~ JB **Exp:** ~~7/2026~~ JB

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 #** ~~IH743~~ JB **Exp:** 8/31/22 JB
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. JB
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** ~~06K138~~ JB **Exp:** ~~11/30/21~~ JB
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. JB
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** ~~06K821~~ JB **Exp:** ~~10/31/22~~ JB
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0733 + 10min = 0743
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.371 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: 2

YSI – Serial Number: FA02656

1. Specific Conductance: 6820
2. ORP: 262.4
3. pH:
   - Point 1: 6.94
   - Point 2: 4.12
   - Point 3: 10.10
4. DO: 106.6

Turbidity Meter Model/Serial Number: ~~FA02656~~ JB LaMotte FA03761

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Note: Lot # and Exp # not associated with Serial No. FA006056 (sheet found in YSI equipment box). from rental agency (10.20.2021 AM)

Date: 10.20.2021

Calibrated by: Liz Bonucki

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

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

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 #:**_____ **Exp:** _____

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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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: 0729 + 10min = 0739
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.09 in. x 25.4 = 764.286 mmHg - 15.169 = 749.117 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number:

1. Specific Conductance: 6821
2. ORP: 220.3
3. pH:
   - Point 1: 6.89
   - Point 2: 4.07
   - Point 3: 10.01
4. DO: 96.2%

Turbidity Meter Model/Serial Number: LAMOTTE (S/N FA03761)

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Note: Lot# and Exp# not associated with Serial No. FA02656 (sheet found in YSI equipment box) from rental agency (10.21.2021 AM)

Date: 10.21.2021

Calibrated by: Liz Bonucki

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

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

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 #:**_____ **Exp:** _____

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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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: 0728 + 10min = 0738
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.16 in. x 25.4 = 766.064 mmHg - 15.169 = 750.895 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: FA02656

1. Specific Conductance: 6906
2. ORP: 222.4
3. pH:
   - Point 1: 6.88
   - Point 2: 4.06
   - Point 3: 10.05
4. DO: 98.0

Turbidity Meter Model/Serial Number: FA037601 (LaMotte)

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CRC

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 16H743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 1300 + 10min = 1310
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.)
   30.17 in. x 25.4 = 766.32 mmHg - 15.169 = 751.149 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: 1

YSI – Serial Number: FA04893

1. Specific Conductance: 4.48 ms/cm
2. ORP: 225.07 mV
3. pH:
   - Point 1: 3.99
   - Point 2: 7.03
   - Point 3: 10.01
4. DO: 92.7%

Turbidity Meter Model/Serial Number: FA03556

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/19/21

Calibrated by: Jackie Zellmer

same as yesterday

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

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

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 #:**_____ **Exp:** _____

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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0740 + 10min = 0750
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.10 in. x 25.4 = 764.54 mmHg - 15.169 = 749.371 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: same

1. Specific Conductance: 7.83 mS/cm
2. ORP: 237.7
3. pH:
   - Point 1: 7
   - Point 2: 4.03
   - Point 3: 10
4. DO: 749.371

Turbidity Meter Model/Serial Number: same

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-20-21

Calibrated by: Jackie Fellmer

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

same

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

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 #:** _____ **Exp:** _____

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 #** _____ **Exp:** _____
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 #** _____ **Exp:** _____
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 #** _____ **Exp:** _____
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0725 + 10min = 0735
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.09 in. x 25.4 = 764.286 mmHg - 15.169 = 749.117 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: same

1. Specific Conductance: 7 mS/cm
2. ORP: 237.7
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: 749.117

Turbidity Meter Model/Serial Number: same

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-21-21

Calibrated by: Jackie Zellmer

same

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

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

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 #:**_____ **Exp:** _____

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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0725 + 10min = 0735
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: same

1. Specific Conductance: 7 mS/cm
2. ORP: 237.7
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: ~~same~~ 751.1

Turbidity Meter Model/Serial Number: same

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10-22-21

Calibrated by: Jackie Zellmer

same

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

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

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 #:**_____ **Exp:** _____

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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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 #** _____ **Exp:**_____
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: 0724 + 10min = 0734
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.15 in. x 25.4 = 765.81 mmHg - 15.169 = 760.641 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: same

1. Specific Conductance: 7 mS/cm
2. ORP: 237.4
3. pH:
   - Point 1: 7
   - Point 2: 4
   - Point 3: 10
4. DO: 760.6

Turbidity Meter Model/Serial Number: same

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/18/21

Calibrated by: CAV

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 6658 **Exp:** 7/2026

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 #** 16H743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 06J821 **Exp:** 10/31/22
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: 1418 + 10min = 1428
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: FA03192

1. Specific Conductance: 6.94 mS/cm
2. ORP: 229.8 mV
3. pH:
   - Point 1: 3.98
   - Point 2: 6.97
   - Point 3: 10.00
4. DO: 103.8%

Turbidity Meter Model/Serial Number: FA00757

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/22/21

Calibrated by: CP

Same as yesterday

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

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

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 #:** " **Exp:** "

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 #** " **Exp:** "
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 #** " **Exp:** "
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 #** " **Exp:** "
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: 0730 + 10min = 0740
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.556 mmHg - 15.169 = 750.387 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: FA03192 14.8 237.994

1. Specific Conductance: 10984
2. ORP: 237.994
3. pH:
   - Point 1: 7.05
   - Point 2: 4.32
   - Point 3: 9.92
4. DO: 101.2%

Turbidity Meter Model/Serial Number: FA60757

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/20/21

Calibrated by: [illegible]

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

Same as yesterday

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

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 #:** " **Exp:** "

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. 237.406
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 #** " **Exp:** "
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 #** " **Exp:** "
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 #** " **Exp:** "
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: 0739 + 10min = 0749
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.09 in. x 25.4 = 764.286 mmHg - 15.169 = 749.117 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

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

Field Notebook calibration entry:

YSI – Serial Number: FA03192

1. Specific Conductance: 7043
2. ORP: 236.9
3. pH:
   - Point 1: 7.04
   - Point 2: 4.29
   - Point 3: 9.98
4. DO: 103%

Turbidity Meter Model/Serial Number: FA

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/21/21

Calibrated by: Gabby Penaflor

Same as yesterday

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

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

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 #:** " **Exp:** " 232261

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.

223 + 1.47(25-T)

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 #** " **Exp:** "
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 #** " **Exp:** "
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 #** " **Exp:** "
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: 0730 + 10min = 0740
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.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: FA03192

1. Specific Conductance: 6982
2. ORP: 232.3
3. pH:
   - Point 1: 6.99
   - Point 2: 4.03
   - Point 3: 10.06
4. DO: 110.6%

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/21/21

Calibrated by: L.McQuaig

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 21J100221 **Exp:** 9/16/26

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 #** 164743 **Exp:** 8/31/23
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 #** 06K133 **Exp:** 11/30/20
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 #** 06J821 **Exp:** 10/31/27
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0720 + 10min = 0730
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.17 in. x 25.4 = 766.318 mmHg - 15.169 = 751.149 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: 18K100534

1. Specific Conductance: 7043
2. ORP: 244.0
3. pH:
   - Point 1: 7.16
   - Point 2: 4.13
   - Point 3: 10.12
4. DO:

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Field Equipment Calibration Checklist

Date: 10/22/21

Calibrated by: L. McQuaig

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 06K987 **Exp:** 11/30/21

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 #:** 215100221 **Exp:** 9/16/26

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 #** 16H743 **Exp:** 8/31/23
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 #** 06K138 **Exp:** 11/30/22
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 #** 065821 **Exp:** 10/31/22
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

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

1. Ensure unit has been on for at least 10 minutes: Initial time: 0720 + 10min = 0730
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.556 mmHg - 15.169 = 750.387 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:

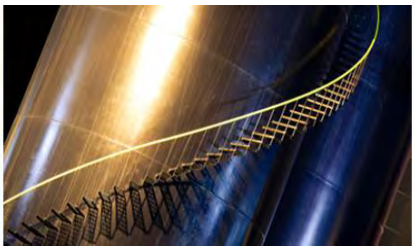
1. Specific Conductance: 6.83 mS/cm
2. ORP: 238.3
3. pH:
   - Point 1: 6.42
   - Point 2: 4.02
   - Point 3: 10.03
4. DO: 101.1%

Turbidity Meter Model/Serial Number:

RAMBOLL ENVIRON

Attachment B

2021 Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report



ATTACHMENT B

2021 Soil Vapor Monitoring and Vapor Intrusion Assessment Report

Whirlpool Corporation
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll US Corporation

Date:
February 2022

RAMBOLL

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1 Introduction

Ramboll US Consulting, Inc. (Ramboll) has prepared this Annual 2021 Soil Vapor Monitoring and Vapor Intrusion Assessment Report for the Fort Smith, Arkansas, Site (Site) on behalf of Whirlpool Corporation (Whirlpoor), in accordance with the Revised Groundwater Monitoring Plan (RGWMP) approved by the Arkansas Department of Energy and Environment Department of Environmental Quality (ADEQ) in September 2016; the Remedial Action Decision Document (RADD) issued by ADEQ on December 27, 2013, and revised in November 2015 (Revised RADD); and ADEQ comment letters and Ramboll/Whirlpool responses to previous Soil Vapor Monitoring and Vapor Intrusion Assessment Reports. This report is Attachment B of the Annual 2021 Monitoring Report for the Site.

Whirlpool has been monitoring groundwater at the Site since 1989. In 2012, the potential for vapor intrusion from groundwater into residential buildings in the neighborhood north of the Site and the onsite building were 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 the monitoring data collected after the 2013 risk assessment (Ramboll Environ 2016b). The use of multiple lines of evidence in these risk assessments is consistent USEPA's recommendations in its 2015 vapor intrusion guidance documents (USEPA 2015a and 2015b).

Monitoring data collected during the 2021 annual sampling event from groundwater monitoring wells and vapor monitoring points are evaluated in this report for residential buildings in the neighborhood north of the Site, using the methods and assumptions described in the 2013 and 2016 risk assessment reports.

Monitoring data to assess potential for vapor intrusion for the onsite building was assessed in April and November 2015. The onsite building has been renovated by the current owner Phoenix Investors LLC (Phoenix) to facilitate future use for warehousing purposes. The building renovation included removal of equipment, filling of former pits, interior painting and subdividing the interior of the building. Since completion of renovations, vapor intrusion sampling has occurred onsite during several sampling events as described below.

- In April 2019, indoor air and subslab soil gas data were collected to assess indoor air quality and the degree to which a vapor intrusion pathway exists (if at all). An evaluation of this data was presented in a separate report (Ramboll 2019a).
- In July 2020 and October 2020, indoor air and subslab soil gas data were collected. An evaluation of this data was presented in the Onsite Indoor Air and Sub-Slab Vapor Monitoring Report (Ramboll 2021a).
- In April and October 2021, indoor air and subslab soil gas data were collected. An evaluation of this data will be presented in the Onsite Indoor Air and Sub-Slab Vapor Monitoring Report (Ramboll 2021c and Ramboll 2021d).

Groundwater, soil vapor, crawl space air and indoor air have been monitored since 2014 to assess the potential for vapor intrusion in the neighborhood north of the Site and the onsite building, as documented in the following reports:

- Four quarterly monitoring events in 2014 consisting of:
  - First Quarter 2014 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, May 15, 2014;
  - Second Quarter 2014 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, August 15, 2014;
  - Third Quarter 2014 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, November 14, 2014; and
  - Fourth Quarter 2014 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, February 13, 2015.
- 2014 Remedial Action Effectiveness Report, January 2015.
- Four quarterly monitoring events in 2015 consisting of:
  - First Quarter 2015 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, May 8, 2015;
  - Second Quarter 2015 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, August 13, 2015 (including outdoor, crawl space and indoor air samples from Parcel 3 on April 22 and 23, 2015);
  - Third Quarter 2015 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, November 13, 2015; and
  - Fourth Quarter 2015 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, January 12, 2016 (including outdoor, crawl space and indoor air samples from Parcel 3 on November 5, 2015).
- 2015 Two Year Technical Review Report, January 28, 2016.
- Human Health Risk Assessment Update, January 29, 2016.
- Two quarters of monitoring events in 2016 consisting of:
  - First Quarter 2016 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, May 12, 2016; and
  - Second Quarter 2016 Quarterly Soil Vapor Monitoring/Vapor Intrusion Report, August 15, 2016.
- Onsite Indoor Air and Sub-Slab Soil Vapor Data Report, April 27, 2016.
- Onsite Indoor Air and Sub-Slab Soil Vapor Data Report, Second Monitoring Event, August 26, 2016.
- Annual 2016 Soil Vapor Monitoring and Vapor Intrusion Assessment Report, February 2, 2017.

- 2017 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, July 2017.
- Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report, January 5, 2018.
- 2018 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, July 2018.
- 2018 Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, January 2019.
- Onsite Indoor Air and Sub-Slab Soil Vapor Data Report, June, 2019.
- 2019 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, June 2019.
- 2019 Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, December 2019.
- 2020 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, July 2020.
- 2020 Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, February 2021.
- 2021 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report, July 2021.

2 Vapor Intrusion Assessment Sampling

The most recent samples for vapor intrusion assessment were collected on October 19-21, 2021, in accordance with the Revised Groundwater Monitoring Plan, section "Shallow Groundwater Monitoring for Vapor Intrusion Assessment" and Table 1 (Ramboll Environ 2016g). 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 at 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 these soil vapor monitoring points. A sample was not able to be collected at VP-7 as discussed in the main text of this report. 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 (2016g), data from this location are evaluated in this assessment.

Perched water filled the vapor monitoring points VP-8, VP-9, VP-10, VP-12 and VP-14 and the water from these monitoring points could not be purged from the sampling train and therefore prevented the collection of the vapor samples. Water samples were collected from each of these vapor points, per the sampling modifications discussed in the Second Quarter 2014 Soil Vapor Monitoring/Vapor Intrusion Report except for VP-9. As discussed in Section 2.3 of the main text of this report, neither an air sample nor a water sample was able to be retrieved from location VP-9. Table 1a summarizes the matrices encountered at the vapor monitoring points at each Parcel and the types of samples that were collected during the semi-annual sampling event, as well as the sampling events since 2014. Table 1a also shows that indoor air, crawl space and outdoor air data were collected in April and October 2015 at Parcel 3 to provide additional lines of evidence for supporting the vapor intrusion assessment.

Table 1b summarizes the groundwater monitoring wells and vapor monitoring points sampled in October 2021, 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 2016g). 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 2015f). 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); the sampling attempts on October 19-21 were not preceded by at least five consecutive days with less than 0.1 inch of rain. Precipitation data for October 2021 are provided in Appendix B.

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

The volatile organic compound (VOC) results for the groundwater, soil vapor and perched water samples collected during the 2021 annual sampling event are discussed in Section 3. The analytical data reports for the samples are provided in Appendix A.

3 Results

3.1 Summary of Prior Assessments

The data collected over the groundwater plume in the neighborhood prior to Q4 2020 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, crawl space air 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.

3.2 Current Assessment

Groundwater data from monitoring wells (which have identifiers beginning with “MW-”) in the neighborhood collected during the 2021 annual sampling event in October 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 from soil vapor points sampled during the 2021 annual sampling event are included in Table 3.

The maximum detected groundwater concentrations among the monitoring wells in the neighborhood that were sampled in October 2021 are summarized in Table 4. These concentrations were used to calculate upper-bound risk estimates for potential vapor intrusion from groundwater into residences in the neighborhood, using the approach in Section 6.5.2 of the ADEQ-approved RRMP which was also used in the 2016 risk assessment. The calculation of and input parameters for these risk estimates are included as Appendix C. As shown in Table 4, the calculations resulted in upper-bound cumulative cancer risk and non-cancer hazard index (HI) estimates of 3×10^{-6} and 0.5, respectively. These risk estimates are below ADEQ’s risk management limits of 10^{-4} and 1, respectively, for reasonable maximum exposure (RME) risks (ADEQ 2005). The calculations for risk estimates discussed in this section are included in Appendix C. Toxicity values used in the risk calculations are current as of December 2021.

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 2021 per the Revised Groundwater Monitoring Plan. Perched water data from Parcel 4 are also evaluated, even though Parcel 4 was excluded from the vapor intrusion assessment (Ramboll Environ 2016g). The parcels within the neighborhood

are discussed in Section 3.2.1 and the parcel south of the neighborhood is discussed in Section 3.2.2.

3.2.1 Parcels in the Neighborhood

3.2.1.1 Parcel 2

At Parcel 2, vapor intrusion risks were estimated based on the groundwater data from MW-175 and the approach discussed above for groundwater. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater water at MW-175 are 3 x 10^{-7} and 0.007, respectively, which are within ADEQ's risk management limits for RME risks.

Upper-bound risk estimates were also calculated using the perched water data from 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 10.5 feet below ground surface (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-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 Parcel.

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 0.2, respectively, which are well within ADEQ's risk management limits for RME risks.

Vapor intrusion risks were also calculated based on the perched water data from VP-10, which is located adjacent to MW-176, as an additional line of evidence. The risk estimates were calculated using the approach discussed above for groundwater, except the depth to water was decreased to 11 feet bgs. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for water at VP-10 are 7 x 10^{-7} and 0.1, respectively, which are within ADEQ's risk management limits for RME risks.

In previous sampling events, soil vapor concentrations from VP-9 were used to calculated upper-bound risk estimates. However, no sample was collected from VP-9 during this sampling event. Since the concentrations at MW-176 and VP-10 have not drastically increased during this sampling event, risk estimates from these two locations are sufficient evidence that quantitative risks at this parcel within ADEQ's risk management targets. The following paragraphs in this section describe multiple lines of evidence collected during previous sampling rounds.

The highest TCE concentration at VP-9 was detected in 2015. In November 2015, TCE was detected at a concentration of 1,200 µg/m^3 in the vapor at VP-9. Because of the large increase in the TCE soil vapor concentration in November 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 (< 0.034 µ/m^3), crawl space (< 0.062 µg/m^3) and indoor air (< 0.032 µg/m^3) 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. This determination is the same as that based on the outdoor, crawl space and indoor air data collected at Parcel 3 in April 2015 at the request of the resident (all TCE concentrations were below detection limits of 0.039 µg/m^3 or less) (when VP-9 had a TCE vapor concentration of 0.25 µg/m^3).

The findings from the November 2015 vapor intrusion assessment are still considered to be valid. Since the current TCE soil vapor sampling location at VP-9 is water-flooded vapor diffusion is expected to be much slower in this location than in November 2015 when air sampling data demonstrated that the vapor intrusion pathway from groundwater did not actually exist. A summary of TCE concentrations at Parcel 3 in all media (groundwater, soil gas, crawl space, indoor air and outdoor air) can be found on Table 6.

Although the upper-bound risk estimates for soil vapor from VP-9 have been sometimes higher than the risk estimates based on the perched water data from VP-10, they 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 applying EPA's generic attenuation factor to 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 that include crawl space and indoor air data, the past 4 years of assessment results do not indicate vapor intrusion from groundwater is posing an unacceptable risk at Parcel 3.

Since the shallow groundwater at Parcel 3 has had the highest TCE concentrations in the plume under the neighborhood, the 2015 crawl space and indoor air results at Parcel 3 also provide a relevant line of evidence for other residential properties in the neighborhood overlying the plume. As shown in Table 7, the highest TCE concentrations in shallow groundwater in the neighborhood since 2015 were at MW-176 and VP-10, which are located at Parcel 3. Since the crawl space and indoor air data at Parcel 3 do not show evidence of a complete vapor intrusion pathway, it is reasonable to expect the same findings at properties where TCE concentrations in shallow groundwater are lower.

3.2.1.3 Parcel 4

At Parcel 4, vapor intrusion risks were estimated based on the perched water data from VP-12 and the approach discussed above for groundwater, except the depth to water was increased to 12.5 feet bgs. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates from groundwater at VP-12 are 1 x 10^{-9} and 0.0002, respectively, which are well within ADEQ's risk management limits for RME risks.

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

3.2.2 South of the Neighborhood – Parcel 5

Risk estimates for potential vapor intrusion from groundwater into residential buildings were estimated based on the data collected at Parcel 5, which is a vacant non-residential property located south of Ingersoll Avenue and the residential neighborhood. Groundwater vapor intrusion risks were calculated using the groundwater data from MW-179 and the approach discussed above for groundwater. As shown in Table 8, the upper-bound cumulative cancer risk and non-cancer HI estimates from groundwater at MW-179 are 7 x 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 feet bgs and 10.5 feet bgs, respectively. As shown in Table 8, the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at VP-14 are 1 x 10^{-7} and 0.02, respectively; the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at MW-178 are 0 and 0.00000008, respectively; the risk estimates at these sample points are well within ADEQ's risk management limits for RME risks.

In previous monitoring events, 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 October 2021 data collected over the groundwater plume in the neighborhood during the annual sampling event continued to show that trichloroethene 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, crawl space air 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.

- The concentrations of TCE in groundwater are generally stable or decreasing compared to previous reporting periods and historic results.
- Risk estimates for vapor intrusion from groundwater in the neighborhood are below ADEQ's risk management limits of 10^{-4} and 1 for cumulative cancer risk and non-cancer hazards, respectively.
- Vapor intrusion modeling using perched water confirms the modeling results using VOC concentrations in water collected from groundwater monitoring wells. In addition, data from outdoor, crawl space and indoor air sampling demonstrated that vapor intrusion from groundwater has not been 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.

ENVIRON International Corporation (ENVIRON). 2014c. Third Quarter 2014 Progress Report, Attachment B: Soil Vapor Monitoring/Vapor Intrusion Report. November 14.

ENVIRON International Corporation (ENVIRON). 2015a. 2014 Remedial Action Effectiveness Report, January 2015

ENVIRON International Corporation (ENVIRON). 2015b. Fourth Quarter 2014 Progress Report, Attachment B: Soil Vapor Monitoring/Vapor Intrusion Report. February 13.

ENVIRON International Corporation (ENVIRON). 2015c. First Quarter 2015 Progress Report, Attachment B: Soil Vapor Monitoring and Vapor Intrusion Assessment Report. April.

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

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

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

Ramboll Environ US Corporation (Ramboll Environ). 2016a. 2015 Two Year Technical Review Report, January.

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

Ramboll Environ US Corporation (Ramboll Environ). 2016c. Onsite Indoor Air and Sub-Slab Soil Vapor Data Report. April.

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

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

Ramboll Environ US Corporation (Ramboll Environ). 2016f. Onsite Indoor Air and Sub-Slab Soil Vapor Data Report, Second Monitoring Event. August.

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

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

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

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

Ramboll US Corporation (Ramboll). 2018. Semi-Annual 2018 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. July.

Ramboll US Corporation (Ramboll). 2019. Annual 2018 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. February.

Ramboll US Corporation (Ramboll). 2019a. Onsite Indoor Air and Sub-Slab Vapor Monitoring Report – April 2019.

Ramboll US Corporation (Ramboll). 2019b. Semi-Annual 2019 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. July.

Ramboll US Corporation (Ramboll). 2020. Annual 2020 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. December.

Ramboll US Corporation (Ramboll). 2020 Semi-Annual 2020 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. July.

Ramboll US Corporation (Ramboll). 2021a. 2020 Onsite Indoor Air and Sub-Slab Vapor Monitoring Report. February.

Ramboll US Corporation (Ramboll). 2021b. Annual 2020 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. February.

Ramboll US Corporation (Ramboll). 2021c. 2021 Semi-Annual Onsite Indoor Air and Sub-Slab Vapor Monitoring Report. July.

Ramboll US Corporation (Ramboll). 2021d. Semi-Annual 2021 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. July.

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 2021. Accessed May 31, 2020. <https://www.wunderground.com/history/monthly/us/ar/fort-smith/KFSM/date/2021-4>.

Tables

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

Quarter of Collection	Date of Collection	In Neighborhood										South of Neighborhood	
		Parcel 1		Parcel 2		Parcel 3			Parcel 4		Parcel 6	Parcel 5	
		VP-5	VP-6	VP-7	VP-8	OA/CS/IA~	VP-9	VP-10	VP-1S+	VP-1D / VP-12#	VP-15	VP-2S+	VP-2D / VP-14#
Annual 2021	10/2021	--	--	NS	**Water**	NS	NS	**Water**	--	**Water**	--	--	**Water**
Semi-Annual 2021	4/2021	--	--	**Water**	**Water**	NS	NS	**Water**	--	**Water**	--	--	**Water**
Annual 2020	10/2020	--	--	**Water**	**Water**	NS	NS	**Water**	--	**Water**	--	--	**Water**
Semi-Annual 2020	5/2020	--	--	**Water**	**Water**	NS	NS	**Water**	--	**Water**	--	--	**Water**
Annual 2019	10/2019	--	--	**Water**	**Water**	NS	NS	**Water**	--	**Water**	--	--	**Water**
Semi-Annual 2019	4/2019	--	--	**Water**	**Water**	NS	**Air**	**Water**	--	**Water**	--	--	**Water**
Annual 2018	11/2018	--	--	**Water**	**Water**	NS	**Air**	**Water**	--	**Water**	--	--	**Water**
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
In Neighborhood	1	MW-173	5-6	No	
In Neighborhood	1	VP-5	7.25-7.75	No	
In Neighborhood	1	MW-174	10-11	No	
In Neighborhood	1	VP-6	13.75-14.25	No	
In Neighborhood	2	VP-7	5.25-5.75	Yes	Water in VP
In Neighborhood	2	VP-8	10.25-10.75	Yes	Water in VP
In Neighborhood	2	MW-175	14-15	Yes	
In Neighborhood	3	VP-9	5.25-5.75	Yes	No air or water available
In Neighborhood	3	VP-10	10.75-11.25	Yes	Water in VP
In Neighborhood	3	MW-176	13.5-14.5	Yes	
In Neighborhood	4	MW-181 (VP-11)+	5.5-6.5	No	
In Neighborhood	4	MW-177	9-10	No	
In Neighborhood	4	MW-71	12#	No	
In Neighborhood	4	VP-12 (VP-1D)*	12.25-12.75	No	Water in VP
In Neighborhood	6	VP-15	5.25-5.75	No	
In Neighborhood	6	MW-55R	19-21	No&	
South of Neighborhood	5	MW-180 (VP-13)+	6-7	No	
South of Neighborhood	5	MW-178	7-8	Yes	
South of Neighborhood	5	VP-14 (VP-2D)*	10.25-10.75	Yes	Water in VP
South of Neighborhood	5	MW-179	12-13	Yes	
South of Neighborhood	5	MW-33R^	19-21	No	

Notes:
Italicized cells indicate that insufficient volume was available for sample collection.
Dashes ("--") indicate the location was not installed or was abandoned during this sampling event.
Prior to the Third Quarter 2014, water encountered in the soil vapor monitoring points was not sampled per the quarterly sampling plan.
"NS" indicates the location was not sampled during this sampling event.

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

+ During the First Quarter 2015, VP-1S and VP-2S were abandoned and installation of VP-11 and VP-13 was attempted in Parcels 4 and 5, respectively. However, because of water in the borings for VP-11 and VP-13, monitoring wells MW-181 and MW-180, respectively, were installed.
# Well screen information is not available for MW-71. The typical depth to groundwater of 12 feet bgs was substituted for the screen depth.
& MW-55R is included in the Revised Groundwater Monitoring Plan for purposes other than the Vapor Intrusion Assessment.
^ MW-33R was abandoned in April 2016.

TABLE 2a
ANNUAL 2021 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-178	MW-179
Field Sample ID	MW-178-202110	MW-179-202110
Lab Sample ID	60383996019	60383996020
Sample Method	Low Flow	Low Flow
Sample Date	10/21/2021	10/21/2021
Comments		
VOC		
Acetone	2.8 J (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)
2-Butanone	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.089)
Chloromethane	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	0.19 J (0.13)	1.1 (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)
4-Methyl-2-pentanone	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.14)
Trichloroethene	U (0.21)	20.1 (0.21)
Vinyl Chloride	U (0.17)	U (0.17)

Notes:

1 All concentrations are presented in µg/L (ppb).
2 Only chemicals with at least one detection in any water or soil vapor sample are shown.
U = Not detected
J = Estimated concentration
( ) = Detection limit
µg/L = Micrograms per liter

TABLE 2b
ANNUAL 2021 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-39R	MW-40R	MW-46R	MW-50R	MW-55R	MW-56R
Field Sample ID	MW-39R-202110	MW-40R-202110	MW-46R-202110	MW-50R-202110	MW-55R-202110	MW-56R-202110
Lab Sample ID	60383737031	60383737024	60383996008	60383737042	60383737005	60383996013
Sample Method	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Sample Date	10/18/2021	10/19/2021	10/21/2021	10/19/2021	10/19/2021	10/21/2021
Comments						
VOC						
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
2-Butanone	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	1.3 J- (0.22)	U (0.22)	0.37 J (0.22)	1.5 (0.22)
cis-1,2-Dichloroethene	U (0.13)	U (0.13)	30.8 (0.13)	U (0.13)	1.2 (0.13)	14.8 (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	0.42 J (0.10)	U (0.10)	U (0.10)	0.27 J (0.10)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	U (0.21)	U (0.21)	461 (2.1)	0.61 J (0.21)	29.9 (0.21)	619 (4.2)
Vinyl Chloride	U (0.17)	U (0.17)	0.63 J (0.17)	U (0.17)	0.19 J (0.17)	0.20 J (0.17)

Notes:

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

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

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2b
ANNUAL 2021 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-57R	MW-58R	MW-60R	MW-61R	MW-62R	MW-63R
Field Sample ID	MW-57R-202110	MW-58R-202110	MW-60R-202110	MW-61R-202110	MW-62R-202110	MW-63R-202110
Lab Sample ID	60383996015	60383996039	60383737013	60383878003	60383737036	60383878020
Sample Method	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Sample Date	10/21/2021	10/21/2021	10/19/2021	10/20/2021	10/18/2021	10/20/2021
Comments						
VOC						
Acetone	U (2.5)	U (12.7)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.68)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
2-Butanone	U (0.98)	U (4.9)	U (0.98)	U (0.98)	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.44)	UJ (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloromethane	U (0.28)	U (1.4)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.61)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	1.8 (0.22)	1.4 J (1.1)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	22.1 (0.13)	8.2 (0.64)	U (0.13)	2.0 (0.13)	U (0.13)	0.81 J (0.13)
trans-1,2-Dichloroethene	0.21 J (0.10)	U (0.51)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
4-Methyl-2-pentanone	U (0.74)	U (3.7)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (2.0)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (1.6)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (1.3)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.71)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	286 (4.2)	208 (1.0)	U (0.21)	6.9 (0.21)	U (0.21)	3.9 (0.21)
Vinyl Chloride	0.38 J (0.17)	U (0.84)	U (0.17)	0.53 J (0.17)	U (0.17)	U (0.17)

Notes:

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

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

U = Not detected
J = Estimated concentration
( ) = Detection limit
µg/L = Micrograms per liter

TABLE 2b
ANNUAL 2021 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-68	MW-82	MW-96	MW-96	MW-97	MW-98
Field Sample ID	MW-68-202110	MW-82-202110	MW-96-202110	DUP-02-202110	MW-97-202110	MW-98-202110
Lab Sample ID	60383737023	60384461004	60383737025	60383737026	60383737040	60383737035
Sample Method	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Sample Date	10/19/2021	10/22/2021	10/19/2021	10/19/2021	10/19/2021	10/18/2021
Comments				Field Duplicate		
VOC						
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
2-Butanone	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloromethane	U (0.28)	0.52 J (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	U (0.13)	0.83 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	2.1 (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	U (0.21)	40.0 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Vinyl Chloride	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)

Notes:

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

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

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2b
ANNUAL 2021 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-99	MW-175	MW-176	MW-184	MW-184	MW-194
Field Sample ID	MW-99-202110	MW-175-202110	MW-176-202110	MW-184-202110	DUP-01-202110	MW-194-202110
Lab Sample ID	60383737047	60383878029	60383878015	60383737011	60383737012	60383878004
Sample Method	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Sample Date	10/19/2021	10/20/2021	10/20/2021	10/19/2021	10/19/2021	10/20/2021
Comments					Field Duplicate	
VOC						
Acetone	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	0.16 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
2-Butanone	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	1.8 (0.22)	U (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	2.0 (0.13)	1.9 (0.13)	17.0 (0.13)	U (0.13)	U (0.13)	1.8 (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	0.38 J (0.10)	U (0.10)	U (0.10)	U (0.10)
4-Methyl-2-pentanone	1.9 J (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	0.31 J (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	0.26 J (0.21)	91.1 (0.21)	310 (2.1)	U (0.21)	U (0.21)	4.1 (0.21)
Vinyl Chloride	U (0.17)	U (0.17)	19.3 (0.17)	U (0.17)	U (0.17)	U (0.17)

Notes:

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

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

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2b
ANNUAL 2021 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-195	MW-195	MW-196
Field Sample ID	MW-195-202110	DUP-05-202110	MW-196-202110
Lab Sample ID	60383737021	60383737022	60383737015
Sample Method	Low Flow	Low Flow	Low Flow
Sample Date	10/19/2021	10/19/2021	10/19/2021
Comments		Field Duplicate	
VOC			
Acetone	U (2.5)	U (2.5)	U (2.5)
Benzene	U (0.14)	U (0.14)	U (0.14)
2-Butanone	U (0.98)	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)
Chloromethane	U (0.28)	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	U (0.13)	U (0.13)	U (0.13)
trans-1,2-Dichloroethene	U (0.10)	U (0.10)	U (0.10)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)
Toluene	U (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	0.49 J (0.21)	0.40 J (0.21)	U (0.21)
Vinyl Chloride	U (0.17)	U (0.17)	U (0.17)

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 3
ANNUAL 2021 WATER DATA FROM SOIL VAPOR MONITORING POINTS
Whirlpool Facility - Fort Smith, Arkansas

Parcel	Parcel 2	Parcel 3	Parcel 4	Parcel 5
Location	VP-8	VP-10	VP-12	VP-14
Field Sample ID	VP-8-202110	VP-10-202110	VP-12-202110	VP-14-202110
Lab Sample ID	60383996002	60383996004	60383878019	60383996001
Sample Date	10/21/2021	10/21/2021	10/20/2021	10/21/2021
Comments				
VOC				
Acetone	61.6 (2.5)	U (2.5)	U (2.5)	U (2.5)
Benzene	0.53 J (0.14)	0.23 J (0.14)	U (0.14)	U (0.14)
2-Butanone	5.1 J (0.98)	U (0.98)	U (0.98)	U (0.98)
Chlorobenzene	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloromethane	U (0.28)	U (0.28)	U (0.28)	U (0.28)
1,1-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.22)	1.5 (0.22)	U (0.22)	U (0.22)
cis-1,2-Dichloroethene	0.13 J (0.13)	12.4 (0.13)	U (0.13)	1.1 (0.13)
trans-1,2-Dichloroethene	U (0.10)	0.44 J (0.10)	U (0.10)	U (0.10)
4-Methyl-2-pentanone	U (0.74)	U (0.74)	U (0.74)	U (0.74)
Methylene Chloride	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	0.31 J (0.25)	0.36 J (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	4.2 (0.21)	177 (1.0)	0.31 J (0.21)	25.6 (0.21)
Vinyl Chloride	U (0.17)	0.33 J (0.17)	U (0.17)	U (0.17)

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 4
UPPER-BOUND VAPOR INTRUSION RISK ESTIMATES
BASED ON ANNUAL 2021 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	Benzene	71-43-2	1.60E-04	MW-99	7.1E-10	7.0E-06
VOC	Chloromethane	74-87-3	5.20E-04	MW-82		9.0E-06
VOC	1,1-Dichloroethene	75-35-4	1.80E-03	MW-57R		2.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	3.08E-02	MW-46R		
VOC	trans-1,2-Dichloroethene	156-60-5	4.20E-04	MW-46R		
VOC	4-Methyl-2-pentanone	108-10-1	1.90E-03	MW-99		1.4E-07
VOC	Methylene Chloride	75-09-2	2.10E-03	MW-82	2.4E-11	3.7E-06
VOC	Toluene	108-88-3	3.10E-04	MW-99		7.9E-08
VOC	Trichloroethene	79-01-6	6.19E-01	MW-56R	2.3E-06	4.8E-01
VOC	Vinyl Chloride	75-01-4	1.93E-02	MW-176	4.0E-07	6.1E-04
				Cumulative Risk and HI:	3E-06	5E-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 2021 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		
			10.5 ft bgs			12 ft bgs			11 ft bgs			12 ft bgs			12.5 ft bgs		
			VP-8			MW-175			VP-10			MW-176			VP-12		
			Perched Water			Groundwater			Perched Water			Groundwater			Groundwater		
			Conc	Risk	HQ	Conc	Risk	HQ	Conc	Risk	HQ	Conc	Risk	HQ	Conc	Risk	HQ
VOC	Acetone	67-64-1	6.16E-02		4.6E-07												
VOC	Benzene	71-43-2	5.3E-04	2.4E-09	2.4E-05				2.30E-04	1.0E-09	1.0E-05						
VOC	2-Butanone	78-93-3	5.1E-03		2.2E-07												
VOC	1,1-Dichloroethene	75-35-4							1.50E-03		1.9E-05	1.80E-03		2.3E-05			
VOC	cis-1,2-Dichloroethene	156-59-2	1.3E-04			1.90E-03			1.24E-02			1.70E-02					
VOC	trans-1,2-Dichloroethene	156-60-5							4.40E-04			3.80E-04					
VOC	Toluene	108-88-3	3.1E-04		8.0E-08				3.60E-04		9.3E-08						
VOC	Trichloroethene	79-01-6	4.2E-03	1.6E-08	3.2E-03	9.11E-02	3.4E-07	7.0E-02	1.77E-01	6.6E-07	1.4E-01	3.10E-01	1.2E-06	2.4E-01	3.10E-04	1.1E-09	2.4E-04
VOC	Vinyl Chloride	75-01-4							3.30E-04	6.8E-09	1.0E-05	1.93E-02	4.0E-07	6.1E-04			
	Cumulative Risk and HI:			2E-08	3E-03		3E-07	7E-02		7E-07	1E-01		2E-06	2E-01		1E-09	2E-04

Notes:
Groundwater and perched water concentrations are in mg/L.
Only COCs detected in the 2021 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.
Cumulative cancer risk and HI estimates were below Arkansas Department of Environmental Quality (ADEQ)'s risk limits (1E-4 and 1, respectively).

Table 6: Summary of TCE Concentrations at Parcel 3 from 2015 to Present. Whirlpool: Fort Smith, Fort Smith, AR.								
Sampling Quarter	**Sample Date**	**MW-176 Groundwater 13.5-14.5 ft bgs** (ug/L)	**VP-10 Groundwater 10.75-11.25 ft bgs** (ug/L)	**VP-9 Groundwater 5.25-5.75 ft bgs** (ug/L)	**VP-9 Soil Gas 5.25-5.75 ft bgs** (ug/m^3)	**Crawl Space** (ug/m^3)	**Indoor Air** (ug/m^3)	**Outdoor Air** (ug/m^3)
2015Q1	Jan-15	720 (5.0)	636 (5.0)	--	31 (0.011)	--	--	--
2015Q2	Apr-15	528 (1.7)	395 (1.7)	--	0.25 (0.012)	U (0.011)	U (0.013)	U (0.012)
2015Q3	Jul-15	575 (1.7)	6.1 (0.17)	2.4 (0.17)	--	--	--	--
2015Q4	Oct-15	420 (1.7)	198 (0.17)	--	360 (0.79)	--	--	--
2015Q4	Nov-15	--	--	--	1200 (1.8)	U (0.011)	0.062 (0.011)	U (0.011)
2016Q1	Jan-16	306 (1.7)	823 (0.85)	--	--	--	--	--
2016Q2	May-16	389 (1.7)	376 (0.85)	--	--	--	--	--
2016Q4	Nov-16	320 (1.7)	278 (0.85)	--	464 (7.7)	--	--	--
2017Q2	Apr-17	355 (1.7)	198 (0.85)	--	400 D (0.14)	--	--	--
2017Q4	Oct-17	281 (1.7)	211 (0.85)	--	400 D (1.5)	--	--	--
2018Q2	Apr-18	426 (1.7)	357 (0.85)	--	540 D (0.27)	--	--	--
2018Q4	Nov-18	397 (1.7)	250 (0.85)	--	230 (8.4)	--	--	--
2019Q2	Apr-19	503 (1.7)	211 (0.48)	--	2.5 (0.36)	--	--	--
2019Q4	Oct-19	317 (1.7)	3.3 J (0.85)	--	--	--	--	--
2020Q2	May-20	323 (0.90)	27.5 (0.17)	--	--	--	--	--
2020Q4	Oct-20	359 (2.5)	110 (1.2)	--	--	--	--	--
2021Q2	May-20	369 (2.5)	169 (0.25)	--	--	--	--	--
2021Q4	Oct-20	310 (2.1)	177 (1.0)	--	--	--	--	--

Notes:

1. The VP-9 soil gas sample was collected in May 2017.
2. VP-10 was installed as a vapor sampling point but was flooded during all of the sampling events shown.
3. VP-9 was flooded in July 2015; a groundwater sample was collected.
4. Neither a soil gas sample or water sample was able to be collected at VP-9 in all samples after April 2019.

Abbreviations:

U -- Not Detected.
D -- Compound Quantitated on a Diluted Sample.
( ) -- Detection Limit.
-- -- Sample Not Collected.

TABLE 7
SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE IN SHALLOW WELLS AND AT VAPOR POINTS IN THE NEIGHBORHOOD FROM 2015 TO PRESENT
Whirlpool Facility
Fort Smith, Arkansas

Location	Sample ID	Date	Sample Type	Trichloroethene	
MW-173	MW-173-201504	04/15/15	N	< 1.0	U
MW-173	MW-173-201507	07/22/15	N	< 1.0	U
MW-173	MW-173-201510	10/06/15	N	< 1.0	U
MW-173	MW-173-201601	01/12/16	N	< 1.0	U
MW-173	MW-173-201605	05/04/16	N	< 1.0	U
MW-174	MW-174-GW-20150120	01/20/15	N	< 1.0	U
MW-174	MW-174-201504	04/14/15	N	0.68	J
MW-174	MW-174-201507	07/21/15	N	< 1.0	U
MW-174	MW-174-201510	10/06/15	N	< 1.0	U
MW-174	MW-174-201601	01/12/16	N	< 1.0	U
MW-174	MW-174-201605	05/04/16	N	< 1.0	U
MW-175	MW-175-GW-20150120	01/20/15	N	123	
MW-175	MW-175-201504	04/15/15	N	98.8	
MW-175	MW-175-201507	07/21/15	N	20.3	
MW-175	MW-175-201510	10/07/15	N	78.6	
MW-175	MW-175-201601	01/11/16	N	52.6	
MW-175	MW-175-201605	05/03/16	N	54.9	
MW-175	MW-175-201611	11/08/16	N	50.9	
MW-175	MW-175-201704	04/28/17	N	53.2	
MW-175	MW-175-201710	10/24/17	N	72.2	
MW-175	MW-175-201804	04/18/18	N	117	
MW-175	MW-175-201811	11/13/18	N	70.7	
MW-175	MW-175-201904	04/23/19	N	102	
MW-175	MW-175-201910	10/23/19	N	138	
MW-175	MW-175-202005	05/13/20	N	135	
MW-175	MW-175-202010	10/06/20	N	69.5	
MW-175	MW-175-202104	04/13/21	N	82.3	
MW-175	MW-175-202110	10/20/21	N	91.1	
MW-176	MW-176-GW-20150120	01/20/15	N	720	
MW-176	MW-176-201504	04/14/15	N	528	
MW-176	MW-176-201507	07/21/15	N	575	
MW-176	MW-176-201510	10/06/15	N	420	
MW-176	MW-176-201601	01/12/16	N	306	
MW-176	MW-176-201605	05/03/16	N	389	
MW-176	MW-176-201611	11/08/16	N	320	
MW-176	MW-176-201704	04/28/17	N	355	
MW-176	MW-176-201710	10/24/17	N	281	
MW-176	MW-176-201804	04/17/18	N	426	
MW-176	MW-176-201811	11/13/18	N	397	
MW-176	MW-176-201904	04/23/19	N	503	
MW-176	MW-176-201910	10/22/19	N	317	
MW-176	MW-176-202005	05/12/20	N	323	
MW-176	MW-176-202010	10/06/20	N	359	
MW-176	MW-176-202104	04/13/21	N	369	
MW-176	MW-176-202110	10/20/21	N	310	
MW-177	MW-177-GW-20150121	01/21/15	N	< 1.0	U
MW-177	MW-177-201504	04/14/15	N	< 1.0	U

TABLE 7
SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE IN SHALLOW WELLS AND AT VAPOR POINTS IN THE NEIGHBORHOOD FROM 2015 TO PRESENT
Whirlpool Facility
Fort Smith, Arkansas

Location	Sample ID	Date	Sample Type	Trichloroethene	
MW-177	MW-177-201510	10/06/15	N	< 1.0	U
MW-177	MW-177-201601	01/11/16	N	< 1.0	U
MW-177	MW-177-201605	05/02/16	N	< 1.0	U
MW-178	MW-178-GW-20150118	01/18/15	N	5.2	
MW-178	MW-178-201504	04/16/15	N	5.0	
MW-178	MW-178-201507	07/22/15	N	4.6	
MW-178	MW-178-201510	10/07/15	N	5.8	
MW-178	MW-178-201611	11/10/16	N	3.2	
MW-178	MW-178-201704	04/27/17	N	4.6	
MW-178	MW-178-201710	10/25/17	N	3.9	
MW-178	FD-06-201710	10/25/17	FD	3.6	
MW-178	MW-178-201804	04/18/18	N	5.3	
MW-178	MW-178-201811	11/14/18	N	4.5	
MW-178	MW-178-201904	04/24/19	N	2.9	
MW-178	MW-178-201910	10/23/19	N	4.1	
MW-178	MW-178-202005	05/13/20	N	2.0	
MW-178	MW-178-202010	10/07/20	N	1.9	
MW-178	MW-178-202104	04/15/21	N	< 1.0	U
MW-178	DUP-03-202104	04/15/21	FD	0.47	J
MW-178	MW-178-202110	10/21/21	N	< 1.0	U
MW-179	MW-179-201504	04/16/15	N	41.2	
MW-179	MW-179-201507	07/22/15	N	27.3	
MW-179	MW-179-201601	01/13/16	N	30.6	
MW-179	MW-179-201605	05/04/16	N	6.6	
MW-179	MW-179-201704	04/28/17	N	20.4	
MW-179	MW-179-201710	10/26/17	N	10.7	
MW-179	MW-179-201804	04/19/18	N	21.7	
MW-179	MW-179-201811	11/13/18	N	1.4	
MW-179	MW-179-201904	04/24/19	N	8.9	
MW-179	MW-179-201910	10/24/19	N	23.7	
MW-179	MW-179-202005	05/15/20	N	21.4	
MW-179	MW-179-202010	10/08/20	N	22.9	
MW-179	MW-179-202104	04/15/21	N	19.3	
MW-179	MW-179-202110	10/21/21	N	20.1	
MW-180	MW-180-GW-20150119	01/19/15	N	23.7	
MW-180	MW-180-201504	04/16/15	N	21.4	
MW-180	MW-180-201507	07/22/15	N	22.1	
MW-180	MW-180-201510	10/07/15	N	18.5	
MW-180	MW-180-201601	01/14/16	N	10.6	
MW-180	MW-180-201605	05/05/16	N	10.3	
MW-181	MW-181-GW-20150121	01/21/15	N	< 1.0	U
MW-181	MW-181-201504	04/14/15	N	< 1.0	U
MW-181	MW-181-201507	07/21/15	N	< 1.0	U
MW-181	MW-181-201601	01/11/16	N	< 1.0	U
MW-181	MW-181-201605	05/04/16	N	< 1.0	U
VP-5	VP-05-20150422	04/22/15	N	< 1.0	U
VP-5	VP-05-201507	07/30/15	N	< 1.0	U

TABLE 7
SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE IN SHALLOW WELLS AND AT VAPOR POINTS IN THE NEIGHBORHOOD FROM 2015 TO PRESENT
Whirlpool Facility
Fort Smith, Arkansas

Location	Sample ID	Date	Sample Type	Trichloroethene	
VP-5	VP-05-201510	10/06/15	N	< 1.0	U
VP-5	VP-05-201601	01/12/16	N	< 1.0	U
VP-5	VP-05-201605	05/04/16	N	0.66	J
VP-5	VP-05-201611	11/08/16	N	< 1.0	U
VP-6	VP-06-GW-20150120	01/20/15	N	4.3	
VP-6	VP-06-20150422	04/22/15	N	2.3	
VP-6	VP-06-201507	07/30/15	N	0.76	J
VP-6	VP-06-201510	10/06/15	N	0.75	J
VP-6	VP-06-201601	01/12/16	N	1.3	
VP-6	VP-06-201605	05/04/16	N	0.78	J
VP-6	VP-06-201611	11/08/16	N	< 1.0	U
VP-7	VP-07-201601	01/11/16	N	< 1.0	U
VP-7	VP-07-201605	05/03/16	N	< 1.0	U
VP-7	VP-07-201611	11/08/16	N	< 1.0	U
VP-7	VP-07-201704	05/03/17	N	< 1.0	U
VP-7	VP-07-201710	10/25/17	N	0.71	J
VP-7	VP-7-201804	04/19/18	N	< 1.0	U
VP-7	VP-7-201811	11/15/18	N	< 1.0	U
VP-7	VP-7-201904	04/24/19	N	< 1.0	U
VP-7	VP-7-201910	10/23/19	N	< 1.0	U
VP-7	VP-7-202005	05/12/20	N	< 1.0	U
VP-7	VP-07-202010	10/07/20	N	< 1.0	U
VP-7	VP-7-202104	04/14/21	N	< 1.0	U
VP-8	VP-08-20150422	04/22/15	N	1.2	
VP-8	VP-08-201507	07/30/15	N	2.2	
VP-8	VP-08-201510	10/07/15	N	2.5	B
VP-8	VP-08-201601	01/11/16	N	3.2	
VP-8	VP-08-201605	05/03/16	N	3.8	
VP-8	VP-08-201611	11/08/16	N	2.4	
VP-8	VP-08-201704	05/03/17	N	2.5	
VP-8	VP-08-201710	10/25/17	N	2.9	
VP-8	VP-8-201804	04/19/18	N	3.4	
VP-8	VP-8-201811	11/15/18	N	4.5	
VP-8	VP-8-201904	04/24/19	N	4.8	
VP-8	VP-8-201910	10/23/19	N	5.8	
VP-8	VP-8-202005	05/12/20	N	4.4	
VP-8	VP-08-202010	10/07/20	N	< 1.0	U
VP-8	VP-8-202104	04/14/21	N	5.8	
VP-8	VP-8-202110	10/21/21	N	4.2	
VP-9	VP-09-201507	07/30/15	N	2.4	
VP-10	VP-10-GW-20150120	01/20/15	N	636	
VP-10	VP-10-20150422	04/22/15	N	395	
VP-10	VP-10-201507	07/30/15	N	6.1	
VP-10	VP-10-201510	10/06/15	N	198	
VP-10	VP-10-201601	01/12/16	N	823	
VP-10	VP-10-201605	05/03/16	N	376	
VP-10	VP-10-201611	11/08/16	N	278	

TABLE 7
SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE IN SHALLOW WELLS AND AT VAPOR POINTS IN THE NEIGHBORHOOD FROM 2015 TO PRESENT
Whirlpool Facility
Fort Smith, Arkansas

Location	Sample ID	Date	Sample Type	Trichloroethene	
VP-10	VP-10-201704	05/03/17	N	198	
VP-10	VP-10-201710	10/25/17	N	211	
VP-10	VP-10-201804	04/19/18	N	357	
VP-10	VP-10-201811	11/15/18	N	250	
VP-10	VP-10-201904	04/24/19	N	211	
VP-10	VP-10-201910	10/23/19	N	3.3	J
VP-10	VP-10-202005	05/12/20	N	27.5	
VP-10	VP-10-202010	10/07/20	N	110	
VP-10	VP-10-202104	04/14/21	N	169	
VP-10	VP-10-202110	10/21/21	N	177	
VP-12	VP-12-GW-20150121	01/21/15	N	< 1.0	U
VP-12	VP-12-20150422	04/22/15	N	< 1.0	U
VP-12	VP-12-201507	07/30/15	N	< 1.0	U
VP-12	VP-12-201510	10/07/15	N	< 1.0	U
VP-12	VP-12-201601	01/11/16	N	< 1.0	U
VP-12	VP-12-201605	05/02/16	N	< 1.0	U
VP-12	VP-12-201611	11/08/16	N	0.55	J
VP-12	VP-12-201704	05/03/17	N	< 1.0	U
VP-12	VP-12-201710	10/25/17	N	0.22	J
VP-12	VP-12-201804	04/19/18	N	< 1.0	U
VP-12	VP-12-201811	11/15/18	N	< 1.0	U
VP-12	VP-12-201904	04/24/19	N	< 1.0	U
VP-12	VP-12-201910	10/23/19	N	< 1.0	U
VP-12	VP-12-202005	05/13/20	N	0.62	J
VP-12	VP-12-202010	10/07/20	N	< 1.0	U
VP-12	VP-12-202104	04/14/21	N	< 1.0	U
VP-12	VP-12-202110	10/20/21	N	0.31	J
VP-14	VP-14-201507	07/30/15	N	55.6	
VP-14	VP-14-201510	10/07/15	N	59.3	
VP-14	VP-14-201601	01/13/16	N	65.6	
VP-14	VP-14-201605	05/04/16	N	54.5	
VP-14	VP-14-201704	05/03/17	N	62.9	
VP-14	VP-14-201710	10/25/17	N	69.0	
VP-14	VP-14-201804	04/19/18	N	55.8	
VP-14	VP-14-201811	11/15/18	N	64.1	
VP-14	VP-14-201904	04/24/19	N	53.6	
VP-14	VP-14-201910	10/23/19	N	87.9	
VP-14	VP-14-202005	05/12/20	N	42.9	
VP-14	VP-14-202010	10/08/20	N	38.3	
VP-14	VP-14-202104	04/14/21	N	26.1	
VP-14	VP-14-202110	10/21/21	N	25.6	
VP-15	VP-15-GW-20150701	07/01/15	N	< 1.0	U
VP-15	VP-15-201510	10/07/15	N	< 1.0	U
VP-15	VP-15-201601	01/11/16	N	< 1.0	U
VP-15	VP-15-201605	05/02/16	N	< 1.0	U

TABLE 8
EVALUATION OF VOCS IN WATER AT PARCEL 5 (SOUTH OF NEIGHBORHOOD)
Whirlpool Facility - Fort Smith, Arkansas

Chem Group	Chemical	CASRN	7.5 ft bgs			10.5 ft bgs			12 ft bgs		
			MW-178			VP-14			MW-179		
			Perched Water			Perched Water			Groundwater		
			Conc	Risk	HQ	Conc	Risk	HQ	Conc	Risk	HQ
VOC	Acetone	67-64-1	2.8E-03		3.0E-08						
VOC	cis-1,2-Dichloroethene	156-59-2	1.9E-04			1.1E-03			1.1E-03		
VOC	Trichloroethene	79-01-6				2.6E-02	9.5E-08	2.0E-02	2.0E-02	7.5E-08	1.5E-02
	Cumulative Risk and HI:			0E+00	3E-08		1E-07	2E-02		7E-08	2E-02

Notes:

Groundwater and perched water concentrations are in mg/L.

Only COCs detected in the 2021 Annual Samping Event samples at locations listed on the table are shown.

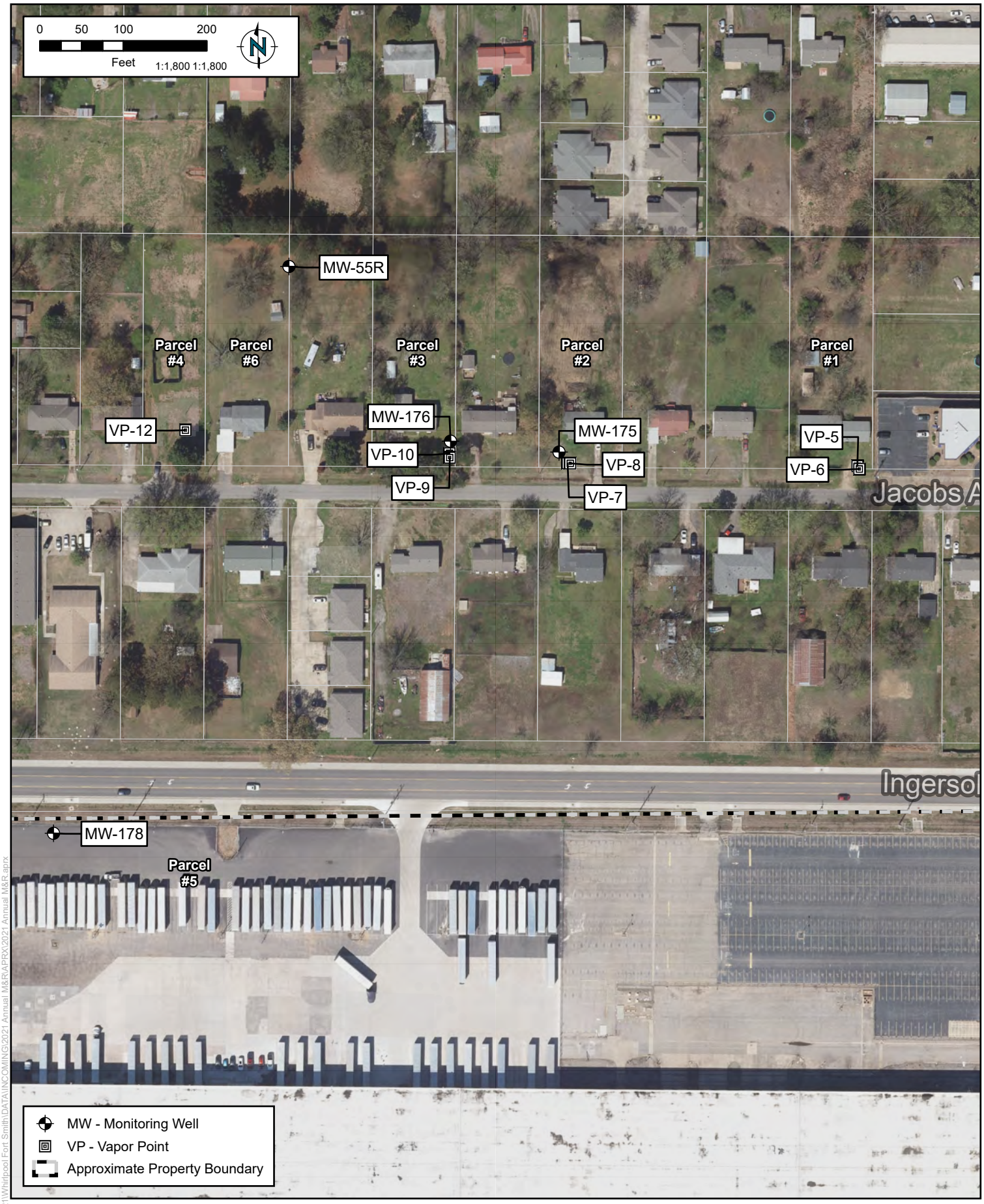
Risk and HQ estimates were not calculated for detected chemicals with inadequate toxicity or physical/chemical parameters or where chemical concentrations were non-detect.

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

DRAFTED BY: DFM | DATE: 01/12/2022

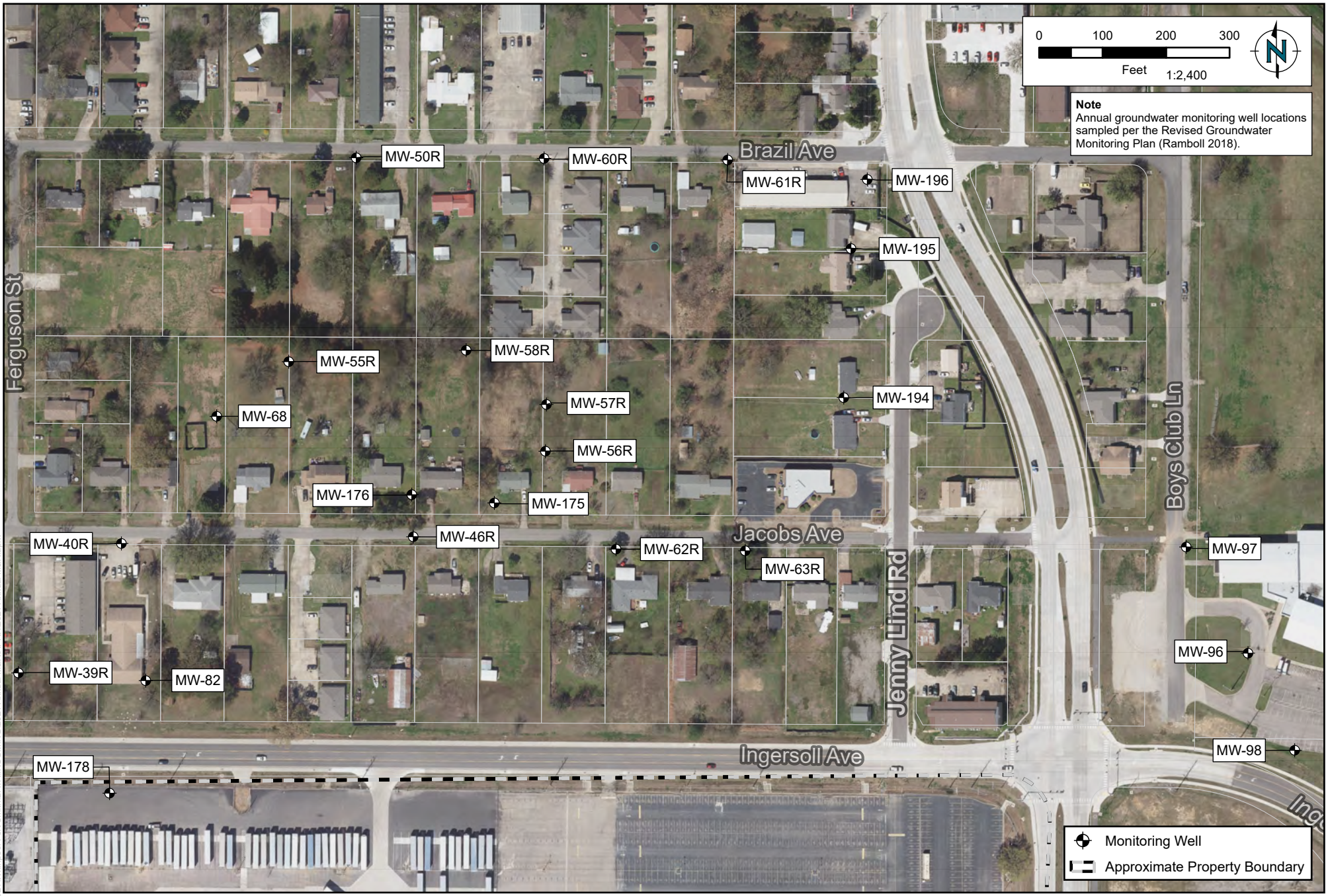
SHALLOW GROUNDWATER MONITORING WELLS AND VAPOR POINTS SAMPLED DURING 2021 ANNUAL SAMPLING

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

PROJECT: 1690023020

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\PRX\2021 Annual M&R.aprx



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DRAFTED BY: DFM

DATE: 01/12/2022

GROUNDWATER MONITORING WELL LOCATIONS

Whirlpool Facility - Fort Smith, Arkansas

Figure 2

PROJECT: 1690012820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Annual M&R\APRX\2021 Annual M&R.aprx

Appendix A
Laboratory Analytical Data

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

December 29, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

REV-1, 12/29/21: Report revised to update comment on Project Narrative page that was reported in error.

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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

CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast
7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383737001	MW-187-202110	Water	10/19/21 15:05	10/20/21 04:45
60383737002	MW-203-202110	Water	10/19/21 15:05	10/20/21 04:45
60383737003	EB-02-202110	Water	10/19/21 16:30	10/20/21 04:45
60383737004	MW-188-202110	Water	10/19/21 16:28	10/20/21 04:45
60383737005	MW-55R-202110	Water	10/19/21 16:53	10/20/21 04:45
60383737006	TB-01-202110	Water	10/19/21 07:00	10/20/21 04:45
60383737007	TB-02-202110	Water	10/19/21 07:00	10/20/21 04:45
60383737008	TB-03-202110	Water	10/19/21 07:00	10/20/21 04:45
60383737009	MW-183R-202110	Water	10/19/21 11:52	10/20/21 04:45
60383737010	MW-200-202110	Water	10/19/21 12:09	10/20/21 04:45
60383737011	MW-184-202110	Water	10/19/21 13:25	10/20/21 04:45
60383737012	DUP-01-202110	Water	10/19/21 13:25	10/20/21 04:45
60383737013	MW-60R-202110	Water	10/19/21 13:48	10/20/21 04:45
60383737014	ITMW-2R-202110	Water	10/19/21 13:47	10/20/21 04:45
60383737015	MW-196-202110	Water	10/19/21 14:07	10/20/21 04:45
60383737016	ITMW-16-202110	Water	10/19/21 10:45	10/20/21 04:45
60383737017	MW-26-202110	Water	10/19/21 09:50	10/20/21 04:45
60383737018	TMW-27-202110	Water	10/19/21 11:25	10/20/21 04:45
60383737019	MW-201-202110	Water	10/19/21 11:49	10/20/21 04:45
60383737020	MW-29-202110	Water	10/19/21 11:45	10/20/21 04:45
60383737021	MW-195-202110	Water	10/19/21 11:35	10/20/21 04:45
60383737022	DUP-05-202110	Water	10/19/21 11:35	10/20/21 04:45
60383737023	MW-68-202110	Water	10/19/21 09:07	10/20/21 04:45
60383737024	MW-40R-202110	Water	10/19/21 10:23	10/20/21 04:45
60383737025	MW-96-202110	Water	10/19/21 10:20	10/20/21 04:45
60383737026	DUP-02-202110	Water	10/19/21 10:20	10/20/21 04:45
60383737027	TMW-29-202110	Water	10/19/21 09:45	10/20/21 04:45
60383737028	TMW-20-202110	Water	10/19/21 10:33	10/20/21 04:45
60383737029	TMW-35-202110	Water	10/19/21 09:02	10/20/21 04:45
60383737030	DUP-06-202110	Water	10/19/21 09:02	10/20/21 04:45
60383737031	MW-39R-202110	Water	10/18/21 17:10	10/20/21 04:45
60383737032	MW-191-202110	Water	10/18/21 16:28	10/20/21 04:45
60383737033	MW-27-202110	Water	10/18/21 17:30	10/20/21 04:45
60383737034	EB-01-202110	Water	10/18/21 18:05	10/20/21 04:45
60383737035	MW-98-202110	Water	10/18/21 17:12	10/20/21 04:45
60383737036	MW-62R-20210	Water	10/18/21 18:20	10/20/21 04:45
60383737037	MW-28-202110	Water	10/18/21 18:00	10/20/21 04:45

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383737038	**ITMW-20-202110**	Water	10/19/21 09:03	10/20/21 04:45
60383737039	**DUP-03-202110**	Water	10/19/21 09:03	10/20/21 04:45
60383737040	**MW-97-202110**	Water	10/19/21 09:17	10/20/21 04:45
60383737041	**TMW-10-202110**	Water	10/19/21 14:31	10/20/21 04:45
60383737042	**MW-50R-202110**	Water	10/19/21 14:32	10/20/21 04:45
60383737043	**TMW-16-202110**	Water	10/19/21 11:55	10/20/21 04:45
60383737044	**MW-186-202110**	Water	10/19/21 14:10	10/20/21 04:45
60383737045	**TMW-36-202110**	Water	10/19/21 13:20	10/20/21 04:45
60383737046	**TMW-36B-202110**	Water	10/19/21 11:45	10/20/21 04:45
60383737047	**MW-99-202110**	Water	10/19/21 15:48	10/20/21 04:45
60383737048	**TMW-26-202110**	Water	10/19/21 16:25	10/20/21 04:45

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383737001	MW-187-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737002	MW-203-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737003	EB-02-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737004	MW-188-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737005	MW-55R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737006	TB-01-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737007	TB-02-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737008	TB-03-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737009	MW-183R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737010	MW-200-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737011	MW-184-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737012	DUP-01-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737013	MW-60R-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737014	ITMW-2R-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737015	MW-196-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737016	ITMW-16-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737017	MW-26-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737018	TMW-27-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737019	MW-201-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737020	MW-29-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737021	MW-195-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737022	DUP-05-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737023	MW-68-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737024	MW-40R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737025	MW-96-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737026	DUP-02-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737027	TMW-29-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737028	TMW-20-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737029	TMW-35-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737030	DUP-06-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737031	MW-39R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737032	MW-191-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737033	MW-27-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737034	EB-01-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737035	MW-98-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737036	MW-62R-20210	EPA 5030B/8260	PGH	38	PASI-K
60383737037	MW-28-202110	EPA 5030B/8260	PGH	38	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383737038	**ITMW-20-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383737039	**DUP-03-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383737040	**MW-97-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383737041	**TMW-10-202110**	AM20GAX	CWB	1	GCLA
		AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737042	**MW-50R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	1	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383737043	**TMW-16-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	KB	3	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737044	**MW-186-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383737045	**TMW-36-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737046	**TMW-36B-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	KB	3	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737047	**MW-99-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737048	**TMW-26-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **AM20GAX**
Description: Indicator Gases Bubblestrip H2
Client: Ramboll_AR
Date: December 29, 2021

General Information:
1 sample was analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: December 29, 2021

General Information:
8 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: December 29, 2021

General Information:
8 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: December 29, 2021

General Information:
48 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

QC Batch: 751594

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

- LCS (Lab ID: 3009508)
  - 2-Butanone (MEK)

QC Batch: 751819

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

- LCS (Lab ID: 3010213)
  - Methylene Chloride

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

QC Batch: 751819

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737013

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

- MS (Lab ID: 3010214)

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: December 29, 2021

QC Batch: 751819

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737013

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

- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,2-Dichloropropane
- Bromodichloromethane
- Carbon tetrachloride
- Chlorobenzene
- Chloroform
- Dibromochloromethane
- Styrene
- cis-1,3-Dichloropropene
- trans-1,3-Dichloropropene

- MSD (Lab ID: 3010215)
  - 1,1,2-Trichloroethane
  - Bromodichloromethane
  - Carbon tetrachloride
  - Chloroform
  - Dibromochloromethane
  - Styrene

QC Batch: 751955

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

QC Batch: 752343

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737020,60383737023

R1: RPD value was outside control limits.

- MSD (Lab ID: 3011629)
  - 1,1-Dichloroethane
- MSD (Lab ID: 3011631)
  - 1,1-Dichloroethane

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 751612

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383950001

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

- MS (Lab ID: 3009541)
  - Sulfide, Total
- MSD (Lab ID: 3009542)
  - Sulfide, Total

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: December 29, 2021

General Information:
8 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll_AR
Date: December 29, 2021

General Information:
8 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis conducted outside the EPA method holding time.
- TMW-16-202110 (Lab ID: 60383737043)
- TMW-36B-202110 (Lab ID: 60383737046)

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753086

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737043,60384407001

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

- MS (Lab ID: 3014272)
  - Nitrogen, NO2 plus NO3
- MS (Lab ID: 3014274)
  - Nitrogen, NO2 plus NO3

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: December 29, 2021

General Information:
8 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: December 29, 2021

General Information:
7 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737047

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

- MS (Lab ID: 3017245)
  - Dissolved Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: December 29, 2021

General Information:
7 samples were analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis was conducted outside of the recognized method holding time.
- TMW-10-202110 (Lab ID: 60383737041)

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-187-202110 **Lab ID: 60383737001** Collected: 10/19/21 15:05 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 23:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 23:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 23:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 23:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 23:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 23:09	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 23:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 23:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 23:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 23:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 23:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 23:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 23:09	124-48-1	
1,1-Dichloroethane	**0.67J**	ug/L	1.0	0.12	1		10/26/21 23:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 23:09	107-06-2	
1,1-Dichloroethene	**0.39J**	ug/L	1.0	0.22	1		10/26/21 23:09	75-35-4	
cis-1,2-Dichloroethene	**3.8**	ug/L	1.0	0.13	1		10/26/21 23:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 23:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 23:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 23:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 23:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 23:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 23:09	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 23:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 23:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 23:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 23:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 23:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 23:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 23:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 23:09	79-00-5	
Trichloroethene	**16.8**	ug/L	1.0	0.21	1		10/26/21 23:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 23:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 23:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/26/21 23:09	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 23:09	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 23:09	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 23:09		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-203-202110 **Lab ID: 60383737002** Collected: 10/19/21 15:05 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:33	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:33	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:33	124-48-1	
1,1-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		10/26/21 20:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:33	107-06-2	
1,1-Dichloroethene	**0.50J**	ug/L	1.0	0.22	1		10/26/21 20:33	75-35-4	
cis-1,2-Dichloroethene	**2.9**	ug/L	1.0	0.13	1		10/26/21 20:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:33	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:33	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:33	79-00-5	
Trichloroethene	**102**	ug/L	1.0	0.21	1		10/26/21 20:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 20:33	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 20:33	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/26/21 20:33	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:33		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: EB-02-202110 **Lab ID: 60383737003** Collected: 10/19/21 16:30 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:19	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 20:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:19	591-78-6	
Methylene Chloride	**0.43J**	ug/L	1.0	0.39	1		10/26/21 20:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 20:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 20:19	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 20:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 20:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-188-202110 **Lab ID: 60383737004** Collected: 10/19/21 16:28 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:47	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:47	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:47	75-35-4	
cis-1,2-Dichloroethene	**0.14J**	ug/L	1.0	0.13	1		10/26/21 20:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:47	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:47	79-00-5	
Trichloroethene	**1.1**	ug/L	1.0	0.21	1		10/26/21 20:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 20:47	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 20:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 20:47	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:47		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-55R-202110 **Lab ID: 60383737005** Collected: 10/19/21 16:53 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:01	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:01	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:01	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:01	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:01	107-06-2	
1,1-Dichloroethene	**0.37J**	ug/L	1.0	0.22	1		10/26/21 21:01	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.13	1		10/26/21 21:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:01	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:01	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:01	79-00-5	
Trichloroethene	**29.9**	ug/L	1.0	0.21	1		10/26/21 21:01	79-01-6	
Vinyl chloride	**0.19J**	ug/L	1.0	0.17	1		10/26/21 21:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 21:01	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 21:01	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 21:01	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:01		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TB-01-202110 **Lab ID: 60383737006** Collected: 10/19/21 07:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:36	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 19:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 19:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 19:36	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/26/21 19:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 19:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:36		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TB-02-202110 **Lab ID: 60383737007** Collected: 10/19/21 07:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:50	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 19:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:50	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 19:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 19:50	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 19:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 19:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:50		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TB-03-202110 **Lab ID: 60383737008** Collected: 10/19/21 07:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:04	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:04	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 20:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:04	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:04	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 20:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 20:04	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 20:04	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 20:04	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:04		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-183R-202110 **Lab ID: 60383737009** Collected: 10/19/21 11:52 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:15	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:15	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:15	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:15	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:15	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:15	79-00-5	
Trichloroethene	**0.67J**	ug/L	1.0	0.21	1		10/26/21 21:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 21:15	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 21:15	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 21:15	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:15		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-200-202110 **Lab ID: 60383737010** Collected: 10/19/21 12:09 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/25/21 23:45	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/25/21 23:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/25/21 23:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/25/21 23:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/25/21 23:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/25/21 23:45	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/25/21 23:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/25/21 23:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/25/21 23:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/25/21 23:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/25/21 23:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/25/21 23:45	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/25/21 23:45	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/25/21 23:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/25/21 23:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/25/21 23:45	75-35-4	
cis-1,2-Dichloroethene	**0.13J**	ug/L	1.0	0.13	1		10/25/21 23:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/25/21 23:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/25/21 23:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/25/21 23:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/25/21 23:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/25/21 23:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/25/21 23:45	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/25/21 23:45	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/25/21 23:45	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/25/21 23:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/25/21 23:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/25/21 23:45	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/25/21 23:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/25/21 23:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/25/21 23:45	79-00-5	
Trichloroethene	**1.0**	ug/L	1.0	0.21	1		10/25/21 23:45	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/25/21 23:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/25/21 23:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/25/21 23:45	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/25/21 23:45	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/25/21 23:45	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/25/21 23:45		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-184-202110 **Lab ID: 60383737011** Collected: 10/19/21 13:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 00:00	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 00:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 00:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 00:00	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 00:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 00:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 00:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 00:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 00:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 00:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 00:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 00:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 00:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 00:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 00:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 00:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 00:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 00:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 00:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 00:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 00:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 00:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 00:00	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 00:00	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 00:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 00:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 00:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 00:00	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 00:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 00:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 00:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 00:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 00:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 00:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 00:00	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 00:00	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 00:00	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 00:00		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-01-202110 **Lab ID: 60383737012** Collected: 10/19/21 13:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 00:17	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 00:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 00:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 00:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 00:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 00:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 00:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 00:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 00:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 00:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 00:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 00:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 00:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 00:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 00:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 00:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 00:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 00:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 00:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 00:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 00:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 00:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 00:17	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 00:17	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 00:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 00:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 00:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 00:17	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 00:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 00:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 00:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 00:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 00:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 00:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 00:17	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 00:17	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 00:17	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 00:17		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-60R-202110 **Lab ID: 60383737013** Collected: 10/19/21 13:48 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 00:32	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 00:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 00:32	75-27-4	M1
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 00:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 00:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 00:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 00:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 00:32	56-23-5	M1
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 00:32	108-90-7	M1
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 00:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 00:32	67-66-3	M1
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 00:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 00:32	124-48-1	M1
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 00:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 00:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 00:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 00:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 00:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 00:32	78-87-5	M1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 00:32	10061-01-5	M1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 00:32	10061-02-6	M1
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 00:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 00:32	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 00:32	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 00:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 00:32	100-42-5	M1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 00:32	79-34-5	M1
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 00:32	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 00:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 00:32	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 00:32	79-00-5	M1
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 00:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 00:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 00:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 00:32	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 00:32	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 00:32	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 00:32		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: ITMW-2R-202110 **Lab ID: 60383737014** Collected: 10/19/21 13:47 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 01:20	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 01:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 01:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 01:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 01:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 01:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 01:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 01:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 01:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 01:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 01:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 01:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 01:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 01:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 01:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 01:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 01:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 01:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 01:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 01:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 01:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 01:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 01:20	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 01:20	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 01:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 01:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 01:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 01:20	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 01:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 01:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 01:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 01:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 01:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 01:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 01:20	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 01:20	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 01:20	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 01:20		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-196-202110 **Lab ID: 60383737015** Collected: 10/19/21 14:07 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 01:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 01:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 01:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 01:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 01:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 01:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 01:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 01:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 01:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 01:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 01:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 01:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 01:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 01:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 01:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 01:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 01:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 01:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 01:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 01:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 01:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 01:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 01:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 01:36	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 01:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 01:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 01:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 01:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 01:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 01:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 01:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 01:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 01:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 01:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 01:36	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 01:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 01:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 01:36		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: ITMW-16-202110 **Lab ID: 60383737016** Collected: 10/19/21 10:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 01:52	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 01:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 01:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 01:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 01:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 01:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 01:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 01:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 01:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 01:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 01:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 01:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 01:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 01:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 01:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 01:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 01:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 01:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 01:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 01:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 01:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 01:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 01:52	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 01:52	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 01:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 01:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 01:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 01:52	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 01:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 01:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 01:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 01:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 01:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 01:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 01:52	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 01:52	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 01:52	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 01:52		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-26-202110 **Lab ID: 60383737017** Collected: 10/19/21 09:50 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:08	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:08	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:08	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:08	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:08	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 02:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 02:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 02:08	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 02:08	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 02:08	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:08		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-27-202110 **Lab ID: 60383737018** Collected: 10/19/21 11:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:24	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:24	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:24	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:24	127-18-4	
Toluene	**0.31J**	ug/L	1.0	0.25	1		10/26/21 02:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 02:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 02:24	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 02:24	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 02:24	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:24		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-201-202110 **Lab ID: 60383737019** Collected: 10/19/21 11:49 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:40	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:40	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:40	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:40	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 02:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 02:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 02:40	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 02:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 02:40	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:40		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-29-202110 **Lab ID: 60383737020** Collected: 10/19/21 11:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 12:35	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 12:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 12:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 12:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 12:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 12:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 12:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 12:35	56-23-5	
Chlorobenzene	**5.5**	ug/L	1.0	0.089	1		10/27/21 12:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 12:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 12:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 12:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 12:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 12:35	75-34-3	R1
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 12:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 12:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 12:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 12:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 12:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 12:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 12:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 12:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 12:35	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 12:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 12:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 12:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 12:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 12:35	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 12:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 12:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 12:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 12:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 12:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 12:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 12:35	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 12:35	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/27/21 12:35	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 12:35		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-195-202110 **Lab ID: 60383737021** Collected: 10/19/21 11:35 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:56	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:56	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:56	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:56	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 02:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:56	79-00-5	
Trichloroethene	**0.49J**	ug/L	1.0	0.21	1		10/26/21 02:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 02:56	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 02:56	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 02:56	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:56		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-05-202110 **Lab ID: 60383737022** Collected: 10/19/21 11:35 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 13:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 13:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 13:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 13:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 13:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 13:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 13:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 13:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 13:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 13:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 13:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 13:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 13:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 13:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 13:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 13:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 13:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 13:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 13:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 13:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 13:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 13:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 13:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 13:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 13:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 13:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 13:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 13:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 13:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 13:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 13:23	79-00-5	
Trichloroethene	**0.40J**	ug/L	1.0	0.21	1		10/27/21 13:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 13:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 13:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 13:23	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 13:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/27/21 13:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 13:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-68-202110 **Lab ID: 60383737023** Collected: 10/19/21 09:07 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 13:39	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 13:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 13:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 13:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 13:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 13:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 13:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 13:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 13:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 13:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 13:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 13:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 13:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 13:39	75-34-3	R1
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 13:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 13:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 13:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 13:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 13:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 13:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 13:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 13:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 13:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 13:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 13:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 13:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 13:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 13:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 13:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 13:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 13:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 13:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 13:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 13:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/27/21 13:39	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/27/21 13:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 13:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 13:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-40R-202110 **Lab ID: 60383737024** Collected: 10/19/21 10:23 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 14:27	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 14:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 14:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 14:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 14:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 14:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 14:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 14:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 14:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 14:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 14:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 14:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 14:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 14:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 14:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 14:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 14:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 14:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 14:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 14:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 14:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 14:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 14:27	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 14:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 14:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 14:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 14:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 14:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 14:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 14:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 14:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 14:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 14:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 14:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 14:27	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 14:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/27/21 14:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 14:27		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-96-202110 **Lab ID: 60383737025** Collected: 10/19/21 10:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 14:43	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 14:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 14:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 14:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 14:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 14:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 14:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 14:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 14:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 14:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 14:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 14:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 14:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 14:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 14:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 14:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 14:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 14:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 14:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 14:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 14:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 14:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 14:43	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 14:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 14:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 14:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 14:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 14:43	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 14:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 14:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 14:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 14:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 14:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 14:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 14:43	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/27/21 14:43	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/27/21 14:43	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 14:43		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-02-202110 **Lab ID: 60383737026** Collected: 10/19/21 10:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 14:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 14:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 14:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 14:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 14:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 14:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 14:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 14:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 14:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 14:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 14:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 14:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 14:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 14:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 14:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 14:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 14:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 14:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 14:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 14:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 14:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 14:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 14:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 14:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 14:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 14:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 14:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 14:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 14:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 14:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 14:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 14:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 14:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 14:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 14:59	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/27/21 14:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/27/21 14:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 14:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-29-202110 **Lab ID: 60383737027** Collected: 10/19/21 09:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 15:14	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 15:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 15:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 15:14	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 15:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 15:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 15:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 15:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 15:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 15:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 15:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 15:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 15:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 15:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 15:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 15:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 15:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 15:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 15:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 15:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 15:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 15:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 15:14	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 15:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 15:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 15:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 15:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 15:14	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 15:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 15:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 15:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 15:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 15:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 15:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/27/21 15:14	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 15:14	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/27/21 15:14	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 15:14		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-20-202110 **Lab ID: 60383737028** Collected: 10/19/21 10:33 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:12	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:12	75-35-4	
cis-1,2-Dichloroethene	**0.28J**	ug/L	1.0	0.13	1		10/26/21 09:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:12	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:12	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 09:12	460-00-4	
Toluene-d8 (S)	105	%	80-120		1		10/26/21 09:12	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 09:12	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:12		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-35-202110 **Lab ID: 60383737029** Collected: 10/19/21 09:02 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:26	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 09:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:26	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		10/26/21 09:26	460-00-4	
Toluene-d8 (S)	103	%	80-120		1		10/26/21 09:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 09:26	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:26		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-06-202110 **Lab ID: 60383737030** Collected: 10/19/21 09:02 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:40	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 09:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:40	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:40	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 09:40	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 09:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 09:40	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:40		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-39R-202110 **Lab ID: 60383737031** Collected: 10/18/21 17:10 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:29	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:29	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:29	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:29	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:29	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:29	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:29	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:29	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:29	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 21:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 21:29	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 21:29	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	107	%	80-120		1		10/26/21 21:29	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:29		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-191-202110 **Lab ID: 60383737032** Collected: 10/18/21 16:28 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:44	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:44	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:44	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:44	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:44	79-00-5	
Trichloroethene	**0.62J**	ug/L	1.0	0.21	1		10/26/21 21:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/26/21 21:44	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 21:44	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 21:44	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:44		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-27-202110 **Lab ID: 60383737033** Collected: 10/18/21 17:30 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:58	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:58	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:58	75-35-4	
cis-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.13	1		10/26/21 21:58	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.10	1		10/26/21 21:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:58	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:58	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:58	79-00-5	
Trichloroethene	**56.3**	ug/L	1.0	0.21	1		10/26/21 21:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 21:58	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 21:58	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 21:58	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:58		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: EB-01-202110 **Lab ID: 60383737034** Collected: 10/18/21 18:05 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:12	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:12	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:12	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:12	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 22:12	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 22:12	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 22:12	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:12		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-98-202110 **Lab ID: 60383737035** Collected: 10/18/21 17:12 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:26	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:26	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:26	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 22:26	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 22:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 22:26	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:26		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-62R-20210 **Lab ID: 60383737036** Collected: 10/18/21 18:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:40	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:40	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:40	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:40	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/26/21 22:40	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 22:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 22:40	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:40		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-28-202110 **Lab ID: 60383737037** Collected: 10/18/21 18:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:55	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 22:55	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 22:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 22:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: ITMW-20-202110 **Lab ID: 60383737038** Collected: 10/19/21 09:03 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 09:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 09:55	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 09:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 09:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-03-202110 **Lab ID: 60383737039** Collected: 10/19/21 09:03 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 10:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 10:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 10:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 10:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:09	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 10:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 10:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 10:09	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 10:09	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 10:09	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:09		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-97-202110 **Lab ID: 60383737040** Collected: 10/19/21 09:17 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 10:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 10:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 10:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 10:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 10:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 10:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 10:23	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 10:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 10:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-10-202110 **Lab ID: 60383737041** Collected: 10/19/21 14:31 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Bubblestrip H2	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Hydrogen	**2.5**	nM	1.9	0.49	1		11/02/21 12:22	1333-74-0	
Hydrogen	**1.9**	nM	1.9	0.49	1		10/28/21 11:33	1333-74-0	
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**11000**	ug/L	5.0	2.0	1		11/02/21 11:58	74-82-8	
Ethane	**1.0**	ug/L	1.0	0.17	1		11/02/21 11:58	74-84-0	
Ethene	**1.7**	ug/L	1.0	0.24	1		11/02/21 11:58	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/02/21 11:58	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**14400**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 15:58	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:05	67-64-1	
Benzene	**0.20J**	ug/L	1.0	0.14	1		10/26/21 11:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:05	75-35-4	
cis-1,2-Dichloroethene	**0.46J**	ug/L	1.0	0.13	1		10/26/21 11:05	156-59-2	
trans-1,2-Dichloroethene	**0.15J**	ug/L	1.0	0.10	1		10/26/21 11:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:05	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 11:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:05	127-18-4	
Toluene	**0.29J**	ug/L	1.0	0.25	1		10/26/21 11:05	108-88-3	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-10-202110 **Lab ID: 60383737041** Collected: 10/19/21 14:31 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:05	79-00-5	
Trichloroethene	**0.59J**	ug/L	1.0	0.21	1		10/26/21 11:05	79-01-6	
Vinyl chloride	**2.2**	ug/L	1.0	0.17	1		10/26/21 11:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 11:05	460-00-4	
Toluene-d8 (S)	103	%	80-120		1		10/26/21 11:05	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 11:05	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:05		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	**0.064**	mg/L	0.050	0.026	1		10/25/21 13:33	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**153**	mg/L	20.0	7.8	20		10/26/21 18:20	16887-00-6	
Sulfate	**1.3**	mg/L	1.0	0.42	1		10/26/21 17:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/21/21 08:49		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:49	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:49	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**2.3**	mg/L	1.0	0.30	1		10/28/21 15:34	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**2.6**	mg/L	1.0	0.30	1		10/29/21 10:34		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**5.2**	mg/L	5.0	0.53	10		11/17/21 08:36	50-21-5	H1
Acetic Acid	**3.2J**	mg/L	5.0	1.2	10		11/17/21 08:36	64-19-7	H1
Propionic Acid	ND	mg/L	5.0	0.53	10		11/17/21 08:36	79-09-4	H1
Formic acid	**51**	mg/L	5.0	0.55	10		11/17/21 08:36	64-18-6	H1
Butyric Acid	ND	mg/L	5.0	0.58	10		11/17/21 08:36	107-92-6	H1
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/17/21 08:36	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/17/21 08:36	503-74-2	H1
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/17/21 08:36	109-52-4	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-10-202110 **Lab ID: 60383737041** Collected: 10/19/21 14:31 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Low Level Volatile Fatty Acids	Analytical Method: AM23G Pace Analytical Gulf Coast								
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/17/21 08:36	646-07-1	H1
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/17/21 08:36	142-62-1	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-50R-202110 **Lab ID: 60383737042** Collected: 10/19/21 14:32 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**8.1**	ug/L	5.0	2.0	1		11/02/21 12:09	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/02/21 12:09	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 12:09	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/02/21 12:09	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**529**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:00	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:37	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 10:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 10:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 10:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 10:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:37	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:37	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:37	79-00-5	
Trichloroethene	**0.61J**	ug/L	1.0	0.21	1		10/26/21 10:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 10:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:37	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-50R-202110 **Lab ID: 60383737042** Collected: 10/19/21 14:32 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 10:37	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 10:37	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 10:37	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:37		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 13:33	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Sulfate	**16.0**	mg/L	2.0	0.84	2		10/26/21 19:00	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.14**	mg/L	0.10	0.066	1		10/21/21 08:52		
Nitrogen, Nitrate	**0.14**	mg/L	0.10	0.079	1		10/21/21 08:52	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:52	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.67J**	mg/L	1.0	0.30	1		10/28/21 12:54	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-16-202110 **Lab ID: 60383737043** Collected: 10/19/21 11:55 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**7600**	ug/L	5.0	2.0	1		11/02/21 18:22	74-82-8	
Ethane	**2.4**	ug/L	1.0	0.17	1		11/02/21 18:22	74-84-0	
Ethene	**1.9**	ug/L	1.0	0.24	1		11/02/21 18:22	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**9900**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:07	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 15:31	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.14	1		10/27/21 15:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 15:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 15:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 15:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 15:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 15:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 15:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 15:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 15:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 15:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 15:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 15:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 15:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 15:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 15:31	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.13	1		10/27/21 15:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 15:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 15:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 15:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 15:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 15:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 15:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 15:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 15:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 15:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 15:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 15:31	127-18-4	
Toluene	**0.37J**	ug/L	1.0	0.25	1		10/27/21 15:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 15:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 15:31	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.21	1		10/27/21 15:31	79-01-6	
Vinyl chloride	**0.77J**	ug/L	1.0	0.17	1		10/27/21 15:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 15:31	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-16-202110 **Lab ID: 60383737043** Collected: 10/19/21 11:55 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 15:31	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/27/21 15:31	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 15:31	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 15:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**240**	mg/L	20.0	7.8	20		10/26/21 10:40	16887-00-6	
Sulfate	**3.1**	mg/L	1.0	0.42	1		10/26/21 19:13	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 11:30		H1
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/29/21 11:30	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/29/21 11:30	14797-65-0	H1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 15:11		M1
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**12.0**	mg/L	2.0	0.59	2		10/28/21 13:08	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**7.1**	mg/L	1.0	0.30	1		10/29/21 11:01		
Low Level Volatile Fatty Acids	Analytical Method: AM23G Pace Analytical Gulf Coast								
Lactic Acid	**4.6J**	mg/L	5.0	0.53	10		11/16/21 11:01	50-21-5	
Acetic Acid	**5.4**	mg/L	5.0	1.2	10		11/16/21 11:01	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 11:01	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 11:01	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:01	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 11:01	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 11:01	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:01	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:01	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:01	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-186-202110 **Lab ID: 60383737044** Collected: 10/19/21 14:10 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**7700**	ug/L	5.0	2.0	1		11/02/21 18:33	74-82-8	
Ethane	**0.39J**	ug/L	1.0	0.17	1		11/02/21 18:33	74-84-0	
Ethene	**0.26J**	ug/L	1.0	0.24	1		11/02/21 18:33	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**14200**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:09	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:20	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 11:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:20	75-35-4	
cis-1,2-Dichloroethene	**0.66J**	ug/L	1.0	0.13	1		10/26/21 11:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 11:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:20	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 11:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:20	127-18-4	
Toluene	**0.33J**	ug/L	1.0	0.25	1		10/26/21 11:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:20	79-00-5	
Trichloroethene	**0.49J**	ug/L	1.0	0.21	1		10/26/21 11:20	79-01-6	
Vinyl chloride	**0.45J**	ug/L	1.0	0.17	1		10/26/21 11:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:20	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-186-202110 **Lab ID: 60383737044** Collected: 10/19/21 14:10 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	104	%	80-120		1		10/26/21 11:20	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 11:20	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 11:20	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**118**	mg/L	20.0	7.8	20		10/26/21 10:54	16887-00-6	
Sulfate	**0.94J**	mg/L	1.0	0.42	1		10/26/21 19:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.066J**	mg/L	0.10	0.066	1		10/21/21 08:47		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:47	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:47	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**17.1**	mg/L	10.0	3.0	10		10/28/21 13:21	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**8.3**	mg/L	1.0	0.30	1		10/29/21 11:14		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**4.6J**	mg/L	5.0	0.53	10		11/16/21 11:35	50-21-5	
Acetic Acid	**5.4**	mg/L	5.0	1.2	10		11/16/21 11:35	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 11:35	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 11:35	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:35	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 11:35	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 11:35	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:35	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:35	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:35	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36-202110 **Lab ID: 60383737045** Collected: 10/19/21 13:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**1500**	ug/L	5.0	2.0	1		11/02/21 18:45	74-82-8	
Ethane	**0.53J**	ug/L	1.0	0.17	1		11/02/21 18:45	74-84-0	
Ethene	**0.36J**	ug/L	1.0	0.24	1		11/02/21 18:45	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**3490**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:11	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:51	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:51	124-48-1	
1,1-Dichloroethane	**0.53J**	ug/L	1.0	0.12	1		10/26/21 10:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:51	107-06-2	
1,1-Dichloroethene	**0.94J**	ug/L	1.0	0.22	1		10/26/21 10:51	75-35-4	
cis-1,2-Dichloroethene	**64.3**	ug/L	1.0	0.13	1		10/26/21 10:51	156-59-2	
trans-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.10	1		10/26/21 10:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:51	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:51	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:51	79-00-5	
Trichloroethene	**110**	ug/L	1.0	0.21	1		10/26/21 10:51	79-01-6	
Vinyl chloride	**0.27J**	ug/L	1.0	0.17	1		10/26/21 10:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:51	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36-202110 **Lab ID: 60383737045** Collected: 10/19/21 13:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 10:51	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 10:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 10:51	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**105**	mg/L	20.0	7.8	20		10/26/21 11:07	16887-00-6	
Sulfate	**15.3**	mg/L	1.0	0.42	1		10/26/21 19:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.29**	mg/L	0.10	0.066	1		10/21/21 08:40		
Nitrogen, Nitrate	**0.29**	mg/L	0.10	0.079	1		10/21/21 08:40	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:40	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.68J**	mg/L	1.0	0.30	1		10/28/21 13:34	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.94J**	mg/L	1.0	0.30	1		10/29/21 11:41		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	ND	mg/L	5.0	0.53	10		11/16/21 12:10	50-21-5	
Acetic Acid	**5.5**	mg/L	5.0	1.2	10		11/16/21 12:10	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 12:10	79-09-4	
Formic acid	**53**	mg/L	5.0	0.55	10		11/16/21 12:10	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:10	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 12:10	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 12:10	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:10	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:10	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:10	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36B-202110 **Lab ID: 60383737046** Collected: 10/19/21 11:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**34**	ug/L	5.0	2.0	1		11/02/21 18:56	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/02/21 18:56	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 18:56	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**5450**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:13	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:48	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 11:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 11:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 11:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:48	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 11:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:48	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 11:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 11:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 11:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:48	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36B-202110 **Lab ID: 60383737046** Collected: 10/19/21 11:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 11:48	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 11:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 11:48	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**384**	mg/L	20.0	7.8	20		10/26/21 11:21	16887-00-6	
Sulfate	**17.7**	mg/L	2.0	0.84	2		10/26/21 20:20	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.3**	mg/L	0.10	0.066	1		10/29/21 11:30		H1
Nitrogen, Nitrate	**1.3**	mg/L	0.10	0.079	1		10/29/21 11:30	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/29/21 11:30	14797-65-0	H1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 15:13		
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.61J**	mg/L	1.0	0.30	1		10/28/21 13:48	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.57J**	mg/L	1.0	0.30	1		10/29/21 11:54		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.5J**	mg/L	5.0	0.53	10		11/16/21 12:45	50-21-5	
Acetic Acid	**6.0**	mg/L	5.0	1.2	10		11/16/21 12:45	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 12:45	79-09-4	
Formic acid	**55**	mg/L	5.0	0.55	10		11/16/21 12:45	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:45	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 12:45	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 12:45	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:45	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:45	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:45	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-99-202110 **Lab ID: 60383737047** Collected: 10/19/21 15:48 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**7400**	ug/L	5.0	2.0	1		11/02/21 19:07	74-82-8	
Ethane	**1.1**	ug/L	1.0	0.17	1		11/02/21 19:07	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 19:07	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**12200**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:20	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:34	67-64-1	
Benzene	**0.16J**	ug/L	1.0	0.14	1		10/26/21 11:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:34	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	1.0	0.13	1		10/26/21 11:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 11:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:34	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.9J**	ug/L	10.0	0.74	1		10/26/21 11:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:34	127-18-4	
Toluene	**0.31J**	ug/L	1.0	0.25	1		10/26/21 11:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:34	79-00-5	
Trichloroethene	**0.26J**	ug/L	1.0	0.21	1		10/26/21 11:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 11:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:34	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-99-202110 **Lab ID: 60383737047** Collected: 10/19/21 15:48 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 11:34	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 11:34	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 11:34	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**91.6**	mg/L	20.0	7.8	20		10/26/21 12:01	16887-00-6	
Sulfate	**3.2**	mg/L	1.0	0.42	1		10/26/21 20:34	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/21/21 08:54		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:54	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:54	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**56.4**	mg/L	25.0	7.4	25		10/28/21 14:01	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**55.6**	mg/L	25.0	7.4	25		11/03/21 11:59		M1
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**7.8**	mg/L	5.0	0.53	10		11/16/21 13:19	50-21-5	
Acetic Acid	**8.4**	mg/L	5.0	1.2	10		11/16/21 13:19	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 13:19	79-09-4	
Formic acid	**54**	mg/L	5.0	0.55	10		11/16/21 13:19	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 13:19	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 13:19	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 13:19	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:19	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:19	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 13:19	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-26-202110 **Lab ID: 60383737048** Collected: 10/19/21 16:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4500**	ug/L	5.0	2.0	1		11/02/21 19:19	74-82-8	
Ethane	**0.58J**	ug/L	1.0	0.17	1		11/02/21 19:19	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 19:19	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**20600**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:22	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 12:02	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 12:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 12:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 12:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 12:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 12:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 12:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 12:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 12:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 12:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 12:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 12:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 12:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 12:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 12:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 12:02	75-35-4	
cis-1,2-Dichloroethene	**0.88J**	ug/L	1.0	0.13	1		10/26/21 12:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 12:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 12:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 12:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 12:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 12:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 12:02	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 12:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 12:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 12:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 12:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 12:02	127-18-4	
Toluene	**2.0**	ug/L	1.0	0.25	1		10/26/21 12:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 12:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 12:02	79-00-5	
Trichloroethene	**2.7**	ug/L	1.0	0.21	1		10/26/21 12:02	79-01-6	
Vinyl chloride	**0.44J**	ug/L	1.0	0.17	1		10/26/21 12:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 12:02	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-26-202110 **Lab ID: 60383737048** Collected: 10/19/21 16:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 12:02	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 12:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 12:02	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 12:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**172**	mg/L	20.0	7.8	20		10/26/21 12:14	16887-00-6	
Sulfate	**3.4**	mg/L	1.0	0.42	1		10/26/21 20:47	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/21/21 08:58		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:58	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:58	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**44.6**	mg/L	25.0	7.4	25		10/28/21 14:14	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**40.1**	mg/L	10.0	3.0	10		11/03/21 12:26		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.8J**	mg/L	5.0	0.53	10		11/16/21 13:54	50-21-5	
Acetic Acid	**5.6**	mg/L	5.0	1.2	10		11/16/21 13:54	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 13:54	79-09-4	
Formic acid	**55**	mg/L	5.0	0.55	10		11/16/21 13:54	64-18-6	
Butyric Acid	**0.71J**	mg/L	5.0	0.58	10		11/16/21 13:54	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 13:54	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 13:54	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:54	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:54	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 13:54	142-62-1	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725022
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Bubble Strip H2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041

METHOD BLANK: 2262602
Matrix: Air
Associated Lab Samples: 60383737041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hydrogen	nM	ND	1.9	0.49	10/28/21 11:06	

LABORATORY CONTROL SAMPLE & LCSD: 2262603 2262604

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hydrogen	nM	12	9.5	9.5	80	80	70-130	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725469
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Bubble Strip H2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041

METHOD BLANK: 2265165
Matrix: Air
Associated Lab Samples: 60383737041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hydrogen	nM	ND	1.9	0.49	11/02/21 11:45	

LABORATORY CONTROL SAMPLE & LCSD: 2265166 2265167

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hydrogen	nM	12	15	15	130	129	70-130	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725427
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041, 60383737042

METHOD BLANK: 2264858
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/02/21 07:56	
Ethane	ug/L	ND	1.0	0.17	11/02/21 07:56	
Ethene	ug/L	ND	1.0	0.24	11/02/21 07:56	
Acetylene	ug/L	ND	0.50	0.13	11/02/21 07:56	

LABORATORY CONTROL SAMPLE & LCSD: 2264859 2264860

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	430	400	111	105	70-130	6	20	
Ethane	ug/L	97	110	110	117	111	70-130	5	20	
Ethene	ug/L	120	140	130	113	108	70-130	5	20	
Acetylene	ug/L	30	34	32	110	105	70-130	5	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725466
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 2265154 Matrix: Water
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/02/21 17:16	
Ethane	ug/L	ND	1.0	0.17	11/02/21 17:16	
Ethene	ug/L	ND	1.0	0.24	11/02/21 17:16	

LABORATORY CONTROL SAMPLE & LCSD: 2265155 2265156

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	360	370	94	96	70-130	3	20	
Ethane	ug/L	97	97	100	100	104	70-130	4	20	
Ethene	ug/L	120	120	120	98	101	70-130	3	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 754327
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3019084
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/05/21 15:54	

LABORATORY CONTROL SAMPLE: 3019085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9750	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3019086 3019087

Parameter	Units	60383737042 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	529	10000	10000	10100	10100	95	95	75-125	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751594
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737001, 60383737002, 60383737003, 60383737004, 60383737005, 60383737006, 60383737007, 60383737008, 60383737009, 60383737031, 60383737032, 60383737033, 60383737034, 60383737035, 60383737036, 60383737037

METHOD BLANK: 3009507
Matrix: Water
Associated Lab Samples: 60383737001, 60383737002, 60383737003, 60383737004, 60383737005, 60383737006, 60383737007, 60383737008, 60383737009, 60383737031, 60383737032, 60383737033, 60383737034, 60383737035, 60383737036, 60383737037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/26/21 19:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/26/21 19:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/26/21 19:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/26/21 19:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/26/21 19:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/26/21 19:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/26/21 19:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/26/21 19:22	
2-Hexanone	ug/L	ND	10.0	1.1	10/26/21 19:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/26/21 19:22	
Acetone	ug/L	ND	10.0	2.5	10/26/21 19:22	
Benzene	ug/L	ND	1.0	0.14	10/26/21 19:22	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/26/21 19:22	
Bromoform	ug/L	ND	1.0	0.68	10/26/21 19:22	
Bromomethane	ug/L	ND	5.0	0.46	10/26/21 19:22	
Carbon disulfide	ug/L	ND	5.0	0.98	10/26/21 19:22	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/26/21 19:22	
Chlorobenzene	ug/L	ND	1.0	0.089	10/26/21 19:22	
Chloroethane	ug/L	ND	1.0	0.37	10/26/21 19:22	
Chloroform	ug/L	ND	1.0	0.22	10/26/21 19:22	
Chloromethane	ug/L	ND	1.0	0.28	10/26/21 19:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/26/21 19:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/26/21 19:22	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/26/21 19:22	
Ethylbenzene	ug/L	ND	1.0	0.12	10/26/21 19:22	
Methylene Chloride	ug/L	ND	1.0	0.39	10/26/21 19:22	
Styrene	ug/L	ND	1.0	0.12	10/26/21 19:22	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/26/21 19:22	
Toluene	ug/L	ND	1.0	0.25	10/26/21 19:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/26/21 19:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/26/21 19:22	
Trichloroethene	ug/L	ND	1.0	0.21	10/26/21 19:22	
Vinyl chloride	ug/L	ND	1.0	0.17	10/26/21 19:22	
Xylene (Total)	ug/L	ND	3.0	0.28	10/26/21 19:22	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/26/21 19:22	
4-Bromofluorobenzene (S)	%	98	80-120		10/26/21 19:22	
Toluene-d8 (S)	%	99	80-120		10/26/21 19:22	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3009508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.9	110	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	23.5	118	75-125	
1,1,2-Trichloroethane	ug/L	20	22.9	114	80-120	
1,1-Dichloroethane	ug/L	20	22.6	113	75-125	
1,1-Dichloroethene	ug/L	20	18.9	95	80-120	
1,2-Dichloroethane	ug/L	20	22.2	111	75-120	
1,2-Dichloropropane	ug/L	20	22.7	113	80-125	
2-Butanone (MEK)	ug/L	100	157	157	40-150	L1
2-Hexanone	ug/L	100	148	148	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	126	126	65-140	
Acetone	ug/L	100	175	175	20-175	
Benzene	ug/L	20	23.4	117	80-120	
Bromodichloromethane	ug/L	20	21.3	107	80-125	
Bromoform	ug/L	20	20.5	103	60-135	
Bromomethane	ug/L	20	19.1	96	10-165	
Carbon disulfide	ug/L	20	20.2	101	75-135	
Carbon tetrachloride	ug/L	20	20.8	104	80-125	
Chlorobenzene	ug/L	20	22.5	112	80-120	
Chloroethane	ug/L	20	22.7	113	70-130	
Chloroform	ug/L	20	21.4	107	80-120	
Chloromethane	ug/L	20	22.3	112	35-155	
cis-1,2-Dichloroethene	ug/L	20	23.2	116	80-120	
cis-1,3-Dichloropropene	ug/L	20	23.0	115	80-125	
Dibromochloromethane	ug/L	20	18.4	92	70-120	
Ethylbenzene	ug/L	20	22.6	113	80-120	
Methylene Chloride	ug/L	20	19.7	99	75-120	
Styrene	ug/L	20	23.0	115	80-120	
Tetrachloroethene	ug/L	20	20.9	105	80-120	
Toluene	ug/L	20	22.1	111	80-120	
trans-1,2-Dichloroethene	ug/L	20	23.2	116	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.3	107	75-120	
Trichloroethene	ug/L	20	21.7	108	80-120	
Vinyl chloride	ug/L	20	22.6	113	65-130	
Xylene (Total)	ug/L	60	67.5	112	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009509 3009510

Parameter	Units	60383737001 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	21.7	22.1	108	111	75-130	2	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.3	22.4	102	112	65-130	10	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.9	21.1	105	105	70-120	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009509 3009510

Parameter	Units	60383737001 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	0.67J	20	20	22.2	22.8	108	110	61-130	2	15	
1,1-Dichloroethene	ug/L	0.39J	20	20	18.9	18.4	92	90	60-135	3	25	
1,2-Dichloroethane	ug/L	ND	20	20	20.3	20.4	102	102	30-160	1	25	
1,2-Dichloropropane	ug/L	ND	20	20	20.7	20.3	103	101	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	98.5	97.0	99	97	30-130	2	25	
2-Hexanone	ug/L	ND	100	100	100	105	100	105	40-135	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	109	111	109	111	60-135	3	20	
Acetone	ug/L	ND	100	100	75.4	81.8	75	82	10-150	8	25	
Benzene	ug/L	ND	20	20	22.4	22.6	112	113	20-155	1	25	
Bromodichloromethane	ug/L	ND	20	20	20.2	20.2	101	101	70-130	0	15	
Bromoform	ug/L	ND	20	20	17.9	18.3	90	91	50-125	2	20	
Bromomethane	ug/L	ND	20	20	16.5	17.1	83	85	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.0	17.3	90	87	55-140	4	25	
Carbon tetrachloride	ug/L	ND	20	20	20.3	20.6	101	103	70-140	2	20	
Chlorobenzene	ug/L	ND	20	20	21.0	20.6	105	103	65-130	2	20	
Chloroethane	ug/L	ND	20	20	23.0	23.2	115	116	20-180	1	20	
Chloroform	ug/L	ND	20	20	20.3	20.6	102	103	70-125	1	20	
Chloromethane	ug/L	ND	20	20	21.8	23.4	109	117	20-160	7	30	
cis-1,2-Dichloroethene	ug/L	3.8	20	20	25.0	25.7	106	110	55-130	3	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	16.9	17.2	84	86	60-125	2	20	
Dibromochloromethane	ug/L	ND	20	20	16.6	16.8	83	84	65-120	1	20	
Ethylbenzene	ug/L	ND	20	20	21.7	21.7	109	109	20-160	0	25	
Methylene Chloride	ug/L	ND	20	20	18.6	17.6	93	88	60-125	5	25	
Styrene	ug/L	ND	20	20	19.9	21.0	100	105	40-145	5	30	
Tetrachloroethene	ug/L	ND	20	20	18.8	19.1	94	96	55-135	2	25	
Toluene	ug/L	ND	20	20	19.9	20.5	99	103	25-150	3	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.4	21.2	102	106	60-130	4	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.6	17.0	83	85	60-120	2	15	
Trichloroethene	ug/L	16.8	20	20	36.9	36.9	101	101	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	22.8	22.7	114	113	40-155	1	25	
Xylene (Total)	ug/L	ND	60	60	61.7	62.5	103	104	15-160	1	30	
1,2-Dichlorobenzene-d4 (S)	%						98	101	80-120			
4-Bromofluorobenzene (S)	%						95	99	80-120			
Toluene-d8 (S)	%						99	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009511 3009512

Parameter	Units	60383737009 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	23.3	23.2	116	116	75-130	1	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.7	20.6	108	103	65-130	5	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	21.1	21.3	106	107	70-120	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009511 3009512

Parameter	Units	60383737009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	22.2	22.7	111	114	61-130	2	15	
1,1-Dichloroethene	ug/L	ND	20	20	18.8	20.3	94	102	60-135	8	25	
1,2-Dichloroethane	ug/L	ND	20	20	20.9	21.0	105	105	30-160	1	25	
1,2-Dichloropropane	ug/L	ND	20	20	21.9	21.6	110	108	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	98.8	94.9	99	95	30-130	4	25	
2-Hexanone	ug/L	ND	100	100	106	106	106	106	40-135	0	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	112	112	112	112	60-135	0	20	
Acetone	ug/L	ND	100	100	83.9	89.1	84	89	10-150	6	25	
Benzene	ug/L	ND	20	20	23.0	23.1	115	116	20-155	1	25	
Bromodichloromethane	ug/L	ND	20	20	20.9	20.5	104	102	70-130	2	15	
Bromoform	ug/L	ND	20	20	18.0	18.6	90	93	50-125	3	20	
Bromomethane	ug/L	ND	20	20	18.4	17.9	92	89	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.7	19.7	94	98	55-140	5	25	
Carbon tetrachloride	ug/L	ND	20	20	21.6	21.9	108	110	70-140	2	20	
Chlorobenzene	ug/L	ND	20	20	20.9	21.5	105	108	65-130	3	20	
Chloroethane	ug/L	ND	20	20	23.6	24.0	118	120	20-180	1	20	
Chloroform	ug/L	ND	20	20	21.3	21.3	106	107	70-125	0	20	
Chloromethane	ug/L	ND	20	20	23.4	24.2	117	121	20-160	3	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	23.1	23.6	116	118	55-130	2	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.5	17.8	88	89	60-125	2	20	
Dibromochloromethane	ug/L	ND	20	20	17.4	16.9	87	84	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	21.4	22.3	107	112	20-160	4	25	
Methylene Chloride	ug/L	ND	20	20	19.1	18.1	96	91	60-125	5	25	
Styrene	ug/L	ND	20	20	21.7	21.8	109	109	40-145	0	30	
Tetrachloroethene	ug/L	ND	20	20	19.5	20.2	97	101	55-135	4	25	
Toluene	ug/L	ND	20	20	20.5	20.7	103	103	25-150	1	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.2	16.5	86	82	60-130	4	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	16.7	86	84	60-120	3	15	
Trichloroethene	ug/L	0.67J	20	20	21.5	21.6	104	105	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	23.3	23.2	116	116	40-155	0	25	
Xylene (Total)	ug/L	ND	60	60	64.1	64.4	107	107	15-160	0	30	
1,2-Dichlorobenzene-d4 (S)	%						101	100	80-120			
4-Bromofluorobenzene (S)	%						102	99	80-120			
Toluene-d8 (S)	%						98	102	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751819
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737010, 60383737011, 60383737012, 60383737013, 60383737014, 60383737015, 60383737016, 60383737017, 60383737018, 60383737019, 60383737021

METHOD BLANK: 3010212
Matrix: Water
Associated Lab Samples: 60383737010, 60383737011, 60383737012, 60383737013, 60383737014, 60383737015, 60383737016, 60383737017, 60383737018, 60383737019, 60383737021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/25/21 21:06	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/25/21 21:06	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/25/21 21:06	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/25/21 21:06	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/25/21 21:06	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/25/21 21:06	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/25/21 21:06	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/25/21 21:06	
2-Hexanone	ug/L	ND	10.0	1.1	10/25/21 21:06	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/25/21 21:06	
Acetone	ug/L	ND	10.0	2.5	10/25/21 21:06	
Benzene	ug/L	ND	1.0	0.14	10/25/21 21:06	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/25/21 21:06	
Bromoform	ug/L	ND	1.0	0.68	10/25/21 21:06	
Bromomethane	ug/L	ND	5.0	0.46	10/25/21 21:06	
Carbon disulfide	ug/L	ND	5.0	0.98	10/25/21 21:06	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/25/21 21:06	
Chlorobenzene	ug/L	ND	1.0	0.089	10/25/21 21:06	
Chloroethane	ug/L	ND	1.0	0.37	10/25/21 21:06	
Chloroform	ug/L	ND	1.0	0.22	10/25/21 21:06	
Chloromethane	ug/L	ND	1.0	0.28	10/25/21 21:06	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/25/21 21:06	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/25/21 21:06	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/25/21 21:06	
Ethylbenzene	ug/L	ND	1.0	0.12	10/25/21 21:06	
Methylene Chloride	ug/L	ND	1.0	0.39	10/25/21 21:06	
Styrene	ug/L	ND	1.0	0.12	10/25/21 21:06	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/25/21 21:06	
Toluene	ug/L	ND	1.0	0.25	10/25/21 21:06	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/25/21 21:06	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/25/21 21:06	
Trichloroethene	ug/L	ND	1.0	0.21	10/25/21 21:06	
Vinyl chloride	ug/L	ND	1.0	0.17	10/25/21 21:06	
Xylene (Total)	ug/L	ND	3.0	0.28	10/25/21 21:06	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120		10/25/21 21:06	
4-Bromofluorobenzene (S)	%	102	80-120		10/25/21 21:06	
Toluene-d8 (S)	%	98	80-120		10/25/21 21:06	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3010213

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.7	119	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	22.1	110	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	80-120	
1,1-Dichloroethane	ug/L	20	23.1	115	75-125	
1,1-Dichloroethene	ug/L	20	21.3	107	80-120	
1,2-Dichloroethane	ug/L	20	20.4	102	75-120	
1,2-Dichloropropane	ug/L	20	21.7	108	80-125	
2-Butanone (MEK)	ug/L	100	107	107	40-150	
2-Hexanone	ug/L	100	111	111	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	114	114	65-140	
Acetone	ug/L	100	95.0	95	20-175	
Benzene	ug/L	20	23.4	117	80-120	
Bromodichloromethane	ug/L	20	20.1	100	80-125	
Bromoform	ug/L	20	20.5	103	60-135	
Bromomethane	ug/L	20	19.8	99	10-165	
Carbon disulfide	ug/L	20	25.6	128	75-135	
Carbon tetrachloride	ug/L	20	22.5	112	80-125	
Chlorobenzene	ug/L	20	22.1	111	80-120	
Chloroethane	ug/L	20	22.3	112	70-130	
Chloroform	ug/L	20	21.3	107	80-120	
Chloromethane	ug/L	20	26.4	132	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.6	108	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.1	105	80-125	
Dibromochloromethane	ug/L	20	20.2	101	70-120	
Ethylbenzene	ug/L	20	22.5	113	80-120	
Methylene Chloride	ug/L	20	24.1	121	75-120	L1
Styrene	ug/L	20	21.6	108	80-120	
Tetrachloroethene	ug/L	20	20.8	104	80-120	
Toluene	ug/L	20	22.7	113	80-120	
trans-1,2-Dichloroethene	ug/L	20	21.8	109	80-120	
trans-1,3-Dichloropropene	ug/L	20	20.5	102	75-120	
Trichloroethene	ug/L	20	21.8	109	80-120	
Vinyl chloride	ug/L	20	23.8	119	65-130	
Xylene (Total)	ug/L	60	63.7	106	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010214 3010215

Parameter	Units	60383737013 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	13.7	14.9	68	75	75-130	9	15	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	12.0	13.7	60	69	65-130	13	15	M1
1,1,2-Trichloroethane	ug/L	ND	20	20	11.8	13.1	59	65	70-120	10	20	M1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010214 3010215

Parameter	Units	60383737013 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	13.4	15.0	67	75	61-130	11	15	
1,1-Dichloroethene	ug/L	ND	20	20	12.0	13.1	60	66	60-135	9	25	
1,2-Dichloroethane	ug/L	ND	20	20	11.5	12.9	58	64	30-160	11	25	
1,2-Dichloropropane	ug/L	ND	20	20	12.1	13.9	61	69	65-130	13	20	M1
2-Butanone (MEK)	ug/L	ND	100	100	47.8	54.7	48	55	30-130	14	25	
2-Hexanone	ug/L	ND	100	100	51.2	58.6	51	59	40-135	14	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	59.8	69.0	60	69	60-135	14	20	
Acetone	ug/L	ND	100	100	31.4	38.1	31	38	10-150	19	25	
Benzene	ug/L	ND	20	20	13.2	15.0	66	75	20-155	12	25	
Bromodichloromethane	ug/L	ND	20	20	11.2	13.0	56	65	70-130	14	15	M1
Bromoform	ug/L	ND	20	20	11.0	12.7	55	64	50-125	14	20	
Bromomethane	ug/L	ND	20	20	10.6	12.5	53	63	10-155	17	45	
Carbon disulfide	ug/L	ND	20	20	14.3	15.6	71	78	55-140	9	25	
Carbon tetrachloride	ug/L	ND	20	20	12.6	13.8	63	69	70-140	9	20	M1
Chlorobenzene	ug/L	ND	20	20	12.3	14.2	62	71	65-130	14	20	M1
Chloroethane	ug/L	ND	20	20	12.8	13.8	64	69	20-180	7	20	
Chloroform	ug/L	ND	20	20	12.2	13.9	61	69	70-125	13	20	M1
Chloromethane	ug/L	ND	20	20	14.5	16.4	73	82	20-160	12	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	12.1	14.2	60	71	55-130	16	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	11.5	13.3	57	67	60-125	15	20	M1
Dibromochloromethane	ug/L	ND	20	20	11.3	12.9	57	64	65-120	13	20	M1
Ethylbenzene	ug/L	ND	20	20	12.5	13.9	63	69	20-160	10	25	
Methylene Chloride	ug/L	ND	20	20	13.4	15.3	67	76	60-125	13	25	
Styrene	ug/L	ND	20	20	4.8	6.2	24	31	40-145	26	30	M1
Tetrachloroethene	ug/L	ND	20	20	11.7	12.5	58	63	55-135	7	25	
Toluene	ug/L	ND	20	20	12.5	14.2	63	71	25-150	13	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	12.1	14.2	61	71	60-130	16	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	10.9	12.5	55	63	60-120	14	15	M1
Trichloroethene	ug/L	ND	20	20	12.1	13.8	60	69	50-145	13	20	
Vinyl chloride	ug/L	ND	20	20	13.5	14.2	68	71	40-155	5	25	
Xylene (Total)	ug/L	ND	60	60	35.1	39.4	59	66	15-160	11	30	
1,2-Dichlorobenzene-d4 (S)	%						100	99	80-120			
4-Bromofluorobenzene (S)	%						103	102	80-120			
Toluene-d8 (S)	%						99	98	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751955
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737028, 60383737029, 60383737030, 60383737038, 60383737039, 60383737040, 60383737041, 60383737042, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3010465
Matrix: Water
Associated Lab Samples: 60383737028, 60383737029, 60383737030, 60383737038, 60383737039, 60383737040, 60383737041, 60383737042, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/26/21 07:33	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/26/21 07:33	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/26/21 07:33	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/26/21 07:33	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/26/21 07:33	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/26/21 07:33	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/26/21 07:33	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/26/21 07:33	
2-Hexanone	ug/L	ND	10.0	1.1	10/26/21 07:33	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/26/21 07:33	
Acetone	ug/L	ND	10.0	2.5	10/26/21 07:33	
Benzene	ug/L	ND	1.0	0.14	10/26/21 07:33	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/26/21 07:33	
Bromoform	ug/L	ND	1.0	0.68	10/26/21 07:33	
Bromomethane	ug/L	ND	5.0	0.46	10/26/21 07:33	
Carbon disulfide	ug/L	ND	5.0	0.98	10/26/21 07:33	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/26/21 07:33	
Chlorobenzene	ug/L	ND	1.0	0.089	10/26/21 07:33	
Chloroethane	ug/L	ND	1.0	0.37	10/26/21 07:33	
Chloroform	ug/L	ND	1.0	0.22	10/26/21 07:33	
Chloromethane	ug/L	ND	1.0	0.28	10/26/21 07:33	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/26/21 07:33	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/26/21 07:33	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/26/21 07:33	
Ethylbenzene	ug/L	ND	1.0	0.12	10/26/21 07:33	
Methylene Chloride	ug/L	ND	1.0	0.39	10/26/21 07:33	
Styrene	ug/L	ND	1.0	0.12	10/26/21 07:33	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/26/21 07:33	
Toluene	ug/L	ND	1.0	0.25	10/26/21 07:33	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/26/21 07:33	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/26/21 07:33	
Trichloroethene	ug/L	ND	1.0	0.21	10/26/21 07:33	
Vinyl chloride	ug/L	ND	1.0	0.17	10/26/21 07:33	
Xylene (Total)	ug/L	ND	3.0	0.28	10/26/21 07:33	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120		10/26/21 07:33	
4-Bromofluorobenzene (S)	%	98	80-120		10/26/21 07:33	
Toluene-d8 (S)	%	99	80-120		10/26/21 07:33	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3010466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	97	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	21.8	109	75-125	
1,1,2-Trichloroethane	ug/L	20	20.4	102	80-120	
1,1-Dichloroethane	ug/L	20	20.1	100	75-125	
1,1-Dichloroethene	ug/L	20	17.9	90	80-120	
1,2-Dichloroethane	ug/L	20	18.9	94	75-120	
1,2-Dichloropropane	ug/L	20	19.8	99	80-125	
2-Butanone (MEK)	ug/L	100	131	131	40-150	
2-Hexanone	ug/L	100	130	130	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	65-140	
Acetone	ug/L	100	169	169	20-175	
Benzene	ug/L	20	20.9	104	80-120	
Bromodichloromethane	ug/L	20	19.0	95	80-125	
Bromoform	ug/L	20	17.6	88	60-135	
Bromomethane	ug/L	20	20.2	101	10-165	
Carbon disulfide	ug/L	20	20.0	100	75-135	
Carbon tetrachloride	ug/L	20	18.7	93	80-125	
Chlorobenzene	ug/L	20	20.1	100	80-120	
Chloroethane	ug/L	20	21.6	108	70-130	
Chloroform	ug/L	20	19.1	95	80-120	
Chloromethane	ug/L	20	21.7	109	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.2	106	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.9	100	80-125	
Dibromochloromethane	ug/L	20	15.7	78	70-120	
Ethylbenzene	ug/L	20	20.6	103	80-120	
Methylene Chloride	ug/L	20	17.2	86	75-120	
Styrene	ug/L	20	20.2	101	80-120	
Tetrachloroethene	ug/L	20	19.0	95	80-120	
Toluene	ug/L	20	19.4	97	80-120	
trans-1,2-Dichloroethene	ug/L	20	16.4	82	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	75-120	
Trichloroethene	ug/L	20	19.0	95	80-120	
Vinyl chloride	ug/L	20	22.3	112	65-130	
Xylene (Total)	ug/L	60	62.1	104	80-120	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 752343
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737020, 60383737022, 60383737023, 60383737024, 60383737025, 60383737026, 60383737027, 60383737043

METHOD BLANK: 3011626
Matrix: Water
Associated Lab Samples: 60383737020, 60383737022, 60383737023, 60383737024, 60383737025, 60383737026, 60383737027, 60383737043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/27/21 12:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/27/21 12:03	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/27/21 12:03	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/27/21 12:03	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/27/21 12:03	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/27/21 12:03	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/27/21 12:03	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/27/21 12:03	
2-Hexanone	ug/L	ND	10.0	1.1	10/27/21 12:03	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/27/21 12:03	
Acetone	ug/L	ND	10.0	2.5	10/27/21 12:03	
Benzene	ug/L	ND	1.0	0.14	10/27/21 12:03	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/27/21 12:03	
Bromoform	ug/L	ND	1.0	0.68	10/27/21 12:03	
Bromomethane	ug/L	ND	5.0	0.46	10/27/21 12:03	
Carbon disulfide	ug/L	ND	5.0	0.98	10/27/21 12:03	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Chlorobenzene	ug/L	ND	1.0	0.089	10/27/21 12:03	
Chloroethane	ug/L	ND	1.0	0.37	10/27/21 12:03	
Chloroform	ug/L	ND	1.0	0.22	10/27/21 12:03	
Chloromethane	ug/L	ND	1.0	0.28	10/27/21 12:03	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/27/21 12:03	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/27/21 12:03	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/27/21 12:03	
Ethylbenzene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Methylene Chloride	ug/L	ND	1.0	0.39	10/27/21 12:03	
Styrene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/27/21 12:03	
Toluene	ug/L	ND	1.0	0.25	10/27/21 12:03	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/27/21 12:03	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/27/21 12:03	
Trichloroethene	ug/L	ND	1.0	0.21	10/27/21 12:03	
Vinyl chloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Xylene (Total)	ug/L	ND	3.0	0.28	10/27/21 12:03	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/27/21 12:03	
4-Bromofluorobenzene (S)	%	104	80-120		10/27/21 12:03	
Toluene-d8 (S)	%	98	80-120		10/27/21 12:03	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3011627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.9	99	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.4	92	75-125	
1,1,2-Trichloroethane	ug/L	20	19.5	97	80-120	
1,1-Dichloroethane	ug/L	20	16.7	84	75-125	
1,1-Dichloroethene	ug/L	20	20.3	102	80-120	
1,2-Dichloroethane	ug/L	20	19.1	96	75-120	
1,2-Dichloropropane	ug/L	20	19.6	98	80-125	
2-Butanone (MEK)	ug/L	100	100	100	40-150	
2-Hexanone	ug/L	100	102	102	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.2	97	65-140	
Acetone	ug/L	100	96.2	96	20-175	
Benzene	ug/L	20	20.3	101	80-120	
Bromodichloromethane	ug/L	20	19.3	96	80-125	
Bromoform	ug/L	20	18.2	91	60-135	
Bromomethane	ug/L	20	17.8	89	10-165	
Carbon disulfide	ug/L	20	19.6	98	75-135	
Carbon tetrachloride	ug/L	20	18.9	95	80-125	
Chlorobenzene	ug/L	20	19.7	99	80-120	
Chloroethane	ug/L	20	19.4	97	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	19.5	98	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.6	93	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-125	
Dibromochloromethane	ug/L	20	19.3	96	70-120	
Ethylbenzene	ug/L	20	20.0	100	80-120	
Methylene Chloride	ug/L	20	19.5	97	75-120	
Styrene	ug/L	20	22.4	112	80-120	
Tetrachloroethene	ug/L	20	20.2	101	80-120	
Toluene	ug/L	20	20.0	100	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.0	85	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	18.8	94	65-130	
Xylene (Total)	ug/L	60	61.5	102	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	18.7	19.1	93	96	75-130	2	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.9	17.5	85	88	65-130	3	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.2	18.9	91	95	70-120	4	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	15.3	18.1	77	91	61-130	17	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	18.5	19.9	92	100	60-135	8	25	
1,2-Dichloroethane	ug/L	ND	20	20	16.9	17.8	84	89	30-160	5	25	
1,2-Dichloropropane	ug/L	ND	20	20	17.9	18.0	89	90	65-130	1	20	
2-Butanone (MEK)	ug/L	ND	100	100	78.9	84.3	79	84	30-130	7	25	
2-Hexanone	ug/L	ND	100	100	85.5	89.6	85	90	40-135	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	83.5	85.2	83	85	60-135	2	20	
Acetone	ug/L	ND	100	100	73.0	75.8	73	76	10-150	4	25	
Benzene	ug/L	ND	20	20	18.8	19.4	94	96	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	16.8	17.2	84	86	70-130	2	15	
Bromoform	ug/L	ND	20	20	15.7	16.3	79	82	50-125	4	20	
Bromomethane	ug/L	ND	20	20	15.1	15.5	76	78	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.1	18.3	90	92	55-140	1	25	
Carbon tetrachloride	ug/L	ND	20	20	18.1	18.4	90	92	70-140	2	20	
Chlorobenzene	ug/L	5.5	20	20	23.9	24.5	92	95	65-130	2	20	
Chloroethane	ug/L	ND	20	20	17.5	18.4	87	92	20-180	5	20	
Chloroform	ug/L	ND	20	20	17.4	17.6	87	88	70-125	1	20	
Chloromethane	ug/L	ND	20	20	17.0	17.2	85	86	20-160	1	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.0	17.9	85	89	55-130	5	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.0	17.8	85	89	60-125	5	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.5	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	18.4	19.0	92	95	20-160	3	25	
Methylene Chloride	ug/L	ND	20	20	16.7	17.2	84	86	60-125	3	25	
Styrene	ug/L	ND	20	20	11.1	10.9	55	55	40-145	1	30	
Tetrachloroethene	ug/L	ND	20	20	19.8	19.7	99	98	55-135	1	25	
Toluene	ug/L	ND	20	20	18.4	19.1	92	95	25-150	4	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.8	16.2	79	81	60-130	2	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	18.3	86	91	60-120	6	15	
Trichloroethene	ug/L	ND	20	20	18.1	18.8	90	94	50-145	4	20	
Vinyl chloride	ug/L	ND	20	20	16.7	17.1	83	86	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	95	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						97	97	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						102	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	18.0	19.6	90	98	75-130	9	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.6	17.4	88	87	65-130	1	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.1	18.8	96	94	70-120	2	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	15.2	18.6	76	93	61-130	20	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	19.0	19.7	95	99	60-135	4	25	
1,2-Dichloroethane	ug/L	ND	20	20	17.6	18.3	88	91	30-160	3	25	
1,2-Dichloropropane	ug/L	ND	20	20	18.1	18.4	90	92	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	74.7	87.0	75	87	30-130	15	25	
2-Hexanone	ug/L	ND	100	100	89.1	89.9	89	90	40-135	1	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	89.5	90.1	89	90	60-135	1	20	
Acetone	ug/L	ND	100	100	75.8	74.3	76	74	10-150	2	25	
Benzene	ug/L	ND	20	20	19.3	20.0	97	100	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	17.6	17.5	88	88	70-130	0	15	
Bromoform	ug/L	ND	20	20	16.2	16.3	81	82	50-125	0	20	
Bromomethane	ug/L	ND	20	20	15.7	16.8	79	84	10-155	7	45	
Carbon disulfide	ug/L	ND	20	20	18.5	19.4	92	97	55-140	5	25	
Carbon tetrachloride	ug/L	ND	20	20	18.0	19.2	90	96	70-140	7	20	
Chlorobenzene	ug/L	ND	20	20	18.1	18.9	91	95	65-130	4	20	
Chloroethane	ug/L	ND	20	20	17.4	18.5	87	92	20-180	6	20	
Chloroform	ug/L	ND	20	20	15.9	18.1	80	90	70-125	13	20	
Chloromethane	ug/L	ND	20	20	17.0	17.6	85	88	20-160	4	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	15.5	18.3	78	91	55-130	16	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.9	18.5	90	93	60-125	3	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.6	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	19.3	19.6	96	98	20-160	2	25	
Methylene Chloride	ug/L	ND	20	20	17.8	18.0	89	90	60-125	1	25	
Styrene	ug/L	ND	20	20	20.2	21.3	101	106	40-145	5	30	
Tetrachloroethene	ug/L	ND	20	20	19.0	19.6	95	98	55-135	3	25	
Toluene	ug/L	ND	20	20	18.9	19.4	95	97	25-150	2	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.9	17.0	79	85	60-130	7	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.5	17.9	87	90	60-120	2	15	
Trichloroethene	ug/L	ND	20	20	19.1	19.0	95	95	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	17.3	17.9	87	89	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	94	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						103	100	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						101	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751612
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042

METHOD BLANK: 3009539 Matrix: Water
Associated Lab Samples: 60383737041, 60383737042

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/25/21 13:29	

LABORATORY CONTROL SAMPLE: 3009540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009541 3009542

Parameter	Units	60383950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.14	0.11	24	20	75-125	17	20	H1,M1

SAMPLE DUPLICATE: 3009543

Parameter	Units	60383950001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

SAMPLE DUPLICATE: 3009544

Parameter	Units	60383885002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751896
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3010348
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/26/21 06:47	
Sulfate	mg/L	ND	1.0	0.42	10/26/21 06:47	

LABORATORY CONTROL SAMPLE: 3010349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010350 3010351

Parameter	Units	60383737041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	153	100	100	246	247	93	95	80-120	0	15	
Sulfate	mg/L	1.3	5	5	5.9	5.9	93	94	80-120	0	15	

MATRIX SPIKE SAMPLE: 3010352

Parameter	Units	60383996041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	92.7	100	181	88	80-120	
Sulfate	mg/L	1.9	5	6.4	90	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 750899
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737043, 60383737046

METHOD BLANK: 3006639 Matrix: Water
Associated Lab Samples: 60383737043, 60383737046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/29/21 11:24	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/29/21 11:24	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/29/21 11:24	

LABORATORY CONTROL SAMPLE: 3006640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	101	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 3006641

Parameter	Units	60383725024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.1	110	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	101	90-110	H1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.1	104	90-110	H1

SAMPLE DUPLICATE: 3006642

Parameter	Units	60383725004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	H1
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 750952
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737044, 60383737045, 60383737047, 60383737048

METHOD BLANK: 3006857
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737044, 60383737045, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/21/21 08:36	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/21/21 08:36	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/21/21 08:36	

LABORATORY CONTROL SAMPLE: 3006858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.91	91	70-130	
Nitrogen, Nitrite	mg/L	1	0.99	99	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	95	90-110	

MATRIX SPIKE SAMPLE: 3006859

Parameter	Units	60383745004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.86	86	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	97	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	1.9	93	90-110	

MATRIX SPIKE SAMPLE: 3006861

Parameter	Units	60383725006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.89	89	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	1.9	93	90-110	

SAMPLE DUPLICATE: 3006860

Parameter	Units	60383745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 753086
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737043, 60383737046

METHOD BLANK: 3014270
Matrix: Water
Associated Lab Samples: 60383737043, 60383737046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/29/21 15:09	

LABORATORY CONTROL SAMPLE: 3014271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 3014272

Parameter	Units	60383737043 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.095J	5	90-110	M1

MATRIX SPIKE SAMPLE: 3014274

Parameter	Units	60384407001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.11	5	90-110	M1

SAMPLE DUPLICATE: 3014273

Parameter	Units	60384461001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 752649
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3012426
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/28/21 09:43	

LABORATORY CONTROL SAMPLE: 3012427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.3	105	80-120	

MATRIX SPIKE SAMPLE: 3012428

Parameter	Units	60383451003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	27.1	25	49.2	89	80-120	

SAMPLE DUPLICATE: 3012429

Parameter	Units	60383674005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	7.1	6.5	9	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 752988
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737043, 60383737044, 60383737045, 60383737046

METHOD BLANK: 3013841 Matrix: Water
Associated Lab Samples: 60383737041, 60383737043, 60383737044, 60383737045, 60383737046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 09:45	

LABORATORY CONTROL SAMPLE: 3013842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	93	80-120	

MATRIX SPIKE SAMPLE: 3013843

Parameter	Units	60383737041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.6	5	7.4	95	80-120	

SAMPLE DUPLICATE: 3013844

Parameter	Units	60383737044 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.3	8.2	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 753833
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737047, 60383737048

METHOD BLANK: 3017243
Matrix: Water
Associated Lab Samples: 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	11/03/21 11:33	

LABORATORY CONTROL SAMPLE: 3017244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	95	80-120	

MATRIX SPIKE SAMPLE: 3017245

Parameter	Units	60383737047 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	55.6	125	206	121	80-120	M1

SAMPLE DUPLICATE: 3017246

Parameter	Units	60383996041 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.8	9.1	4	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725711
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 2266432
Matrix: Water
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/16/21 10:26	
Acetic Acid	mg/L	ND	0.50	0.12	11/16/21 10:26	
Propionic Acid	mg/L	ND	0.50	0.053	11/16/21 10:26	
Formic acid	mg/L	ND	0.50	0.055	11/16/21 10:26	
Butyric Acid	mg/L	ND	0.50	0.058	11/16/21 10:26	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/16/21 10:26	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/16/21 10:26	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/16/21 10:26	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/16/21 10:26	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/16/21 10:26	

LABORATORY CONTROL SAMPLE & LCSD: 2266433 2266434

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.3	2.3	117	117	70-130	0	20	
Acetic Acid	mg/L	2	2.1	2.1	107	107	70-130	0	20	
Propionic Acid	mg/L	2	2.3	2.3	117	115	70-130	2	20	
Formic acid	mg/L	2	2.1	2.1	105	104	70-130	1	20	
Butyric Acid	mg/L	2	2.1	2.2	107	110	70-130	3	20	
Pyruvic Acid	mg/L	2	2.3	2.3	117	117	70-130	1	20	
i-Pentanoic Acid	mg/L	2	2.3	2.3	114	115	70-130	0	20	
Pentanoic Acid	mg/L	2	2.1	2.1	104	107	70-130	3	20	
i-Hexanoic Acid	mg/L	2	2.3	2.2	117	113	70-130	4	20	
Hexanoic Acid	mg/L	2	2.2	2.1	108	106	70-130	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 726862
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041

METHOD BLANK: 2273096
Matrix: Water
Associated Lab Samples: 60383737041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/17/21 17:16	
Acetic Acid	mg/L	ND	0.50	0.12	11/17/21 17:16	
Propionic Acid	mg/L	ND	0.50	0.053	11/17/21 17:16	
Formic acid	mg/L	ND	0.50	0.055	11/17/21 17:16	
Butyric Acid	mg/L	ND	0.50	0.058	11/17/21 17:16	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/17/21 17:16	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/17/21 17:16	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/17/21 17:16	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/17/21 17:16	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/17/21 17:16	

LABORATORY CONTROL SAMPLE & LCSD: 2273097 2273098

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.3	2.4	115	120	70-130	5	20	
Acetic Acid	mg/L	2	2.2	2.2	108	112	70-130	4	20	
Propionic Acid	mg/L	2	2.3	2.4	115	121	70-130	5	20	
Formic acid	mg/L	2	2.2	2.1	108	106	70-130	2	20	
Butyric Acid	mg/L	2	2.5	2.4	124	122	70-130	2	20	
Pyruvic Acid	mg/L	2	2.3	2.2	114	112	70-130	2	20	
i-Pentanoic Acid	mg/L	2	2.0	2.0	100	101	70-130	1	20	
Pentanoic Acid	mg/L	2	2.1	1.9	106	97	70-130	9	20	
i-Hexanoic Acid	mg/L	2	2.4	2.4	120	120	70-130	0	20	
Hexanoic Acid	mg/L	2	2.4	2.2	119	108	70-130	9	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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BATCH QUALIFIERS

Batch: 751955

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

ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.

H1 Analysis was conducted outside of the recognized method holding time.

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

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383737041	**TMW-10-202110**	AM20GAX	725022		
60383737041	**TMW-10-202110**	AM20GAX	725469		
60383737041	**TMW-10-202110**	AM20GAX	725427		
60383737042	**MW-50R-202110**	AM20GAX	725427		
60383737043	**TMW-16-202110**	AM20GAX	725466		
60383737044	**MW-186-202110**	AM20GAX	725466		
60383737045	**TMW-36-202110**	AM20GAX	725466		
60383737046	**TMW-36B-202110**	AM20GAX	725466		
60383737047	**MW-99-202110**	AM20GAX	725466		
60383737048	**TMW-26-202110**	AM20GAX	725466		
60383737041	**TMW-10-202110**	EPA 3010	754327	EPA 6010	754446
60383737042	**MW-50R-202110**	EPA 3010	754327	EPA 6010	754446
60383737043	**TMW-16-202110**	EPA 3010	754327	EPA 6010	754446
60383737044	**MW-186-202110**	EPA 3010	754327	EPA 6010	754446
60383737045	**TMW-36-202110**	EPA 3010	754327	EPA 6010	754446
60383737046	**TMW-36B-202110**	EPA 3010	754327	EPA 6010	754446
60383737047	**MW-99-202110**	EPA 3010	754327	EPA 6010	754446
60383737048	**TMW-26-202110**	EPA 3010	754327	EPA 6010	754446
60383737001	**MW-187-202110**	EPA 5030B/8260	751594		
60383737002	**MW-203-202110**	EPA 5030B/8260	751594		
60383737003	**EB-02-202110**	EPA 5030B/8260	751594		
60383737004	**MW-188-202110**	EPA 5030B/8260	751594		
60383737005	**MW-55R-202110**	EPA 5030B/8260	751594		
60383737006	**TB-01-202110**	EPA 5030B/8260	751594		
60383737007	**TB-02-202110**	EPA 5030B/8260	751594		
60383737008	**TB-03-202110**	EPA 5030B/8260	751594		
60383737009	**MW-183R-202110**	EPA 5030B/8260	751594		
60383737010	**MW-200-202110**	EPA 5030B/8260	751819		
60383737011	**MW-184-202110**	EPA 5030B/8260	751819		
60383737012	**DUP-01-202110**	EPA 5030B/8260	751819		
60383737013	**MW-60R-202110**	EPA 5030B/8260	751819		
60383737014	**ITMW-2R-202110**	EPA 5030B/8260	751819		
60383737015	**MW-196-202110**	EPA 5030B/8260	751819		
60383737016	**ITMW-16-202110**	EPA 5030B/8260	751819		
60383737017	**MW-26-202110**	EPA 5030B/8260	751819		
60383737018	**TMW-27-202110**	EPA 5030B/8260	751819		
60383737019	**MW-201-202110**	EPA 5030B/8260	751819		
60383737020	**MW-29-202110**	EPA 5030B/8260	752343		
60383737021	**MW-195-202110**	EPA 5030B/8260	751819		
60383737022	**DUP-05-202110**	EPA 5030B/8260	752343		
60383737023	**MW-68-202110**	EPA 5030B/8260	752343		
60383737024	**MW-40R-202110**	EPA 5030B/8260	752343		
60383737025	**MW-96-202110**	EPA 5030B/8260	752343		
60383737026	**DUP-02-202110**	EPA 5030B/8260	752343		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383737027	**TMW-29-202110**	EPA 5030B/8260	752343		
60383737028	**TMW-20-202110**	EPA 5030B/8260	751955		
60383737029	**TMW-35-202110**	EPA 5030B/8260	751955		
60383737030	**DUP-06-202110**	EPA 5030B/8260	751955		
60383737031	**MW-39R-202110**	EPA 5030B/8260	751594		
60383737032	**MW-191-202110**	EPA 5030B/8260	751594		
60383737033	**MW-27-202110**	EPA 5030B/8260	751594		
60383737034	**EB-01-202110**	EPA 5030B/8260	751594		
60383737035	**MW-98-202110**	EPA 5030B/8260	751594		
60383737036	**MW-62R-20210**	EPA 5030B/8260	751594		
60383737037	**MW-28-202110**	EPA 5030B/8260	751594		
60383737038	**ITMW-20-202110**	EPA 5030B/8260	751955		
60383737039	**DUP-03-202110**	EPA 5030B/8260	751955		
60383737040	**MW-97-202110**	EPA 5030B/8260	751955		
60383737041	**TMW-10-202110**	EPA 5030B/8260	751955		
60383737042	**MW-50R-202110**	EPA 5030B/8260	751955		
60383737043	**TMW-16-202110**	EPA 5030B/8260	752343		
60383737044	**MW-186-202110**	EPA 5030B/8260	751955		
60383737045	**TMW-36-202110**	EPA 5030B/8260	751955		
60383737046	**TMW-36B-202110**	EPA 5030B/8260	751955		
60383737047	**MW-99-202110**	EPA 5030B/8260	751955		
60383737048	**TMW-26-202110**	EPA 5030B/8260	751955		
60383737041	**TMW-10-202110**	SM 4500-S-2 D	751612		
60383737042	**MW-50R-202110**	SM 4500-S-2 D	751612		
60383737041	**TMW-10-202110**	EPA 300.0	751896		
60383737042	**MW-50R-202110**	EPA 300.0	751896		
60383737043	**TMW-16-202110**	EPA 300.0	751896		
60383737044	**MW-186-202110**	EPA 300.0	751896		
60383737045	**TMW-36-202110**	EPA 300.0	751896		
60383737046	**TMW-36B-202110**	EPA 300.0	751896		
60383737047	**MW-99-202110**	EPA 300.0	751896		
60383737048	**TMW-26-202110**	EPA 300.0	751896		
60383737041	**TMW-10-202110**	EPA 353.2	750952		
60383737042	**MW-50R-202110**	EPA 353.2	750952		
60383737043	**TMW-16-202110**	EPA 353.2	750899		
60383737044	**MW-186-202110**	EPA 353.2	750952		
60383737045	**TMW-36-202110**	EPA 353.2	750952		
60383737046	**TMW-36B-202110**	EPA 353.2	750899		
60383737047	**MW-99-202110**	EPA 353.2	750952		
60383737048	**TMW-26-202110**	EPA 353.2	750952		
60383737043	**TMW-16-202110**	EPA 353.2	753086		
60383737046	**TMW-36B-202110**	EPA 353.2	753086		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383737041	**TMW-10-202110**	SM 5310C	752649		
60383737042	**MW-50R-202110**	SM 5310C	752649		
60383737043	**TMW-16-202110**	SM 5310C	752649		
60383737044	**MW-186-202110**	SM 5310C	752649		
60383737045	**TMW-36-202110**	SM 5310C	752649		
60383737046	**TMW-36B-202110**	SM 5310C	752649		
60383737047	**MW-99-202110**	SM 5310C	752649		
60383737048	**TMW-26-202110**	SM 5310C	752649		
60383737041	**TMW-10-202110**	SM 5310C	752988		
60383737043	**TMW-16-202110**	SM 5310C	752988		
60383737044	**MW-186-202110**	SM 5310C	752988		
60383737045	**TMW-36-202110**	SM 5310C	752988		
60383737046	**TMW-36B-202110**	SM 5310C	752988		
60383737047	**MW-99-202110**	SM 5310C	753833		
60383737048	**TMW-26-202110**	SM 5310C	753833		
60383737041	**TMW-10-202110**	AM23G	726862		
60383737043	**TMW-16-202110**	AM23G	725711		
60383737044	**MW-186-202110**	AM23G	725711		
60383737045	**TMW-36-202110**	AM23G	725711		
60383737046	**TMW-36B-202110**	AM23G	725711		
60383737047	**MW-99-202110**	AM23G	725711		
60383737048	**TMW-26-202110**	AM23G	725711		

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Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60383737

60383737

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 ☑ SPLC

Thermometer Used: T299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 1.1 **Corr. Factor** -0.2 **Corrected** 1.9°C

Date and initials of person examining contents:

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	NOX 10/21/21 1155
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) LOT# 603173	☑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	SR 10/20/21
Headspace in VOA vials (>6mm):	☐Yes ☑No ☑N/A	SR 10/20/21
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:

REVIEWED
By jchurch at 9:04 pm, 10/20/21

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight
David Meyer

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight
David Meyer

Email To: thouseknight@ramboll.com
dmeyer@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample #, Comments
1	MW-187-202110	GW	G	10-19-21	1505				3	X	
1	MW-187-202110-MS	GW	G	10-19-21	1505				3	X	
1	MW-187-202110-MSD	GW	G	10-19-21	1505				3	X	
1	MW-203-202110	GW	G	10-19-21	1505				3	X	
1	EB-02-202110	GW	G	10-19-21	1630				3	X	
1	MW-188-202110	GW	G	10-19-21	1628				3	X	
1	MW-55R-202110	GW	G	10-19-21	1653				3	X	
1	TB-01-202110	TB	G	10-19-21	0700				2	X	
3	TB-02-202110	TB	G	10-19-21	0700				2	X	
3	TB-03-202110	TB	G	10-19-21	0700				2	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SROGERS PACE	10/20/21 0445
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 1 of 7

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60383737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight
David Meyer

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com
dmeyer@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft. Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	MW-183R-202110-MS	GW	G	10-19-21	1152				3	X	
1	MW-183R-202110-MSD	GW	G	10-19-21	1152				3	X	
1	MW-200-202110	GW	G	10-19-21	1209				3	X	
1	~~TMW-16~~ MW-184-202110	GW	G	10-19-21	1325				3	X	
1	DUP-01-202110	GW	G	10-19-21	1325				3	X	
1	MW-60R-202110	GW	G	10-19-21	1348				3	X	
1	MW-60R-202110-MS	GW	G	10-19-21	1348				3	X	
1	MW-60R-202110-MSD	GW	G	10-19-21	1348				3	X	
1	ITMW-2R-202110	GW	G	10-19-21	1347				3	X	
1	MW-196-202110	GW	G	10-19-21	1407				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 2 of 9

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SPEEDERS PACE	10/20/21 0445
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60383737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses: 8260 VOCs

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
ITMW-16-202110	GW	G	10-19-21	1045				3	X	
MW-26-202110	GW	G	10-19-21	0950				3	X	
TMW-27-202110	GW	G	10-19-21	1125				3	X	
MW-201-202110	GW	G	10-19-21	1149				3	X	
MW-29-202110	GW	G	10-19-21	1145				3	X	
MW-29-202110-MS	GW	G	10-19-21	1145				3	X	
MW-29-202110-MSD	GW	G	10-19-21	1145				3	X	
MW-195-202110	GW	G	10-19-21	1135				3	X	
DUP-05-202110	GW	G	10-19-21	1135				3	X	
MW-183R-202110	GW	G	10-19-21	1152				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [X] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt ____ oC
Cooler Therm Corr. Factor ____ oC
Cooler Temp Corrected 1.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 3 of 7

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 / 1800	SROGERS PACE	10/20/21 0445

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 603837 37

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: / PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	LAB USE ONLY: Lab Sample #, Comments
MW-68-202110	GW	G	10-19-21	0907				3	X	
MW-68-202110-MS	GW	G	10-19-21	0907				3	X	
MW-68-202110-MSD	GW	G	10-19-21	0907				3	X	
MW-40R-202110	GW	G	10-19-21	1023				3	X	
MW-96-202110	GW	G	10-19-21	1020				3	X	
DUP-02-202110	GW	G	10-19-21	1020				3	X	
TMW-29-202110	GW	G	10-19-21	0945				3	X	
TMW-20-202110	GW	G	10-19-21	1033				3	X	
TMW-35-202110	GW	G	10-19-21	0902				3	X	
DUP-06-202110	GW	G	10-19-21	0902				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [X] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:

ACCT #:

Template:

Prelogin:

PM:

PB:

LAB Sample Temperature Info:

Temp Blank received: Y N NA

Therm ID #:

Cooler Temp Upon Receipt oC

Cooler Therm Corr. Factor oC

Cooler Temp Corrected 1.9 oC

Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s): YES / NO

Page 4 of 7

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	Rogers Pace	10/20/21 0945
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 60JR 3>3>

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: LP

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [✓] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	MW-39R-202110	GW	G	10-18-21	1710	-	-		3	X	
1	MW-191-202110	GW	G	10-18-21	1628	-	-		3	X	
1	MW-27-202110	GW	G	10-18-21	1730	-	-		3	X	
1	EB-01-202110	GW	G	10-18-21	1805	-	-		3	X	
1	MW-98-202110	GW	G	10-18-21	1712	-	-		3	X	
1	MW-62R-20210	GW	G	10-18-21	1820	-	-		3	X	
1	MW-28-202110	GW	G	10-18-21	1800	-	-		3	X	
1	ITMW-20-202110	GW	G	10-19-21	0903	-	-		3	X	
1	DUP-03-202110	GW	G	10-19-21	0903	-	-		3	X	
1	MW-97-202110	GW	G	10-19-21	0917	-	-		3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [✓] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY
Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: _____
Cooler Temp Upon Receipt _____ oC
Cooler Therm Corr. Factor _____ oC
Cooler Temp Corrected 1.9 oC
Comments: _____

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 6 of 7

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ramboll	10-19-21 1800	SROGERS PACE	10/20/21 0445
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Haley Ahlers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

Container Preservative Type **: 3 U 5 U 2 U 1 0 0 0

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride, Sulfate, Nitrate	~~Sulfate~~ Sulfide	~~Nitrate~~ Hydrogen	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene, Ammonia, Acetylene	LAB USE ONLY: Lab Sample # / Comments
TMW-10-202110	GW	G	10-19-21	1431				14	X	X	X	X	X	X	X	X	X	X	
MW-SOR-202110	GW	G	10-19-21	1432				11	X	X	X	X	X		X			X	

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

DM

Customer Remarks/ Special Conditions/ Possible Hazards:
Do not analyze for chloride for Sample ~~TMW~~ MW-SOR-202110.

Type of Ice Used: Wet [X] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY
Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: _____
Cooler Temp Upon Receipt _____ oC
Cooler Therm Corr. Factor _____ oC
Cooler Temp Corrected 1.9 oC
Comments: _____

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ramboll	10-19-21 1800	SROGERS PACE	10/20/21 0445

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

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CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6037 3737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Haley Ahlers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3 U U U 2 U 1 0 0

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

Lab Project Manager: Jamie Church

LAB Profile/Line: 7444 Line 1

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	Chloride	Sulfate	Nitrate	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
3	TMW-16-202110	GW	G	10-19-21	1155	-	-		12	X	X	X	X	X	X	X	X	X	
3	MW-186-202110	GW	G	10-19-21	1410	-	-		12	X	X	X	X	X	X	X	X	X	
2	TMW-36-202110	GW	G	10-19-21	1320	-	-		12	X	X	X	X	X	X	X	X	X	
2	TMW-36G-202110	GW	G	10-19-21	1145	-	-		12	X	X	X	X	X	X	X	X	X	
3	MW-99-202110	GW	G	10-19-21	1548	-	-		12	X	X	X	X	X	X	X	X	X	
3	TMW-26-202110	GW	G	10-19-21	1625	-	-		12	X	X	X	X	X	X	X	X	X	

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeCH TSP Other

NonConformance(s) YES / NO

Page 7 of 7

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SPECTRUS PACE	10/20/21 0445
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

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

December 29, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

REV-1, 12/29/21: Report revised to update comment on Project Narrative page that was reported in error.

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast
7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383996001	VP-14-202110	Water	10/21/21 16:43	10/22/21 03:00
60383996002	VP-8-202110	Water	10/21/21 15:08	10/22/21 03:00
60383996003	MW-190-202110	Water	10/21/21 15:20	10/22/21 03:00
60383996004	VP-10-202110	Water	10/21/21 15:25	10/22/21 03:00
60383996005	ITMW-6-202110	Water	10/21/21 15:17	10/22/21 03:00
60383996006	ITMW-5-202110	Water	10/21/21 17:30	10/22/21 03:00
60383996007	MW-84-202110	Water	10/21/21 17:09	10/22/21 03:00
60383996008	MW-46R-202110	Water	10/21/21 17:24	10/22/21 03:00
60383996009	EB-04-202110	Water	10/21/21 17:15	10/22/21 03:00
60383996010	TB-01-202110	Water	10/21/21 00:00	10/22/21 03:00
60383996011	TMW-30-202110	Water	10/21/21 12:02	10/22/21 03:00
60383996012	DUP-11-202110	Water	10/21/21 12:02	10/22/21 03:00
60383996013	MW-56R-202110	Water	10/21/21 11:42	10/22/21 03:00
60383996014	TMW-24-202110	Water	10/21/21 12:25	10/22/21 03:00
60383996015	MW-57R-202110	Water	10/21/21 13:35	10/22/21 03:00
60383996016	MW-93-202110	Water	10/21/21 13:25	10/22/21 03:00
60383996017	MW-205-202110	Water	10/21/21 13:49	10/22/21 03:00
60383996018	MW-189-202110	Water	10/21/21 13:56	10/22/21 03:00
60383996019	MW-178-202110	Water	10/21/21 16:05	10/22/21 03:00
60383996020	MW-179-202110	Water	10/21/21 16:25	10/22/21 03:00
60383996021	ITMW-18-202110	Water	10/21/21 08:48	10/22/21 03:00
60383996022	MW-199-202110	Water	10/21/21 08:45	10/22/21 03:00
60383996023	MW-24-202110	Water	10/21/21 08:45	10/22/21 03:00
60383996024	ITMW-19-202110	Water	10/21/21 09:10	10/22/21 03:00
60383996025	MW-182-202110	Water	10/21/21 10:09	10/22/21 03:00
60383996026	ITMW-10-202110	Water	10/21/21 10:23	10/22/21 03:00
60383996027	TMW-12-202110	Water	10/21/21 10:25	10/22/21 03:00
60383996028	DUP-08-202110	Water	10/21/21 10:25	10/22/21 03:00
60383996029	DUP-10-202110	Water	10/21/21 10:09	10/22/21 03:00
60383996030	DUP-07-202110	Water	10/21/21 08:45	10/22/21 03:00
60383996031	TB-07-202110	Water	10/21/21 17:31	10/22/21 03:00
60383996032	TB-08-202110	Water	10/21/21 17:32	10/22/21 03:00
60383996033	MW-38-202110	Water	10/21/21 09:15	10/22/21 03:00
60383996034	RW-69-202110	Water	10/21/21 09:25	10/22/21 03:00
60383996035	MW-87-202110	Water	10/21/21 10:23	10/22/21 03:00
60383996036	MW-198-202110	Water	10/21/21 10:55	10/22/21 03:00
60383996037	ITMW-9-202110	Water	10/21/21 11:35	10/22/21 03:00

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383996038	**IW-73-202110**	Water	10/21/21 12:10	10/22/21 03:00
60383996039	**MW-58R-202110**	Water	10/21/21 13:30	10/22/21 03:00
60383996040	**MW-95-202110**	Water	10/21/21 14:35	10/22/21 03:00
60383996041	**MW-91-202110**	Water	10/21/21 15:25	10/22/21 03:00
60383996042	**TMW-22R-202110**	Water	10/21/21 15:15	10/22/21 03:00
60383996043	**MW-185-202110**	Water	10/21/21 16:25	10/22/21 03:00

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

SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383996001	VP-14-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996002	VP-8-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996003	MW-190-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996004	VP-10-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996005	ITMW-6-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996006	ITMW-5-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996007	MW-84-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996008	MW-46R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996009	EB-04-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996010	TB-01-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996011	TMW-30-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996012	DUP-11-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996013	MW-56R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996014	TMW-24-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996015	MW-57R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996016	MW-93-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996017	MW-205-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996018	MW-189-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996019	MW-178-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996020	MW-179-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996021	ITMW-18-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996022	MW-199-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996023	MW-24-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996024	ITMW-19-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996025	MW-182-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996026	ITMW-10-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996027	TMW-12-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996028	DUP-08-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996029	DUP-10-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996030	DUP-07-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996031	TB-07-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996032	TB-08-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996033	MW-38-202110	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996034	**RW-69-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996035	**MW-87-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996036	**MW-198-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996037	**ITMW-9-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996038	**IW-73-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383996039	**MW-58R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996040	**MW-95-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996041	**MW-91-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383996042	**TMW-22R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383996043	**MW-185-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		AM23G	SLL2	10	GCLA

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Date: December 29, 2021

In the AM20_LHC analysis, all samples were analyzed outside the recognized holding time Due to a lab error, the analysis was delayed.

In the AM23G analysis, all samples were conducted one day outside of the recognized method holding time.

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: December 29, 2021

General Information:
11 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis was conducted outside of the recognized method holding time.
- ITMW-9-202110 (Lab ID: 60383996037)
- IW-73-202110 (Lab ID: 60383996038)
- MW-185-202110 (Lab ID: 60383996043)
- MW-198-202110 (Lab ID: 60383996036)
- MW-38-202110 (Lab ID: 60383996033)
- MW-58R-202110 (Lab ID: 60383996039)
- MW-87-202110 (Lab ID: 60383996035)
- MW-91-202110 (Lab ID: 60383996041)
- MW-95-202110 (Lab ID: 60383996040)
- RW-69-202110 (Lab ID: 60383996034)
- TMW-22R-202110 (Lab ID: 60383996042)

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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: December 29, 2021

General Information:
11 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: December 29, 2021

General Information:
43 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.
- MW-84-202110 (Lab ID: 60383996007)

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

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

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

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

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

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

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

QC Batch: 752748

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: 3012918)
  - 1,1-Dichloroethene

QC Batch: 753288

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- LCS (Lab ID: 3015423)
  - Bromoform

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

QC Batch: 752721

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

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: December 29, 2021

QC Batch: 752748

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

QC Batch: 752796

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

QC Batch: 753191

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

QC Batch: 753272

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

QC Batch: 753288

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

QC Batch: 753621

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: December 29, 2021

General Information:
8 samples were analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: December 29, 2021

General Information:
11 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

QC Batch: 752147

B: Analyte was detected in the associated method blank.

- BLANK for HBN 752147 [WETA/827 (Lab ID: 3011008)
  - Chloride
- BLANK for HBN 752147 [WETA/827 (Lab ID: 3014120)
  - Chloride
- BLANK for HBN 752147 [WETA/827 (Lab ID: 3014387)
  - 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: 752149

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383996038,60384139008

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

- MSD (Lab ID: 3011022)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll_AR
Date: December 29, 2021

General Information:
11 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: December 29, 2021

General Information:
11 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753114

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383395002

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

- MS (Lab ID: 3014350)
  - Total Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: December 29, 2021

General Information:
3 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737047

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

- MS (Lab ID: 3017245)
  - Dissolved Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: December 29, 2021

General Information:
3 samples were analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis was conducted outside of the recognized method holding time.
- MW-185-202110 (Lab ID: 60383996043)
- MW-91-202110 (Lab ID: 60383996041)
- TMW-22R-202110 (Lab ID: 60383996042)

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: VP-14-202110 **Lab ID: 60383996001** Collected: 10/21/21 16:43 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 20:02	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 20:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 20:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 20:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 20:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 20:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/28/21 20:02	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.13	1		10/28/21 20:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:02	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:02	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 20:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:02	79-00-5	
Trichloroethene	**25.6**	ug/L	1.0	0.21	1		10/28/21 20:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/28/21 20:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/28/21 20:02	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/28/21 20:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/28/21 20:02	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 20:02		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: VP-8-202110 **Lab ID: 60383996002** Collected: 10/21/21 15:08 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**61.6**	ug/L	10.0	2.5	1		10/28/21 20:17	67-64-1	
Benzene	**0.53J**	ug/L	1.0	0.14	1		10/28/21 20:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 20:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:17	74-83-9	
2-Butanone (MEK)	**5.1J**	ug/L	10.0	0.98	1		10/28/21 20:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 20:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 20:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/28/21 20:17	75-35-4	
cis-1,2-Dichloroethene	**0.13J**	ug/L	1.0	0.13	1		10/28/21 20:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:17	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:17	127-18-4	
Toluene	**0.31J**	ug/L	1.0	0.25	1		10/28/21 20:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:17	79-00-5	
Trichloroethene	**4.2**	ug/L	1.0	0.21	1		10/28/21 20:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/28/21 20:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/28/21 20:17	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/28/21 20:17	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/28/21 20:17	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 20:17		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-190-202110 **Lab ID: 60383996003** Collected: 10/21/21 15:20 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 20:33	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 20:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 20:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 20:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 20:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:33	124-48-1	
1,1-Dichloroethane	**0.34J**	ug/L	1.0	0.12	1		10/28/21 20:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:33	107-06-2	
1,1-Dichloroethene	**0.71J**	ug/L	1.0	0.22	1		10/28/21 20:33	75-35-4	
cis-1,2-Dichloroethene	**4.6**	ug/L	1.0	0.13	1		10/28/21 20:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:33	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:33	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 20:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:33	79-00-5	
Trichloroethene	**199**	ug/L	1.0	0.21	1		10/28/21 20:33	79-01-6	
Vinyl chloride	**0.22J**	ug/L	1.0	0.17	1		10/28/21 20:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/28/21 20:33	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/28/21 20:33	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/28/21 20:33	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 20:33		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: VP-10-202110 **Lab ID: 60383996004** Collected: 10/21/21 15:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 21:05	67-64-1	
Benzene	**0.23J**	ug/L	1.0	0.14	1		10/28/21 21:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 21:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 21:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 21:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 21:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 21:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 21:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 21:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 21:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 21:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 21:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 21:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 21:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 21:05	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.22	1		10/28/21 21:05	75-35-4	
cis-1,2-Dichloroethene	**12.4**	ug/L	1.0	0.13	1		10/28/21 21:05	156-59-2	
trans-1,2-Dichloroethene	**0.44J**	ug/L	1.0	0.10	1		10/28/21 21:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 21:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 21:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 21:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 21:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 21:05	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 21:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 21:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 21:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 21:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 21:05	127-18-4	
Toluene	**0.36J**	ug/L	1.0	0.25	1		10/28/21 21:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 21:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 21:05	79-00-5	
Trichloroethene	**177**	ug/L	5.0	1.0	5		11/02/21 22:34	79-01-6	
Vinyl chloride	**0.33J**	ug/L	1.0	0.17	1		10/28/21 21:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 21:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/21 21:05	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/28/21 21:05	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/28/21 21:05	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 21:05		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-6-202110 **Lab ID: 60383996005** Collected: 10/21/21 15:17 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 21:21	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 21:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 21:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 21:21	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 21:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 21:21	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 21:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 21:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 21:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 21:21	75-00-3	
Chloroform	**0.41J**	ug/L	1.0	0.22	1		10/28/21 21:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 21:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 21:21	124-48-1	
1,1-Dichloroethane	**0.34J**	ug/L	1.0	0.12	1		10/28/21 21:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 21:21	107-06-2	
1,1-Dichloroethene	**2.9**	ug/L	1.0	0.22	1		10/28/21 21:21	75-35-4	
cis-1,2-Dichloroethene	**18.2**	ug/L	1.0	0.13	1		10/28/21 21:21	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.10	1		10/28/21 21:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 21:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 21:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 21:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 21:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 21:21	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 21:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 21:21	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 21:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 21:21	79-34-5	
Tetrachloroethene	**0.70J**	ug/L	1.0	0.33	1		10/28/21 21:21	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 21:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 21:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 21:21	79-00-5	
Trichloroethene	**1980**	ug/L	20.0	4.2	20		11/01/21 13:52	79-01-6	
Vinyl chloride	**1.1**	ug/L	1.0	0.17	1		10/28/21 21:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 21:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/21 21:21	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/28/21 21:21	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/28/21 21:21	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 21:21		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-5-202110 **Lab ID: 60383996006** Collected: 10/21/21 17:30 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 21:37	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 21:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 21:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 21:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 21:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 21:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 21:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 21:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 21:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 21:37	75-00-3	
Chloroform	**0.63J**	ug/L	1.0	0.22	1		10/28/21 21:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 21:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 21:37	124-48-1	
1,1-Dichloroethane	**0.83J**	ug/L	1.0	0.12	1		10/28/21 21:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 21:37	107-06-2	
1,1-Dichloroethene	**5.2**	ug/L	1.0	0.22	1		10/28/21 21:37	75-35-4	
cis-1,2-Dichloroethene	**27.9**	ug/L	1.0	0.13	1		10/28/21 21:37	156-59-2	
trans-1,2-Dichloroethene	**0.32J**	ug/L	1.0	0.10	1		10/28/21 21:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 21:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 21:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 21:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 21:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 21:37	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 21:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 21:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 21:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 21:37	79-34-5	
Tetrachloroethene	**1.3**	ug/L	1.0	0.33	1		10/28/21 21:37	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 21:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 21:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 21:37	79-00-5	
Trichloroethene	**2420**	ug/L	20.0	4.2	20		11/01/21 14:08	79-01-6	
Vinyl chloride	**1.1**	ug/L	1.0	0.17	1		10/28/21 21:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 21:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/21 21:37	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/28/21 21:37	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/28/21 21:37	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 21:37		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-84-202110 **Lab ID: 60383996007** Collected: 10/21/21 17:09 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**4.5J**	ug/L	10.0	2.5	1		10/28/21 20:49	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 20:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:49	75-27-4	
Bromoform	**2.7**	ug/L	1.0	0.68	1		10/28/21 20:49	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 20:49	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:49	67-66-3	
Chloromethane	**2.1**	ug/L	1.0	0.28	1		10/28/21 20:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:49	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 20:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/28/21 20:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/28/21 20:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:49	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:49	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:49	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 20:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:49	79-00-5	
Trichloroethene	**7.8**	ug/L	1.0	0.21	1		10/28/21 20:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/28/21 20:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/28/21 20:49	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		10/28/21 20:49	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/28/21 20:49	2199-69-1	
Preservation pH	**6.0**		0.10		1		10/28/21 20:49		pH

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-46R-202110 **Lab ID: 60383996008** Collected: 10/21/21 17:24 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:09	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.22	1		10/29/21 12:09	75-35-4	L2
cis-1,2-Dichloroethene	**30.8**	ug/L	1.0	0.13	1		10/29/21 12:09	156-59-2	
trans-1,2-Dichloroethene	**0.42J**	ug/L	1.0	0.10	1		10/29/21 12:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:09	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:09	79-00-5	
Trichloroethene	**461**	ug/L	10.0	2.1	10		10/29/21 12:23	79-01-6	
Vinyl chloride	**0.63J**	ug/L	1.0	0.17	1		10/29/21 12:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/21 12:09	460-00-4	
Toluene-d8 (S)	105	%	80-120		1		10/29/21 12:09	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 12:09	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:09		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: EB-04-202110 **Lab ID: 60383996009** Collected: 10/21/21 17:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 08:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 08:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 08:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 08:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 08:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 08:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 08:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 08:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 08:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 08:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 08:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 08:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 08:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 08:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 08:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 08:50	75-35-4	L2
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 08:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 08:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 08:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 08:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 08:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 08:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 08:50	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 08:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 08:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 08:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 08:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 08:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 08:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 08:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 08:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 08:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 08:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 08:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/21 08:50	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 08:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 08:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 08:50		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TB-01-202110 **Lab ID: 60383996010** Collected: 10/21/21 00:00 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 09:04	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 09:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 09:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 09:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 09:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 09:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 09:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 09:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 09:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 09:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 09:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 09:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 09:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 09:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 09:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 09:04	75-35-4	L2
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 09:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 09:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 09:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 09:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 09:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 09:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 09:04	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 09:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 09:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 09:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 09:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 09:04	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 09:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 09:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 09:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 09:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 09:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 09:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	106	%	80-120		1		10/29/21 09:04	460-00-4	
Toluene-d8 (S)	113	%	80-120		1		10/29/21 09:04	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	106	%	80-120		1		10/29/21 09:04	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 09:04		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-30-202110 **Lab ID: 60383996011** Collected: 10/21/21 12:02 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	200	50.8	20		11/01/21 14:23	67-64-1	
Benzene	ND	ug/L	20.0	2.7	20		11/01/21 14:23	71-43-2	
Bromodichloromethane	ND	ug/L	20.0	3.1	20		11/01/21 14:23	75-27-4	
Bromoform	ND	ug/L	20.0	13.5	20		11/01/21 14:23	75-25-2	
Bromomethane	ND	ug/L	100	9.2	20		11/01/21 14:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	19.5	20		11/01/21 14:23	78-93-3	
Carbon disulfide	ND	ug/L	100	19.6	20		11/01/21 14:23	75-15-0	
Carbon tetrachloride	ND	ug/L	20.0	3.4	20		11/01/21 14:23	56-23-5	
Chlorobenzene	ND	ug/L	20.0	1.8	20		11/01/21 14:23	108-90-7	
Chloroethane	ND	ug/L	20.0	7.5	20		11/01/21 14:23	75-00-3	
Chloroform	ND	ug/L	20.0	4.4	20		11/01/21 14:23	67-66-3	
Chloromethane	ND	ug/L	20.0	5.7	20		11/01/21 14:23	74-87-3	
Dibromochloromethane	ND	ug/L	20.0	6.1	20		11/01/21 14:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	20.0	2.4	20		11/01/21 14:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	4.2	20		11/01/21 14:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	4.4	20		11/01/21 14:23	75-35-4	
cis-1,2-Dichloroethene	**3.5J**	ug/L	20.0	2.6	20		11/01/21 14:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	2.0	20		11/01/21 14:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	20.0	2.8	20		11/01/21 14:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	20.0	1.6	20		11/01/21 14:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	3.6	20		11/01/21 14:23	10061-02-6	
Ethylbenzene	ND	ug/L	20.0	2.4	20		11/01/21 14:23	100-41-4	
2-Hexanone	ND	ug/L	200	22.0	20		11/01/21 14:23	591-78-6	
Methylene Chloride	ND	ug/L	20.0	7.8	20		11/01/21 14:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	14.7	20		11/01/21 14:23	108-10-1	
Styrene	ND	ug/L	20.0	2.5	20		11/01/21 14:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	3.1	20		11/01/21 14:23	79-34-5	
Tetrachloroethene	ND	ug/L	20.0	6.6	20		11/01/21 14:23	127-18-4	
Toluene	ND	ug/L	20.0	5.1	20		11/01/21 14:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	20.0	2.2	20		11/01/21 14:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	2.8	20		11/01/21 14:23	79-00-5	
Trichloroethene	**8.7J**	ug/L	20.0	4.2	20		11/01/21 14:23	79-01-6	
Vinyl chloride	ND	ug/L	20.0	3.3	20		11/01/21 14:23	75-01-4	
Xylene (Total)	ND	ug/L	60.0	5.6	20		11/01/21 14:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		20		11/01/21 14:23	460-00-4	F1
Toluene-d8 (S)	97	%	80-120		20		11/01/21 14:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		20		11/01/21 14:23	2199-69-1	
Preservation pH	**1.0**		0.10		20		11/01/21 14:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-11-202110 **Lab ID: 60383996012** Collected: 10/21/21 12:02 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	200	50.8	20		11/01/21 14:39	67-64-1	
Benzene	ND	ug/L	20.0	2.7	20		11/01/21 14:39	71-43-2	
Bromodichloromethane	ND	ug/L	20.0	3.1	20		11/01/21 14:39	75-27-4	
Bromoform	ND	ug/L	20.0	13.5	20		11/01/21 14:39	75-25-2	
Bromomethane	ND	ug/L	100	9.2	20		11/01/21 14:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	19.5	20		11/01/21 14:39	78-93-3	
Carbon disulfide	ND	ug/L	100	19.6	20		11/01/21 14:39	75-15-0	
Carbon tetrachloride	ND	ug/L	20.0	3.4	20		11/01/21 14:39	56-23-5	
Chlorobenzene	ND	ug/L	20.0	1.8	20		11/01/21 14:39	108-90-7	
Chloroethane	ND	ug/L	20.0	7.5	20		11/01/21 14:39	75-00-3	
Chloroform	ND	ug/L	20.0	4.4	20		11/01/21 14:39	67-66-3	
Chloromethane	ND	ug/L	20.0	5.7	20		11/01/21 14:39	74-87-3	
Dibromochloromethane	ND	ug/L	20.0	6.1	20		11/01/21 14:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	20.0	2.4	20		11/01/21 14:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	4.2	20		11/01/21 14:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	4.4	20		11/01/21 14:39	75-35-4	
cis-1,2-Dichloroethene	**2.7J**	ug/L	20.0	2.6	20		11/01/21 14:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	2.0	20		11/01/21 14:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	20.0	2.8	20		11/01/21 14:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	20.0	1.6	20		11/01/21 14:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	3.6	20		11/01/21 14:39	10061-02-6	
Ethylbenzene	ND	ug/L	20.0	2.4	20		11/01/21 14:39	100-41-4	
2-Hexanone	ND	ug/L	200	22.0	20		11/01/21 14:39	591-78-6	
Methylene Chloride	ND	ug/L	20.0	7.8	20		11/01/21 14:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	14.7	20		11/01/21 14:39	108-10-1	
Styrene	ND	ug/L	20.0	2.5	20		11/01/21 14:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	3.1	20		11/01/21 14:39	79-34-5	
Tetrachloroethene	ND	ug/L	20.0	6.6	20		11/01/21 14:39	127-18-4	
Toluene	ND	ug/L	20.0	5.1	20		11/01/21 14:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	20.0	2.2	20		11/01/21 14:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	2.8	20		11/01/21 14:39	79-00-5	
Trichloroethene	**7.8J**	ug/L	20.0	4.2	20		11/01/21 14:39	79-01-6	
Vinyl chloride	ND	ug/L	20.0	3.3	20		11/01/21 14:39	75-01-4	
Xylene (Total)	ND	ug/L	60.0	5.6	20		11/01/21 14:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		20		11/01/21 14:39	460-00-4	F1
Toluene-d8 (S)	99	%	80-120		20		11/01/21 14:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		20		11/01/21 14:39	2199-69-1	
Preservation pH	**1.0**		0.10		20		11/01/21 14:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-56R-202110 **Lab ID: 60383996013** Collected: 10/21/21 11:42 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 15:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 15:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 15:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 15:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 15:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 15:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 15:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 15:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 15:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 15:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 15:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 15:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 15:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 15:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 15:59	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.22	1		11/01/21 15:59	75-35-4	
cis-1,2-Dichloroethene	**14.8**	ug/L	1.0	0.13	1		11/01/21 15:59	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.10	1		11/01/21 15:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 15:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 15:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 15:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 15:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 15:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 15:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 15:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 15:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 15:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 15:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 15:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 15:59	79-00-5	
Trichloroethene	**619**	ug/L	20.0	4.2	20		11/01/21 16:15	79-01-6	
Vinyl chloride	**0.20J**	ug/L	1.0	0.17	1		11/01/21 15:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 15:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		11/01/21 15:59	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		11/01/21 15:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		11/01/21 15:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 15:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-24-202110 **Lab ID: 60383996014** Collected: 10/21/21 12:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 13:47	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 13:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 13:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 13:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 13:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 13:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 13:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 13:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 13:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 13:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 13:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 13:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 13:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 13:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 13:47	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.22	1		10/29/21 13:47	75-35-4	
cis-1,2-Dichloroethene	**11.3**	ug/L	1.0	0.13	1		10/29/21 13:47	156-59-2	
trans-1,2-Dichloroethene	**0.19J**	ug/L	1.0	0.10	1		10/29/21 13:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 13:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 13:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 13:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 13:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 13:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 13:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 13:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 13:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 13:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 13:47	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 13:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 13:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 13:47	79-00-5	
Trichloroethene	**487**	ug/L	10.0	2.1	10		10/29/21 14:03	79-01-6	
Vinyl chloride	**0.24J**	ug/L	1.0	0.17	1		10/29/21 13:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 13:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		10/29/21 13:47	460-00-4	
Toluene-d8 (S)	104	%	80-120		1		10/29/21 13:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 13:47	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 13:47		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-57R-202110 **Lab ID: 60383996015** Collected: 10/21/21 13:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 16:26	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 16:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 16:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 16:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 16:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 16:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 16:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 16:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 16:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 16:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 16:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 16:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 16:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 16:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 16:26	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.22	1		10/29/21 16:26	75-35-4	
cis-1,2-Dichloroethene	**22.1**	ug/L	1.0	0.13	1		10/29/21 16:26	156-59-2	
trans-1,2-Dichloroethene	**0.21J**	ug/L	1.0	0.10	1		10/29/21 16:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 16:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 16:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 16:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 16:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 16:26	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 16:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 16:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 16:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 16:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 16:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 16:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 16:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 16:26	79-00-5	
Trichloroethene	**286**	ug/L	20.0	4.2	20		10/29/21 16:42	79-01-6	
Vinyl chloride	**0.38J**	ug/L	1.0	0.17	1		10/29/21 16:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 16:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/21 16:26	460-00-4	
Toluene-d8 (S)	90	%	80-120		1		10/29/21 16:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/29/21 16:26	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 16:26		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-93-202110 **Lab ID: 60383996016** Collected: 10/21/21 13:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 13:15	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 13:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 13:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 13:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 13:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 13:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 13:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 13:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 13:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 13:15	75-00-3	
Chloroform	**1.9**	ug/L	1.0	0.22	1		10/29/21 13:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 13:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 13:15	124-48-1	
1,1-Dichloroethane	**0.16J**	ug/L	1.0	0.12	1		10/29/21 13:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 13:15	107-06-2	
1,1-Dichloroethene	**10.8**	ug/L	1.0	0.22	1		10/29/21 13:15	75-35-4	
cis-1,2-Dichloroethene	**62.3**	ug/L	1.0	0.13	1		10/29/21 13:15	156-59-2	
trans-1,2-Dichloroethene	**4.8**	ug/L	1.0	0.10	1		10/29/21 13:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 13:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 13:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 13:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 13:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 13:15	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 13:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 13:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 13:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 13:15	79-34-5	
Tetrachloroethene	**3.1**	ug/L	1.0	0.33	1		10/29/21 13:15	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 13:15	108-88-3	
1,1,1-Trichloroethane	**0.11J**	ug/L	1.0	0.11	1		10/29/21 13:15	71-55-6	
1,1,2-Trichloroethane	**0.47J**	ug/L	1.0	0.14	1		10/29/21 13:15	79-00-5	
Trichloroethene	**8560**	ug/L	200	42.0	200		10/29/21 13:31	79-01-6	
Vinyl chloride	**0.90J**	ug/L	1.0	0.17	1		10/29/21 13:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 13:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 13:15	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/29/21 13:15	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 13:15	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 13:15		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-205-202110 **Lab ID: 60383996017** Collected: 10/21/21 13:49 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:43	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:43	124-48-1	
1,1-Dichloroethane	**0.97J**	ug/L	1.0	0.12	1		10/29/21 12:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:43	107-06-2	
1,1-Dichloroethene	**3.0**	ug/L	1.0	0.22	1		10/29/21 12:43	75-35-4	
cis-1,2-Dichloroethene	**135**	ug/L	1.0	0.13	1		10/29/21 12:43	156-59-2	
trans-1,2-Dichloroethene	**0.58J**	ug/L	1.0	0.10	1		10/29/21 12:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:43	591-78-6	
Methylene Chloride	**0.61J**	ug/L	1.0	0.39	1		10/29/21 12:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:43	79-34-5	
Tetrachloroethene	**0.94J**	ug/L	1.0	0.33	1		10/29/21 12:43	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:43	71-55-6	
1,1,2-Trichloroethane	**0.26J**	ug/L	1.0	0.14	1		10/29/21 12:43	79-00-5	
Trichloroethene	**400**	ug/L	10.0	2.1	10		11/02/21 23:22	79-01-6	
Vinyl chloride	**0.74J**	ug/L	1.0	0.17	1		10/29/21 12:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 12:43	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/29/21 12:43	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/29/21 12:43	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:43		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-189-202110 **Lab ID: 60383996018** Collected: 10/21/21 13:56 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 14:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 14:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 14:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 14:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 14:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 14:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 14:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 14:19	56-23-5	
Chlorobenzene	**0.12J**	ug/L	1.0	0.089	1		10/29/21 14:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 14:19	75-00-3	
Chloroform	**0.52J**	ug/L	1.0	0.22	1		10/29/21 14:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 14:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 14:19	124-48-1	
1,1-Dichloroethane	**0.56J**	ug/L	1.0	0.12	1		10/29/21 14:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 14:19	107-06-2	
1,1-Dichloroethene	**0.48J**	ug/L	1.0	0.22	1		10/29/21 14:19	75-35-4	
cis-1,2-Dichloroethene	**6.1**	ug/L	1.0	0.13	1		10/29/21 14:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 14:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 14:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 14:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 14:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 14:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 14:19	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 14:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 14:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 14:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 14:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 14:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 14:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 14:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 14:19	79-00-5	
Trichloroethene	**238**	ug/L	10.0	2.1	10		10/29/21 14:34	79-01-6	
Vinyl chloride	**0.25J**	ug/L	1.0	0.17	1		10/29/21 14:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 14:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 14:19	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 14:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 14:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 14:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-178-202110 **Lab ID: 60383996019** Collected: 10/21/21 16:05 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**2.8J**	ug/L	10.0	2.5	1		10/29/21 10:35	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:35	75-35-4	
cis-1,2-Dichloroethene	**0.19J**	ug/L	1.0	0.13	1		10/29/21 10:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:35	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:35	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 10:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/29/21 10:35	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/29/21 10:35	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 10:35	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:35		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-179-202110 **Lab ID: 60383996020** Collected: 10/21/21 16:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 10:51	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:51	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.13	1		10/29/21 10:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:51	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:51	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:51	79-00-5	
Trichloroethene	**20.1**	ug/L	1.0	0.21	1		10/29/21 10:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 10:51	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/29/21 10:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/29/21 10:51	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:51		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-18-202110 **Lab ID: 60383996021** Collected: 10/21/21 08:48 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 14:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 14:50	71-43-2	
Bromodichloromethane	**0.52J**	ug/L	1.0	0.16	1		10/29/21 14:50	75-27-4	
Bromoform	**1.2**	ug/L	1.0	0.68	1		10/29/21 14:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 14:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 14:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 14:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 14:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 14:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 14:50	75-00-3	
Chloroform	**2.0**	ug/L	1.0	0.22	1		10/29/21 14:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 14:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 14:50	124-48-1	
1,1-Dichloroethane	**0.54J**	ug/L	1.0	0.12	1		10/29/21 14:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 14:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 14:50	75-35-4	
cis-1,2-Dichloroethene	**192**	ug/L	1.0	0.13	1		10/29/21 14:50	156-59-2	
trans-1,2-Dichloroethene	**37.7**	ug/L	1.0	0.10	1		10/29/21 14:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 14:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 14:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 14:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 14:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 14:50	591-78-6	
Methylene Chloride	**1.4**	ug/L	1.0	0.39	1		10/29/21 14:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 14:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 14:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 14:50	79-34-5	
Tetrachloroethene	**1.1**	ug/L	1.0	0.33	1		10/29/21 14:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 14:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 14:50	71-55-6	
1,1,2-Trichloroethane	**0.23J**	ug/L	1.0	0.14	1		10/29/21 14:50	79-00-5	
Trichloroethene	**2090**	ug/L	25.0	5.2	25		11/02/21 23:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 14:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 14:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 14:50	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 14:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 14:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 14:50		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-199-202110 **Lab ID: 60383996022** Collected: 10/21/21 08:45 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:07	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 11:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:07	56-23-5	
Chlorobenzene	**0.79J**	ug/L	1.0	0.089	1		10/29/21 11:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:07	124-48-1	
1,1-Dichloroethane	**0.16J**	ug/L	1.0	0.12	1		10/29/21 11:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:07	107-06-2	
1,1-Dichloroethene	**0.27J**	ug/L	1.0	0.22	1		10/29/21 11:07	75-35-4	
cis-1,2-Dichloroethene	**10.2**	ug/L	1.0	0.13	1		10/29/21 11:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:07	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:07	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:07	79-00-5	
Trichloroethene	**82.3**	ug/L	1.0	0.21	1		10/29/21 11:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 11:07	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/29/21 11:07	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/29/21 11:07	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:07		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-24-202110 **Lab ID: 60383996023** Collected: 10/21/21 08:45 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:59	75-27-4	
Bromoform	**0.73J**	ug/L	1.0	0.68	1		10/29/21 12:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 12:59	75-35-4	
cis-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.13	1		10/29/21 12:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 12:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:59	79-00-5	
Trichloroethene	**10.4**	ug/L	1.0	0.21	1		10/29/21 12:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 12:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 12:59	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/29/21 12:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 12:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-19-202110 **Lab ID: 60383996024** Collected: 10/21/21 09:10 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 15:22	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 15:22	71-43-2	
Bromodichloromethane	**1.4**	ug/L	1.0	0.16	1		10/29/21 15:22	75-27-4	
Bromoform	**12.9**	ug/L	1.0	0.68	1		10/29/21 15:22	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 15:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 15:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 15:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 15:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 15:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 15:22	75-00-3	
Chloroform	**2.3**	ug/L	1.0	0.22	1		10/29/21 15:22	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 15:22	74-87-3	
Dibromochloromethane	**1.1**	ug/L	1.0	0.30	1		10/29/21 15:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 15:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 15:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 15:22	75-35-4	
cis-1,2-Dichloroethene	**13.6**	ug/L	1.0	0.13	1		10/29/21 15:22	156-59-2	
trans-1,2-Dichloroethene	**2.4**	ug/L	1.0	0.10	1		10/29/21 15:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 15:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 15:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 15:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 15:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 15:22	591-78-6	
Methylene Chloride	**0.46J**	ug/L	1.0	0.39	1		10/29/21 15:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 15:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 15:22	100-42-5	
1,1,2,2-Tetrachloroethane	**0.26J**	ug/L	1.0	0.15	1		10/29/21 15:22	79-34-5	
Tetrachloroethene	**0.85J**	ug/L	1.0	0.33	1		10/29/21 15:22	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 15:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 15:22	71-55-6	
1,1,2-Trichloroethane	**0.21J**	ug/L	1.0	0.14	1		10/29/21 15:22	79-00-5	
Trichloroethene	**1350**	ug/L	10.0	2.1	10		10/29/21 15:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 15:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 15:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/21 15:22	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 15:22	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 15:22	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 15:22		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-182-202110 **Lab ID: 60383996025** Collected: 10/21/21 10:09 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:39	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.14	1		10/29/21 11:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:39	56-23-5	
Chlorobenzene	**5.9**	ug/L	1.0	0.089	1		10/29/21 11:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 11:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 11:39	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.13	1		10/29/21 11:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:39	79-00-5	
Trichloroethene	**19.2**	ug/L	1.0	0.21	1		10/29/21 11:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 11:39	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/29/21 11:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 11:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-10-202110 **Lab ID: 60383996026** Collected: 10/21/21 10:23 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 15:54	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 15:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 15:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 15:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 15:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 15:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 15:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 15:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 15:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 15:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 15:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 15:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 15:54	124-48-1	
1,1-Dichloroethane	**0.19J**	ug/L	1.0	0.12	1		10/29/21 15:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 15:54	107-06-2	
1,1-Dichloroethene	**0.55J**	ug/L	1.0	0.22	1		10/29/21 15:54	75-35-4	
cis-1,2-Dichloroethene	**4.4**	ug/L	1.0	0.13	1		10/29/21 15:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 15:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 15:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 15:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 15:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 15:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 15:54	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 15:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 15:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 15:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 15:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 15:54	127-18-4	
Toluene	**0.29J**	ug/L	1.0	0.25	1		10/29/21 15:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 15:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 15:54	79-00-5	
Trichloroethene	**302**	ug/L	10.0	2.1	10		10/29/21 16:10	79-01-6	
Vinyl chloride	**0.24J**	ug/L	1.0	0.17	1		10/29/21 15:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 15:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/29/21 15:54	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		10/29/21 15:54	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 15:54	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 15:54		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-12-202110 **Lab ID: 60383996027** Collected: 10/21/21 10:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:11	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:11	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.22	1		10/29/21 12:11	75-35-4	
cis-1,2-Dichloroethene	**8.9**	ug/L	1.0	0.13	1		10/29/21 12:11	156-59-2	
trans-1,2-Dichloroethene	**0.12J**	ug/L	1.0	0.10	1		10/29/21 12:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:11	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:11	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:11	79-00-5	
Trichloroethene	**366**	ug/L	10.0	2.1	10		11/01/21 17:03	79-01-6	
Vinyl chloride	**0.20J**	ug/L	1.0	0.17	1		10/29/21 12:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 12:11	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 12:11	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 12:11	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:11		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-08-202110 **Lab ID: 60383996028** Collected: 10/21/21 10:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:27	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:27	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.22	1		10/29/21 12:27	75-35-4	
cis-1,2-Dichloroethene	**9.6**	ug/L	1.0	0.13	1		10/29/21 12:27	156-59-2	
trans-1,2-Dichloroethene	**0.19J**	ug/L	1.0	0.10	1		10/29/21 12:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:27	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:27	79-00-5	
Trichloroethene	**359**	ug/L	10.0	2.1	10		11/01/21 17:19	79-01-6	
Vinyl chloride	**0.23J**	ug/L	1.0	0.17	1		10/29/21 12:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/21 12:27	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/29/21 12:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 12:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:27		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-10-202110 **Lab ID: 60383996029** Collected: 10/21/21 10:09 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:55	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.14	1		10/29/21 11:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:55	56-23-5	
Chlorobenzene	**6.0**	ug/L	1.0	0.089	1		10/29/21 11:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 11:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 11:55	75-35-4	
cis-1,2-Dichloroethene	**1.3**	ug/L	1.0	0.13	1		10/29/21 11:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:55	79-00-5	
Trichloroethene	**19.6**	ug/L	1.0	0.21	1		10/29/21 11:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/29/21 11:55	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 11:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 11:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-07-202110 **Lab ID: 60383996030** Collected: 10/21/21 08:45 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 11:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 11:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 11:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 11:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 11:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:23	79-00-5	
Trichloroethene	**10.0**	ug/L	1.0	0.21	1		10/29/21 11:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/21 11:23	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 11:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 11:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TB-07-202110 **Lab ID: 60383996031** Collected: 10/21/21 17:31 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 10:03	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 10:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:03	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:03	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 10:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 10:03	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 10:03	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 10:03	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:03		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TB-08-202110 **Lab ID: 60383996032** Collected: 10/21/21 17:32 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 10:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 10:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:19	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 10:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 10:19	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 10:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 10:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-38-202110 **Lab ID: 60383996033** Collected: 10/21/21 09:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**6.5**	ug/L	5.0	2.0	1		11/05/21 14:35	74-82-8	H1
Ethane	**0.28J**	ug/L	1.0	0.17	1		11/05/21 14:35	74-84-0	H1
Ethene	**2.3**	ug/L	1.0	0.24	1		11/05/21 14:35	74-85-1	H1
Acetylene	**0.15J**	ug/L	0.50	0.13	1		11/05/21 14:35	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**988**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:02	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 16:58	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 16:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 16:58	75-27-4	
Bromoform	**1.2**	ug/L	1.0	0.68	1		10/29/21 16:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 16:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 16:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 16:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 16:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 16:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 16:58	75-00-3	
Chloroform	**1.1**	ug/L	1.0	0.22	1		10/29/21 16:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 16:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 16:58	124-48-1	
1,1-Dichloroethane	**0.48J**	ug/L	1.0	0.12	1		10/29/21 16:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 16:58	107-06-2	
1,1-Dichloroethene	**3.2**	ug/L	1.0	0.22	1		10/29/21 16:58	75-35-4	
cis-1,2-Dichloroethene	**1060**	ug/L	25.0	3.2	25		10/29/21 17:14	156-59-2	
trans-1,2-Dichloroethene	**13.9**	ug/L	1.0	0.10	1		10/29/21 16:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 16:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 16:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 16:58	10061-02-6	
Ethylbenzene	**0.12J**	ug/L	1.0	0.12	1		10/29/21 16:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 16:58	591-78-6	
Methylene Chloride	**0.44J**	ug/L	1.0	0.39	1		10/29/21 16:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 16:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 16:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 16:58	79-34-5	
Tetrachloroethene	**3.2**	ug/L	1.0	0.33	1		10/29/21 16:58	127-18-4	
Toluene	**1.6**	ug/L	1.0	0.25	1		10/29/21 16:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 16:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 16:58	79-00-5	
Trichloroethene	**5830**	ug/L	50.0	10.5	50		11/01/21 17:35	79-01-6	
Vinyl chloride	**204**	ug/L	25.0	4.2	25		10/29/21 17:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 16:58	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-38-202110 **Lab ID: 60383996033** Collected: 10/21/21 09:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/29/21 16:58	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 16:58	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 16:58	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 16:58		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 13:59	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**221**	mg/L	20.0	7.8	20		10/28/21 19:55	16887-00-6	
Sulfate	**558**	mg/L	50.0	21.0	50		10/28/21 20:06	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.73**	mg/L	0.10	0.066	1		10/23/21 09:09		
Nitrogen, Nitrate	**0.73**	mg/L	0.10	0.079	1		10/23/21 09:09	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:09	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.37J**	mg/L	1.0	0.30	1		10/29/21 23:25	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: RW-69-202110 **Lab ID: 60383996034** Collected: 10/21/21 09:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**290**	ug/L	5.0	2.0	1		11/05/21 14:46	74-82-8	H1
Ethane	ND	ug/L	1.0	0.17	1		11/05/21 14:46	74-84-0	H1
Ethene	**0.46J**	ug/L	1.0	0.24	1		11/05/21 14:46	74-85-1	H1
Acetylene	**0.19J**	ug/L	0.50	0.13	1		11/05/21 14:46	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**16900**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:13	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 13:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 13:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 13:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 13:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 13:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 13:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 13:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 13:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 13:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 13:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 13:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 13:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 13:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 13:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 13:36	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.22	1		11/01/21 13:36	75-35-4	
cis-1,2-Dichloroethene	**49.3**	ug/L	1.0	0.13	1		11/01/21 13:36	156-59-2	
trans-1,2-Dichloroethene	**0.25J**	ug/L	1.0	0.10	1		11/01/21 13:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 13:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 13:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 13:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 13:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 13:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 13:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 13:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 13:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 13:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 13:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 13:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 13:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 13:36	79-00-5	
Trichloroethene	**44.4**	ug/L	1.0	0.21	1		11/01/21 13:36	79-01-6	
Vinyl chloride	**0.69J**	ug/L	1.0	0.17	1		11/01/21 13:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 13:36	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: RW-69-202110 **Lab ID: 60383996034** Collected: 10/21/21 09:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/01/21 13:36	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 13:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/01/21 13:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 13:36		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.10**	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**247**	mg/L	20.0	7.8	20		10/28/21 20:17	16887-00-6	
Sulfate	**1.9**	mg/L	1.0	0.42	1		10/29/21 19:24	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:10		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:10	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:10	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/29/21 23:52	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-87-202110 **Lab ID: 60383996035** Collected: 10/21/21 10:23 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	ND	ug/L	5.0	2.0	1		11/05/21 14:57	74-82-8	H1
Ethane	ND	ug/L	1.0	0.17	1		11/05/21 14:57	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 14:57	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 14:57	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**341**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:15	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 16:31	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 16:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 16:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 16:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 16:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 16:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 16:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 16:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 16:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 16:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 16:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 16:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 16:31	124-48-1	
1,1-Dichloroethane	**0.85J**	ug/L	1.0	0.12	1		11/01/21 16:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 16:31	107-06-2	
1,1-Dichloroethene	**3.1**	ug/L	1.0	0.22	1		11/01/21 16:31	75-35-4	
cis-1,2-Dichloroethene	**20.6**	ug/L	1.0	0.13	1		11/01/21 16:31	156-59-2	
trans-1,2-Dichloroethene	**0.51J**	ug/L	1.0	0.10	1		11/01/21 16:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 16:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 16:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 16:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 16:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 16:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 16:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 16:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 16:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 16:31	79-34-5	
Tetrachloroethene	**3.1**	ug/L	1.0	0.33	1		11/01/21 16:31	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 16:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 16:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 16:31	79-00-5	
Trichloroethene	**276**	ug/L	10.0	2.1	10		11/01/21 16:47	79-01-6	
Vinyl chloride	**0.17J**	ug/L	1.0	0.17	1		11/01/21 16:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 16:31	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-87-202110 **Lab ID: 60383996035** Collected: 10/21/21 10:23 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		11/01/21 16:31	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		11/01/21 16:31	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/01/21 16:31	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 16:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**82.8**	mg/L	20.0	7.8	20		10/28/21 20:40	16887-00-6	B
Sulfate	**12.9**	mg/L	2.0	0.84	2		10/29/21 19:36	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.5**	mg/L	0.10	0.066	1		10/23/21 09:12		
Nitrogen, Nitrate	**1.5**	mg/L	0.10	0.079	1		10/23/21 09:12	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:12	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.33J**	mg/L	1.0	0.30	1		10/30/21 00:05	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-198-202110 **Lab ID: 60383996036** Collected: 10/21/21 10:55 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**13**	ug/L	5.0	2.0	1		11/05/21 15:08	74-82-8	H1
Ethane	**3.7**	ug/L	1.0	0.17	1		11/05/21 15:08	74-84-0	H1
Ethene	**1.0**	ug/L	1.0	0.24	1		11/05/21 15:08	74-85-1	H1
Acetylene	**0.60**	ug/L	0.50	0.13	1		11/05/21 15:08	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**25.6J**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:17	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 14:55	67-64-1	
Benzene	**0.20J**	ug/L	1.0	0.14	1		11/01/21 14:55	71-43-2	
Bromodichloromethane	**0.44J**	ug/L	1.0	0.16	1		11/01/21 14:55	75-27-4	
Bromoform	**1.4**	ug/L	1.0	0.68	1		11/01/21 14:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 14:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 14:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 14:55	75-15-0	
Carbon tetrachloride	**0.56J**	ug/L	1.0	0.17	1		11/01/21 14:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 14:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 14:55	75-00-3	
Chloroform	**8.5**	ug/L	1.0	0.22	1		11/01/21 14:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 14:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 14:55	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.12	1		11/01/21 14:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 14:55	107-06-2	
1,1-Dichloroethene	**32.2**	ug/L	1.0	0.22	1		11/01/21 14:55	75-35-4	
cis-1,2-Dichloroethene	**1540**	ug/L	250	32.2	250		11/01/21 15:11	156-59-2	
trans-1,2-Dichloroethene	**57.7**	ug/L	1.0	0.10	1		11/01/21 14:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 14:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 14:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 14:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 14:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 14:55	591-78-6	
Methylene Chloride	**2.5**	ug/L	1.0	0.39	1		11/01/21 14:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 14:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 14:55	100-42-5	
1,1,2,2-Tetrachloroethane	**10.6**	ug/L	1.0	0.15	1		11/01/21 14:55	79-34-5	
Tetrachloroethene	**8.9**	ug/L	1.0	0.33	1		11/01/21 14:55	127-18-4	
Toluene	**0.93J**	ug/L	1.0	0.25	1		11/01/21 14:55	108-88-3	
1,1,1-Trichloroethane	**24.9**	ug/L	1.0	0.11	1		11/01/21 14:55	71-55-6	
1,1,2-Trichloroethane	**0.67J**	ug/L	1.0	0.14	1		11/01/21 14:55	79-00-5	
Trichloroethene	**22800**	ug/L	250	52.5	250		11/01/21 15:11	79-01-6	
Vinyl chloride	**86.5**	ug/L	1.0	0.17	1		11/01/21 14:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 14:55	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-198-202110 **Lab ID: 60383996036** Collected: 10/21/21 10:55 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/01/21 14:55	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 14:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/01/21 14:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 14:55		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**293**	mg/L	20.0	7.8	20		10/28/21 21:03	16887-00-6	
Sulfate	**217**	mg/L	20.0	8.4	20		10/28/21 21:03	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.1**	mg/L	0.10	0.066	1		10/23/21 09:12		
Nitrogen, Nitrate	**1.0**	mg/L	0.10	0.079	1		10/23/21 09:12	14797-55-8	
Nitrogen, Nitrite	**0.13**	mg/L	0.10	0.079	1		10/23/21 09:12	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.44J**	mg/L	1.0	0.30	1		10/30/21 00:19	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-9-202110 **Lab ID: 60383996037** Collected: 10/21/21 11:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**18**	ug/L	5.0	2.0	1		11/05/21 15:20	74-82-8	H1
Ethane	**0.22J**	ug/L	1.0	0.17	1		11/05/21 15:20	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 15:20	74-85-1	H1
Acetylene	**0.29J**	ug/L	0.50	0.13	1		11/05/21 15:20	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**32.4J**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:19	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 15:27	67-64-1	
Benzene	**1.4**	ug/L	1.0	0.14	1		11/01/21 15:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 15:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 15:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 15:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 15:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 15:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 15:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 15:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 15:27	75-00-3	
Chloroform	**1.0**	ug/L	1.0	0.22	1		11/01/21 15:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 15:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 15:27	124-48-1	
1,1-Dichloroethane	**3.7**	ug/L	1.0	0.12	1		11/01/21 15:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 15:27	107-06-2	
1,1-Dichloroethene	**15.4**	ug/L	1.0	0.22	1		11/01/21 15:27	75-35-4	
cis-1,2-Dichloroethene	**101**	ug/L	1.0	0.13	1		11/01/21 15:27	156-59-2	
trans-1,2-Dichloroethene	**5.4**	ug/L	1.0	0.10	1		11/01/21 15:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 15:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 15:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 15:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 15:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 15:27	591-78-6	
Methylene Chloride	**0.56J**	ug/L	1.0	0.39	1		11/01/21 15:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 15:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 15:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 15:27	79-34-5	
Tetrachloroethene	**3.6**	ug/L	1.0	0.33	1		11/01/21 15:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 15:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 15:27	71-55-6	
1,1,2-Trichloroethane	**0.20J**	ug/L	1.0	0.14	1		11/01/21 15:27	79-00-5	
Trichloroethene	**3620**	ug/L	50.0	10.5	50		11/01/21 15:43	79-01-6	
Vinyl chloride	**2.1**	ug/L	1.0	0.17	1		11/01/21 15:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 15:27	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-9-202110 **Lab ID: 60383996037** Collected: 10/21/21 11:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/01/21 15:27	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		11/01/21 15:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/01/21 15:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 15:27		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**97.6**	mg/L	20.0	7.8	20		10/28/21 21:25	16887-00-6	
Sulfate	**27.9**	mg/L	5.0	2.1	5		10/29/21 19:47	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**6.4**	mg/L	0.50	0.33	5		10/23/21 09:24		
Nitrogen, Nitrate	**6.4**	mg/L	0.50	0.39	5		10/23/21 09:24	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.50	0.39	5		10/23/21 09:24	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.81J**	mg/L	1.0	0.30	1		10/30/21 00:32	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: IW-73-202110 **Lab ID: 60383996038** Collected: 10/21/21 12:10 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2.9J**	ug/L	5.0	2.0	1		11/05/21 15:31	74-82-8	H1
Ethane	**0.20J**	ug/L	1.0	0.17	1		11/05/21 15:31	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 15:31	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 15:31	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**360**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:21	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		11/01/21 17:22	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		11/01/21 17:22	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		11/01/21 17:22	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		11/01/21 17:22	75-25-2	L1
Bromomethane	ND	ug/L	25.0	2.3	5		11/01/21 17:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		11/01/21 17:22	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		11/01/21 17:22	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		11/01/21 17:22	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		11/01/21 17:22	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		11/01/21 17:22	75-00-3	
Chloroform	ND	ug/L	5.0	1.1	5		11/01/21 17:22	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		11/01/21 17:22	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		11/01/21 17:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.61	5		11/01/21 17:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		11/01/21 17:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.1	5		11/01/21 17:22	75-35-4	
cis-1,2-Dichloroethene	**6.8**	ug/L	5.0	0.64	5		11/02/21 22:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.51	5		11/01/21 17:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		11/01/21 17:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		11/01/21 17:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		11/01/21 17:22	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		11/01/21 17:22	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		11/01/21 17:22	591-78-6	
Methylene Chloride	ND	ug/L	5.0	2.0	5		11/01/21 17:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		11/01/21 17:22	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		11/01/21 17:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.77	5		11/01/21 17:22	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.6	5		11/01/21 17:22	127-18-4	
Toluene	**2.7J**	ug/L	5.0	1.3	5		11/01/21 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.54	5		11/01/21 17:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.71	5		11/01/21 17:22	79-00-5	
Trichloroethene	**198**	ug/L	5.0	1.0	5		11/01/21 17:22	79-01-6	
Vinyl chloride	**1.7J**	ug/L	5.0	0.84	5		11/01/21 17:22	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		11/01/21 17:22	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: IW-73-202110 **Lab ID: 60383996038** Collected: 10/21/21 12:10 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	89	%	80-120		5		11/01/21 17:22	460-00-4	
Toluene-d8 (S)	87	%	80-120		5		11/01/21 17:22	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		5		11/01/21 17:22	2199-69-1	
Preservation pH	**1.0**		0.10		5		11/01/21 17:22		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**178**	mg/L	20.0	7.8	20		10/27/21 09:13	16887-00-6	M1
Sulfate	**3.2**	mg/L	1.0	0.42	1		10/28/21 22:50	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.23**	mg/L	0.10	0.066	1		10/23/21 09:15		
Nitrogen, Nitrate	**0.23**	mg/L	0.10	0.079	1		10/23/21 09:15	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:15	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/30/21 00:45	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-58R-202110 **Lab ID: 60383996039** Collected: 10/21/21 13:30 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**22**	ug/L	5.0	2.0	1		11/05/21 15:42	74-82-8	H1
Ethane	**0.36J**	ug/L	1.0	0.17	1		11/05/21 15:42	74-84-0	H1
Ethene	**0.25J**	ug/L	1.0	0.24	1		11/05/21 15:42	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 15:42	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**318**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:23	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		11/01/21 17:38	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		11/01/21 17:38	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		11/01/21 17:38	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		11/01/21 17:38	75-25-2	L1
Bromomethane	ND	ug/L	25.0	2.3	5		11/01/21 17:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		11/01/21 17:38	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		11/01/21 17:38	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		11/01/21 17:38	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		11/01/21 17:38	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		11/01/21 17:38	75-00-3	
Chloroform	ND	ug/L	5.0	1.1	5		11/01/21 17:38	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		11/01/21 17:38	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		11/01/21 17:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.61	5		11/01/21 17:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		11/01/21 17:38	107-06-2	
1,1-Dichloroethene	**1.4J**	ug/L	5.0	1.1	5		11/01/21 17:38	75-35-4	
cis-1,2-Dichloroethene	**8.2**	ug/L	5.0	0.64	5		11/02/21 23:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.51	5		11/01/21 17:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		11/01/21 17:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		11/01/21 17:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		11/01/21 17:38	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		11/01/21 17:38	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		11/01/21 17:38	591-78-6	
Methylene Chloride	ND	ug/L	5.0	2.0	5		11/01/21 17:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		11/01/21 17:38	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		11/01/21 17:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.77	5		11/01/21 17:38	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.6	5		11/01/21 17:38	127-18-4	
Toluene	ND	ug/L	5.0	1.3	5		11/01/21 17:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.54	5		11/01/21 17:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.71	5		11/01/21 17:38	79-00-5	
Trichloroethene	**208**	ug/L	5.0	1.0	5		11/01/21 17:38	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.84	5		11/01/21 17:38	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		11/01/21 17:38	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-58R-202110 **Lab ID: 60383996039** Collected: 10/21/21 13:30 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	89	%	80-120		5		11/01/21 17:38	460-00-4	
Toluene-d8 (S)	100	%	80-120		5		11/01/21 17:38	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		5		11/01/21 17:38	2199-69-1	
Preservation pH	**1.0**		0.10		5		11/01/21 17:38		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**223**	mg/L	20.0	7.8	20		10/27/21 10:08	16887-00-6	
Sulfate	**2.3**	mg/L	1.0	0.42	1		10/28/21 23:45	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:18		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:18	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:18	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/30/21 01:25	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-95-202110 **Lab ID: 60383996040** Collected: 10/21/21 14:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2.8J**	ug/L	5.0	2.0	1		11/05/21 15:54	74-82-8	H1
Ethane	**0.59J**	ug/L	1.0	0.17	1		11/05/21 15:54	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 15:54	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 15:54	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	ND	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:26	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	2000	508	200		11/01/21 17:54	67-64-1	
Benzene	ND	ug/L	200	27.2	200		11/01/21 17:54	71-43-2	
Bromodichloromethane	ND	ug/L	200	31.0	200		11/01/21 17:54	75-27-4	
Bromoform	ND	ug/L	200	135	200		11/01/21 17:54	75-25-2	L1
Bromomethane	ND	ug/L	1000	92.0	200		11/01/21 17:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	2000	195	200		11/01/21 17:54	78-93-3	
Carbon disulfide	ND	ug/L	1000	196	200		11/01/21 17:54	75-15-0	
Carbon tetrachloride	ND	ug/L	200	34.4	200		11/01/21 17:54	56-23-5	
Chlorobenzene	ND	ug/L	200	17.7	200		11/01/21 17:54	108-90-7	
Chloroethane	ND	ug/L	200	74.8	200		11/01/21 17:54	75-00-3	
Chloroform	ND	ug/L	200	44.0	200		11/01/21 17:54	67-66-3	
Chloromethane	ND	ug/L	200	56.6	200		11/01/21 17:54	74-87-3	
Dibromochloromethane	ND	ug/L	200	61.0	200		11/01/21 17:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	200	24.4	200		11/01/21 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	200	42.4	200		11/01/21 17:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	200	43.8	200		11/01/21 17:54	75-35-4	
cis-1,2-Dichloroethene	**402**	ug/L	200	25.8	200		11/02/21 23:54	156-59-2	
trans-1,2-Dichloroethene	**30.3J**	ug/L	200	20.4	200		11/01/21 17:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	200	27.8	200		11/01/21 17:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	200	15.6	200		11/01/21 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	200	36.4	200		11/01/21 17:54	10061-02-6	
Ethylbenzene	ND	ug/L	200	24.0	200		11/01/21 17:54	100-41-4	
2-Hexanone	ND	ug/L	2000	220	200		11/01/21 17:54	591-78-6	
Methylene Chloride	ND	ug/L	200	78.2	200		11/01/21 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2000	147	200		11/01/21 17:54	108-10-1	
Styrene	ND	ug/L	200	24.6	200		11/01/21 17:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	200	30.8	200		11/01/21 17:54	79-34-5	
Tetrachloroethene	ND	ug/L	200	66.0	200		11/01/21 17:54	127-18-4	
Toluene	ND	ug/L	200	50.6	200		11/01/21 17:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	200	21.8	200		11/01/21 17:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	200	28.4	200		11/01/21 17:54	79-00-5	
Trichloroethene	**28600**	ug/L	200	42.0	200		11/01/21 17:54	79-01-6	
Vinyl chloride	ND	ug/L	200	33.4	200		11/01/21 17:54	75-01-4	
Xylene (Total)	ND	ug/L	600	56.4	200		11/01/21 17:54	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-95-202110 **Lab ID: 60383996040** Collected: 10/21/21 14:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	90	%	80-120		200		11/01/21 17:54	460-00-4	
Toluene-d8 (S)	101	%	80-120		200		11/01/21 17:54	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		200		11/01/21 17:54	2199-69-1	
Preservation pH	**1.0**		0.10		200		11/01/21 17:54		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:02	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**331**	mg/L	20.0	7.8	20		10/27/21 10:26	16887-00-6	
Sulfate	**127**	mg/L	20.0	8.4	20		10/27/21 10:26	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.78**	mg/L	0.10	0.066	1		10/23/21 09:18		
Nitrogen, Nitrate	**0.78**	mg/L	0.10	0.079	1		10/23/21 09:18	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:18	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/30/21 01:39	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-91-202110 **Lab ID: 60383996041** Collected: 10/21/21 15:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**6100**	ug/L	5.0	2.0	1		11/05/21 16:05	74-82-8	H1
Ethane	**0.84J**	ug/L	1.0	0.17	1		11/05/21 16:05	74-84-0	H1
Ethene	**1.1**	ug/L	1.0	0.24	1		11/05/21 16:05	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 16:05	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**17200**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:32	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 17:34	67-64-1	
Benzene	**0.27J**	ug/L	1.0	0.14	1		11/01/21 17:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 17:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 17:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 17:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 17:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 17:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 17:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 17:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 17:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 17:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 17:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 17:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 17:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 17:34	107-06-2	
1,1-Dichloroethene	**0.43J**	ug/L	1.0	0.22	1		11/01/21 17:34	75-35-4	
cis-1,2-Dichloroethene	**70.3**	ug/L	1.0	0.13	1		11/01/21 17:34	156-59-2	
trans-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.10	1		11/01/21 17:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 17:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 17:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 17:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 17:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 17:34	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 17:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 17:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 17:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 17:34	79-34-5	
Tetrachloroethene	**0.45J**	ug/L	1.0	0.33	1		11/01/21 17:34	127-18-4	
Toluene	**1.4**	ug/L	1.0	0.25	1		11/01/21 17:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 17:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 17:34	79-00-5	
Trichloroethene	**9.5**	ug/L	1.0	0.21	1		11/01/21 17:34	79-01-6	
Vinyl chloride	**0.39J**	ug/L	1.0	0.17	1		11/01/21 17:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 17:34	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-91-202110 **Lab ID: 60383996041** Collected: 10/21/21 15:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/01/21 17:34	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		11/01/21 17:34	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/01/21 17:34	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 17:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**92.7**	mg/L	20.0	7.8	20		10/26/21 21:27	16887-00-6	
Sulfate	**1.9**	mg/L	1.0	0.42	1		10/26/21 21:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:20		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:20	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:20	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**15.0**	mg/L	5.0	1.5	5		10/28/21 16:27	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**8.8**	mg/L	1.0	0.30	1		11/03/21 12:39		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.8**	mg/L	0.50	0.053	1		11/19/21 01:24	50-21-5	H1
Acetic Acid	**2.2**	mg/L	0.50	0.12	1		11/19/21 01:24	64-19-7	H1
Propionic Acid	ND	mg/L	0.50	0.053	1		11/19/21 01:24	79-09-4	H1
Formic acid	**5.8**	mg/L	0.50	0.055	1		11/19/21 01:24	64-18-6	H1
Butyric Acid	ND	mg/L	0.50	0.058	1		11/19/21 01:24	107-92-6	H1
Pyruvic Acid	ND	mg/L	0.50	0.060	1		11/19/21 01:24	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	0.50	0.061	1		11/19/21 01:24	503-74-2	H1
Pentanoic Acid	**0.98**	mg/L	0.50	0.056	1		11/19/21 01:24	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	0.50	0.056	1		11/19/21 01:24	646-07-1	H1
Hexanoic Acid	ND	mg/L	0.50	0.058	1		11/19/21 01:24	142-62-1	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-22R-202110 **Lab ID: 60383996042** Collected: 10/21/21 15:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4100**	ug/L	5.0	2.0	1		11/05/21 16:16	74-82-8	H1
Ethane	**3.4**	ug/L	1.0	0.17	1		11/05/21 16:16	74-84-0	H1
Ethene	**13**	ug/L	1.0	0.24	1		11/05/21 16:16	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 16:16	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**14700**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:43	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 17:48	67-64-1	
Benzene	**0.17J**	ug/L	1.0	0.14	1		11/01/21 17:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 17:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 17:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 17:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 17:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 17:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 17:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 17:48	108-90-7	
Chloroethane	**3.9**	ug/L	1.0	0.37	1		11/01/21 17:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 17:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 17:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 17:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 17:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 17:48	107-06-2	
1,1-Dichloroethene	**0.32J**	ug/L	1.0	0.22	1		11/01/21 17:48	75-35-4	
cis-1,2-Dichloroethene	**24.7**	ug/L	1.0	0.13	1		11/01/21 17:48	156-59-2	
trans-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.10	1		11/01/21 17:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 17:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 17:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 17:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 17:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 17:48	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 17:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 17:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 17:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 17:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 17:48	127-18-4	
Toluene	**0.28J**	ug/L	1.0	0.25	1		11/01/21 17:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 17:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 17:48	79-00-5	
Trichloroethene	**21.9**	ug/L	1.0	0.21	1		11/01/21 17:48	79-01-6	
Vinyl chloride	**12.8**	ug/L	1.0	0.17	1		11/01/21 17:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 17:48	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-22R-202110 **Lab ID: 60383996042** Collected: 10/21/21 15:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		11/01/21 17:48	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		11/01/21 17:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/01/21 17:48	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 17:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**188**	mg/L	20.0	7.8	20		10/26/21 13:08	16887-00-6	
Sulfate	**2.0**	mg/L	1.0	0.42	1		10/26/21 21:54	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:19		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:19	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:19	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.78J**	mg/L	1.0	0.30	1		10/29/21 17:00	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**1.2**	mg/L	1.0	0.30	1		11/03/21 13:06		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.9J**	mg/L	5.0	0.53	10		11/19/21 01:58	50-21-5	H1
Acetic Acid	**3.4J**	mg/L	5.0	1.2	10		11/19/21 01:58	64-19-7	H1
Propionic Acid	ND	mg/L	5.0	0.53	10		11/19/21 01:58	79-09-4	H1
Formic acid	**47**	mg/L	5.0	0.55	10		11/19/21 01:58	64-18-6	H1
Butyric Acid	ND	mg/L	5.0	0.58	10		11/19/21 01:58	107-92-6	H1
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/19/21 01:58	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/19/21 01:58	503-74-2	H1
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/19/21 01:58	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/19/21 01:58	646-07-1	H1
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/19/21 01:58	142-62-1	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-185-202110 **Lab ID: 60383996043** Collected: 10/21/21 16:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**3.4J**	ug/L	5.0	2.0	1		11/05/21 16:27	74-82-8	H1
Ethane	ND	ug/L	1.0	0.17	1		11/05/21 16:27	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 16:27	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 16:27	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**105**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:45	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 18:03	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 18:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 18:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 18:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 18:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 18:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 18:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 18:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 18:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 18:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 18:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 18:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 18:03	124-48-1	
1,1-Dichloroethane	**0.70J**	ug/L	1.0	0.12	1		11/01/21 18:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 18:03	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.22	1		11/01/21 18:03	75-35-4	
cis-1,2-Dichloroethene	**11.7**	ug/L	1.0	0.13	1		11/01/21 18:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/01/21 18:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 18:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 18:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 18:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 18:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 18:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 18:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 18:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 18:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 18:03	79-34-5	
Tetrachloroethene	**0.34J**	ug/L	1.0	0.33	1		11/01/21 18:03	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 18:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 18:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 18:03	79-00-5	
Trichloroethene	**182**	ug/L	5.0	1.0	5		11/02/21 22:18	79-01-6	
Vinyl chloride	**0.25J**	ug/L	1.0	0.17	1		11/01/21 18:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 18:03	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-185-202110 **Lab ID: 60383996043** Collected: 10/21/21 16:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		11/01/21 18:03	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 18:03	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/01/21 18:03	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 18:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**40.2**	mg/L	5.0	1.9	5		10/26/21 22:21	16887-00-6	
Sulfate	**8.7**	mg/L	1.0	0.42	1		10/26/21 22:07	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**5.5**	mg/L	0.50	0.33	5		10/23/21 09:29		
Nitrogen, Nitrate	**5.5**	mg/L	0.50	0.39	5		10/23/21 09:29	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.50	0.39	5		10/23/21 09:29	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.46J**	mg/L	1.0	0.30	1		10/29/21 18:06	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.74J**	mg/L	1.0	0.30	1		11/03/21 13:19		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.2**	mg/L	0.50	0.053	1		11/19/21 02:33	50-21-5	H1
Acetic Acid	**0.25J**	mg/L	0.50	0.12	1		11/19/21 02:33	64-19-7	H1
Propionic Acid	ND	mg/L	0.50	0.053	1		11/19/21 02:33	79-09-4	H1
Formic acid	**5.6**	mg/L	0.50	0.055	1		11/19/21 02:33	64-18-6	H1
Butyric Acid	ND	mg/L	0.50	0.058	1		11/19/21 02:33	107-92-6	H1
Pyruvic Acid	ND	mg/L	0.50	0.060	1		11/19/21 02:33	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	0.50	0.061	1		11/19/21 02:33	503-74-2	H1
Pentanoic Acid	ND	mg/L	0.50	0.056	1		11/19/21 02:33	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	0.50	0.056	1		11/19/21 02:33	646-07-1	H1
Hexanoic Acid	ND	mg/L	0.50	0.058	1		11/19/21 02:33	142-62-1	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 725913
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

METHOD BLANK: 2267597
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/05/21 13:43	
Ethane	ug/L	ND	1.0	0.17	11/05/21 13:43	
Ethene	ug/L	ND	1.0	0.24	11/05/21 13:43	
Acetylene	ug/L	ND	0.50	0.13	11/05/21 13:43	

LABORATORY CONTROL SAMPLE & LCSD: 2267598 2267599

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	360	340	93	88	70-130	5	20	
Ethane	ug/L	97	98	95	101	98	70-130	3	20	
Ethene	ug/L	120	120	110	98	95	70-130	3	20	
Acetylene	ug/L	30	29	28	96	93	70-130	3	20	

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

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753096
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3014307
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/03/21 18:28	

LABORATORY CONTROL SAMPLE: 3014308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10100	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014309 3014310

Parameter	Units	60383996041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	17200	10000	10000	27100	27100	99	99	75-125	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753826
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

METHOD BLANK: 3017217
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/04/21 19:57	

LABORATORY CONTROL SAMPLE: 3017218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9770	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017219 3017220

Parameter	Units	60383996033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	988	10000	10000	11000	11200	100	103	75-125	2	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752721
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996001, 60383996002, 60383996003, 60383996004, 60383996005, 60383996006, 60383996007

METHOD BLANK: 3012840
Matrix: Water
Associated Lab Samples: 60383996001, 60383996002, 60383996003, 60383996004, 60383996005, 60383996006, 60383996007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/28/21 17:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/28/21 17:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/28/21 17:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/28/21 17:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/28/21 17:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/28/21 17:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/28/21 17:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/28/21 17:22	
2-Hexanone	ug/L	ND	10.0	1.1	10/28/21 17:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/28/21 17:22	
Acetone	ug/L	ND	10.0	2.5	10/28/21 17:22	
Benzene	ug/L	ND	1.0	0.14	10/28/21 17:22	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/28/21 17:22	
Bromoform	ug/L	ND	1.0	0.68	10/28/21 17:22	
Bromomethane	ug/L	ND	5.0	0.46	10/28/21 17:22	
Carbon disulfide	ug/L	ND	5.0	0.98	10/28/21 17:22	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/28/21 17:22	
Chlorobenzene	ug/L	ND	1.0	0.089	10/28/21 17:22	
Chloroethane	ug/L	ND	1.0	0.37	10/28/21 17:22	
Chloroform	ug/L	ND	1.0	0.22	10/28/21 17:22	
Chloromethane	ug/L	ND	1.0	0.28	10/28/21 17:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/28/21 17:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/28/21 17:22	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/28/21 17:22	
Ethylbenzene	ug/L	ND	1.0	0.12	10/28/21 17:22	
Methylene Chloride	ug/L	ND	1.0	0.39	10/28/21 17:22	
Styrene	ug/L	ND	1.0	0.12	10/28/21 17:22	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/28/21 17:22	
Toluene	ug/L	ND	1.0	0.25	10/28/21 17:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/28/21 17:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/28/21 17:22	
Trichloroethene	ug/L	ND	1.0	0.21	10/28/21 17:22	
Vinyl chloride	ug/L	ND	1.0	0.17	10/28/21 17:22	
Xylene (Total)	ug/L	ND	3.0	0.28	10/28/21 17:22	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/28/21 17:22	
4-Bromofluorobenzene (S)	%	100	80-120		10/28/21 17:22	
Toluene-d8 (S)	%	98	80-120		10/28/21 17:22	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3012841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.6	93	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	75-125	
1,1,2-Trichloroethane	ug/L	20	20.1	100	80-120	
1,1-Dichloroethane	ug/L	20	15.1	76	75-125	
1,1-Dichloroethene	ug/L	20	19.0	95	80-120	
1,2-Dichloroethane	ug/L	20	18.3	91	75-120	
1,2-Dichloropropane	ug/L	20	18.2	91	80-125	
2-Butanone (MEK)	ug/L	100	89.0	89	40-150	
2-Hexanone	ug/L	100	93.3	93	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	89.4	89	65-140	
Acetone	ug/L	100	86.7	87	20-175	
Benzene	ug/L	20	18.8	94	80-120	
Bromodichloromethane	ug/L	20	17.9	89	80-125	
Bromoform	ug/L	20	16.5	82	60-135	
Bromomethane	ug/L	20	15.8	79	10-165	
Carbon disulfide	ug/L	20	17.2	86	75-135	
Carbon tetrachloride	ug/L	20	17.8	89	80-125	
Chlorobenzene	ug/L	20	18.9	94	80-120	
Chloroethane	ug/L	20	18.0	90	70-130	
Chloroform	ug/L	20	17.8	89	80-120	
Chloromethane	ug/L	20	16.0	80	35-155	
cis-1,2-Dichloroethene	ug/L	20	17.5	88	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.3	91	80-125	
Dibromochloromethane	ug/L	20	18.4	92	70-120	
Ethylbenzene	ug/L	20	19.0	95	80-120	
Methylene Chloride	ug/L	20	18.0	90	75-120	
Styrene	ug/L	20	21.8	109	80-120	
Tetrachloroethene	ug/L	20	19.7	98	80-120	
Toluene	ug/L	20	18.9	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	16.2	81	80-120	
trans-1,3-Dichloropropene	ug/L	20	17.2	86	75-120	
Trichloroethene	ug/L	20	18.6	93	80-120	
Vinyl chloride	ug/L	20	15.8	79	65-130	
Xylene (Total)	ug/L	60	59.6	99	80-120	
1,2-Dichlorobenzene-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752748
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996008, 60383996009, 60383996010

METHOD BLANK: 3012917
Matrix: Water
Associated Lab Samples: 60383996008, 60383996009, 60383996010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/21 07:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/21 07:39	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/29/21 07:39	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/29/21 07:39	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/29/21 07:39	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/29/21 07:39	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/29/21 07:39	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/29/21 07:39	
2-Hexanone	ug/L	ND	10.0	1.1	10/29/21 07:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/29/21 07:39	
Acetone	ug/L	ND	10.0	2.5	10/29/21 07:39	
Benzene	ug/L	ND	1.0	0.14	10/29/21 07:39	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/29/21 07:39	
Bromoform	ug/L	ND	1.0	0.68	10/29/21 07:39	
Bromomethane	ug/L	ND	5.0	0.46	10/29/21 07:39	
Carbon disulfide	ug/L	ND	5.0	0.98	10/29/21 07:39	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/29/21 07:39	
Chlorobenzene	ug/L	ND	1.0	0.089	10/29/21 07:39	
Chloroethane	ug/L	ND	1.0	0.37	10/29/21 07:39	
Chloroform	ug/L	ND	1.0	0.22	10/29/21 07:39	
Chloromethane	ug/L	ND	1.0	0.28	10/29/21 07:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/29/21 07:39	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/29/21 07:39	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/29/21 07:39	
Ethylbenzene	ug/L	ND	1.0	0.12	10/29/21 07:39	
Methylene Chloride	ug/L	ND	1.0	0.39	10/29/21 07:39	
Styrene	ug/L	ND	1.0	0.12	10/29/21 07:39	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/29/21 07:39	
Toluene	ug/L	ND	1.0	0.25	10/29/21 07:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/29/21 07:39	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/29/21 07:39	
Trichloroethene	ug/L	ND	1.0	0.21	10/29/21 07:39	
Vinyl chloride	ug/L	ND	1.0	0.17	10/29/21 07:39	
Xylene (Total)	ug/L	ND	3.0	0.28	10/29/21 07:39	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/29/21 07:39	
4-Bromofluorobenzene (S)	%	104	80-120		10/29/21 07:39	
Toluene-d8 (S)	%	100	80-120		10/29/21 07:39	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3012918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	22.7	113	75-125	
1,1,2-Trichloroethane	ug/L	20	21.3	107	80-120	
1,1-Dichloroethane	ug/L	20	20.6	103	75-125	
1,1-Dichloroethene	ug/L	20	15.9	79	80-120	L2
1,2-Dichloroethane	ug/L	20	20.2	101	75-120	
1,2-Dichloropropane	ug/L	20	20.5	102	80-125	
2-Butanone (MEK)	ug/L	100	134	134	40-150	
2-Hexanone	ug/L	100	139	139	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	114	114	65-140	
Acetone	ug/L	100	146	146	20-175	
Benzene	ug/L	20	21.3	106	80-120	
Bromodichloromethane	ug/L	20	19.7	98	80-125	
Bromoform	ug/L	20	19.4	97	60-135	
Bromomethane	ug/L	20	17.7	89	10-165	
Carbon disulfide	ug/L	20	16.1	80	75-135	
Carbon tetrachloride	ug/L	20	18.7	94	80-125	
Chlorobenzene	ug/L	20	21.1	105	80-120	
Chloroethane	ug/L	20	19.7	98	70-130	
Chloroform	ug/L	20	19.3	96	80-120	
Chloromethane	ug/L	20	19.7	99	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.5	107	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.5	108	80-125	
Dibromochloromethane	ug/L	20	17.9	90	70-120	
Ethylbenzene	ug/L	20	21.0	105	80-120	
Methylene Chloride	ug/L	20	16.4	82	75-120	
Styrene	ug/L	20	21.9	110	80-120	
Tetrachloroethene	ug/L	20	20.5	103	80-120	
Toluene	ug/L	20	20.4	102	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.9	99	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.1	105	75-120	
Trichloroethene	ug/L	20	19.6	98	80-120	
Vinyl chloride	ug/L	20	20.8	104	65-130	
Xylene (Total)	ug/L	60	64.9	108	80-120	
1,2-Dichlorobenzene-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			103	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752796
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996014, 60383996015, 60383996016, 60383996017, 60383996018, 60383996019, 60383996020, 60383996021, 60383996022, 60383996023, 60383996024, 60383996025, 60383996026, 60383996027, 60383996028, 60383996029, 60383996030, 60383996031, 60383996032, 60383996033

METHOD BLANK: 3013079
Matrix: Water
Associated Lab Samples: 60383996014, 60383996015, 60383996016, 60383996017, 60383996018, 60383996019, 60383996020, 60383996021, 60383996022, 60383996023, 60383996024, 60383996025, 60383996026, 60383996027, 60383996028, 60383996029, 60383996030, 60383996031, 60383996032, 60383996033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/21 09:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/21 09:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/29/21 09:47	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/29/21 09:47	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/29/21 09:47	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/29/21 09:47	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/29/21 09:47	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/29/21 09:47	
2-Hexanone	ug/L	ND	10.0	1.1	10/29/21 09:47	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/29/21 09:47	
Acetone	ug/L	ND	10.0	2.5	10/29/21 09:47	
Benzene	ug/L	ND	1.0	0.14	10/29/21 09:47	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/29/21 09:47	
Bromoform	ug/L	ND	1.0	0.68	10/29/21 09:47	
Bromomethane	ug/L	ND	5.0	0.46	10/29/21 09:47	
Carbon disulfide	ug/L	ND	5.0	0.98	10/29/21 09:47	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/29/21 09:47	
Chlorobenzene	ug/L	ND	1.0	0.089	10/29/21 09:47	
Chloroethane	ug/L	ND	1.0	0.37	10/29/21 09:47	
Chloroform	ug/L	ND	1.0	0.22	10/29/21 09:47	
Chloromethane	ug/L	ND	1.0	0.28	10/29/21 09:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/29/21 09:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/29/21 09:47	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/29/21 09:47	
Ethylbenzene	ug/L	ND	1.0	0.12	10/29/21 09:47	
Methylene Chloride	ug/L	ND	1.0	0.39	10/29/21 09:47	
Styrene	ug/L	ND	1.0	0.12	10/29/21 09:47	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/29/21 09:47	
Toluene	ug/L	ND	1.0	0.25	10/29/21 09:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/29/21 09:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/29/21 09:47	
Trichloroethene	ug/L	ND	1.0	0.21	10/29/21 09:47	
Vinyl chloride	ug/L	ND	1.0	0.17	10/29/21 09:47	
Xylene (Total)	ug/L	ND	3.0	0.28	10/29/21 09:47	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120		10/29/21 09:47	
4-Bromofluorobenzene (S)	%	96	80-120		10/29/21 09:47	
Toluene-d8 (S)	%	99	80-120		10/29/21 09:47	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3013080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.5	93	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.7	93	75-125	
1,1,2-Trichloroethane	ug/L	20	19.6	98	80-120	
1,1-Dichloroethane	ug/L	20	17.6	88	75-125	
1,1-Dichloroethene	ug/L	20	18.4	92	80-120	
1,2-Dichloroethane	ug/L	20	18.6	93	75-120	
1,2-Dichloropropane	ug/L	20	18.4	92	80-125	
2-Butanone (MEK)	ug/L	100	92.5	92	40-150	
2-Hexanone	ug/L	100	99.9	100	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.8	94	65-140	
Acetone	ug/L	100	90.1	90	20-175	
Benzene	ug/L	20	19.1	95	80-120	
Bromodichloromethane	ug/L	20	18.4	92	80-125	
Bromoform	ug/L	20	18.0	90	60-135	
Bromomethane	ug/L	20	16.5	83	10-165	
Carbon disulfide	ug/L	20	17.9	90	75-135	
Carbon tetrachloride	ug/L	20	18.1	91	80-125	
Chlorobenzene	ug/L	20	19.1	96	80-120	
Chloroethane	ug/L	20	17.6	88	70-130	
Chloroform	ug/L	20	17.9	90	80-120	
Chloromethane	ug/L	20	16.9	85	35-155	
cis-1,2-Dichloroethene	ug/L	20	17.9	89	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.9	94	80-125	
Dibromochloromethane	ug/L	20	18.8	94	70-120	
Ethylbenzene	ug/L	20	19.5	98	80-120	
Methylene Chloride	ug/L	20	20.5	103	75-120	
Styrene	ug/L	20	22.3	111	80-120	
Tetrachloroethene	ug/L	20	19.7	98	80-120	
Toluene	ug/L	20	19.5	98	80-120	
trans-1,2-Dichloroethene	ug/L	20	18.4	92	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.0	95	75-120	
Trichloroethene	ug/L	20	17.9	90	80-120	
Vinyl chloride	ug/L	20	16.0	80	65-130	
Xylene (Total)	ug/L	60	60.5	101	80-120	
1,2-Dichlorobenzene-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753191
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3015122
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 13:18	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 13:18	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 13:18	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 13:18	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 13:18	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 13:18	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 13:18	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 13:18	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 13:18	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 13:18	
Acetone	ug/L	ND	10.0	2.5	11/01/21 13:18	
Benzene	ug/L	ND	1.0	0.14	11/01/21 13:18	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 13:18	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 13:18	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 13:18	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 13:18	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 13:18	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 13:18	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 13:18	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 13:18	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 13:18	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/01/21 13:18	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 13:18	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 13:18	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 13:18	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 13:18	
Styrene	ug/L	ND	1.0	0.12	11/01/21 13:18	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 13:18	
Toluene	ug/L	ND	1.0	0.25	11/01/21 13:18	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 13:18	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 13:18	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 13:18	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 13:18	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 13:18	
1,2-Dichlorobenzene-d4 (S)	%	108	80-120		11/01/21 13:18	
4-Bromofluorobenzene (S)	%	101	80-120		11/01/21 13:18	
Toluene-d8 (S)	%	98	80-120		11/01/21 13:18	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3015123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.0	120	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	75-125	
1,1,2-Trichloroethane	ug/L	20	19.5	98	80-120	
1,1-Dichloroethane	ug/L	20	20.2	101	75-125	
1,1-Dichloroethene	ug/L	20	21.0	105	80-120	
1,2-Dichloroethane	ug/L	20	22.3	112	75-120	
1,2-Dichloropropane	ug/L	20	19.6	98	80-125	
2-Butanone (MEK)	ug/L	100	127	127	40-150	
2-Hexanone	ug/L	100	109	109	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	65-140	
Acetone	ug/L	100	167	167	20-175	
Benzene	ug/L	20	20.6	103	80-120	
Bromodichloromethane	ug/L	20	21.9	110	80-125	
Bromoform	ug/L	20	22.1	111	60-135	
Bromomethane	ug/L	20	12.5	63	10-165	
Carbon disulfide	ug/L	20	21.4	107	75-135	
Carbon tetrachloride	ug/L	20	23.3	117	80-125	
Chlorobenzene	ug/L	20	20.7	104	80-120	
Chloroethane	ug/L	20	20.6	103	70-130	
Chloroform	ug/L	20	21.4	107	80-120	
Chloromethane	ug/L	20	14.1	70	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.2	106	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.7	109	80-125	
Dibromochloromethane	ug/L	20	19.1	96	70-120	
Ethylbenzene	ug/L	20	20.1	101	80-120	
Methylene Chloride	ug/L	20	22.1	110	75-120	
Styrene	ug/L	20	20.9	104	80-120	
Tetrachloroethene	ug/L	20	20.6	103	80-120	
Toluene	ug/L	20	18.4	92	80-120	
trans-1,2-Dichloroethene	ug/L	20	21.3	107	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-120	
Trichloroethene	ug/L	20	21.3	106	80-120	
Vinyl chloride	ug/L	20	18.1	91	65-130	
Xylene (Total)	ug/L	60	61.1	102	80-120	
1,2-Dichlorobenzene-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			97	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753272
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996005, 60383996006, 60383996011, 60383996012, 60383996013, 60383996027, 60383996028, 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

METHOD BLANK: 3015397
Matrix: Water
Associated Lab Samples: 60383996005, 60383996006, 60383996011, 60383996012, 60383996013, 60383996027, 60383996028, 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 12:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 12:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 12:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 12:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 12:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 12:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 12:32	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 12:32	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 12:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 12:32	
Acetone	ug/L	ND	10.0	2.5	11/01/21 12:32	
Benzene	ug/L	ND	1.0	0.14	11/01/21 12:32	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 12:32	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 12:32	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 12:32	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 12:32	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 12:32	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 12:32	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 12:32	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 12:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/01/21 12:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 12:32	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 12:32	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 12:32	
Styrene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 12:32	
Toluene	ug/L	ND	1.0	0.25	11/01/21 12:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 12:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 12:32	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 12:32	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 12:32	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/01/21 12:32	
4-Bromofluorobenzene (S)	%	99	80-120		11/01/21 12:32	
Toluene-d8 (S)	%	99	80-120		11/01/21 12:32	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3015398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.4	97	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	75-125	
1,1,2-Trichloroethane	ug/L	20	19.2	96	80-120	
1,1-Dichloroethane	ug/L	20	16.5	82	75-125	
1,1-Dichloroethene	ug/L	20	19.7	99	80-120	
1,2-Dichloroethane	ug/L	20	18.4	92	75-120	
1,2-Dichloropropane	ug/L	20	19.1	96	80-125	
2-Butanone (MEK)	ug/L	100	92.1	92	40-150	
2-Hexanone	ug/L	100	90.8	91	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	88.0	88	65-140	
Acetone	ug/L	100	93.3	93	20-175	
Benzene	ug/L	20	20.1	101	80-120	
Bromodichloromethane	ug/L	20	18.5	93	80-125	
Bromoform	ug/L	20	18.4	92	60-135	
Bromomethane	ug/L	20	17.2	86	10-165	
Carbon disulfide	ug/L	20	19.2	96	75-135	
Carbon tetrachloride	ug/L	20	19.1	95	80-125	
Chlorobenzene	ug/L	20	19.2	96	80-120	
Chloroethane	ug/L	20	18.2	91	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	17.3	86	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.3	96	80-125	
Dibromochloromethane	ug/L	20	18.7	93	70-120	
Ethylbenzene	ug/L	20	19.9	100	80-120	
Methylene Chloride	ug/L	20	19.2	96	75-120	
Styrene	ug/L	20	22.0	110	80-120	
Tetrachloroethene	ug/L	20	19.9	100	80-120	
Toluene	ug/L	20	18.8	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-120	
Trichloroethene	ug/L	20	18.9	94	80-120	
Vinyl chloride	ug/L	20	17.1	85	65-130	
Xylene (Total)	ug/L	60	60.2	100	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			96	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753288
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996038, 60383996039, 60383996040

METHOD BLANK: 3015422
Matrix: Water
Associated Lab Samples: 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 15:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 15:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 15:46	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 15:46	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 15:46	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 15:46	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 15:46	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 15:46	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 15:46	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 15:46	
Acetone	ug/L	ND	10.0	2.5	11/01/21 15:46	
Benzene	ug/L	ND	1.0	0.14	11/01/21 15:46	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 15:46	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 15:46	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 15:46	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 15:46	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 15:46	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 15:46	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 15:46	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 15:46	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 15:46	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 15:46	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 15:46	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 15:46	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 15:46	
Styrene	ug/L	ND	1.0	0.12	11/01/21 15:46	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 15:46	
Toluene	ug/L	ND	1.0	0.25	11/01/21 15:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 15:46	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 15:46	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 15:46	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 15:46	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 15:46	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		11/01/21 15:46	
4-Bromofluorobenzene (S)	%	90	80-120		11/01/21 15:46	
Toluene-d8 (S)	%	101	80-120		11/01/21 15:46	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3015423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	22.6	113	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	80-120	
1,1-Dichloroethane	ug/L	20	19.1	95	75-125	
1,1-Dichloroethene	ug/L	20	21.4	107	80-120	
1,2-Dichloroethane	ug/L	20	20.1	101	75-120	
1,2-Dichloropropane	ug/L	20	19.9	100	80-125	
2-Butanone (MEK)	ug/L	100	91.6	92	40-150	
2-Hexanone	ug/L	100	97.6	98	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.3	98	65-140	
Acetone	ug/L	100	85.4	85	20-175	
Benzene	ug/L	20	19.6	98	80-120	
Bromodichloromethane	ug/L	20	20.8	104	80-125	
Bromoform	ug/L	20	28.1	141	60-135	L1
Bromomethane	ug/L	20	18.1	91	10-165	
Carbon disulfide	ug/L	20	18.3	92	75-135	
Carbon tetrachloride	ug/L	20	21.8	109	80-125	
Chlorobenzene	ug/L	20	22.2	111	80-120	
Chloroethane	ug/L	20	17.0	85	70-130	
Chloroform	ug/L	20	20.6	103	80-120	
Chloromethane	ug/L	20	18.7	93	35-155	
cis-1,3-Dichloropropene	ug/L	20	20.5	103	80-125	
Dibromochloromethane	ug/L	20	22.6	113	70-120	
Ethylbenzene	ug/L	20	22.8	114	80-120	
Methylene Chloride	ug/L	20	19.2	96	75-120	
Styrene	ug/L	20	23.2	116	80-120	
Tetrachloroethene	ug/L	20	23.7	119	80-120	
Toluene	ug/L	20	21.2	106	80-120	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	75-120	
Trichloroethene	ug/L	20	20.7	104	80-120	
Vinyl chloride	ug/L	20	17.2	86	65-130	
Xylene (Total)	ug/L	60	68.3	114	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			90	80-120	
Toluene-d8 (S)	%			103	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753621
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996004, 60383996017, 60383996021, 60383996038, 60383996039, 60383996040, 60383996043

METHOD BLANK: 3016480
Matrix: Water
Associated Lab Samples: 60383996004, 60383996017, 60383996021, 60383996038, 60383996039, 60383996040, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/02/21 19:39	
Trichloroethene	ug/L	ND	1.0	0.21	11/02/21 19:39	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		11/02/21 19:39	
4-Bromofluorobenzene (S)	%	92	80-120		11/02/21 19:39	
Toluene-d8 (S)	%	99	80-120		11/02/21 19:39	

LABORATORY CONTROL SAMPLE: 3016481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.1	90	80-120	
Trichloroethene	ug/L	20	18.6	93	80-120	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			94	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 751728
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

METHOD BLANK: 3009909
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/25/21 13:55	

LABORATORY CONTROL SAMPLE: 3009910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.49	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009911 3009912

Parameter	Units	60384060004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.53	0.54	104	104	75-125	0	20	

SAMPLE DUPLICATE: 3009913

Parameter	Units	60384060005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3009914

Parameter	Units	60383996037 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 751896
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3010348
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/26/21 06:47	
Sulfate	mg/L	ND	1.0	0.42	10/26/21 06:47	

LABORATORY CONTROL SAMPLE: 3010349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010350 3010351

Parameter	Units	60383737041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	153	100	100	246	247	93	95	80-120	0	15	
Sulfate	mg/L	1.3	5	5	5.9	5.9	93	94	80-120	0	15	

MATRIX SPIKE SAMPLE: 3010352

Parameter	Units	60383996041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	92.7	100	181	88	80-120	
Sulfate	mg/L	1.9	5	6.4	90	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752147
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

METHOD BLANK: 3011008 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/27/21 09:40	
Sulfate	mg/L	ND	1.0	0.42	10/27/21 09:40	

METHOD BLANK: 3014120 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/28/21 10:38	
Sulfate	mg/L	ND	1.0	0.42	10/28/21 10:38	

METHOD BLANK: 3014387 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.46J	1.0	0.39	10/29/21 12:58	
Sulfate	mg/L	ND	1.0	0.42	10/29/21 12:58	

METHOD BLANK: 3016249 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/01/21 10:05	
Sulfate	mg/L	ND	1.0	0.42	11/01/21 10:05	

METHOD BLANK: 3016993 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/02/21 08:12	
Sulfate	mg/L	ND	1.0	0.42	11/02/21 08:12	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3011009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 3014121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 3014388

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.4	108	90-110	

LABORATORY CONTROL SAMPLE: 3016250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.3	105	90-110	

LABORATORY CONTROL SAMPLE: 3016994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011010 3011011

Parameter	Units	60384170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	215	250	250	441	433	91	87	80-120	2	15	
Sulfate	mg/L	352	250	250	584	572	93	88	80-120	2	15	

MATRIX SPIKE SAMPLE: 3011012

Parameter	Units	60383395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	174	100	274	100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

MATRIX SPIKE SAMPLE: 3011012

Parameter	Units	60383395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	3210	2500	5620	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011564 3011565

Parameter	Units	60383351001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.5	10	10	31.7	31.2	102	97	80-120	2	15	
Sulfate	mg/L	2070	1000	1000	3130	3110	106	105	80-120	0	15	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752149
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996038, 60383996039, 60383996040

METHOD BLANK: 3011019 Matrix: Water
Associated Lab Samples: 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.39J	1.0	0.39	10/27/21 07:53	
Sulfate	mg/L	ND	1.0	0.42	10/27/21 07:53	

METHOD BLANK: 3014118 Matrix: Water
Associated Lab Samples: 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/28/21 10:38	
Sulfate	mg/L	ND	1.0	0.42	10/28/21 10:38	

LABORATORY CONTROL SAMPLE: 3011020

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3014119

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011021 3011022

Parameter	Units	60383996038 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	178	100	100	293	301	115	123	80-120	3	15	M1
Sulfate	mg/L	3.2	5	5	8.0	8.0	97	97	80-120	0	15	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

MATRIX SPIKE SAMPLE: 3011023

Parameter	Units	60384139008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1.6	5	5.8	84	80-120	
Sulfate	mg/L	826	500	1330	100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 751541
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

METHOD BLANK: 3008986
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/23/21 09:07	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/23/21 09:07	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/23/21 09:07	

LABORATORY CONTROL SAMPLE: 3008987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.93	93	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	96	90-110	

MATRIX SPIKE SAMPLE: 3008988

Parameter	Units	60383996034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.87	87	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	1.9	94	90-110	

SAMPLE DUPLICATE: 3008989

Parameter	Units	60383996037 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	6.4	6.4	1	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	6.4	6.4	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752649
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041

METHOD BLANK: 3012426
Matrix: Water
Associated Lab Samples: 60383996041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/28/21 09:43	

LABORATORY CONTROL SAMPLE: 3012427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.3	105	80-120	

MATRIX SPIKE SAMPLE: 3012428

Parameter	Units	60383451003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	27.1	25	49.2	89	80-120	

SAMPLE DUPLICATE: 3012429

Parameter	Units	60383674005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	7.1	6.5	9	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753113
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996042, 60383996043

METHOD BLANK: 3014344
Matrix: Water
Associated Lab Samples: 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 16:06	

LABORATORY CONTROL SAMPLE: 3014345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.0	99	80-120	

MATRIX SPIKE SAMPLE: 3014346

Parameter	Units	60383674004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	231	500	785	111	80-120	

SAMPLE DUPLICATE: 3014347

Parameter	Units	60383996043 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	0.46J	0.45J		25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753114
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

METHOD BLANK: 3014348
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 21:52	

LABORATORY CONTROL SAMPLE: 3014349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.1	102	80-120	

MATRIX SPIKE SAMPLE: 3014350

Parameter	Units	60383395002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	4.3	70	80-120	M1

SAMPLE DUPLICATE: 3014351

Parameter	Units	60383996033 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	0.37J	0.38J		25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753833
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3017243
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	11/03/21 11:33	

LABORATORY CONTROL SAMPLE: 3017244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	95	80-120	

MATRIX SPIKE SAMPLE: 3017245

Parameter	Units	60383737047 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	55.6	125	206	121	80-120	M1

SAMPLE DUPLICATE: 3017246

Parameter	Units	60383996041 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.8	9.1	4	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 727035
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 2274006
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/19/21 05:26	
Acetic Acid	mg/L	ND	0.50	0.12	11/19/21 05:26	
Propionic Acid	mg/L	ND	0.50	0.053	11/19/21 05:26	
Formic acid	mg/L	ND	0.50	0.055	11/19/21 05:26	
Butyric Acid	mg/L	ND	0.50	0.058	11/19/21 05:26	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/19/21 05:26	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/19/21 05:26	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/19/21 05:26	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/19/21 05:26	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/19/21 05:26	

LABORATORY CONTROL SAMPLE & LCSD: 2274007 2274008

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.2	2.4	111	118	70-130	6	20	
Acetic Acid	mg/L	2	2.1	2.0	105	103	70-130	2	20	
Propionic Acid	mg/L	2	2.2	2.2	109	112	70-130	2	20	
Formic acid	mg/L	2	2.0	1.9	98	94	70-130	3	20	
Butyric Acid	mg/L	2	2.4	2.2	118	109	70-130	8	20	
Pyruvic Acid	mg/L	2	2.2	2.3	112	116	70-130	4	20	
i-Pentanoic Acid	mg/L	2	2.2	2.2	108	111	70-130	2	20	
Pentanoic Acid	mg/L	2	2.0	2.0	102	101	70-130	1	20	
i-Hexanoic Acid	mg/L	2	2.2	2.2	112	112	70-130	1	20	
Hexanoic Acid	mg/L	2	2.0	1.8	99	93	70-130	7	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 60383996

[1] In the AM20_LHC analysis, all samples were analyzed outside the recognized holding time Due to a lab error, the analysis was delayed.

[2] In the AM23G analysis, all samples were conducted one day outside of the recognized method holding time.

BATCH QUALIFIERS

Batch: 752721

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

Batch: 752748

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

Batch: 752796

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

Batch: 753191

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

Batch: 753272

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

Batch: 753288

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

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

BATCH QUALIFIERS

Batch: 753621

[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.
F1	The sample was analyzed at a dilution due to foaming of the sample in the purge vessel.
H1	Analysis was conducted outside of the recognized method holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
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.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383996033	MW-38-202110	AM20GAX	725913		
60383996034	RW-69-202110	AM20GAX	725913		
60383996035	MW-87-202110	AM20GAX	725913		
60383996036	MW-198-202110	AM20GAX	725913		
60383996037	ITMW-9-202110	AM20GAX	725913		
60383996038	IW-73-202110	AM20GAX	725913		
60383996039	MW-58R-202110	AM20GAX	725913		
60383996040	MW-95-202110	AM20GAX	725913		
60383996041	MW-91-202110	AM20GAX	725913		
60383996042	TMW-22R-202110	AM20GAX	725913		
60383996043	MW-185-202110	AM20GAX	725913		
60383996033	MW-38-202110	EPA 3010	753826	EPA 6010	753911
60383996034	RW-69-202110	EPA 3010	753826	EPA 6010	753911
60383996035	MW-87-202110	EPA 3010	753826	EPA 6010	753911
60383996036	MW-198-202110	EPA 3010	753826	EPA 6010	753911
60383996037	ITMW-9-202110	EPA 3010	753826	EPA 6010	753911
60383996038	IW-73-202110	EPA 3010	753826	EPA 6010	753911
60383996039	MW-58R-202110	EPA 3010	753826	EPA 6010	753911
60383996040	MW-95-202110	EPA 3010	753826	EPA 6010	753911
60383996041	MW-91-202110	EPA 3010	753096	EPA 6010	753599
60383996042	TMW-22R-202110	EPA 3010	753096	EPA 6010	753599
60383996043	MW-185-202110	EPA 3010	753096	EPA 6010	753599
60383996001	VP-14-202110	EPA 5030B/8260	752721		
60383996002	VP-8-202110	EPA 5030B/8260	752721		
60383996003	MW-190-202110	EPA 5030B/8260	752721		
60383996004	VP-10-202110	EPA 5030B/8260	752721		
60383996004	VP-10-202110	EPA 5030B/8260	753621		
60383996005	ITMW-6-202110	EPA 5030B/8260	752721		
60383996005	ITMW-6-202110	EPA 5030B/8260	753272		
60383996006	ITMW-5-202110	EPA 5030B/8260	752721		
60383996006	ITMW-5-202110	EPA 5030B/8260	753272		
60383996007	MW-84-202110	EPA 5030B/8260	752721		
60383996008	MW-46R-202110	EPA 5030B/8260	752748		
60383996009	EB-04-202110	EPA 5030B/8260	752748		
60383996010	TB-01-202110	EPA 5030B/8260	752748		
60383996011	TMW-30-202110	EPA 5030B/8260	753272		
60383996012	DUP-11-202110	EPA 5030B/8260	753272		
60383996013	MW-56R-202110	EPA 5030B/8260	753272		
60383996014	TMW-24-202110	EPA 5030B/8260	752796		
60383996015	MW-57R-202110	EPA 5030B/8260	752796		
60383996016	MW-93-202110	EPA 5030B/8260	752796		
60383996017	MW-205-202110	EPA 5030B/8260	752796		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383996017	**MW-205-202110**	EPA 5030B/8260	753621		
60383996018	**MW-189-202110**	EPA 5030B/8260	752796		
60383996019	**MW-178-202110**	EPA 5030B/8260	752796		
60383996020	**MW-179-202110**	EPA 5030B/8260	752796		
60383996021	**ITMW-18-202110**	EPA 5030B/8260	752796		
60383996021	**ITMW-18-202110**	EPA 5030B/8260	753621		
60383996022	**MW-199-202110**	EPA 5030B/8260	752796		
60383996023	**MW-24-202110**	EPA 5030B/8260	752796		
60383996024	**ITMW-19-202110**	EPA 5030B/8260	752796		
60383996025	**MW-182-202110**	EPA 5030B/8260	752796		
60383996026	**ITMW-10-202110**	EPA 5030B/8260	752796		
60383996027	**TMW-12-202110**	EPA 5030B/8260	752796		
60383996027	**TMW-12-202110**	EPA 5030B/8260	753272		
60383996028	**DUP-08-202110**	EPA 5030B/8260	752796		
60383996028	**DUP-08-202110**	EPA 5030B/8260	753272		
60383996029	**DUP-10-202110**	EPA 5030B/8260	752796		
60383996030	**DUP-07-202110**	EPA 5030B/8260	752796		
60383996031	**TB-07-202110**	EPA 5030B/8260	752796		
60383996032	**TB-08-202110**	EPA 5030B/8260	752796		
60383996033	**MW-38-202110**	EPA 5030B/8260	752796		
60383996033	**MW-38-202110**	EPA 5030B/8260	753272		
60383996034	**RW-69-202110**	EPA 5030B/8260	753272		
60383996035	**MW-87-202110**	EPA 5030B/8260	753272		
60383996036	**MW-198-202110**	EPA 5030B/8260	753272		
60383996037	**ITMW-9-202110**	EPA 5030B/8260	753272		
60383996038	**IW-73-202110**	EPA 5030B/8260	753288		
60383996038	**IW-73-202110**	EPA 5030B/8260	753621		
60383996039	**MW-58R-202110**	EPA 5030B/8260	753288		
60383996039	**MW-58R-202110**	EPA 5030B/8260	753621		
60383996040	**MW-95-202110**	EPA 5030B/8260	753288		
60383996040	**MW-95-202110**	EPA 5030B/8260	753621		
60383996041	**MW-91-202110**	EPA 5030B/8260	753191		
60383996042	**TMW-22R-202110**	EPA 5030B/8260	753191		
60383996043	**MW-185-202110**	EPA 5030B/8260	753191		
60383996043	**MW-185-202110**	EPA 5030B/8260	753621		
60383996033	**MW-38-202110**	SM 4500-S-2 D	751728		
60383996034	**RW-69-202110**	SM 4500-S-2 D	751728		
60383996035	**MW-87-202110**	SM 4500-S-2 D	751728		
60383996036	**MW-198-202110**	SM 4500-S-2 D	751728		
60383996037	**ITMW-9-202110**	SM 4500-S-2 D	751728		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383996038	**IW-73-202110**	SM 4500-S-2 D	751728		
60383996039	**MW-58R-202110**	SM 4500-S-2 D	751728		
60383996040	**MW-95-202110**	SM 4500-S-2 D	751728		
60383996033	**MW-38-202110**	EPA 300.0	752147		
60383996034	**RW-69-202110**	EPA 300.0	752147		
60383996035	**MW-87-202110**	EPA 300.0	752147		
60383996036	**MW-198-202110**	EPA 300.0	752147		
60383996037	**ITMW-9-202110**	EPA 300.0	752147		
60383996038	**IW-73-202110**	EPA 300.0	752149		
60383996039	**MW-58R-202110**	EPA 300.0	752149		
60383996040	**MW-95-202110**	EPA 300.0	752149		
60383996041	**MW-91-202110**	EPA 300.0	751896		
60383996042	**TMW-22R-202110**	EPA 300.0	751896		
60383996043	**MW-185-202110**	EPA 300.0	751896		
60383996033	**MW-38-202110**	EPA 353.2	751541		
60383996034	**RW-69-202110**	EPA 353.2	751541		
60383996035	**MW-87-202110**	EPA 353.2	751541		
60383996036	**MW-198-202110**	EPA 353.2	751541		
60383996037	**ITMW-9-202110**	EPA 353.2	751541		
60383996038	**IW-73-202110**	EPA 353.2	751541		
60383996039	**MW-58R-202110**	EPA 353.2	751541		
60383996040	**MW-95-202110**	EPA 353.2	751541		
60383996041	**MW-91-202110**	EPA 353.2	751541		
60383996042	**TMW-22R-202110**	EPA 353.2	751541		
60383996043	**MW-185-202110**	EPA 353.2	751541		
60383996033	**MW-38-202110**	SM 5310C	753114		
60383996034	**RW-69-202110**	SM 5310C	753114		
60383996035	**MW-87-202110**	SM 5310C	753114		
60383996036	**MW-198-202110**	SM 5310C	753114		
60383996037	**ITMW-9-202110**	SM 5310C	753114		
60383996038	**IW-73-202110**	SM 5310C	753114		
60383996039	**MW-58R-202110**	SM 5310C	753114		
60383996040	**MW-95-202110**	SM 5310C	753114		
60383996041	**MW-91-202110**	SM 5310C	752649		
60383996042	**TMW-22R-202110**	SM 5310C	753113		
60383996043	**MW-185-202110**	SM 5310C	753113		
60383996041	**MW-91-202110**	SM 5310C	753833		
60383996042	**TMW-22R-202110**	SM 5310C	753833		
60383996043	**MW-185-202110**	SM 5310C	753833		
60383996041	**MW-91-202110**	AM23G	727035		
60383996042	**TMW-22R-202110**	AM23G	727035		
60383996043	**MW-185-202110**	AM23G	727035		

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Sample Condition Upon Receipt

WO# : 60383996

60383996

Client Name: Ram Coll

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-296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 23.7, 5.12 Corr. Factor T-296 -0.3 Corrected 20.2, 2.2, 0.9

Date and initials of person examining contents: JM 10/14

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	NO3
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: water	☐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) LOT# 610 6001	☒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: AL	☐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: _____

REVIEWED
By jchurch at 10:28 am, 10/25/21

Project Manager Reviewed: _____ Date: _____

F-KS-C-003-Rev.11, February 28, 2018

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required: _____

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs		↓ LAB USE ONLY: ↓ Lab Sample # / Comments
VP-14-202110	GW	G	10-21-21	1643				3	X	3(VOAH)	
VP-8-202110	GW	G	10-21-21	1508				3	X	↓	
MW-190-202110	GW	G	10-21-21	1520				3	X	↓	
VP-10-202110	GW	G	10-21-21	1525				3	X	↓	
ITMW-6-202110	GW	G	10-21-21	1517				3	X	↓	
ITMW-5-202110	GW	G	10-21-21	1730				3	X	↓	
MW-84-202110	GW	G	10-21-21	1709				3	X	3(OTHR)	
MW-46R-202110	GW	G	10-21-21	1724				3	X	3(VOAH)	
EB-04-202110	GW	G	10-21-21	1715				3	X	↓	
TB-01-202110	TB	G	10-21-21	1730				3	X	2(VOAH)	

Customer Remarks/ Special Conditions/ Possible Hazards: MW-84-202110 preserved with ascorbic acid

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt: 2.3, 2.6, 1.2 ~~2.0, 2.2, 0.9~~ 10/22/21
Cooler Therm Corr. Factor: -0.3 oC
Cooler Temp Corrected: 2.0, 2.2, 0.9 oC
Comments: _____

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 1 of 6

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Tamara Rambojl	10-21-21 1800	[signature]	10/22/21 03:00
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Analyses

LAB Profile/Line: 7444 Line 1

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs									↓ LAB USE ONLY: ↓ Lab Sample # / Comments
TMW-30-202110	GW	G	10-21-21	1202				3	X			3(VG9H)						
DUP-1)-202110	GW	G	10-21-21	1202				3	X									
MW-56R-202110	GW	G	10-21-21	1142				3	X									
TMW-24-202110	GW	G	10-21-21	1225				3	X									
MW-57R-202110	GW	G	10-21-21	1335				3	X									
MW-93-202110	GW	G	10-21-21	1325				3	X									
MW-205-202110	GW	G	10-21-21	1349				3	X									
MW-189-202110	GW	G	10-21-21	1356				3	X									
MW-178-202110	GW	G	10-21-21	1605				3	X									
MW-179-202110	GW	G	10-21-21	1625				2	X			2(VG9H)						

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.0, 2.2, 0.9 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-21-21 18:00	Pace	10/22/21 0300
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 2 of 6

F-ALL-C-010-rev.00, 05Jul2018

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Analyses

LAB Profile/Line: 7444 Line 1

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs								↓ LAB USE ONLY: ↓ Lab Sample # / Comments
ITMW-18-202110	GW	G	10-21-21	0848				3	X								
MW-199-202110	GW	G	10-21-21	0845				3	X								
MW-24-202110	GW	G	10-21-21	0845				3	X								
ITMW-19-202110	GW	G	10-21-21	0910				3	X								
MW-182-202110	GW	G	10-21-21	1009				3	X								
ITMW-10-202110	GW	G	10-21-21	1023				3	X								
TMW-12-202110	GW	G	10-21-21	1025				3	X								
DUP-08-202110	GW	G	10-21-21	1025				3	X								
DUP-10-202110	GW	G	10-21-21	1009				3	X								
DUP-07-202110	GW	G	10-21-21	0845				3	X								

3 (VOAs)

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ]Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt: 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor: -0.3 oC
Cooler Temp Corrected: 2.0, 2.2, 0.9 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-21-21 1800		10/22/21 0300
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60038 J996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs								↓ LAB USE ONLY: ↓ Lab Sample # / Comments
TB-07-202110	GW	G	10-21-21	1731				3	X			2(VGAH)					
TB-08-202110	GW	G	10-21-21	1732				3	X			↓					

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.0, 2.2, 0.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 4 of 6

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
10-21-21 10:00 Ramboll	10-21-21 1800		10/22/21 03:00
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3 U 4/5 U 2 U 1 D O D

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride, Sulfate, Nitrate	~~Sulfate~~ (DM) Sulfide	~~Nitrate~~ (DM) Hydrogen	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene / Acetylene	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
MW-38-202110	GW	G	10-21-21	0915				11	X	X	X	X	X		X		X (DM)	X	3(VG9H) 3(VG9U) 1(BP2N) 1(BP3C) 1(BP3N) 1(AG5U)
RW-69-202110	GW	G	10-21-21	0925				11	X	X	X	X	X		X			X	
MW-87-202110	GW	G	10-21-21	1023				11	X	X	X	X	X		X			X	
MW-198-202110	GW	G	10-21-21	1055				11	X	X	X	X	X		X			X	
IT-MW-9-202110	GW	G	10-21-21	1135				11	X	X	X	X	X		X			X	
IW-73-202110	GW	G	10-21-21	1210				11	X	X	X	X	X		X			X	
MW-58R-202110	GW	G	10-21-21	1330				11	X	X	X	X	X		X			X	
MW-95-202110	GW	G	10-21-21	1435				11	X	X	X	X	X		X			X	

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-21-21 1800		10/22/21 0700
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt 2.5, 2.3, 2.2 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.0, 2.2, 0.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 5 of 6

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature): DM

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type**: 3 U U U 2 U 1 D O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride	Sulfate	Nitrate	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
MW-91-202110	GW	G	10-21-21	1525				12	X	X	X	X	X	X	X	X	X	3(VG9H) 3(VG9U) 2(OTHER) 1(AG3S) 1(BP3N) 1(BP3U) 1(AG2A)
TMW-22R-202110	GW	G	10-21-21	1515				12	X	X	X	X	X	X	X	X	X	3(VG9H) 3(VG9U) 2(OTHER) 1(AG3S) 1(BP3N) 1(BP3U)
MW-185-202110	GW	G	10-21-21	1625				12	X	X	X	X	X	X	X	X	X	3(VG9H) 3(VG9U) 2(OTHER) 1(AG3S) 1(BP3N) 1(BP3U) 1(AG2A)

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-256
Cooler Temp Upon Receipt: 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor: -0.3 oC
Cooler Temp Corrected: 2.0, 2.2 oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
DM Ramboll	10-21-21 1800	[signature]	10/22/21 03:00
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 6 of 6

F-ALL-C-010-rev.00, 05Jul2018

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(913)599-5665

November 22, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast

7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383878001	TMW-25-202110	Water	10/20/21 09:15	10/20/21 18:00
60383878002	TMW-21-202110	Water	10/20/21 11:20	10/20/21 18:00
60383878003	MW-61R-202110	Water	10/20/21 12:03	10/20/21 18:00
60383878004	MW-194-202110	Water	10/20/21 13:00	10/20/21 18:00
60383878005	TMW-32-202110	Water	10/20/21 14:58	10/20/21 18:00
60383878006	TMW-34-202110	Water	10/20/21 16:53	10/20/21 18:00
60383878007	TMW-11-202110	Water	10/20/21 09:10	10/20/21 18:00
60383878008	MW-89-202110	Water	10/20/21 13:55	10/20/21 18:00
60383878009	MW-22-202110	Water	10/20/21 09:15	10/20/21 18:00
60383878010	MW-192-202110	Water	10/20/21 08:50	10/20/21 18:00
60383878011	ITMW-7-202110	Water	10/20/21 09:12	10/20/21 18:00
60383878012	MW-206-202110	Water	10/20/21 10:35	10/20/21 18:00
60383878013	ITMW-21-202110	Water	10/20/21 10:38	10/20/21 18:00
60383878014	DUP-04-202110	Water	10/20/21 10:38	10/20/21 18:00
60383878015	MW-176-202110	Water	10/20/21 11:13	10/20/21 18:00
60383878016	TMW-14-202110	Water	10/20/21 12:43	10/20/21 18:00
60383878017	MW-83-202110	Water	10/20/21 13:38	10/20/21 18:00
60383878018	MW-202-202110	Water	10/20/21 13:30	10/20/21 18:00
60383878019	VP-12-202110	Water	10/20/21 15:25	10/20/21 18:00
60383878020	MW-63R-202110	Water	10/20/21 15:00	10/20/21 18:00
60383878021	MW-204-202110	Water	10/20/21 15:52	10/20/21 18:00
60383878022	ITMW-1R-202110	Water	10/20/21 16:27	10/20/21 18:00
60383878023	TMW-23-202110	Water	10/20/21 16:50	10/20/21 18:00
60383878024	TB-04-202110	Water	10/20/21 00:00	10/20/21 18:00
60383878026	DUP-09-202110	Water	10/20/21 17:01	10/20/21 18:00
60383878027	TB-05-202110	Water	10/20/21 00:00	10/20/21 18:00
60383878028	EB-03-202110	Water	10/20/21 17:30	10/20/21 18:00
60383878029	MW-175-202110	Water	10/20/21 09:18	10/20/21 18:00

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383878001	**TMW-25-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878002	**TMW-21-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878003	**MW-61R-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878004	**MW-194-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878005	**TMW-32-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878006	**TMW-34-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878007	**TMW-11-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878008	**MW-89-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	1	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383878009	**MW-22-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878010	**MW-192-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878011	**ITMW-7-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878012	**MW-206-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878013	**ITMW-21-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878014	**DUP-04-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878015	**MW-176-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878016	**TMW-14-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878017	**MW-83-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878018	**MW-202-202110**	EPA 5030B/8260	PGH	38	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383878019	**VP-12-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878020	**MW-63R-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878021	**MW-204-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878022	**ITMW-1R-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878023	**TMW-23-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878024	**TB-04-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878026	**DUP-09-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878027	**TB-05-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878028	**EB-03-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878029	**MW-175-202110**	EPA 5030B/8260	PGH	38	PASI-K

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 22, 2021

General Information:
28 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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: 752077

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

QC Batch: 752343

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737020,60383737023

R1: RPD value was outside control limits.

- MSD (Lab ID: 3011629)
  - 1,1-Dichloroethane
- MSD (Lab ID: 3011631)
  - 1,1-Dichloroethane

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: November 22, 2021

General Information:
2 samples were analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 751612

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383950001

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

- MS (Lab ID: 3009541)
  - Sulfide, Total
- MSD (Lab ID: 3009542)
  - Sulfide, Total

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

QC Batch: 751896

B: Analyte was detected in the associated method blank.
- BLANK for HBN 751896 [WETA/826 (Lab ID: 3010348)
  - 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: 752833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60384397008,60384476001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3013296)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3013297)
  - Chloride
  - Sulfate

R1: RPD value was outside control limits.
- MSD (Lab ID: 3013297)
  - Chloride
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: November 22, 2021

General Information:
7 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737047

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

- MS (Lab ID: 3017245)
  - Dissolved Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: November 22, 2021

General Information:
7 samples were analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-25-202110 **Lab ID: 60383878001** Collected: 10/20/21 09:15 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**6700**	ug/L	5.0	2.0	1		11/03/21 13:04	74-82-8	
Ethane	**1.6**	ug/L	1.0	0.17	1		11/03/21 13:04	74-84-0	
Ethene	**0.55J**	ug/L	1.0	0.24	1		11/03/21 13:04	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**20500**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:19	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 16:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 16:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 16:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 16:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 16:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 16:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 16:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 16:36	56-23-5	
Chlorobenzene	**2.7**	ug/L	1.0	0.089	1		10/26/21 16:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 16:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 16:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 16:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 16:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 16:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 16:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 16:36	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.13	1		10/26/21 16:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 16:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 16:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 16:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 16:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 16:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 16:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 16:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 16:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 16:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 16:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 16:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 16:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 16:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 16:36	79-00-5	
Trichloroethene	**6.8**	ug/L	1.0	0.21	1		10/26/21 16:36	79-01-6	
Vinyl chloride	**0.45J**	ug/L	1.0	0.17	1		10/26/21 16:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 16:36	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-25-202110 **Lab ID: 60383878001** Collected: 10/20/21 09:15 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 16:36	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 16:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 16:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 16:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**98.3**	mg/L	20.0	7.8	20		10/26/21 13:34	16887-00-6	
Sulfate	**16.1**	mg/L	2.0	0.84	2		10/26/21 23:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.45**	mg/L	0.10	0.066	1		10/22/21 08:39		
Nitrogen, Nitrate	**0.45**	mg/L	0.10	0.079	1		10/22/21 08:39	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:39	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**6.2**	mg/L	2.0	0.59	2		10/29/21 18:59	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**3.8**	mg/L	1.0	0.30	1		10/29/21 13:13		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**4.6J**	mg/L	5.0	0.53	10		11/16/21 05:49	50-21-5	
Acetic Acid	**4.0J**	mg/L	5.0	1.2	10		11/16/21 05:49	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 05:49	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 05:49	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 05:49	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 05:49	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 05:49	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 05:49	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 05:49	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 05:49	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-21-202110 **Lab ID: 60383878002** Collected: 10/20/21 11:20 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4400**	ug/L	5.0	2.0	1		11/03/21 13:16	74-82-8	
Ethane	**0.43J**	ug/L	1.0	0.17	1		11/03/21 13:16	74-84-0	
Ethene	**1.5**	ug/L	1.0	0.24	1		11/03/21 13:16	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**11400**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:26	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 16:52	67-64-1	
Benzene	**0.19J**	ug/L	1.0	0.14	1		10/26/21 16:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 16:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 16:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 16:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 16:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 16:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 16:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 16:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 16:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 16:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 16:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 16:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 16:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 16:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 16:52	75-35-4	
cis-1,2-Dichloroethene	**2.1**	ug/L	1.0	0.13	1		10/26/21 16:52	156-59-2	
trans-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.10	1		10/26/21 16:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 16:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 16:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 16:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 16:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 16:52	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 16:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 16:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 16:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 16:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 16:52	127-18-4	
Toluene	**1.7**	ug/L	1.0	0.25	1		10/26/21 16:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 16:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 16:52	79-00-5	
Trichloroethene	**5.2**	ug/L	1.0	0.21	1		10/26/21 16:52	79-01-6	
Vinyl chloride	**1.7**	ug/L	1.0	0.17	1		10/26/21 16:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 16:52	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-21-202110 **Lab ID: 60383878002** Collected: 10/20/21 11:20 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 16:52	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 16:52	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 16:52	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 16:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**187**	mg/L	20.0	7.8	20		10/26/21 13:48	16887-00-6	
Sulfate	**10.3**	mg/L	2.0	0.84	2		10/26/21 23:14	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.082J**	mg/L	0.10	0.066	1		10/22/21 08:41		
Nitrogen, Nitrate	**0.082J**	mg/L	0.10	0.079	1		10/22/21 08:41	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:41	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.67J**	mg/L	1.0	0.30	1		10/29/21 19:13	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.72J**	mg/L	1.0	0.30	1		10/29/21 13:26		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.2J**	mg/L	5.0	0.53	10		11/16/21 06:24	50-21-5	
Acetic Acid	**2.8J**	mg/L	5.0	1.2	10		11/16/21 06:24	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 06:24	79-09-4	
Formic acid	**54**	mg/L	5.0	0.55	10		11/16/21 06:24	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:24	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 06:24	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 06:24	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:24	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:24	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:24	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-61R-202110 **Lab ID: 60383878003** Collected: 10/20/21 12:03 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2400**	ug/L	5.0	2.0	1		11/03/21 13:27	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/03/21 13:27	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 13:27	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**13900**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:32	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:07	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 17:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 17:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 17:07	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	1.0	0.13	1		10/26/21 17:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 17:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:07	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:07	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:07	79-00-5	
Trichloroethene	**6.9**	ug/L	1.0	0.21	1		10/26/21 17:07	79-01-6	
Vinyl chloride	**0.53J**	ug/L	1.0	0.17	1		10/26/21 17:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:07	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-61R-202110 **Lab ID: 60383878003** Collected: 10/20/21 12:03 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 17:07	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 17:07	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 17:07	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**121**	mg/L	20.0	7.8	20		10/26/21 14:01	16887-00-6	
Sulfate	**5.3**	mg/L	1.0	0.42	1		10/26/21 23:28	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/22/21 08:42		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/22/21 08:42	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:42	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.69J**	mg/L	1.0	0.30	1		10/29/21 19:26	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.86J**	mg/L	1.0	0.30	1		10/29/21 13:40		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.6J**	mg/L	5.0	0.53	10		11/16/21 06:58	50-21-5	
Acetic Acid	**2.6J**	mg/L	5.0	1.2	10		11/16/21 06:58	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 06:58	79-09-4	
Formic acid	**54**	mg/L	5.0	0.55	10		11/16/21 06:58	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:58	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 06:58	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 06:58	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:58	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:58	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:58	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-194-202110 **Lab ID: 60383878004** Collected: 10/20/21 13:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2700**	ug/L	5.0	2.0	1		11/03/21 13:38	74-82-8	
Ethane	**0.31J**	ug/L	1.0	0.17	1		11/03/21 13:38	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 13:38	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**8860**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:34	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 17:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 17:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 17:23	75-35-4	
cis-1,2-Dichloroethene	**1.8**	ug/L	1.0	0.13	1		10/26/21 17:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 17:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:23	79-00-5	
Trichloroethene	**4.1**	ug/L	1.0	0.21	1		10/26/21 17:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 17:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:23	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-194-202110 **Lab ID: 60383878004** Collected: 10/20/21 13:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 17:23	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 17:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 17:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**142**	mg/L	20.0	7.8	20		10/29/21 15:05	16887-00-6	
Sulfate	**9.1**	mg/L	1.0	0.42	1		11/01/21 17:12	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.084J**	mg/L	0.10	0.066	1		10/22/21 08:49		
Nitrogen, Nitrate	**0.084J**	mg/L	0.10	0.079	1		10/22/21 08:49	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:49	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.46J**	mg/L	1.0	0.30	1		10/29/21 20:06	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.74J**	mg/L	1.0	0.30	1		11/03/21 13:32		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.1J**	mg/L	5.0	0.53	10		11/16/21 07:33	50-21-5	
Acetic Acid	**2.8J**	mg/L	5.0	1.2	10		11/16/21 07:33	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 07:33	79-09-4	
Formic acid	**51**	mg/L	5.0	0.55	10		11/16/21 07:33	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 07:33	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 07:33	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 07:33	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 07:33	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 07:33	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 07:33	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-32-202110 **Lab ID: 60383878005** Collected: 10/20/21 14:58 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**5300**	ug/L	5.0	2.0	1		11/03/21 13:50	74-82-8	
Ethane	**0.41J**	ug/L	1.0	0.17	1		11/03/21 13:50	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 13:50	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**7110**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:37	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:39	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:39	56-23-5	
Chlorobenzene	**1.7**	ug/L	1.0	0.089	1		10/26/21 17:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 17:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 17:39	75-35-4	
cis-1,2-Dichloroethene	**5.2**	ug/L	1.0	0.13	1		10/26/21 17:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 17:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:39	79-00-5	
Trichloroethene	**24.9**	ug/L	1.0	0.21	1		10/26/21 17:39	79-01-6	
Vinyl chloride	**0.36J**	ug/L	1.0	0.17	1		10/26/21 17:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:39	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-32-202110 **Lab ID: 60383878005** Collected: 10/20/21 14:58 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		10/26/21 17:39	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 17:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 17:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**89.4**	mg/L	20.0	7.8	20		10/26/21 14:55	16887-00-6	B
Sulfate	**45.4**	mg/L	20.0	8.4	20		10/26/21 14:55	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/22/21 08:51		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/22/21 08:51	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:51	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.30	1		10/29/21 20:19	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**1.1**	mg/L	1.0	0.30	1		11/03/21 14:45		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.7J**	mg/L	5.0	0.53	10		11/16/21 08:07	50-21-5	
Acetic Acid	**2.9J**	mg/L	5.0	1.2	10		11/16/21 08:07	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 08:07	79-09-4	
Formic acid	**57**	mg/L	5.0	0.55	10		11/16/21 08:07	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:07	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 08:07	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 08:07	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:07	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:07	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:07	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-34-202110 **Lab ID: 60383878006** Collected: 10/20/21 16:53 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**1600**	ug/L	5.0	2.0	1		11/03/21 14:01	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/03/21 14:01	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 14:01	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**1550**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:39	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 17:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:55	124-48-1	
1,1-Dichloroethane	**0.55J**	ug/L	1.0	0.12	1		10/26/21 17:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:55	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.22	1		10/26/21 17:55	75-35-4	
cis-1,2-Dichloroethene	**65.5**	ug/L	1.0	0.13	1		10/26/21 17:55	156-59-2	
trans-1,2-Dichloroethene	**0.14J**	ug/L	1.0	0.10	1		10/26/21 17:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:55	79-00-5	
Trichloroethene	**126**	ug/L	1.0	0.21	1		10/26/21 17:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 17:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:55	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-34-202110 **Lab ID: 60383878006** Collected: 10/20/21 16:53 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 17:55	460-00-4	
Toluene-d8 (S)	94	%	80-120		1		10/26/21 17:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 17:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**38.4**	mg/L	5.0	1.9	5		10/26/21 23:54	16887-00-6	
Sulfate	**8.2**	mg/L	2.0	0.84	2		10/26/21 23:41	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.6**	mg/L	0.10	0.066	1		10/22/21 08:52		
Nitrogen, Nitrate	**1.6**	mg/L	0.10	0.079	1		10/22/21 08:52	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:52	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.61J**	mg/L	1.0	0.30	1		10/29/21 20:32	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.46J**	mg/L	1.0	0.30	1		11/03/21 14:58		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.7J**	mg/L	5.0	0.53	10		11/16/21 08:42	50-21-5	
Acetic Acid	**3.1J**	mg/L	5.0	1.2	10		11/16/21 08:42	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 08:42	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 08:42	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:42	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 08:42	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 08:42	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:42	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:42	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:42	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-11-202110 **Lab ID: 60383878007** Collected: 10/20/21 09:10 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4400**	ug/L	5.0	2.0	1		11/03/21 14:12	74-82-8	
Ethane	**0.60J**	ug/L	1.0	0.17	1		11/03/21 14:12	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 14:12	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/03/21 14:12	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**5580**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:41	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:11	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:11	75-35-4	
cis-1,2-Dichloroethene	**0.22J**	ug/L	1.0	0.13	1		10/26/21 18:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:11	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:11	127-18-4	
Toluene	**0.58J**	ug/L	1.0	0.25	1		10/26/21 18:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 18:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:11	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-11-202110 **Lab ID: 60383878007** Collected: 10/20/21 09:10 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 18:11	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 18:11	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 18:11	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:11		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	**0.030J**	mg/L	0.050	0.026	1		10/25/21 13:35	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**87.4**	mg/L	20.0	7.8	20		10/26/21 15:21	16887-00-6	B
Sulfate	**1.4**	mg/L	1.0	0.42	1		10/27/21 00:08	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/22/21 08:45		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/22/21 08:45	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:45	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**4.0**	mg/L	2.0	0.59	2		10/29/21 20:46	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**4.0**	mg/L	1.0	0.30	1		11/03/21 15:11		
Low Level Volatile Fatty Acids	Analytical Method: AM23G Pace Analytical Gulf Coast								
Lactic Acid	**6.8**	mg/L	5.0	0.53	10		11/16/21 09:17	50-21-5	
Acetic Acid	**3.0J**	mg/L	5.0	1.2	10		11/16/21 09:17	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 09:17	79-09-4	
Formic acid	**53**	mg/L	5.0	0.55	10		11/16/21 09:17	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 09:17	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 09:17	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 09:17	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 09:17	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 09:17	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 09:17	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-89-202110 **Lab ID: 60383878008** Collected: 10/20/21 13:55 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**56**	ug/L	5.0	2.0	1		11/03/21 14:24	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/03/21 14:24	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 14:24	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/03/21 14:24	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**55.1**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:43	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:27	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:27	75-35-4	
cis-1,2-Dichloroethene	**0.30J**	ug/L	1.0	0.13	1		10/26/21 18:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:27	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 18:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:27	79-00-5	
Trichloroethene	**3.9**	ug/L	1.0	0.21	1		10/26/21 18:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:27	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-89-202110 **Lab ID: 60383878008** Collected: 10/20/21 13:55 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 18:27	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 18:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 18:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:27		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 13:35	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Sulfate	**2.4**	mg/L	1.0	0.42	1		10/27/21 00:21	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**53.8**	mg/L	2.0	1.3	20		10/22/21 08:56		
Nitrogen, Nitrate	**53.8**	mg/L	2.0	1.6	20		10/22/21 08:56	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	2.0	1.6	20		10/22/21 08:56	14797-65-0	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**1.0**	mg/L	1.0	0.30	1		10/29/21 20:59	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-22-202110 **Lab ID: 60383878009** Collected: 10/20/21 09:15 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:43	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 18:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:43	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:43	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 18:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 18:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 18:43	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 18:43	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 18:43	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:43		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-192-202110 **Lab ID: 60383878010** Collected: 10/20/21 08:50 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 18:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 18:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 18:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 18:59	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 18:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 18:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: ITMW-7-202110 **Lab ID: 60383878011** Collected: 10/20/21 09:12 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:15	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.14	1		10/26/21 19:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:15	56-23-5	
Chlorobenzene	**5.5**	ug/L	1.0	0.089	1		10/26/21 19:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:15	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:15	75-35-4	
cis-1,2-Dichloroethene	**7.3**	ug/L	1.0	0.13	1		10/26/21 19:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:15	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:15	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:15	79-00-5	
Trichloroethene	**17.7**	ug/L	1.0	0.21	1		10/26/21 19:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 19:15	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 19:15	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 19:15	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:15		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-206-202110 **Lab ID: 60383878012** Collected: 10/20/21 10:35 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:31	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:31	75-35-4	
cis-1,2-Dichloroethene	**0.41J**	ug/L	1.0	0.13	1		10/26/21 19:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:31	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:31	79-00-5	
Trichloroethene	**1.2**	ug/L	1.0	0.21	1		10/26/21 19:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/26/21 19:31	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 19:31	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	96	%	80-120		1		10/26/21 19:31	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:31		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: ITMW-21-202110 **Lab ID: 60383878013** Collected: 10/20/21 10:38 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:47	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:47	75-35-4	
cis-1,2-Dichloroethene	**0.26J**	ug/L	1.0	0.13	1		10/26/21 19:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:47	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:47	79-00-5	
Trichloroethene	**4.9**	ug/L	1.0	0.21	1		10/26/21 19:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 19:47	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 19:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 19:47	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:47		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: DUP-04-202110 **Lab ID: 60383878014** Collected: 10/20/21 10:38 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:03	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:03	75-35-4	
cis-1,2-Dichloroethene	**0.22J**	ug/L	1.0	0.13	1		10/26/21 20:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:03	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:03	79-00-5	
Trichloroethene	**5.8**	ug/L	1.0	0.21	1		10/26/21 20:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 20:03	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 20:03	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 20:03	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:03		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-176-202110 **Lab ID: 60383878015** Collected: 10/20/21 11:13 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:19	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.22	1		10/26/21 20:19	75-35-4	
cis-1,2-Dichloroethene	**17.0**	ug/L	1.0	0.13	1		10/26/21 20:19	156-59-2	
trans-1,2-Dichloroethene	**0.38J**	ug/L	1.0	0.10	1		10/26/21 20:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:19	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	79-00-5	
Trichloroethene	**310**	ug/L	10.0	2.1	10		10/26/21 20:35	79-01-6	
Vinyl chloride	**19.3**	ug/L	1.0	0.17	1		10/26/21 20:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 20:19	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 20:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 20:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-14-202110 **Lab ID: 60383878016** Collected: 10/20/21 12:43 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:51	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:51	75-35-4	
cis-1,2-Dichloroethene	**0.64J**	ug/L	1.0	0.13	1		10/26/21 20:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:51	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:51	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:51	79-00-5	
Trichloroethene	**0.55J**	ug/L	1.0	0.21	1		10/26/21 20:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 20:51	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 20:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 20:51	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:51		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-83-202110 **Lab ID: 60383878017** Collected: 10/20/21 13:38 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:07	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:07	75-27-4	
Bromoform	**2.6**	ug/L	1.0	0.68	1		10/26/21 21:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:07	74-87-3	
Dibromochloromethane	**0.35J**	ug/L	1.0	0.30	1		10/26/21 21:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:07	75-35-4	
cis-1,2-Dichloroethene	**0.52J**	ug/L	1.0	0.13	1		10/26/21 21:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:07	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:07	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:07	79-00-5	
Trichloroethene	**27.8**	ug/L	1.0	0.21	1		10/26/21 21:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 21:07	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 21:07	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 21:07	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:07		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-202-202110 **Lab ID: 60383878018** Collected: 10/20/21 13:30 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 16:02	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 16:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 16:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 16:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 16:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 16:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 16:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 16:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 16:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 16:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 16:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 16:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 16:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 16:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 16:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 16:02	75-35-4	
cis-1,2-Dichloroethene	**6.1**	ug/L	1.0	0.13	1		10/27/21 16:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 16:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 16:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 16:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 16:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 16:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 16:02	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 16:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 16:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 16:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 16:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 16:02	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 16:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 16:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 16:02	79-00-5	
Trichloroethene	**67.3**	ug/L	1.0	0.21	1		10/27/21 16:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 16:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 16:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/21 16:02	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 16:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 16:02	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 16:02		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: VP-12-202110 **Lab ID: 60383878019** Collected: 10/20/21 15:25 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:23	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.21	1		10/26/21 21:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 21:23	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 21:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 21:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-63R-202110 **Lab ID: 60383878020** Collected: 10/20/21 15:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:39	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:39	75-35-4	
cis-1,2-Dichloroethene	**0.81J**	ug/L	1.0	0.13	1		10/26/21 21:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:39	79-00-5	
Trichloroethene	**3.9**	ug/L	1.0	0.21	1		10/26/21 21:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 21:39	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 21:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 21:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-204-202110 **Lab ID: 60383878021** Collected: 10/20/21 15:52 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:55	56-23-5	
Chlorobenzene	**0.77J**	ug/L	1.0	0.089	1		10/26/21 21:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:55	75-35-4	
cis-1,2-Dichloroethene	**3.2**	ug/L	1.0	0.13	1		10/26/21 21:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:55	79-00-5	
Trichloroethene	**49.6**	ug/L	1.0	0.21	1		10/26/21 21:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 21:55	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 21:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 21:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: ITMW-1R-202110 **Lab ID: 60383878022** Collected: 10/20/21 16:27 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 16:18	67-64-1	
Benzene	**0.23J**	ug/L	1.0	0.14	1		10/27/21 16:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 16:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 16:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 16:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 16:18	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 16:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 16:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 16:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 16:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 16:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 16:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 16:18	124-48-1	
1,1-Dichloroethane	**10.5**	ug/L	1.0	0.12	1		10/27/21 16:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 16:18	107-06-2	
1,1-Dichloroethene	**0.48J**	ug/L	1.0	0.22	1		10/27/21 16:18	75-35-4	
cis-1,2-Dichloroethene	**51.1**	ug/L	1.0	0.13	1		10/27/21 16:18	156-59-2	
trans-1,2-Dichloroethene	**0.31J**	ug/L	1.0	0.10	1		10/27/21 16:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 16:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 16:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 16:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 16:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 16:18	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 16:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 16:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 16:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 16:18	79-34-5	
Tetrachloroethene	**0.39J**	ug/L	1.0	0.33	1		10/27/21 16:18	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 16:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 16:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 16:18	79-00-5	
Trichloroethene	**31.1**	ug/L	1.0	0.21	1		10/27/21 16:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 16:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 16:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 16:18	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/27/21 16:18	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 16:18	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 16:18		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-23-202110 **Lab ID: 60383878023** Collected: 10/20/21 16:50 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 16:34	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 16:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 16:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 16:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 16:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 16:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 16:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 16:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 16:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 16:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 16:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 16:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 16:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 16:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 16:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 16:34	75-35-4	
cis-1,2-Dichloroethene	**2.9**	ug/L	1.0	0.13	1		10/27/21 16:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 16:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 16:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 16:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 16:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 16:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 16:34	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 16:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 16:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 16:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 16:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 16:34	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 16:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 16:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 16:34	79-00-5	
Trichloroethene	**186**	ug/L	1.0	0.21	1		10/27/21 16:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 16:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 16:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/27/21 16:34	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 16:34	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/27/21 16:34	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 16:34		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TB-04-202110 **Lab ID: 60383878024** Collected: 10/20/21 00:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 17:06	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 17:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 17:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 17:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 17:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:06	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:06	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 17:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 17:06	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 17:06	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/27/21 17:06	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:06		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: DUP-09-202110 **Lab ID: 60383878026** Collected: 10/20/21 17:01 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**6.6J**	ug/L	10.0	2.5	1		10/27/21 17:22	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:22	75-27-4	
Bromoform	**6.7**	ug/L	1.0	0.68	1		10/27/21 17:22	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:22	67-66-3	
Chloromethane	**0.34J**	ug/L	1.0	0.28	1		10/27/21 17:22	74-87-3	
Dibromochloromethane	**0.35J**	ug/L	1.0	0.30	1		10/27/21 17:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:22	75-35-4	
cis-1,2-Dichloroethene	**0.45J**	ug/L	1.0	0.13	1		10/27/21 17:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:22	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:22	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:22	79-00-5	
Trichloroethene	**15.1**	ug/L	1.0	0.21	1		10/27/21 17:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/27/21 17:22	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 17:22	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/27/21 17:22	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:22		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TB-05-202110 **Lab ID: 60383878027** Collected: 10/20/21 00:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 17:38	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 17:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:38	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 17:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 17:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 17:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:38	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:38	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 17:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 17:38	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/27/21 17:38	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/27/21 17:38	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:38		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: EB-03-202110 **Lab ID: 60383878028** Collected: 10/20/21 17:30 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 17:54	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 17:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 17:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 17:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:54	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:54	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 17:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/27/21 17:54	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 17:54	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	106	%	80-120		1		10/27/21 17:54	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:54		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-175-202110 **Lab ID: 60383878029** Collected: 10/20/21 09:18 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 18:10	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 18:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 18:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 18:10	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 18:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 18:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 18:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 18:10	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	1.0	0.13	1		10/27/21 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 18:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 18:10	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 18:10	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 18:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 18:10	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 18:10	79-00-5	
Trichloroethene	**91.1**	ug/L	1.0	0.21	1		10/27/21 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 18:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 18:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/27/21 18:10	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 18:10	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	97	%	80-120		1		10/27/21 18:10	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 18:10		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 725586
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 2265729
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/03/21 10:49	
Ethane	ug/L	ND	1.0	0.17	11/03/21 10:49	
Ethene	ug/L	ND	1.0	0.24	11/03/21 10:49	
Acetylene	ug/L	ND	0.50	0.13	11/03/21 10:49	

LABORATORY CONTROL SAMPLE & LCSD: 2265730 2265731

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	420	410	110	106	70-130	4	20	
Ethane	ug/L	97	110	110	115	110	70-130	5	20	
Ethene	ug/L	120	130	130	111	108	70-130	3	20	
Acetylene	ug/L	30	32	32	106	105	70-130	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 753530
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3016171
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/04/21 14:15	

LABORATORY CONTROL SAMPLE: 3016172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9270	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3016173 3016174

Parameter	Units	60383878001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	20500	10000	10000	30000	30400	96	99	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752077
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008, 60383878009, 60383878010, 60383878011, 60383878012, 60383878013, 60383878014, 60383878015, 60383878016, 60383878017, 60383878019, 60383878020, 60383878021

METHOD BLANK: 3010859
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008, 60383878009, 60383878010, 60383878011, 60383878012, 60383878013, 60383878014, 60383878015, 60383878016, 60383878017, 60383878019, 60383878020, 60383878021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/26/21 16:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/26/21 16:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/26/21 16:20	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/26/21 16:20	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/26/21 16:20	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/26/21 16:20	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/26/21 16:20	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/26/21 16:20	
2-Hexanone	ug/L	ND	10.0	1.1	10/26/21 16:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/26/21 16:20	
Acetone	ug/L	ND	10.0	2.5	10/26/21 16:20	
Benzene	ug/L	ND	1.0	0.14	10/26/21 16:20	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/26/21 16:20	
Bromoform	ug/L	ND	1.0	0.68	10/26/21 16:20	
Bromomethane	ug/L	ND	5.0	0.46	10/26/21 16:20	
Carbon disulfide	ug/L	ND	5.0	0.98	10/26/21 16:20	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/26/21 16:20	
Chlorobenzene	ug/L	ND	1.0	0.089	10/26/21 16:20	
Chloroethane	ug/L	ND	1.0	0.37	10/26/21 16:20	
Chloroform	ug/L	ND	1.0	0.22	10/26/21 16:20	
Chloromethane	ug/L	ND	1.0	0.28	10/26/21 16:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/26/21 16:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/26/21 16:20	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/26/21 16:20	
Ethylbenzene	ug/L	ND	1.0	0.12	10/26/21 16:20	
Methylene Chloride	ug/L	ND	1.0	0.39	10/26/21 16:20	
Styrene	ug/L	ND	1.0	0.12	10/26/21 16:20	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/26/21 16:20	
Toluene	ug/L	ND	1.0	0.25	10/26/21 16:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/26/21 16:20	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/26/21 16:20	
Trichloroethene	ug/L	ND	1.0	0.21	10/26/21 16:20	
Vinyl chloride	ug/L	ND	1.0	0.17	10/26/21 16:20	
Xylene (Total)	ug/L	ND	3.0	0.28	10/26/21 16:20	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/26/21 16:20	
4-Bromofluorobenzene (S)	%	105	80-120		10/26/21 16:20	
Toluene-d8 (S)	%	99	80-120		10/26/21 16:20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

LABORATORY CONTROL SAMPLE: 3010860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	21.5	107	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	80-120	
1,1-Dichloroethane	ug/L	20	19.0	95	75-125	
1,1-Dichloroethene	ug/L	20	19.8	99	80-120	
1,2-Dichloroethane	ug/L	20	19.9	99	75-120	
1,2-Dichloropropane	ug/L	20	20.0	100	80-125	
2-Butanone (MEK)	ug/L	100	118	118	40-150	
2-Hexanone	ug/L	100	120	120	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	65-140	
Acetone	ug/L	100	129	129	20-175	
Benzene	ug/L	20	20.5	103	80-120	
Bromodichloromethane	ug/L	20	19.4	97	80-125	
Bromoform	ug/L	20	19.4	97	60-135	
Bromomethane	ug/L	20	18.9	94	10-165	
Carbon disulfide	ug/L	20	19.7	98	75-135	
Carbon tetrachloride	ug/L	20	19.2	96	80-125	
Chlorobenzene	ug/L	20	19.6	98	80-120	
Chloroethane	ug/L	20	18.9	94	70-130	
Chloroform	ug/L	20	18.9	95	80-120	
Chloromethane	ug/L	20	21.3	107	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.1	96	80-120	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	80-125	
Dibromochloromethane	ug/L	20	19.5	97	70-120	
Ethylbenzene	ug/L	20	19.9	100	80-120	
Methylene Chloride	ug/L	20	20.0	100	75-120	
Styrene	ug/L	20	22.1	111	80-120	
Tetrachloroethene	ug/L	20	18.8	94	80-120	
Toluene	ug/L	20	19.3	97	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.7	99	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	18.5	92	65-130	
Xylene (Total)	ug/L	60	60.6	101	80-120	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			96	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752343
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878018, 60383878022, 60383878023, 60383878024, 60383878026, 60383878027, 60383878028, 60383878029

METHOD BLANK: 3011626
Matrix: Water
Associated Lab Samples: 60383878018, 60383878022, 60383878023, 60383878024, 60383878026, 60383878027, 60383878028, 60383878029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/27/21 12:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/27/21 12:03	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/27/21 12:03	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/27/21 12:03	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/27/21 12:03	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/27/21 12:03	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/27/21 12:03	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/27/21 12:03	
2-Hexanone	ug/L	ND	10.0	1.1	10/27/21 12:03	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/27/21 12:03	
Acetone	ug/L	ND	10.0	2.5	10/27/21 12:03	
Benzene	ug/L	ND	1.0	0.14	10/27/21 12:03	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/27/21 12:03	
Bromoform	ug/L	ND	1.0	0.68	10/27/21 12:03	
Bromomethane	ug/L	ND	5.0	0.46	10/27/21 12:03	
Carbon disulfide	ug/L	ND	5.0	0.98	10/27/21 12:03	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Chlorobenzene	ug/L	ND	1.0	0.089	10/27/21 12:03	
Chloroethane	ug/L	ND	1.0	0.37	10/27/21 12:03	
Chloroform	ug/L	ND	1.0	0.22	10/27/21 12:03	
Chloromethane	ug/L	ND	1.0	0.28	10/27/21 12:03	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/27/21 12:03	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/27/21 12:03	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/27/21 12:03	
Ethylbenzene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Methylene Chloride	ug/L	ND	1.0	0.39	10/27/21 12:03	
Styrene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/27/21 12:03	
Toluene	ug/L	ND	1.0	0.25	10/27/21 12:03	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/27/21 12:03	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/27/21 12:03	
Trichloroethene	ug/L	ND	1.0	0.21	10/27/21 12:03	
Vinyl chloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Xylene (Total)	ug/L	ND	3.0	0.28	10/27/21 12:03	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/27/21 12:03	
4-Bromofluorobenzene (S)	%	104	80-120		10/27/21 12:03	
Toluene-d8 (S)	%	98	80-120		10/27/21 12:03	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

LABORATORY CONTROL SAMPLE: 3011627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.9	99	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.4	92	75-125	
1,1,2-Trichloroethane	ug/L	20	19.5	97	80-120	
1,1-Dichloroethane	ug/L	20	16.7	84	75-125	
1,1-Dichloroethene	ug/L	20	20.3	102	80-120	
1,2-Dichloroethane	ug/L	20	19.1	96	75-120	
1,2-Dichloropropane	ug/L	20	19.6	98	80-125	
2-Butanone (MEK)	ug/L	100	100	100	40-150	
2-Hexanone	ug/L	100	102	102	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.2	97	65-140	
Acetone	ug/L	100	96.2	96	20-175	
Benzene	ug/L	20	20.3	101	80-120	
Bromodichloromethane	ug/L	20	19.3	96	80-125	
Bromoform	ug/L	20	18.2	91	60-135	
Bromomethane	ug/L	20	17.8	89	10-165	
Carbon disulfide	ug/L	20	19.6	98	75-135	
Carbon tetrachloride	ug/L	20	18.9	95	80-125	
Chlorobenzene	ug/L	20	19.7	99	80-120	
Chloroethane	ug/L	20	19.4	97	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	19.5	98	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.6	93	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-125	
Dibromochloromethane	ug/L	20	19.3	96	70-120	
Ethylbenzene	ug/L	20	20.0	100	80-120	
Methylene Chloride	ug/L	20	19.5	97	75-120	
Styrene	ug/L	20	22.4	112	80-120	
Tetrachloroethene	ug/L	20	20.2	101	80-120	
Toluene	ug/L	20	20.0	100	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.0	85	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	18.8	94	65-130	
Xylene (Total)	ug/L	60	61.5	102	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	18.7	19.1	93	96	75-130	2	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.9	17.5	85	88	65-130	3	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.2	18.9	91	95	70-120	4	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	15.3	18.1	77	91	61-130	17	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	18.5	19.9	92	100	60-135	8	25	
1,2-Dichloroethane	ug/L	ND	20	20	16.9	17.8	84	89	30-160	5	25	
1,2-Dichloropropane	ug/L	ND	20	20	17.9	18.0	89	90	65-130	1	20	
2-Butanone (MEK)	ug/L	ND	100	100	78.9	84.3	79	84	30-130	7	25	
2-Hexanone	ug/L	ND	100	100	85.5	89.6	85	90	40-135	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	83.5	85.2	83	85	60-135	2	20	
Acetone	ug/L	ND	100	100	73.0	75.8	73	76	10-150	4	25	
Benzene	ug/L	ND	20	20	18.8	19.4	94	96	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	16.8	17.2	84	86	70-130	2	15	
Bromoform	ug/L	ND	20	20	15.7	16.3	79	82	50-125	4	20	
Bromomethane	ug/L	ND	20	20	15.1	15.5	76	78	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.1	18.3	90	92	55-140	1	25	
Carbon tetrachloride	ug/L	ND	20	20	18.1	18.4	90	92	70-140	2	20	
Chlorobenzene	ug/L	5.5	20	20	23.9	24.5	92	95	65-130	2	20	
Chloroethane	ug/L	ND	20	20	17.5	18.4	87	92	20-180	5	20	
Chloroform	ug/L	ND	20	20	17.4	17.6	87	88	70-125	1	20	
Chloromethane	ug/L	ND	20	20	17.0	17.2	85	86	20-160	1	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.0	17.9	85	89	55-130	5	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.0	17.8	85	89	60-125	5	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.5	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	18.4	19.0	92	95	20-160	3	25	
Methylene Chloride	ug/L	ND	20	20	16.7	17.2	84	86	60-125	3	25	
Styrene	ug/L	ND	20	20	11.1	10.9	55	55	40-145	1	30	
Tetrachloroethene	ug/L	ND	20	20	19.8	19.7	99	98	55-135	1	25	
Toluene	ug/L	ND	20	20	18.4	19.1	92	95	25-150	4	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.8	16.2	79	81	60-130	2	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	18.3	86	91	60-120	6	15	
Trichloroethene	ug/L	ND	20	20	18.1	18.8	90	94	50-145	4	20	
Vinyl chloride	ug/L	ND	20	20	16.7	17.1	83	86	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	95	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						97	97	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						102	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	18.0	19.6	90	98	75-130	9	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.6	17.4	88	87	65-130	1	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.1	18.8	96	94	70-120	2	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	15.2	18.6	76	93	61-130	20	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	19.0	19.7	95	99	60-135	4	25	
1,2-Dichloroethane	ug/L	ND	20	20	17.6	18.3	88	91	30-160	3	25	
1,2-Dichloropropane	ug/L	ND	20	20	18.1	18.4	90	92	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	74.7	87.0	75	87	30-130	15	25	
2-Hexanone	ug/L	ND	100	100	89.1	89.9	89	90	40-135	1	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	89.5	90.1	89	90	60-135	1	20	
Acetone	ug/L	ND	100	100	75.8	74.3	76	74	10-150	2	25	
Benzene	ug/L	ND	20	20	19.3	20.0	97	100	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	17.6	17.5	88	88	70-130	0	15	
Bromoform	ug/L	ND	20	20	16.2	16.3	81	82	50-125	0	20	
Bromomethane	ug/L	ND	20	20	15.7	16.8	79	84	10-155	7	45	
Carbon disulfide	ug/L	ND	20	20	18.5	19.4	92	97	55-140	5	25	
Carbon tetrachloride	ug/L	ND	20	20	18.0	19.2	90	96	70-140	7	20	
Chlorobenzene	ug/L	ND	20	20	18.1	18.9	91	95	65-130	4	20	
Chloroethane	ug/L	ND	20	20	17.4	18.5	87	92	20-180	6	20	
Chloroform	ug/L	ND	20	20	15.9	18.1	80	90	70-125	13	20	
Chloromethane	ug/L	ND	20	20	17.0	17.6	85	88	20-160	4	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	15.5	18.3	78	91	55-130	16	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.9	18.5	90	93	60-125	3	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.6	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	19.3	19.6	96	98	20-160	2	25	
Methylene Chloride	ug/L	ND	20	20	17.8	18.0	89	90	60-125	1	25	
Styrene	ug/L	ND	20	20	20.2	21.3	101	106	40-145	5	30	
Tetrachloroethene	ug/L	ND	20	20	19.0	19.6	95	98	55-135	3	25	
Toluene	ug/L	ND	20	20	18.9	19.4	95	97	25-150	2	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.9	17.0	79	85	60-130	7	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.5	17.9	87	90	60-120	2	15	
Trichloroethene	ug/L	ND	20	20	19.1	19.0	95	95	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	17.3	17.9	87	89	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	94	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						103	100	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						101	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751612
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878007, 60383878008

METHOD BLANK: 3009539 Matrix: Water
Associated Lab Samples: 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/25/21 13:29	

LABORATORY CONTROL SAMPLE: 3009540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009541 3009542

Parameter	Units	60383950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.14	0.11	24	20	75-125	17	20	H1,M1

SAMPLE DUPLICATE: 3009543

Parameter	Units	60383950001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

SAMPLE DUPLICATE: 3009544

Parameter	Units	60383885002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751896
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3010348
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/26/21 06:47	
Sulfate	mg/L	ND	1.0	0.42	10/26/21 06:47	

LABORATORY CONTROL SAMPLE: 3010349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010350 3010351

Parameter	Units	60383737041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	153	100	100	246	247	93	95	80-120	0	15	
Sulfate	mg/L	1.3	5	5	5.9	5.9	93	94	80-120	0	15	

MATRIX SPIKE SAMPLE: 3010352

Parameter	Units	60383996041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	92.7	100	181	88	80-120	
Sulfate	mg/L	1.9	5	6.4	90	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752833
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878004

METHOD BLANK: 3013294 Matrix: Water
Associated Lab Samples: 60383878004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	10/29/21 09:12	
Sulfate	mg/L	ND	1.0	0.42	10/29/21 09:12	

METHOD BLANK: 3016253 Matrix: Water
Associated Lab Samples: 60383878004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/01/21 10:05	
Sulfate	mg/L	ND	1.0	0.42	11/01/21 10:05	

METHOD BLANK: 3016685 Matrix: Water
Associated Lab Samples: 60383878004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/02/21 08:12	
Sulfate	mg/L	ND	1.0	0.42	11/02/21 08:12	

LABORATORY CONTROL SAMPLE: 3013295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3016254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.3	105	90-110	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

LABORATORY CONTROL SAMPLE: 3016686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013296 3013297

Parameter	Units	60384476001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	74400	100000	100000	195000	229000	121	154	80-120	16	15	M1,R1
Sulfate	mg/L	181000	50000	50000	177000	111000	-9	-141	80-120	46	15	M1,R1

MATRIX SPIKE SAMPLE: 3013298

Parameter	Units	60384397008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	169	100	272	104	80-120	
Sulfate	mg/L	ND	100	103	91	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751260
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003

METHOD BLANK: 3007859 Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/22/21 08:38	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/22/21 08:38	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/22/21 08:38	

LABORATORY CONTROL SAMPLE: 3007860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.90	90	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	102	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	96	90-110	

MATRIX SPIKE SAMPLE: 3007861

Parameter	Units	60383878001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.45	1	1.4	91	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.1	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	0.45	2	2.4	99	90-110	

SAMPLE DUPLICATE: 3007862

Parameter	Units	60383878003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751261
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3007864
Matrix: Water
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/22/21 08:44	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/22/21 08:44	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/22/21 08:44	

LABORATORY CONTROL SAMPLE: 3007865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.88	88	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	96	90-110	

MATRIX SPIKE SAMPLE: 3007866

Parameter	Units	60383878007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.94	94	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.1	106	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.0	100	90-110	

SAMPLE DUPLICATE: 3007867

Parameter	Units	60383878008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	53.8	54.0	0	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	53.8	54.0	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 753113
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3014344
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 16:06	

LABORATORY CONTROL SAMPLE: 3014345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.0	99	80-120	

MATRIX SPIKE SAMPLE: 3014346

Parameter	Units	60383674004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	231	500	785	111	80-120	

SAMPLE DUPLICATE: 3014347

Parameter	Units	60383996043 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	0.46J	0.45J		25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752988
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003

METHOD BLANK: 3013841 Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 09:45	

LABORATORY CONTROL SAMPLE: 3013842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	93	80-120	

MATRIX SPIKE SAMPLE: 3013843

Parameter	Units	60383737041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.6	5	7.4	95	80-120	

SAMPLE DUPLICATE: 3013844

Parameter	Units	60383737044 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.3	8.2	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 753833
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007

METHOD BLANK: 3017243
Matrix: Water
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	11/03/21 11:33	

LABORATORY CONTROL SAMPLE: 3017244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	95	80-120	

MATRIX SPIKE SAMPLE: 3017245

Parameter	Units	60383737047 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	55.6	125	206	121	80-120	M1

SAMPLE DUPLICATE: 3017246

Parameter	Units	60383996041 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.8	9.1	4	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 725360
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007

METHOD BLANK: 2264510
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/16/21 03:31	
Acetic Acid	mg/L	ND	0.50	0.12	11/16/21 03:31	
Propionic Acid	mg/L	ND	0.50	0.053	11/16/21 03:31	
Formic acid	mg/L	ND	0.50	0.055	11/16/21 03:31	
Butyric Acid	mg/L	ND	0.50	0.058	11/16/21 03:31	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/16/21 03:31	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/16/21 03:31	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/16/21 03:31	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/16/21 03:31	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/16/21 03:31	

LABORATORY CONTROL SAMPLE & LCSD: 2264511 2264512

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.3	2.3	113	117	70-130	4	20	
Acetic Acid	mg/L	2	2.1	2.1	105	107	70-130	2	20	
Propionic Acid	mg/L	2	2.2	2.3	112	117	70-130	4	20	
Formic acid	mg/L	2	2.1	2.1	105	105	70-130	0	20	
Butyric Acid	mg/L	2	2.2	2.1	110	107	70-130	3	20	
Pyruvic Acid	mg/L	2	2.0	2.3	100	117	70-130	16	20	
i-Pentanoic Acid	mg/L	2	2.0	2.3	102	114	70-130	12	20	
Pentanoic Acid	mg/L	2	2.1	2.1	105	104	70-130	1	20	
i-Hexanoic Acid	mg/L	2	2.4	2.3	122	117	70-130	4	20	
Hexanoic Acid	mg/L	2	2.2	2.2	111	108	70-130	3	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 752077

[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.

H1 Analysis conducted outside the EPA method holding time.

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383878001	**TMW-25-202110**	AM20GAX	725586		
60383878002	**TMW-21-202110**	AM20GAX	725586		
60383878003	**MW-61R-202110**	AM20GAX	725586		
60383878004	**MW-194-202110**	AM20GAX	725586		
60383878005	**TMW-32-202110**	AM20GAX	725586		
60383878006	**TMW-34-202110**	AM20GAX	725586		
60383878007	**TMW-11-202110**	AM20GAX	725586		
60383878008	**MW-89-202110**	AM20GAX	725586		
60383878001	**TMW-25-202110**	EPA 3010	753530	EPA 6010	753691
60383878002	**TMW-21-202110**	EPA 3010	753530	EPA 6010	753691
60383878003	**MW-61R-202110**	EPA 3010	753530	EPA 6010	753691
60383878004	**MW-194-202110**	EPA 3010	753530	EPA 6010	753691
60383878005	**TMW-32-202110**	EPA 3010	753530	EPA 6010	753691
60383878006	**TMW-34-202110**	EPA 3010	753530	EPA 6010	753691
60383878007	**TMW-11-202110**	EPA 3010	753530	EPA 6010	753691
60383878008	**MW-89-202110**	EPA 3010	753530	EPA 6010	753691
60383878001	**TMW-25-202110**	EPA 5030B/8260	752077		
60383878002	**TMW-21-202110**	EPA 5030B/8260	752077		
60383878003	**MW-61R-202110**	EPA 5030B/8260	752077		
60383878004	**MW-194-202110**	EPA 5030B/8260	752077		
60383878005	**TMW-32-202110**	EPA 5030B/8260	752077		
60383878006	**TMW-34-202110**	EPA 5030B/8260	752077		
60383878007	**TMW-11-202110**	EPA 5030B/8260	752077		
60383878008	**MW-89-202110**	EPA 5030B/8260	752077		
60383878009	**MW-22-202110**	EPA 5030B/8260	752077		
60383878010	**MW-192-202110**	EPA 5030B/8260	752077		
60383878011	**ITMW-7-202110**	EPA 5030B/8260	752077		
60383878012	**MW-206-202110**	EPA 5030B/8260	752077		
60383878013	**ITMW-21-202110**	EPA 5030B/8260	752077		
60383878014	**DUP-04-202110**	EPA 5030B/8260	752077		
60383878015	**MW-176-202110**	EPA 5030B/8260	752077		
60383878016	**TMW-14-202110**	EPA 5030B/8260	752077		
60383878017	**MW-83-202110**	EPA 5030B/8260	752077		
60383878018	**MW-202-202110**	EPA 5030B/8260	752343		
60383878019	**VP-12-202110**	EPA 5030B/8260	752077		
60383878020	**MW-63R-202110**	EPA 5030B/8260	752077		
60383878021	**MW-204-202110**	EPA 5030B/8260	752077		
60383878022	**ITMW-1R-202110**	EPA 5030B/8260	752343		
60383878023	**TMW-23-202110**	EPA 5030B/8260	752343		
60383878024	**TB-04-202110**	EPA 5030B/8260	752343		
60383878026	**DUP-09-202110**	EPA 5030B/8260	752343		
60383878027	**TB-05-202110**	EPA 5030B/8260	752343		
60383878028	**EB-03-202110**	EPA 5030B/8260	752343		
60383878029	**MW-175-202110**	EPA 5030B/8260	752343		
60383878007	**TMW-11-202110**	SM 4500-S-2 D	751612		
60383878008	**MW-89-202110**	SM 4500-S-2 D	751612		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383878001	**TMW-25-202110**	EPA 300.0	751896		
60383878002	**TMW-21-202110**	EPA 300.0	751896		
60383878003	**MW-61R-202110**	EPA 300.0	751896		
60383878004	**MW-194-202110**	EPA 300.0	752833		
60383878005	**TMW-32-202110**	EPA 300.0	751896		
60383878006	**TMW-34-202110**	EPA 300.0	751896		
60383878007	**TMW-11-202110**	EPA 300.0	751896		
60383878008	**MW-89-202110**	EPA 300.0	751896		
60383878001	**TMW-25-202110**	EPA 353.2	751260		
60383878002	**TMW-21-202110**	EPA 353.2	751260		
60383878003	**MW-61R-202110**	EPA 353.2	751260		
60383878004	**MW-194-202110**	EPA 353.2	751261		
60383878005	**TMW-32-202110**	EPA 353.2	751261		
60383878006	**TMW-34-202110**	EPA 353.2	751261		
60383878007	**TMW-11-202110**	EPA 353.2	751261		
60383878008	**MW-89-202110**	EPA 353.2	751261		
60383878001	**TMW-25-202110**	SM 5310C	753113		
60383878002	**TMW-21-202110**	SM 5310C	753113		
60383878003	**MW-61R-202110**	SM 5310C	753113		
60383878004	**MW-194-202110**	SM 5310C	753113		
60383878005	**TMW-32-202110**	SM 5310C	753113		
60383878006	**TMW-34-202110**	SM 5310C	753113		
60383878007	**TMW-11-202110**	SM 5310C	753113		
60383878008	**MW-89-202110**	SM 5310C	753113		
60383878001	**TMW-25-202110**	SM 5310C	752988		
60383878002	**TMW-21-202110**	SM 5310C	752988		
60383878003	**MW-61R-202110**	SM 5310C	752988		
60383878004	**MW-194-202110**	SM 5310C	753833		
60383878005	**TMW-32-202110**	SM 5310C	753833		
60383878006	**TMW-34-202110**	SM 5310C	753833		
60383878007	**TMW-11-202110**	SM 5310C	753833		
60383878001	**TMW-25-202110**	AM23G	725360		
60383878002	**TMW-21-202110**	AM23G	725360		
60383878003	**MW-61R-202110**	AM23G	725360		
60383878004	**MW-194-202110**	AM23G	725360		
60383878005	**TMW-32-202110**	AM23G	725360		
60383878006	**TMW-34-202110**	AM23G	725360		
60383878007	**TMW-11-202110**	AM23G	725360		

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Sample Condition Upon Receipt

WO# : 60383878

60383878

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 ☑ SSLC

Thermometer Used: T296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 3.0 Corr. Factor -0.2 Corrected 2.8, 3.4

Temperature should be above freezing to 6°C 3.6

Date and initials of person examining contents: SP 10/22/21

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	N02/N03 10/22
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	ALL 3 OF SAMPLE
Containers intact:	☑Yes ☑No ☐N/A	IW-78 @ 1701 10/20
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	ARE BROKEN
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	SAMPLE LABEL ON OTHER
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	MW-61R-202110 10/20/21 1203
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	ARE YTMW-21-202110 10/20/21 1203
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) LOT# C063173	☑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	received a set of trip
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	blanks for both coolers
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	4 VGA1
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

REVIEWED
By jchurch at 10:18 am, 10/22/21

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60 38 38 7P

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: / PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride	Sulfate	Nitrate	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	TMW-25-202110	GW	G	10-20-21	0915				12	X	X	X	X	X	X	X	X	X	
1	TMW-21-202110	GW	G	10-20-21	1120				12	X	X	X	X	X	X	X	X	X	
2	MW-61R-202110	GW	G	10-20-21	1203				12	X	X	X	X	X	X	X	X	X	
1	MW-19H-202110	GW	G	10-20-21	1300				12	X	X	X	X	X	X	X	X	X	
2	TMW-32-202110	GW	G	10-20-21	1458				12	X	X	X	X	X	X	X	X	X	
2	TMW-34-202110	GW	G	10-20-21	1653				12	X	X	X	X	X	X	X	X	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll ~~10-20-21~~	10-20-21 1800	SPECTRUM PACE	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page ____ of ____

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR | County/City: Ft Smith | Time Zone Collected: / PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3 | U | 4/5 | U | 2 | U | 1 | D | O | D

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Analyses

	Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride, Sulfate, Nitrate	~~Sulfate~~	~~Nitrate~~ Hydrogen	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene / Acetylene	LAB Sample # / Comments
1	TMW-11-202110	GW	G	10-20-21	0910				14	X	X	X	X	X	X	X		X	X	
1	MW-89-202110	GW	G	10-20-21	1355				11	X	X	X	X	X		X			X	

DM

Customer Remarks/ Special Conditions/ Possible Hazards:
MW-89- do not analyze for Chloride

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY
Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 1800	SPECKERS PACE	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60J83878

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
2	VP-12-202110	GW	G	10-20-21	1525				3	X	
2	MW-63R-202110	GW	G	10-20-21	1900				3	X	
2	MW-204-202110	GW	G	10-20-21	1552				3	X	
2	~~ITMW-1 ITMW-1R 202110~~										
2	ITMW-1R-202110	GW	G	10-20-21	1627				3	X	
2	TMW-23-202110	GW	G	10-20-21	1650				3	X	
2	TB-04-202110	TB	G	10-20-21	1710				3	X	
2	IW-78-202110	GW	G	10-20-21	1701				3	X	
2	DUP-09-202110	GW	G	10-20-21	1701				3	X	
2	TB-05-202110	GW	G	10-20-21	1720				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 3.4 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 1800	SPECTRUM PACE	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3878

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
2	MW-22-202110	GW	G	10-20-21	0915				3	X	
2	MW-192-202110	GW	G	10-20-21	0850				3	X	
2	ITMW-7 202110	GW	G	10-20-21	0912				3	X	
2	MW-206-202110	GW	G	10-20-21	1035				3	X	
2	ITMW-21-202110	GW	G	10-20-21	1038				3	X	
2	DUP-04-202110	GW	G	10-20-21	1038				3	X	
2	MW-176-202110	GW	G	10-20-21	1113				3	X	
2	TMW-14-202110	GW	G	10-20-21	1243				3	X	
2	MW-83-202110	GW	G	10-20-21	1338				3	X	
2	MW-202-202110	GW	G	10-20-21	1330				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 3.4 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 / 1800	SPECTRUM PACE	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time: 10/20/21
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3878

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Mayer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

Lab Project Manager: Jamie Church

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
2	EB-03-202110	GW	G	10-20-21	1730				3	X	
3	~~MW-175-202110~~	GW	G	10-20-21	0918				3	X	

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: _____
Cooler Temp Upon Receipt _____ oC
Cooler Therm Corr. Factor _____ oC
Cooler Temp Corrected 3.4 oC
Comments: _____

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s): YES / NO

Page _____ of _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 1800	Sloggers Pace	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Page 8 of 8

F-ALL-C-010-rev.00, 05Jul2018

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

December 29, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

REV-1, 12/29/21: Report revised to update comment on Project Narrative page that was reported in error.

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast
7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60384461001	**MW-25R-202110**	Water	10/22/21 08:30	10/22/21 15:32
60384461002	**IW-77-202110**	Water	10/22/21 09:05	10/22/21 15:32
60384461003	**RW-1-202110**	Water	10/22/21 09:00	10/22/21 15:32
60384461004	**MW-82-202110**	Water	10/22/21 08:30	10/22/21 15:32
60384461005	**TB-06-202110**	Water	10/22/21 09:33	10/22/21 15:32
60384461006	**TMW-19-202110**	Water	10/22/21 09:06	10/22/21 15:32

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60384461001	**MW-25R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
60384461002	**IW-77-202110**	EPA 5030B/8260	VNH	38	PASI-K
60384461003	**RW-1-202110**	EPA 5030B/8260	PGH, VNH	38	PASI-K
60384461004	**MW-82-202110**	EPA 5030B/8260	PGH, VNH	38	PASI-K
60384461005	**TB-06-202110**	EPA 5030B/8260	PGH, VNH	38	PASI-K
60384461006	**TMW-19-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Date: December 29, 2021

In the AM23G analysis, sample 22110303802 (TMW-19-202110) was conducted one day outside of the recognized method holding time.

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: December 29, 2021

General Information:
6 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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: 753168

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

QC Batch: 753272

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: December 29, 2021

General Information:
1 sample was analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 752763

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60384023001

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

- MS (Lab ID: 3012969)
  - Sulfide, Total
- MSD (Lab ID: 3012970)
  - Sulfide, Total

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

QC Batch: 753201

B: Analyte was detected in the associated method blank.

- BLANK for HBN 753201 [WETA/828 (Lab ID: 3015142)
  - Chloride
- BLANK for HBN 753201 [WETA/828 (Lab ID: 3017448)
  - 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: 753201

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60384461006,60384500001

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

- MS (Lab ID: 3015146)
  - Chloride
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753086

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737043,60384407001

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

- MS (Lab ID: 3014272)
  - Nitrogen, NO2 plus NO3
- MS (Lab ID: 3014274)
  - Nitrogen, NO2 plus NO3

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: December 29, 2021

General Information:
2 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: December 29, 2021

General Information:
1 sample was analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: December 29, 2021

General Information:
1 sample was analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis was conducted outside of the recognized method holding time.
- TMW-19-202110 (Lab ID: 60384461006)

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: MW-25R-202110 **Lab ID: 60384461001** Collected: 10/22/21 08:30 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**340**	ug/L	5.0	2.0	1		11/05/21 16:39	74-82-8	
Ethane	**3.5**	ug/L	1.0	0.17	1		11/05/21 16:39	74-84-0	
Ethene	**0.43J**	ug/L	1.0	0.24	1		11/05/21 16:39	74-85-1	
Acetylene	**0.34J**	ug/L	0.50	0.13	1		11/05/21 16:39	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**8790**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:47	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	**42.8J**	ug/L	100	25.4	10		10/30/21 16:45	67-64-1	
Benzene	**1.8J**	ug/L	10.0	1.4	10		10/30/21 16:45	71-43-2	
Bromodichloromethane	ND	ug/L	10.0	1.6	10		10/30/21 16:45	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		10/30/21 16:45	75-25-2	
Bromomethane	ND	ug/L	50.0	4.6	10		10/30/21 16:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	9.8	10		10/30/21 16:45	78-93-3	
Carbon disulfide	ND	ug/L	50.0	9.8	10		10/30/21 16:45	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	1.7	10		10/30/21 16:45	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.89	10		10/30/21 16:45	108-90-7	
Chloroethane	ND	ug/L	10.0	3.7	10		10/30/21 16:45	75-00-3	
Chloroform	**3.6J**	ug/L	10.0	2.2	10		10/30/21 16:45	67-66-3	
Chloromethane	ND	ug/L	10.0	2.8	10		10/30/21 16:45	74-87-3	
Dibromochloromethane	ND	ug/L	10.0	3.0	10		10/30/21 16:45	124-48-1	
1,1-Dichloroethane	**1.3J**	ug/L	10.0	1.2	10		10/30/21 16:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	2.1	10		10/30/21 16:45	107-06-2	
1,1-Dichloroethene	**8.2J**	ug/L	10.0	2.2	10		10/30/21 16:45	75-35-4	
cis-1,2-Dichloroethene	**2840**	ug/L	50.0	6.4	50		11/01/21 17:51	156-59-2	
trans-1,2-Dichloroethene	**64.0**	ug/L	10.0	1.0	10		10/30/21 16:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	1.4	10		10/30/21 16:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	10.0	0.78	10		10/30/21 16:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.8	10		10/30/21 16:45	10061-02-6	
Ethylbenzene	ND	ug/L	10.0	1.2	10		10/30/21 16:45	100-41-4	
2-Hexanone	ND	ug/L	100	11.0	10		10/30/21 16:45	591-78-6	
Methylene Chloride	**4.6J**	ug/L	10.0	3.9	10		10/30/21 16:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	7.4	10		10/30/21 16:45	108-10-1	
Styrene	ND	ug/L	10.0	1.2	10		10/30/21 16:45	100-42-5	
1,1,2,2-Tetrachloroethane	**3.0J**	ug/L	10.0	1.5	10		10/30/21 16:45	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	3.3	10		10/30/21 16:45	127-18-4	
Toluene	**7.1J**	ug/L	10.0	2.5	10		10/30/21 16:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	10.0	1.1	10		10/30/21 16:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		10/30/21 16:45	79-00-5	
Trichloroethene	**7440**	ug/L	50.0	10.5	50		11/01/21 17:51	79-01-6	
Vinyl chloride	**54.2**	ug/L	10.0	1.7	10		10/30/21 16:45	75-01-4	
Xylene (Total)	ND	ug/L	30.0	2.8	10		10/30/21 16:45	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: MW-25R-202110 **Lab ID: 60384461001** Collected: 10/22/21 08:30 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		10		10/30/21 16:45	460-00-4	
Toluene-d8 (S)	99	%	80-120		10		10/30/21 16:45	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		10		10/30/21 16:45	2199-69-1	
Preservation pH	**1.0**		0.10		10		10/30/21 16:45		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/29/21 08:34	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**329**	mg/L	50.0	19.4	50		11/02/21 14:46	16887-00-6	
Sulfate	**716**	mg/L	50.0	21.0	50		11/02/21 14:46	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 15:14		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.71J**	mg/L	1.0	0.30	1		11/03/21 15:38	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: IW-77-202110 **Lab ID: 60384461002** Collected: 10/22/21 09:05 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		10/30/21 17:01	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		10/30/21 17:01	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		10/30/21 17:01	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		10/30/21 17:01	75-25-2	
Bromomethane	ND	ug/L	25.0	2.3	5		10/30/21 17:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		10/30/21 17:01	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		10/30/21 17:01	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		10/30/21 17:01	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		10/30/21 17:01	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		10/30/21 17:01	75-00-3	
Chloroform	ND	ug/L	5.0	1.1	5		10/30/21 17:01	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		10/30/21 17:01	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		10/30/21 17:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.61	5		10/30/21 17:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		10/30/21 17:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.1	5		10/30/21 17:01	75-35-4	
cis-1,2-Dichloroethene	**7.6**	ug/L	5.0	0.64	5		10/30/21 17:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.51	5		10/30/21 17:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		10/30/21 17:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		10/30/21 17:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		10/30/21 17:01	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		10/30/21 17:01	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		10/30/21 17:01	591-78-6	
Methylene Chloride	**2.6J**	ug/L	5.0	2.0	5		10/30/21 17:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		10/30/21 17:01	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		10/30/21 17:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.77	5		10/30/21 17:01	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.6	5		10/30/21 17:01	127-18-4	
Toluene	**2.4J**	ug/L	5.0	1.3	5		10/30/21 17:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.54	5		10/30/21 17:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.71	5		10/30/21 17:01	79-00-5	
Trichloroethene	**176**	ug/L	5.0	1.0	5		10/30/21 17:01	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.84	5		10/30/21 17:01	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		10/30/21 17:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		5		10/30/21 17:01	460-00-4	
Toluene-d8 (S)	99	%	80-120		5		10/30/21 17:01	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		5		10/30/21 17:01	2199-69-1	
Preservation pH	**1.0**		0.10		5		10/30/21 17:01		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: RW-1-202110 **Lab ID: 60384461003** Collected: 10/22/21 09:00 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		10/30/21 17:16	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		10/30/21 17:16	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		10/30/21 17:16	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		10/30/21 17:16	75-25-2	
Bromomethane	ND	ug/L	25.0	2.3	5		10/30/21 17:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		10/30/21 17:16	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		10/30/21 17:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		10/30/21 17:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		10/30/21 17:16	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		10/30/21 17:16	75-00-3	
Chloroform	**4.9J**	ug/L	5.0	1.1	5		10/30/21 17:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		10/30/21 17:16	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		10/30/21 17:16	124-48-1	
1,1-Dichloroethane	**0.79J**	ug/L	5.0	0.61	5		10/30/21 17:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		10/30/21 17:16	107-06-2	
1,1-Dichloroethene	**36.0**	ug/L	5.0	1.1	5		10/30/21 17:16	75-35-4	
cis-1,2-Dichloroethene	**2580**	ug/L	200	25.8	200		11/01/21 18:07	156-59-2	
trans-1,2-Dichloroethene	**4.1J**	ug/L	5.0	0.51	5		10/30/21 17:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		10/30/21 17:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		10/30/21 17:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		10/30/21 17:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		10/30/21 17:16	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		10/30/21 17:16	591-78-6	
Methylene Chloride	**4.9J**	ug/L	5.0	2.0	5		10/30/21 17:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		10/30/21 17:16	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		10/30/21 17:16	100-42-5	
1,1,2,2-Tetrachloroethane	**1.4J**	ug/L	5.0	0.77	5		10/30/21 17:16	79-34-5	
Tetrachloroethene	**12.0**	ug/L	5.0	1.6	5		10/30/21 17:16	127-18-4	
Toluene	**3.5J**	ug/L	5.0	1.3	5		10/30/21 17:16	108-88-3	
1,1,1-Trichloroethane	**8.4**	ug/L	5.0	0.54	5		10/30/21 17:16	71-55-6	
1,1,2-Trichloroethane	**1.5J**	ug/L	5.0	0.71	5		10/30/21 17:16	79-00-5	
Trichloroethene	**36000**	ug/L	200	42.0	200		11/01/21 18:07	79-01-6	
Vinyl chloride	**12.7**	ug/L	5.0	0.84	5		10/30/21 17:16	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		10/30/21 17:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		5		10/30/21 17:16	460-00-4	
Toluene-d8 (S)	97	%	80-120		5		10/30/21 17:16	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		5		10/30/21 17:16	2199-69-1	
Preservation pH	**1.0**		0.10		5		10/30/21 17:16		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: MW-82-202110 **Lab ID: 60384461004** Collected: 10/22/21 08:30 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/30/21 17:32	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/30/21 17:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/30/21 17:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/30/21 17:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/30/21 17:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/30/21 17:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/30/21 17:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/30/21 17:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/30/21 17:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/30/21 17:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/30/21 17:32	67-66-3	
Chloromethane	**0.52J**	ug/L	1.0	0.28	1		10/30/21 17:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/30/21 17:32	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/21 17:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/30/21 17:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/30/21 17:32	75-35-4	
cis-1,2-Dichloroethene	**0.83J**	ug/L	1.0	0.13	1		11/01/21 13:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/30/21 17:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/30/21 17:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/30/21 17:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/30/21 17:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/30/21 17:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/30/21 17:32	591-78-6	
Methylene Chloride	**2.1**	ug/L	1.0	0.39	1		10/30/21 17:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/30/21 17:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/21 17:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/21 17:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/30/21 17:32	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/30/21 17:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/21 17:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/30/21 17:32	79-00-5	
Trichloroethene	**40.0**	ug/L	1.0	0.21	1		11/01/21 13:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/30/21 17:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/30/21 17:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/30/21 17:32	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/30/21 17:32	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/30/21 17:32	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/30/21 17:32		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: TB-06-202110 **Lab ID: 60384461005** Collected: 10/22/21 09:33 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/30/21 17:48	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/30/21 17:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/30/21 17:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/30/21 17:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/30/21 17:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/30/21 17:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/30/21 17:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/30/21 17:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/30/21 17:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/30/21 17:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/30/21 17:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/30/21 17:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/30/21 17:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/21 17:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/30/21 17:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/30/21 17:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/01/21 12:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/30/21 17:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/30/21 17:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/30/21 17:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/30/21 17:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/30/21 17:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/30/21 17:48	591-78-6	
Methylene Chloride	**2.4**	ug/L	1.0	0.39	1		10/30/21 17:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/30/21 17:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/21 17:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/21 17:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/30/21 17:48	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/30/21 17:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/21 17:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/30/21 17:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/01/21 12:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/30/21 17:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/30/21 17:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/30/21 17:48	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/30/21 17:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/30/21 17:48	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/30/21 17:48		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: TMW-19-202110 **Lab ID: 60384461006** Collected: 10/22/21 09:06 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	ND	ug/L	5.0	2.0	1		11/05/21 16:50	74-82-8	
Ethane	**0.20J**	ug/L	1.0	0.17	1		11/05/21 16:50	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 16:50	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**3270**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:49	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 13:20	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 13:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 13:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 13:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 13:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 13:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 13:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 13:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 13:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 13:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 13:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 13:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 13:20	124-48-1	
1,1-Dichloroethane	**0.32J**	ug/L	1.0	0.12	1		11/01/21 13:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 13:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/01/21 13:20	75-35-4	
cis-1,2-Dichloroethene	**2.6**	ug/L	1.0	0.13	1		11/01/21 13:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/01/21 13:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 13:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 13:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 13:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 13:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 13:20	591-78-6	
Methylene Chloride	**2.5**	ug/L	1.0	0.39	1		11/01/21 13:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 13:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 13:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 13:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 13:20	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 13:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 13:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 13:20	79-00-5	
Trichloroethene	**40.4**	ug/L	1.0	0.21	1		11/01/21 13:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/01/21 13:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 13:20	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: TMW-19-202110 **Lab ID: 60384461006** Collected: 10/22/21 09:06 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	89	%	80-120		1		11/01/21 13:20	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 13:20	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	105	%	80-120		1		11/01/21 13:20	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 13:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**81.1**	mg/L	20.0	7.8	20		11/01/21 15:45	16887-00-6	B,M1
Sulfate	**11.7**	mg/L	1.0	0.42	1		11/02/21 13:45	14808-79-8	M1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.13**	mg/L	0.10	0.066	1		10/29/21 15:15		
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**1.4**	mg/L	1.0	0.30	1		11/03/21 15:51	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**1.4**	mg/L	1.0	0.30	1		10/29/21 13:00		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**1.1**	mg/L	0.50	0.053	1		11/20/21 00:25	50-21-5	H1
Acetic Acid	**0.27J**	mg/L	0.50	0.12	1		11/20/21 00:25	64-19-7	H1
Propionic Acid	ND	mg/L	0.50	0.053	1		11/20/21 00:25	79-09-4	H1
Formic acid	**5.4**	mg/L	0.50	0.055	1		11/20/21 00:25	64-18-6	H1
Butyric Acid	ND	mg/L	0.50	0.058	1		11/20/21 00:25	107-92-6	H1
Pyruvic Acid	ND	mg/L	0.50	0.060	1		11/20/21 00:25	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	0.50	0.061	1		11/20/21 00:25	503-74-2	H1
Pentanoic Acid	ND	mg/L	0.50	0.056	1		11/20/21 00:25	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	0.50	0.056	1		11/20/21 00:25	646-07-1	H1
Hexanoic Acid	**0.12J**	mg/L	0.50	0.058	1		11/20/21 00:25	142-62-1	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 725913
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 2267597
Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/05/21 13:43	
Ethane	ug/L	ND	1.0	0.17	11/05/21 13:43	
Ethene	ug/L	ND	1.0	0.24	11/05/21 13:43	
Acetylene	ug/L	ND	0.50	0.13	11/05/21 13:43	

LABORATORY CONTROL SAMPLE & LCSD: 2267598 2267599

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	360	340	93	88	70-130	5	20	
Ethane	ug/L	97	98	95	101	98	70-130	3	20	
Ethene	ug/L	120	120	110	98	95	70-130	3	20	
Acetylene	ug/L	30	29	28	96	93	70-130	3	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753096
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3014307 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/03/21 18:28	

LABORATORY CONTROL SAMPLE: 3014308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10100	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014309 3014310

Parameter	Units	60383996041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	17200	10000	10000	27100	27100	99	99	75-125	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753168
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461002, 60384461003, 60384461004, 60384461005

METHOD BLANK: 3014836
Matrix: Water
Associated Lab Samples: 60384461001, 60384461002, 60384461003, 60384461004, 60384461005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/21 13:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/21 13:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/30/21 13:02	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/30/21 13:02	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/30/21 13:02	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/30/21 13:02	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/30/21 13:02	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/30/21 13:02	
2-Hexanone	ug/L	ND	10.0	1.1	10/30/21 13:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/30/21 13:02	
Acetone	ug/L	ND	10.0	2.5	10/30/21 13:02	
Benzene	ug/L	ND	1.0	0.14	10/30/21 13:02	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/30/21 13:02	
Bromoform	ug/L	ND	1.0	0.68	10/30/21 13:02	
Bromomethane	ug/L	ND	5.0	0.46	10/30/21 13:02	
Carbon disulfide	ug/L	ND	5.0	0.98	10/30/21 13:02	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/30/21 13:02	
Chlorobenzene	ug/L	ND	1.0	0.089	10/30/21 13:02	
Chloroethane	ug/L	ND	1.0	0.37	10/30/21 13:02	
Chloroform	ug/L	ND	1.0	0.22	10/30/21 13:02	
Chloromethane	ug/L	ND	1.0	0.28	10/30/21 13:02	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/30/21 13:02	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/30/21 13:02	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/30/21 13:02	
Ethylbenzene	ug/L	ND	1.0	0.12	10/30/21 13:02	
Methylene Chloride	ug/L	ND	1.0	0.39	10/30/21 13:02	
Styrene	ug/L	ND	1.0	0.12	10/30/21 13:02	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/30/21 13:02	
Toluene	ug/L	ND	1.0	0.25	10/30/21 13:02	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/30/21 13:02	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/30/21 13:02	
Trichloroethene	ug/L	ND	1.0	0.21	10/30/21 13:02	
Vinyl chloride	ug/L	ND	1.0	0.17	10/30/21 13:02	
Xylene (Total)	ug/L	ND	3.0	0.28	10/30/21 13:02	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/30/21 13:02	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/21 13:02	
Toluene-d8 (S)	%	101	80-120		10/30/21 13:02	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

LABORATORY CONTROL SAMPLE: 3014837

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	75-125	
1,1,2-Trichloroethane	ug/L	20	19.4	97	80-120	
1,1-Dichloroethane	ug/L	20	18.3	92	75-125	
1,1-Dichloroethene	ug/L	20	21.8	109	80-120	
1,2-Dichloroethane	ug/L	20	18.9	94	75-120	
1,2-Dichloropropane	ug/L	20	18.8	94	80-125	
2-Butanone (MEK)	ug/L	100	97.2	97	40-150	
2-Hexanone	ug/L	100	99.0	99	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.3	94	65-140	
Acetone	ug/L	100	112	112	20-175	
Benzene	ug/L	20	19.2	96	80-120	
Bromodichloromethane	ug/L	20	18.9	94	80-125	
Bromoform	ug/L	20	21.2	106	60-135	
Bromomethane	ug/L	20	19.7	99	10-165	
Carbon disulfide	ug/L	20	19.6	98	75-135	
Carbon tetrachloride	ug/L	20	19.5	98	80-125	
Chlorobenzene	ug/L	20	19.9	99	80-120	
Chloroethane	ug/L	20	17.8	89	70-130	
Chloroform	ug/L	20	19.0	95	80-120	
Chloromethane	ug/L	20	18.4	92	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.9	99	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.7	99	80-125	
Dibromochloromethane	ug/L	20	19.5	98	70-120	
Ethylbenzene	ug/L	20	20.4	102	80-120	
Methylene Chloride	ug/L	20	18.8	94	75-120	
Styrene	ug/L	20	20.8	104	80-120	
Tetrachloroethene	ug/L	20	20.1	100	80-120	
Toluene	ug/L	20	19.5	97	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.7	98	75-120	
Trichloroethene	ug/L	20	19.0	95	80-120	
Vinyl chloride	ug/L	20	18.4	92	65-130	
Xylene (Total)	ug/L	60	61.6	103	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			101	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753272
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461003, 60384461004, 60384461005, 60384461006

METHOD BLANK: 3015397
Matrix: Water
Associated Lab Samples: 60384461001, 60384461003, 60384461004, 60384461005, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 12:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 12:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 12:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 12:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 12:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 12:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 12:32	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 12:32	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 12:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 12:32	
Acetone	ug/L	ND	10.0	2.5	11/01/21 12:32	
Benzene	ug/L	ND	1.0	0.14	11/01/21 12:32	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 12:32	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 12:32	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 12:32	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 12:32	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 12:32	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 12:32	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 12:32	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 12:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/01/21 12:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 12:32	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 12:32	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 12:32	
Styrene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 12:32	
Toluene	ug/L	ND	1.0	0.25	11/01/21 12:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 12:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 12:32	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 12:32	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 12:32	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/01/21 12:32	
4-Bromofluorobenzene (S)	%	99	80-120		11/01/21 12:32	
Toluene-d8 (S)	%	99	80-120		11/01/21 12:32	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

LABORATORY CONTROL SAMPLE: 3015398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.4	97	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	75-125	
1,1,2-Trichloroethane	ug/L	20	19.2	96	80-120	
1,1-Dichloroethane	ug/L	20	16.5	82	75-125	
1,1-Dichloroethene	ug/L	20	19.7	99	80-120	
1,2-Dichloroethane	ug/L	20	18.4	92	75-120	
1,2-Dichloropropane	ug/L	20	19.1	96	80-125	
2-Butanone (MEK)	ug/L	100	92.1	92	40-150	
2-Hexanone	ug/L	100	90.8	91	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	88.0	88	65-140	
Acetone	ug/L	100	93.3	93	20-175	
Benzene	ug/L	20	20.1	101	80-120	
Bromodichloromethane	ug/L	20	18.5	93	80-125	
Bromoform	ug/L	20	18.4	92	60-135	
Bromomethane	ug/L	20	17.2	86	10-165	
Carbon disulfide	ug/L	20	19.2	96	75-135	
Carbon tetrachloride	ug/L	20	19.1	95	80-125	
Chlorobenzene	ug/L	20	19.2	96	80-120	
Chloroethane	ug/L	20	18.2	91	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	17.3	86	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.3	96	80-125	
Dibromochloromethane	ug/L	20	18.7	93	70-120	
Ethylbenzene	ug/L	20	19.9	100	80-120	
Methylene Chloride	ug/L	20	19.2	96	75-120	
Styrene	ug/L	20	22.0	110	80-120	
Tetrachloroethene	ug/L	20	19.9	100	80-120	
Toluene	ug/L	20	18.8	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-120	
Trichloroethene	ug/L	20	18.9	94	80-120	
Vinyl chloride	ug/L	20	17.1	85	65-130	
Xylene (Total)	ug/L	60	60.2	100	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			96	80-120	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 752763
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001

METHOD BLANK: 3012967
Matrix: Water
Associated Lab Samples: 60384461001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/29/21 08:31	

LABORATORY CONTROL SAMPLE: 3012968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012969 3012970

Parameter	Units	60384023001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	1.3	1	1	2.0	2.0	67	69	75-125	1	20	H1,M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753201
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3015142 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.44J	1.0	0.39	11/01/21 10:44	
Sulfate	mg/L	ND	1.0	0.42	11/01/21 10:44	

METHOD BLANK: 3016683 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/02/21 08:12	
Sulfate	mg/L	ND	1.0	0.42	11/02/21 08:12	

METHOD BLANK: 3017448 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.46J	1.0	0.39	11/03/21 08:08	
Sulfate	mg/L	ND	1.0	0.42	11/03/21 08:08	

LABORATORY CONTROL SAMPLE: 3015143

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3016684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

LABORATORY CONTROL SAMPLE: 3017449

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Sulfate	mg/L	5	5.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3015144 3015145

Parameter	Units	60384500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	255	250	250	484	479	91	89	80-120	1	15	
Sulfate	mg/L	352	250	250	589	584	95	93	80-120	1	15	

MATRIX SPIKE SAMPLE: 3015146

Parameter	Units	60384461006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	81.1	100	207	126	80-120	M1
Sulfate	mg/L	11.7	5	19.3	152	80-120	M1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753086
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3014270
Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/29/21 15:09	

LABORATORY CONTROL SAMPLE: 3014271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 3014272

Parameter	Units	60383737043 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.095J	5	90-110	M1

MATRIX SPIKE SAMPLE: 3014274

Parameter	Units	60384407001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.11	5	90-110	M1

SAMPLE DUPLICATE: 3014273

Parameter	Units	60384461001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753710
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3016768
Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	11/02/21 17:10	

LABORATORY CONTROL SAMPLE: 3016769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	4.7	94	80-120	

MATRIX SPIKE SAMPLE: 3016770

Parameter	Units	60384565013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.6	5	7.5	97	80-120	

SAMPLE DUPLICATE: 3016771

Parameter	Units	60384565015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	2.7	2.6	2	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 752988
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461006

METHOD BLANK: 3013841
Matrix: Water
Associated Lab Samples: 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 09:45	

LABORATORY CONTROL SAMPLE: 3013842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	93	80-120	

MATRIX SPIKE SAMPLE: 3013843

Parameter	Units	60383737041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.6	5	7.4	95	80-120	

SAMPLE DUPLICATE: 3013844

Parameter	Units	60383737044 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.3	8.2	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 727188
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60384461006

METHOD BLANK: 2275299
Matrix: Water
Associated Lab Samples: 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/20/21 03:18	
Acetic Acid	mg/L	ND	0.50	0.12	11/20/21 03:18	
Propionic Acid	mg/L	ND	0.50	0.053	11/20/21 03:18	
Formic acid	mg/L	ND	0.50	0.055	11/20/21 03:18	
Butyric Acid	mg/L	ND	0.50	0.058	11/20/21 03:18	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/20/21 03:18	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/20/21 03:18	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/20/21 03:18	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/20/21 03:18	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/20/21 03:18	

LABORATORY CONTROL SAMPLE & LCSD: 2275300 2275301

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.2	2.2	113	110	70-130	3	20	
Acetic Acid	mg/L	2	2.0	2.0	100	101	70-130	1	20	
Propionic Acid	mg/L	2	2.1	2.2	107	109	70-130	2	20	
Formic acid	mg/L	2	2.0	2.0	103	102	70-130	1	20	
Butyric Acid	mg/L	2	2.0	1.9	103	97	70-130	6	20	
Pyruvic Acid	mg/L	2	2.2	2.2	112	112	70-130	0	20	
i-Pentanoic Acid	mg/L	2	2.0	1.9	102	98	70-130	5	20	
Pentanoic Acid	mg/L	2	2.0	2.0	100	100	70-130	0	20	
i-Hexanoic Acid	mg/L	2	2.2	2.2	111	111	70-130	1	20	
Hexanoic Acid	mg/L	2	2.0	2.0	100	101	70-130	1	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 60384461

[1]	In the AM23G analysis, sample 22110303802 (TMW-19-202110) was conducted one day outside of the recognized method holding time.

BATCH QUALIFIERS

Batch: 753168

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

Batch: 753272

[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.
H1	Analysis conducted outside the EPA method holding time.
H1	Analysis was conducted outside of the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60384461001	**MW-25R-202110**	AM20GAX	725913		
60384461006	**TMW-19-202110**	AM20GAX	725913		
60384461001	**MW-25R-202110**	EPA 3010	753096	EPA 6010	753599
60384461006	**TMW-19-202110**	EPA 3010	753096	EPA 6010	753599
60384461001	**MW-25R-202110**	EPA 5030B/8260	753168		
60384461001	**MW-25R-202110**	EPA 5030B/8260	753272		
60384461002	**IW-77-202110**	EPA 5030B/8260	753168		
60384461003	**RW-1-202110**	EPA 5030B/8260	753168		
60384461003	**RW-1-202110**	EPA 5030B/8260	753272		
60384461004	**MW-82-202110**	EPA 5030B/8260	753168		
60384461004	**MW-82-202110**	EPA 5030B/8260	753272		
60384461005	**TB-06-202110**	EPA 5030B/8260	753168		
60384461005	**TB-06-202110**	EPA 5030B/8260	753272		
60384461006	**TMW-19-202110**	EPA 5030B/8260	753272		
60384461001	**MW-25R-202110**	SM 4500-S-2 D	752763		
60384461001	**MW-25R-202110**	EPA 300.0	753201		
60384461006	**TMW-19-202110**	EPA 300.0	753201		
60384461001	**MW-25R-202110**	EPA 353.2	753086		
60384461006	**TMW-19-202110**	EPA 353.2	753086		
60384461001	**MW-25R-202110**	SM 5310C	753710		
60384461006	**TMW-19-202110**	SM 5310C	753710		
60384461006	**TMW-19-202110**	SM 5310C	752988		
60384461006	**TMW-19-202110**	AM23G	727188		

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Sample Condition Upon Receipt

WO# : 60384461

60384461

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 ☒ 2pIC

Thermometer Used: T-299 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 0.3 **Corr. Factor** -0.2 **Corrected** 0.1

Date and initials of person examining contents: JLH 10/28/21

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:	☐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) LOT# 603222	☒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: _____

REVIEWED
By jchurch at 3:39 pm, 10/28/21

Project Manager Review: _____ Date: _____

F-KS-C-003-Rev.11, February 28, 2018

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60384461

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Haley Ahlers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3 U 4/5 2 U 1 D O D

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAZ

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride Sulfate, Nitrate	Sulfate (Dw) Sulfide	Nitrate (Dw)	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene / Acetylene	LAB USE ONLY: Lab Sample # / Comments
MW-2SR-202110	GW	G	10-22-21	0830					X	X	X		X		X			X	3VG9H 3DG9Q BP3U BP3N BP82AG3
IW-77-202110	GW	G	10-22-21	0905					X										↓
RW-1-202110	GW	G	10-22-21	0900					X										↓
MW-82-202110	GW	G	10-22-21	0830					X										↓
TB-06-202110	GW	G	10-22-21	0933					X										↓
TMW-19-202110	GW	G	10-22-21	0906				AG2U	X	X	X	X (Dw)	X	X	X	X	X	BP3U	3VG9H 3DG9Q 2OTHR ↓ ↓ ↓

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 0.1 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
(Ramboll)	10/22/21 1530		10-22/1532
	10-22/1625	SPECKERS PACE	10/22/21 1532

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Appendix B

Field Notes and Weather Data for October 2021

10/18/21 Whirlpool

ANNUAL SAMPLING

0700 RAMBOLL (REH) on site: I. McQuay, C. Chavers, D. Meyer, J. Zellner, M. Schappert, G. Penaflor, L. Borucki, Nick Martin

- Tailgate/H+S meeting
- Weather safety
  - 55° F (high 78°), clear wind 5 mph NE

0750 IM offsite to pick up generator for vapor pin reinstallation

0845 On site w/generator

0945 Setting vapor points Z5-1, Z4-1, Z4-2

1130 Vapor point installation complete
- picking up equipment to develop MW-205 + 206
- offsite to return generator

1215 On site

1350 Setting up to develop MW-205
DTW: 14.95 ft btoc
TD: 28.95 ft btoc
1 well vol: 2.28 gal ; 3 well vol: 6.85 gal

Rite in the Rain

10/18/21 Whirlpool

1400 Installing new dedicated tubing in MW-205

1408 Begin purge MW-205
- 900 mL/min
- DTW stable @ 14.98 ft

1453 8gal purged (>3 well vol)
- DTW: 14.98 ft

1505 Mob to dump IDW

1530 Mob to develop MW-206

1540 MW-206:
DTW: 17.50 ft bpc
TD: 31.60 ft bpc
1 well vol: 2.21 gal
3 well vol: 6.89 gal
installing new dedicated tubing

1555 Purging MW-206
- 750 mL/min, water clear
- DTW stable @ 17.95 ft

1700 8gal purged (>3 well vol)
- DTW: 17.95 ft
- water clear

1715 Mob to dump purge water and set samples

1830 IM Hsize / EOD

Annual Sampling

0700 REM ON SITE: IM, CC, DM, MS, NM, JZ, GP, LB
- H&S / Tailgate Meeting
- Weather: 54° (high 79°), clear
Wind ENE 5mph

0715 IM + CC to warehouse to set IA summa canisters, SEE LOG for times, summa IDs + pressure/vac numbers

0900 Canisters placed
- mob to MS to pick up eqpt. for groundwater sampling

0950 CAL YSI # FA03972
Spec Cond. (7 mS/cm): 6.58 mS/cm
pH4: 3.92
pH7: 6.88
pH10: 10.03
ORP (230): 227.6 mV
DO%: 91.0%

DO calc
baro. pressure: 30.13 inHg
30.13 × 25.4 = 765.3 mmHg
765.3 − 15.169 = 750.133 mmHg
O/R

1023 CAL Complete
- mob to MW-29 to sample

1030 Setting up at MW-29, SEE LOG

1145 SAMPLE MW-29 + MS/MSD
VOCs
Fe^{2+}: 0.05 mg/L

Rite in the Rain

10/19/21 Whirlpool

1200 Mob to dump IDW

1212 Mob to MW-184 to sample

1240 Begin purging (installed new dedicated tubing); SEE LOG

1325 SAMPLE MW-184 DUP-01 VOCs Fe^{2+} = 0.17

1345 Mob to dump IDW

1425 Meet CC at AA-1 to start collecting IA/AA canisters (SEE Air Sampling LOG for final pressures + times)

1601 ~~D~~ Collected all IA canisters but Z5-OF-IA; Still had vac of -16, will wait until lower
- offsite for IM + CC lunch

1630 On site @ staging area to help CoC + sample packing

1715 Check Z5-OF-IA can, pressure at -15; will check again later

1805 Z5-OF-IA at -11, will check again later

1815 IM offsite to assemble SS summers

10/19/21 WHIRLPOOL

1910 Summas assembled

1915 IM mob to collect Z5-OF-IA canister

1926 IM on site, Z5-OF-IA canister -8 vac; shut and collect

1945 IM offsite; EOD

Rite in the Rain

10/20/21 Whirlpool

ANNUAL SAMPLING

0700 REH on site: IM, CC, DM, GP, JZ, LB, MS, NM
- H2S / Tailgate Meeting
- Weather: 57° (high 81°), clear, wind 4mph NE

0715 IM + CC mob to set AA-2 can in the NE corner of site

0723 Set AA-2 canister (see log for pressure + CAN ID)

0725 IM + CC mob to Stryker warehouse to begin sub slab (SS) sampling (See Log for can pressures and times, can IDs)

0736 Setting up to sample Z6-2-SS

	1L	2L	
CH4	0.0	0.0	%
CO2	0.2	0.2	%
O2	20.5	20.4	%
Bal	79.3	79.4	%
He	0	0	ppm

0807 Setting up to sample Z5-2-SS

0807 Setting up to sample Z5-2-SS

	1L	2L	
CH4	0	0	%
CO2	1.9	1.9	%
O2	18.6	18.5	%
Bal	79.5	79.6	%
He	0	0	ppm

0841 Setting up to sample Z4-SS

	1L	2L	
CH4	0	0	%
CO2	0	0	%
O2	20.3	19.6	%
Bal	79.7	80.3	%
He	6050	5300	ppm

* Helium in shroud was 18%, concentration of helium in tedlar bag was <10% of helium in shroud (~2.4% of He in shroud)

0905 Setting up to sample Z3-2-SS

	1L	2L	
CH4	0	0	%
CO2	0.9	0.9	%
O2	18.9	18.8	%
Bal	80.2	80.2	%
He	350	0	ppm

Rite in the Rain

0924 Setting up to sample Z4-2-SS

	1L	2L	
CH_4	0	0	%
CO_2	0.5	2.0	%
O_2	19.6	13.0	%
Bal	85.7	85.0	%
He	~~0.5~~ 0	0	ppm

0948 Setting up to sample ~~Z0-1-SS~~ Z2-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	4.4	4.4	%
O_2	15.5	15.5	%
Bal	80.1	80.1	%
He	0	0	ppm

1015 Setting up on Z3-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	14.8	14.8	%
O_2	0	0	%
Bal	85.2	85.2	%
He	0	0	ppm

* 14ppm CO measured in sub slab on 1L meas.
* 1ppm H_2S + 14ppm CO detected in 2L purge

1115 IM + CC offsite for lunch and charge GEM + MGD-2000

1200 IM + CC on site

1225 Setting up to sample Z4-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	1.5	1.5	%
O_2	18.4	18.3	%
Bal	80.1	80.2	%
He	0	0	ppm

1315 Setting up to sample Z5-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	0.3	0.3	%
O_2	19.7	19.5	%
Bal	80.0	80.2	%
He	0	0	ppm

1337 Setting up on Z6-1-SS

	1L	2L	
CH_4	0.1	0	%
CO_2	2.4	2.2	%
O_2	16.5	17.1	%
Bal	81.0	80.7	%
He	0	0	ppm

Rite in the Rain

1358 Setting up on ZS-OF-SS

	1L	2L	
CH_4	0.1	0	%
CO_2	0	0	%
O_2	20.5	20.5	%
Bal	79.4	79.5	%
He	0	0	ppm

1430 COLLECTED
AA-2-202110

1500 Mob to pack summas and complete COC

1715 Drop summas at Fedex
- mob to site to assist with sample sorting / CoC

1810 IM offsite / EOD

10/21/21 Whirlpool

ANNUAL SAMPLING

0700 REH on site: IM, CC, DM, NM, CP, JZ, LB
- H&S / Tailgate meeting
- weather: 54°F (high 73°), clear, wind SW 4mph, baro: 30.17 inHg

0720 CAL YSI # 18K100534
- Spec. Cond : 7043 µS/cm
- ORP : 244.0
- pH4 : ~~7.16~~ cal 4.13
- pH7 : 7.16
- pH10 : 10.12
- DO : 104.3%

0810 Mob to RW-69

0815 Setting up on RW-69

0830 Begin purging RW-69; SEE LOG

0925 SAMPLE RW-69-202110 Fe-6.1 mg/L
VOCs, MNA parameters

1010 Mob to dump purge water

1030 Mob to IW-73 to sample

1112 Purging IW-73; SEE LOG

1210 SAMPLE IW-73-202110 Fe: 0.33
VOCs, MNA parameters

Rite in the Rain

1330 Mob to dump purge water
1415 Begin purging TMW-22R; SEE LOG
1515 SAMPLE
TMW-22R-202110
Fe^{2+} = 2.76 mg/L
VOCs, ISCR parameters
- waiting on VFA vials
1545 VFA vials delivered
- collected VFA
- packing eqpt
1605 Mob to staging area to dump purge water and assist with CoC
1800 Samples given to Pace courier
1825 IM offsite

10/22/21 Whirlpool

ANNUAL SAMPLING

0700 REH on-site: IM, CC, DM, GP, JZ
- weather 51°F, clear, wind W 1mph, baro: 30.14 inHg
0715 Hrs / Tailgate meeting
0720 CAL YSI # FA03788
Spec Cond : 6.83 mS/cm
ORP : 238.3 mV
pH4 : 4.02
pH7 : 6.92
pH10 : 10.03
DO% : 101.1%
0740 Mob to sample IW-77
0805 Setting up on IW-77
0810 Purging IW-77, SEE LOG
0905 SAMPLE
IW-77-202110
Fe^{2+} = 0.08
VOCs
- mob to dump purge water, sort samples and pack equipment
1015 OFFSITE mob to St. Louis

Rite in the Rain

Appendix C
Risk Calculations and Input Parameters

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C.2 Physical and Chemical Properties

C.3 Soil Moisture Profile for Residential Building (Slab-on-Grade) for Risk Calculations from Groundwater at Monitoring Wells
C.4 Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at Monitoring Wells
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C.19 Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-12 (Parcel 4)
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C.21 Soil Moisture Profile for Residential Building (Slab-on-Grade) at Groundwater Monitoring Well MW-178 (Parcel 5)
C.22 Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at MW-178 (Parcel 5)
C.23 Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Groundwater at MW-178 (Parcel 5)
C.24 Soil Moisture Profile for Residential Building (Slab-on-Grade) at Soil Vapor Monitoring Point VP-14 (Parcel 5)
C.25 Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-14 (Parcel 5)
C.26 Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at VP-14 (Parcel 5)
C.27 Soil Moisture Profile for Residential Building (Slab-on-Grade) at Groundwater Monitoring Well MW-179 (Parcel 5)
C.28 Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at MW-179 (Parcel 5)
C.29 Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Groundwater at MW-179 (Parcel 5)

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	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-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	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 Dec 10, 2021.

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.

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	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-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	Toluene	108-88-3	2.7E-01	1.8E-01	44		7.5E-01	44	7.4E-05	44	2.5E+01
VOC	Trichloroethene	79-01-6	4.2E-01	2.9E-01	44		6.8E-01	44	7.9E-05	44	2.5E+01
VOC	Vinyl Chloride	75-01-4	1.1E+00	9.0E-01	44		9.2E-01	44	1.1E-04	71	2.5E+01

Physical and chemical parameters were selected following the hierarchy of sources used by USEPA (Soil Screening Guidance: Technical Background Document, 1996), as discussed in Appendix A, Section 54 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

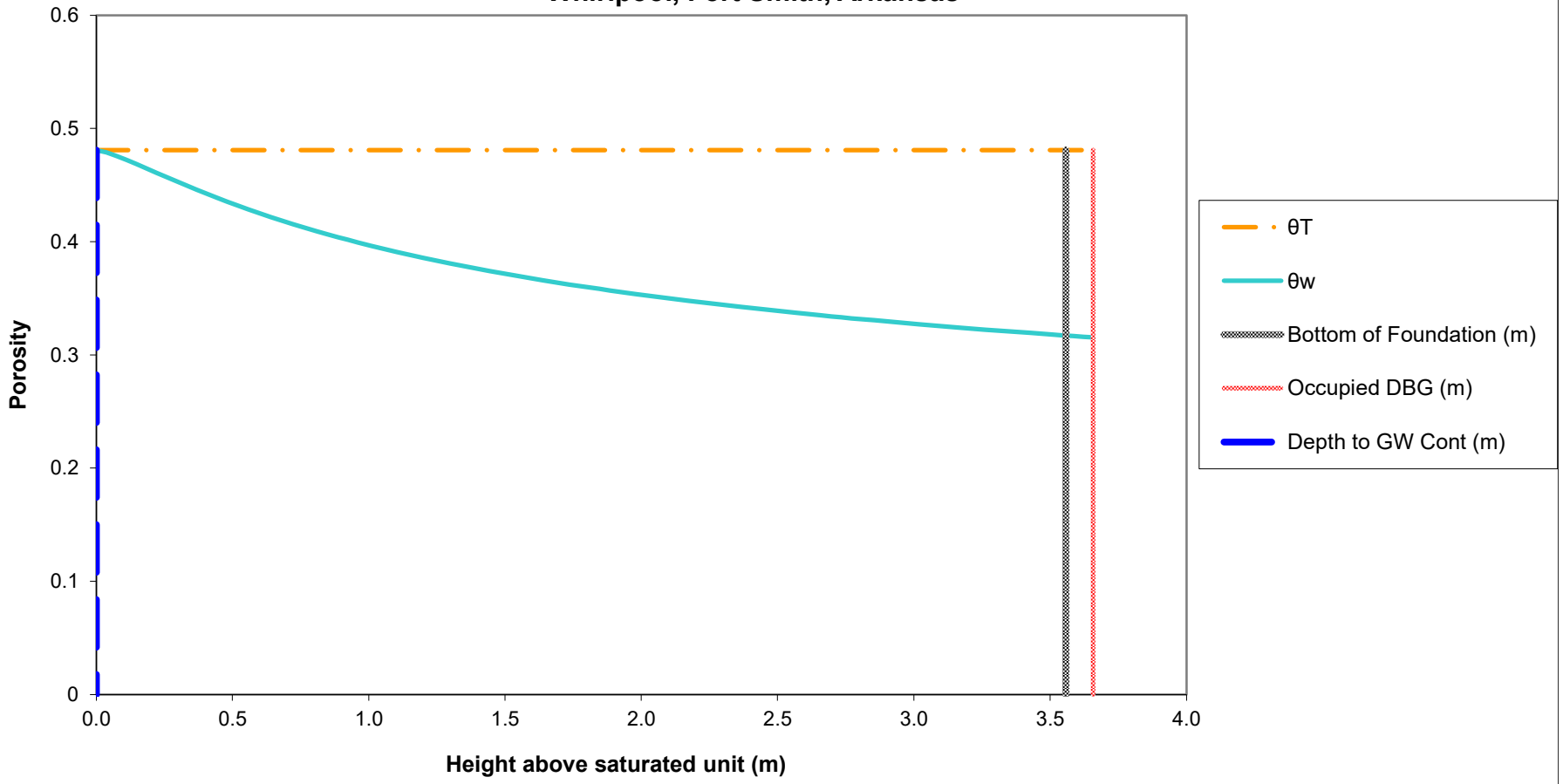
References:

40	Research Triangle Institute, Center for Environmental Analysis. 1995. Supplemental Technical Support Document for Hazardous Waste Identification Rule: Risk Assessment for Human and Ecological Receptors--Volume 1, TABLE A-1. November 1995.
44	USEPA. 1996. Soil Screening Guidance: Technical Background Document and User Guide. Office of Emergency and Remedial Response. EPA/540/R-95/128. May.
50.1	USEPA. 1997. Superfund Chemical Data Matrix (SCDM). Office of Emergency and Remedial Response. September 12.
50.3	USEPA. 20014. Superfund Chemical Data Matrix (SCDM). Office of Superfund Remediation and Technology Innovation. June 20, 2014.
52	USEPA. 1997. CHEM9 Compound Properties Estimation and Data. Version 1.00. Office of Air Quality Planning and Standards. July.
68	PHYSPROP data base. Syracuse Research Corporation.
69	USEPA. 2004. WATER9. Version 2.0.0. Office of Air Quality Planning and Standards. July.
71	USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. OSWER 9355.4-24. December.

Notes:

92	Indicated source cites CHEMFATE.
123	Value has been assigned a default reference temperature.

Attachment C.3: Soil Moisture Profile for Residential Building (Slab-on-Grade) for Risk Calculations from Groundwater at Monitoring Wells
Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

Attachment C.4: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at Monitoring Wells
Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.15E-04	3.17E-03	2.73E-03	8.67E-06	1.38E-03
VOC	Chloromethane	74-87-3	1.09E+00	5.62E-05	3.33E-01	1.75E-01	4.61E-04	1.80E-03	2.73E-03	4.90E-06	1.63E-03
VOC	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	Toluene	108-88-3	7.52E-01	7.43E-05	1.80E-01	1.21E-01	6.97E-04	2.71E-03	2.73E-03	7.41E-06	1.34E-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
	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	Benzene	71-43-2	A	N	1.60E-04	2.20E-07	7.8E-03		7.1E-10		3.0E-02	7.0E-06
VOC	Chloromethane	74-87-3	D	N	5.20E-04	8.49E-07					9.0E-02	9.0E-06
VOC	1,1-Dichloroethene	75-35-4	C	N	1.80E-03	4.84E-06					2.0E-01	2.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	3.08E-02	3.77E-05						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	4.20E-04	7.50E-07						
VOC	4-Methyl-2-pentanone	108-10-1	ID	N	1.90E-03	4.51E-07					3.0E+00	1.4E-07
VOC	Methylene Chloride	75-09-2	LC	Y	2.10E-03	2.33E-06	1.0E-05	1	2.4E-11		6.0E-01	3.7E-06
VOC	Toluene	108-88-3	ID	N	3.10E-04	4.14E-07					5.0E+00	7.9E-08
VOC	Trichloroethene	79-01-6	HC	Y	6.19E-01	9.93E-04	4.1E-03	0.2439	2.3E-06		2.0E-03	4.8E-01
VOC	Vinyl Chloride	75-01-4	A	N	1.93E-02	6.36E-05	4.4E-03		4.0E-07		1.0E-01	6.1E-04
							Cumulative Risk:		3E-06		**HI:**	5E-01

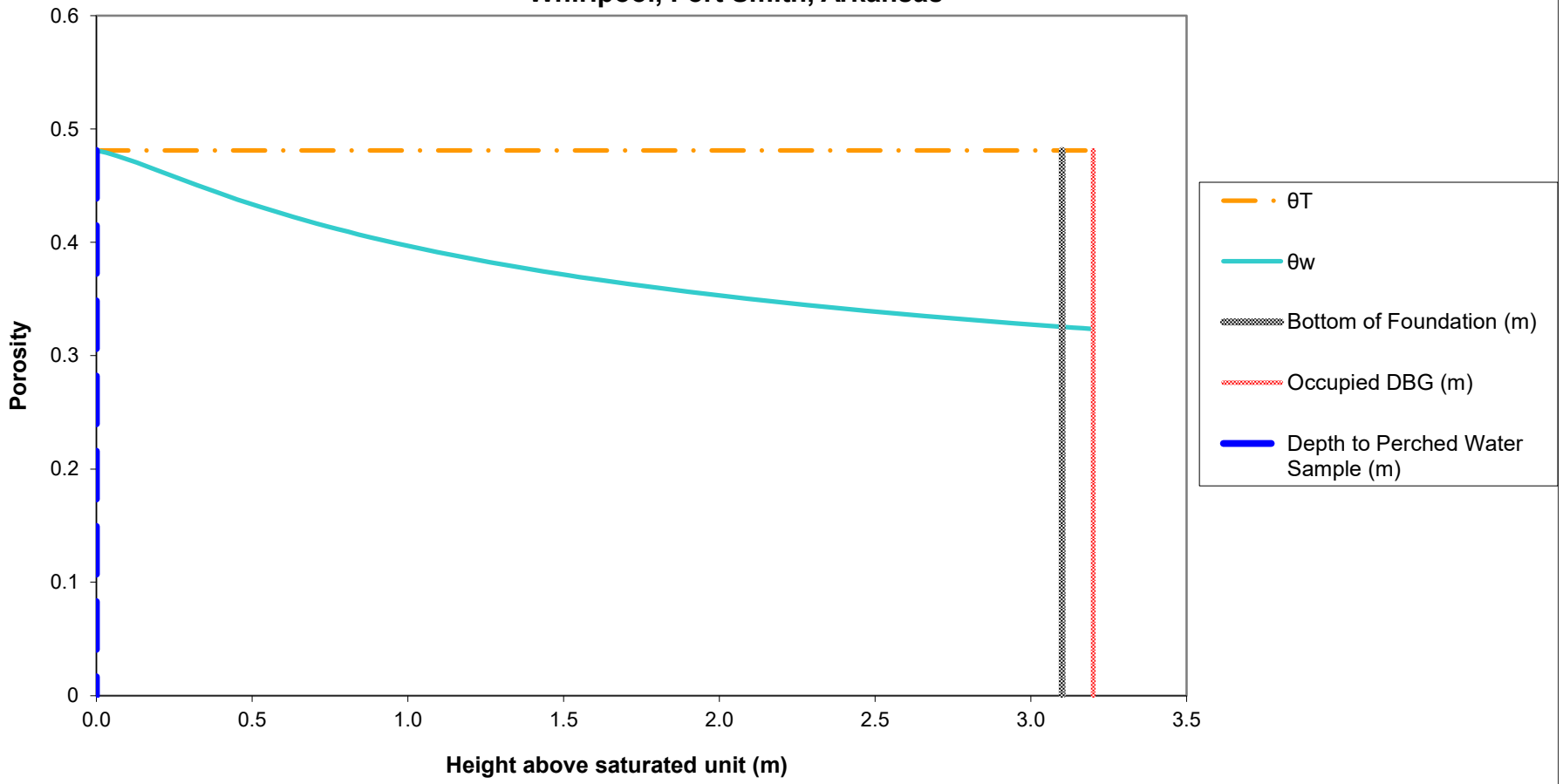
Note:

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 2021 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-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.7: 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	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	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

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
	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-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	6.16E-02	1.48E-05					3.1E+01	4.6E-07
VOC	Benzene	71-43-2	A	N	5.30E-04	7.36E-07	7.8E-03		2.4E-09		3.0E-02	2.4E-05
VOC	2-Butanone	78-93-3	ID	N	5.10E-03	1.17E-06					5.0E+00	2.2E-07
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.30E-04	1.62E-07						
VOC	Toluene	108-88-3	ID	N	3.10E-04	4.17E-07					5.0E+00	8.0E-08
VOC	Trichloroethene	79-01-6	HC	Y	4.20E-03	6.76E-06	4.1E-03	0.2439	1.6E-08		2.0E-03	3.2E-03
							Cumulative Risk:		2E-08		**HI:**	3E-03

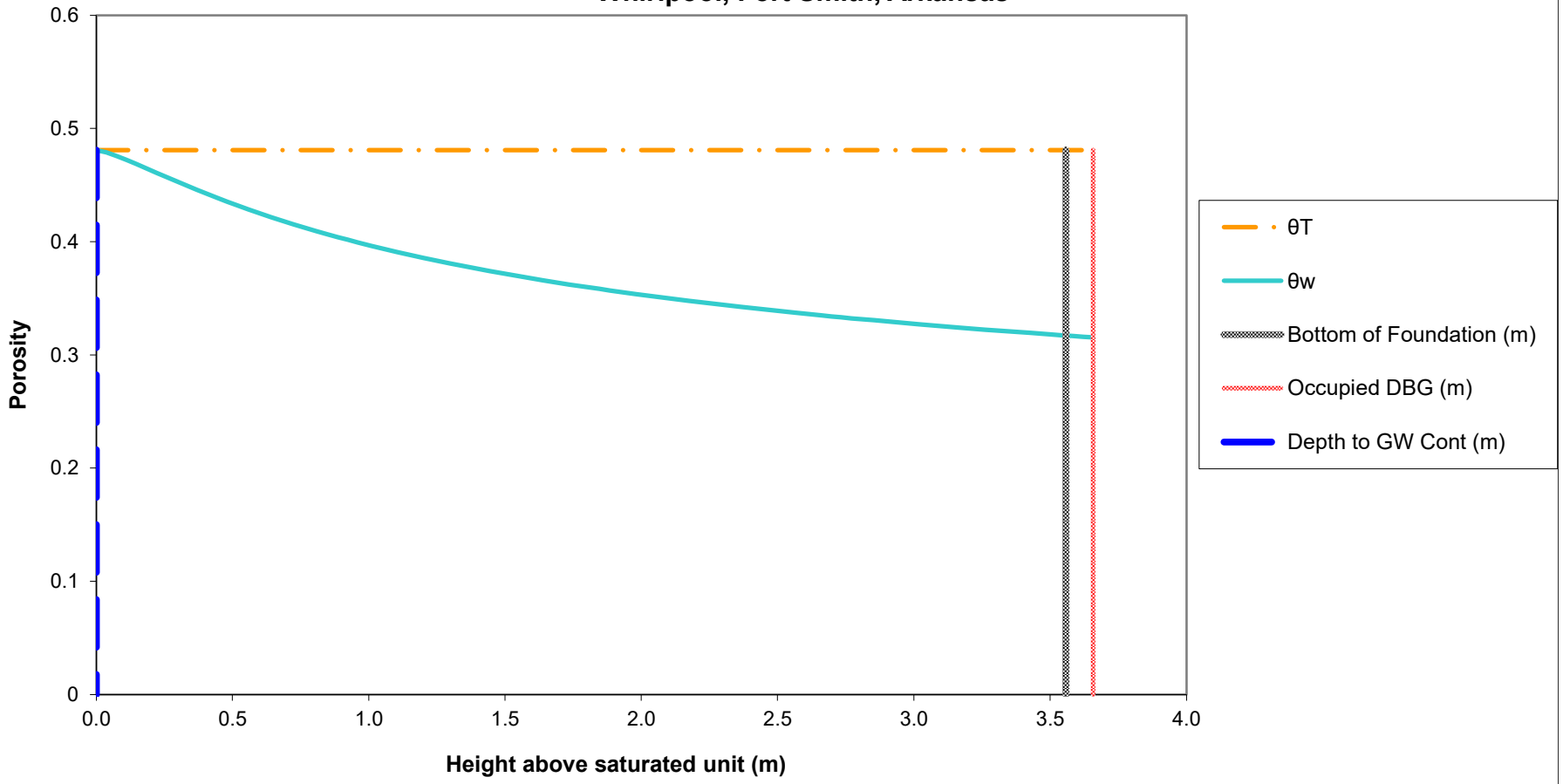
Note:

f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.

Only VOCs detected in the Annual 2021 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.9: 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.10: 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	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
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20

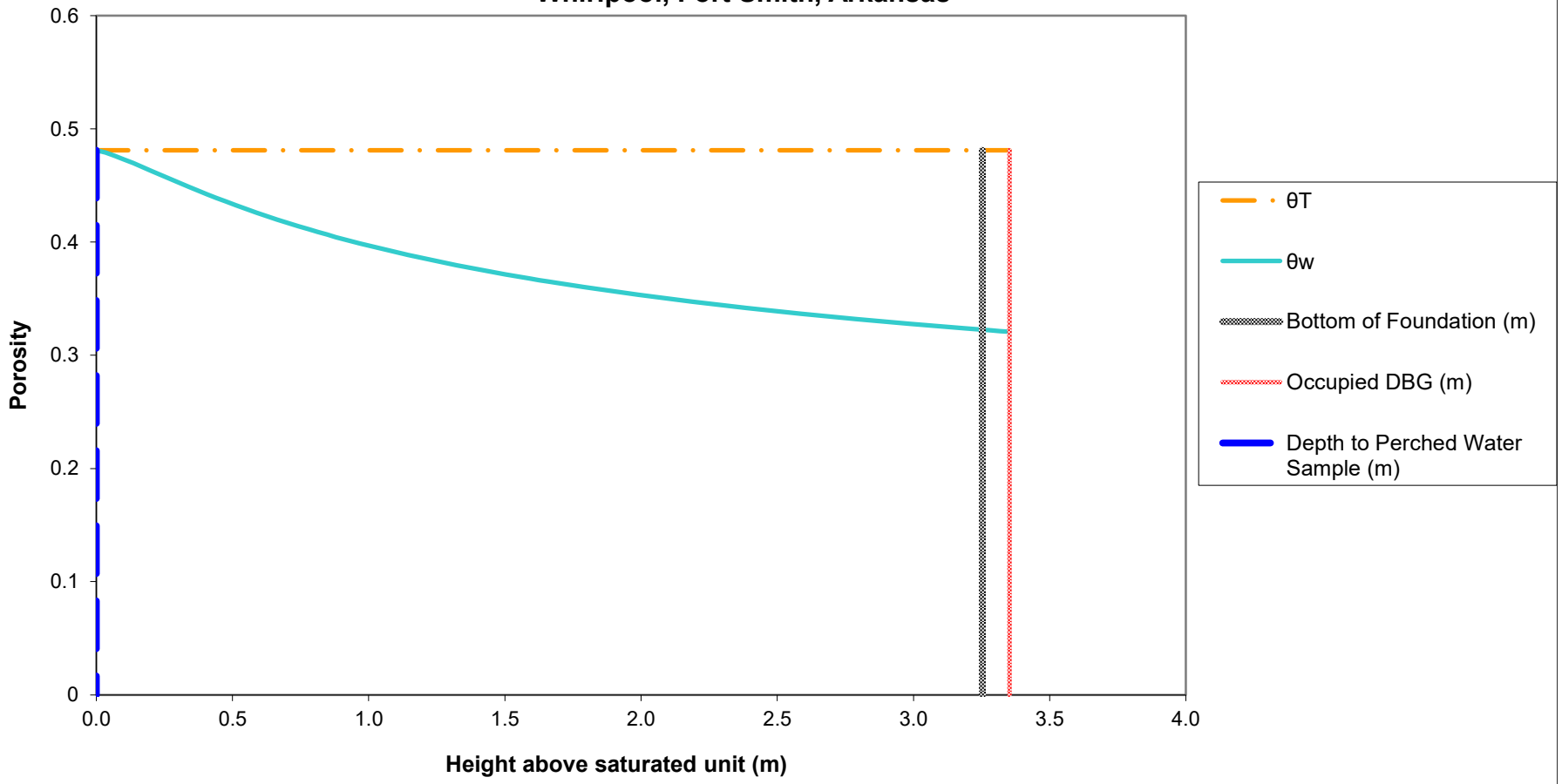
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, 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 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	cis-1,2-Dichloroethene	156-59-2	ID	N	1.90E-03	2.33E-06						
VOC	Trichloroethene	79-01-6	HC	Y	9.11E-02	1.46E-04	4.1E-03	0.2439	3.4E-07		2.0E-03	7.0E-02
							Cumulative Risk:		3E-07		**HI:**	7E-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 2021 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.12: 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.13: 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	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.25E-01	2.87E-04	1.22E-03	2.73E-03	3.34E-06	2.71E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.03E-04	3.84E-03	2.73E-03	1.05E-05	1.24E-03
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	2.81E-01	9.78E-02	5.51E-04	2.35E-03	2.73E-03	6.41E-06	1.81E-03
VOC	Toluene	108-88-3	7.52E-01	7.43E-05	1.80E-01	1.20E-01	6.43E-04	2.74E-03	2.73E-03	7.49E-06	1.35E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.09E-01	4.82E-04	2.06E-03	2.73E-03	5.62E-06	1.62E-03
VOC	Vinyl Chloride	75-01-4	9.16E-01	1.06E-04	9.00E-01	1.47E-01	3.16E-04	1.35E-03	2.73E-03	3.68E-06	3.31E-03

Notes:	Crack Soil and Building Characteristics			Crack Soil
	SCS Soil texture class			Sand
	Bulk density	kg/L	ρ_b	1.66
	Total porosity	L/L-soil	θ_T	0.375
	Water-filled porosity	L/L-soil	θ_w	0.055
	Air-filled porosity	L/L-soil	θ_a	0.320
	Residual saturation	L/L-soil	θ_r	0.053
	Hydraulic conductivity	cm/s	K	7.4E-03
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307
	Density of water	g/cm^3	ρ_w	1.0
	Gravitational acceleration	cm/s^2	g	980.7
	Intrinsic permeability	cm^2	k	9.9E-08
	Relative saturation	unitless	S_e	0.005
	van Genuchten N	unitless	N	3.177
	van Genuchten M	unitless	M	0.685
	Relative air permeability	unitless	k_{rg}	0.997
	Permeability to vapor	cm^2	k_v	9.89E-08
	Distance from building foundation to source	m	L_{T-gw}	3.25
	Bldg foundation thickness	m	L_{crack}	0.1
	Bldg foundation length	m		10.00
	Bldg foundation width	m		10.00
	Bldg occupied height	m		2.44
	Bldg occupied volume	m^3		244.00
	Occupied depth below ground	m		0.0
	Bldg area for vapor intrusion	m^2	A_B	100.0
	Ratio of A_{crack} to A_B		η	4E-04
	Area of cracks	m^2	A_{crack}	4E-02
	Air exchange rate	$hour^{-1}$	ach	0.45
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03
	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 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	2.30E-04	3.20E-07	7.8E-03		1.0E-09		3.0E-02	1.0E-05
VOC	1,1-Dichloroethene	75-35-4	C	N	1.50E-03	4.06E-06					2.0E-01	1.9E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.24E-02	1.54E-05						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	4.40E-04	7.94E-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	1.77E-01	2.86E-04	4.1E-03	0.2439	6.6E-07		2.0E-03	1.4E-01
VOC	Vinyl Chloride	75-01-4	A	N	3.30E-04	1.09E-06	4.4E-03		6.8E-09		1.0E-01	1.0E-05
							Cumulative Risk:		7E-07		**HI:**	1E-01

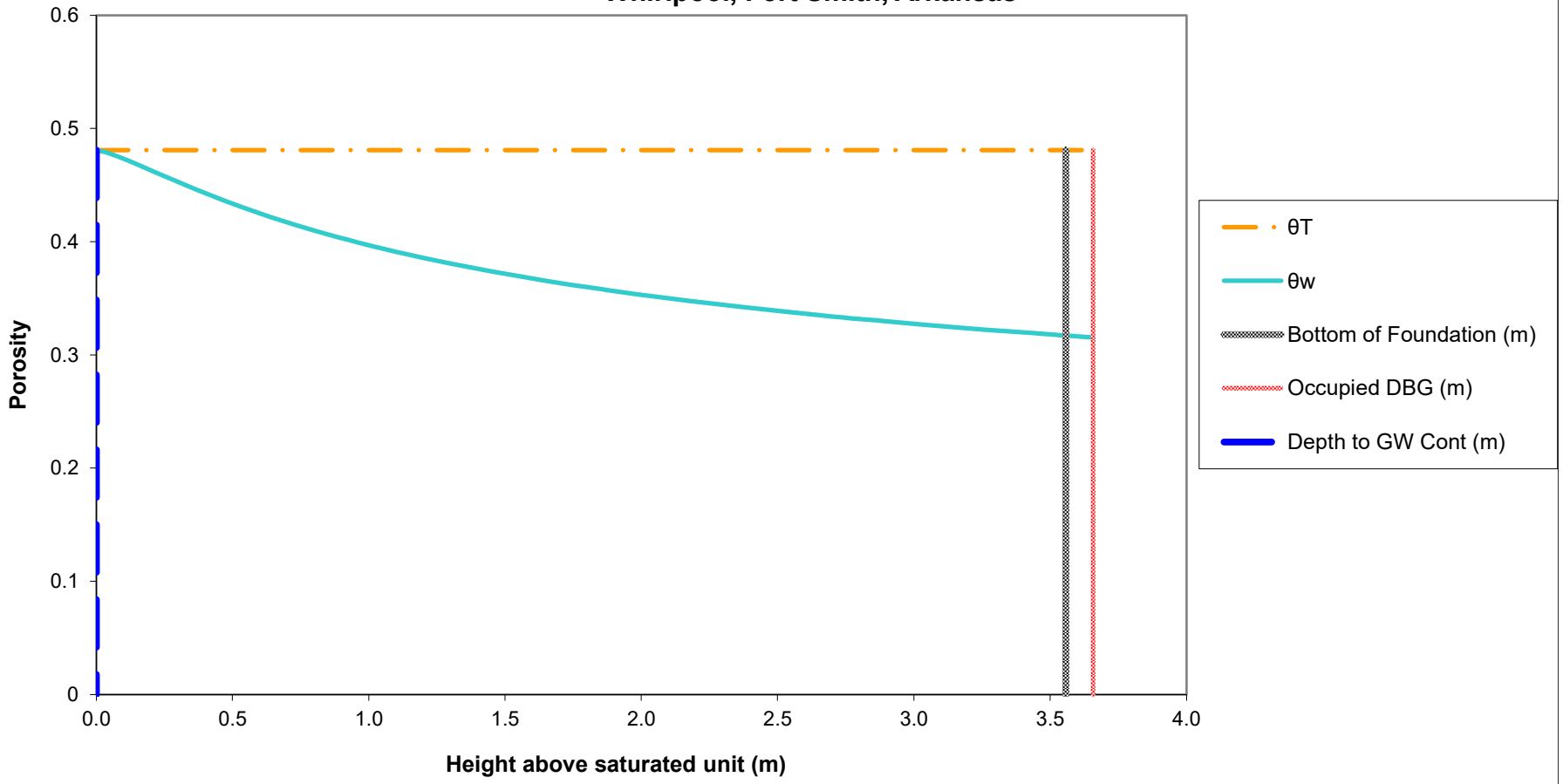
Note:

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 2021 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.15: 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.16: 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	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.25E-01	3.12E-04	1.22E-03	2.73E-03	3.32E-06	2.69E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.72E-04	3.78E-03	2.73E-03	1.03E-05	1.22E-03
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	2.81E-01	9.81E-02	5.96E-04	2.32E-03	2.73E-03	6.35E-06	1.79E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.23E-04	2.04E-03	2.73E-03	5.57E-06	1.60E-03
VOC	Vinyl Chloride	75-01-4	9.16E-01	1.06E-04	9.00E-01	1.47E-01	3.44E-04	1.34E-03	2.73E-03	3.66E-06	3.30E-03

Notes:	Crack Soil and Building Characteristics			Crack Soil
	SCS Soil texture class			Sand
	Bulk density	kg/L	ρ_b	1.66
	Total porosity	L/L-soil	θ_T	0.375
	Water-filled porosity	L/L-soil	θ_w	0.054
	Air-filled porosity	L/L-soil	θ_a	0.321
	Residual saturation	L/L-soil	θ_r	0.053
	Hydraulic conductivity	cm/s	K	7.4E-03
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307
	Density of water	g/cm^3	ρ_w	1.0
	Gravitational acceleration	cm/s^2	g	980.7
	Intrinsic permeability	cm^2	k	9.9E-08
	Relative saturation	unitless	S_e	0.004
	van Genuchten N	unitless	N	3.177
	van Genuchten M	unitless	M	0.685
	Relative air permeability	unitless	k_{rg}	0.998
	Permeability to vapor	cm^2	k_v	9.89E-08
	Distance from building foundation to source	m	L_{T-gw}	3.56
	Bldg foundation thickness	m	L_{crack}	0.1
	Bldg foundation length	m		10.00
	Bldg foundation width	m		10.00
	Bldg occupied height	m		2.44
	Bldg occupied volume	m^3		244.00
	Occupied depth below ground	m		0.0
	Bldg area for vapor intrusion	m^2	A_B	100.0
	Ratio of A_{crack} to A_B		η	4E-04
	Area of cracks	m^2	A_{crack}	4E-02
	Air exchange rate	$hour^{-1}$	ach	0.45
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03
	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.17: 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	1,1-Dichloroethene	75-35-4	C	N	1.80E-03	4.84E-06					2.0E-01	2.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.70E-02	2.08E-05						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	3.80E-04	6.79E-07						
VOC	Trichloroethene	79-01-6	HC	Y	3.10E-01	4.97E-04	4.1E-03	0.2439	1.2E-06		2.0E-03	2.4E-01
VOC	Vinyl Chloride	75-01-4	A	N	1.93E-02	6.36E-05	4.4E-03		4.0E-07		1.0E-01	6.1E-04
							Cumulative Risk:		2E-06		**HI:**	2E-01

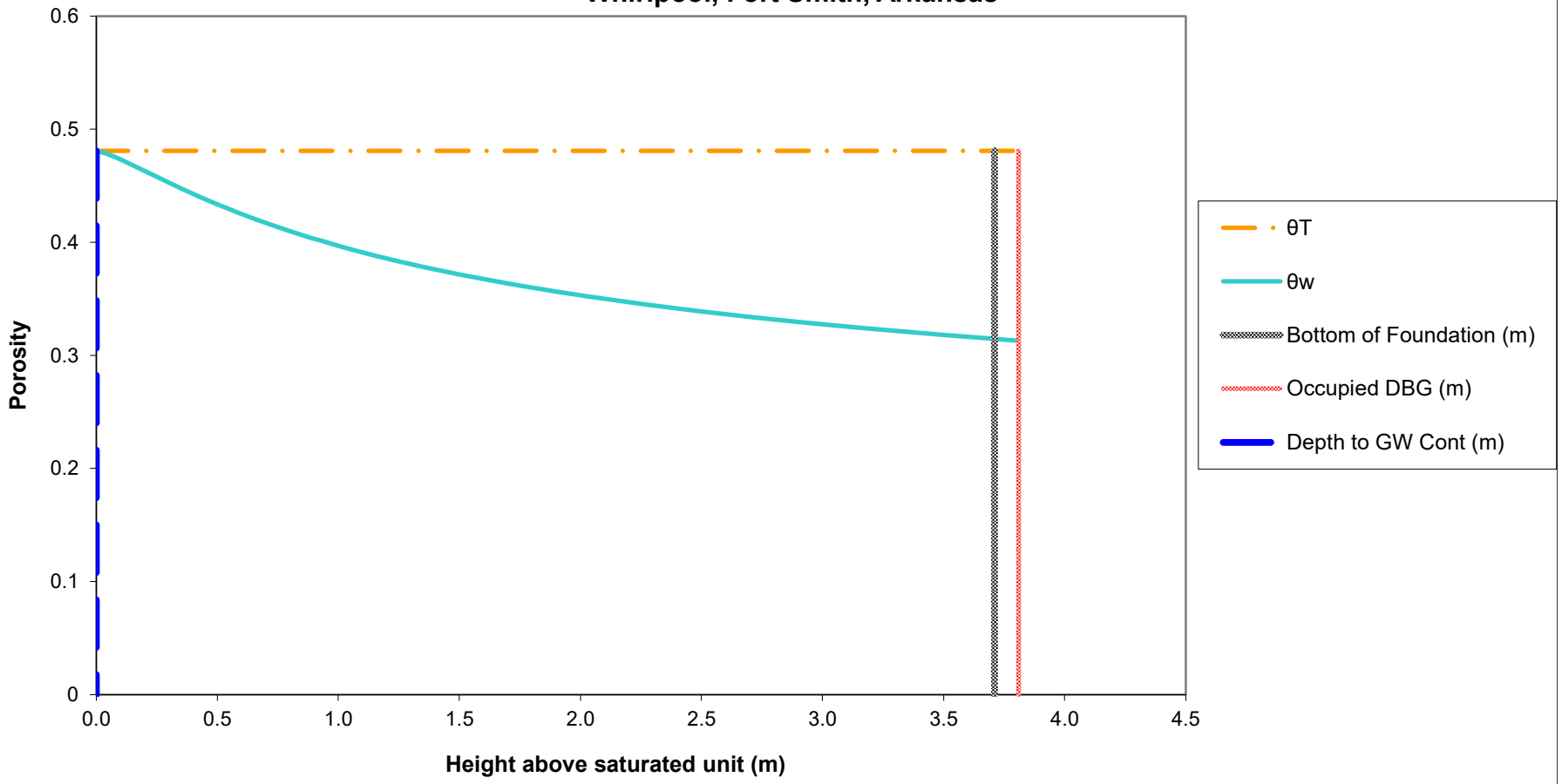
Note:

f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.

Only VOCs detected in the Annual 2021 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.18: 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.

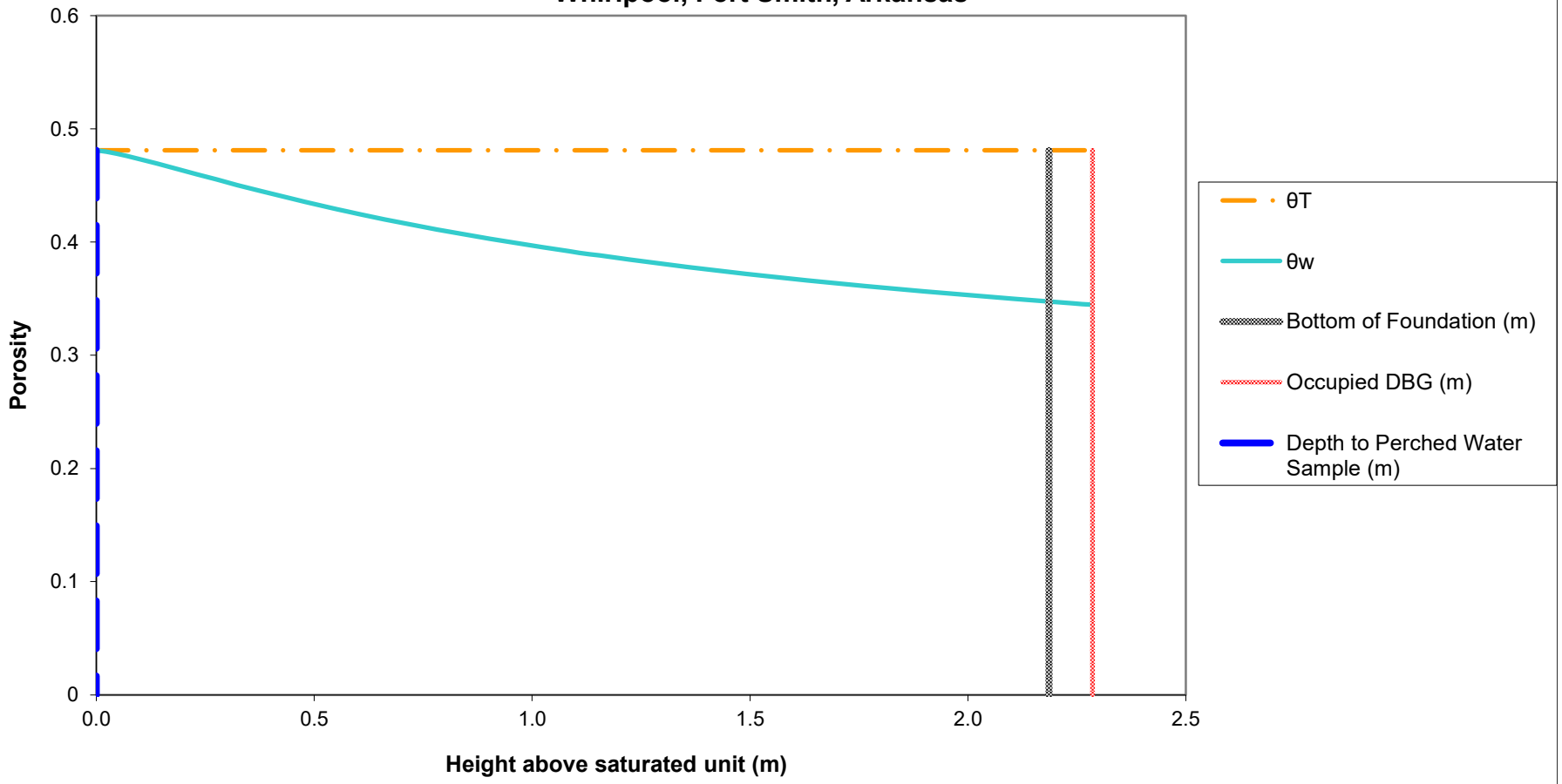
Attachment C.19: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-12 (Parcel 4) Whirlpool, Fort Smith, Arkansas

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	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.43E-04	2.03E-03	2.73E-03	5.54E-06	1.60E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.054							
	Air-filled porosity	L/L-soil	θ_a	0.321							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	K	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	g	980.7							
	Intrinsic permeability	cm^2	k	9.9E-08							
	Relative saturation	unitless	S_e	0.004							
	van Genuchten N	unitless	N	3.177							
	van Genuchten M	unitless	M	0.685							
	Relative air permeability	unitless	k_{rg}	0.998							
	Permeability to vapor	cm^2	k_v	9.89E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.71							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	ach	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	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.20: 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	Trichloroethene	79-01-6	HC	Y	3.10E-04	4.95E-07	4.1E-03	0.2439	1.1E-09		2.0E-03	2.4E-04
							Cumulative Risk:		1E-09		**HI:**	2E-04
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2021 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.21: 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.

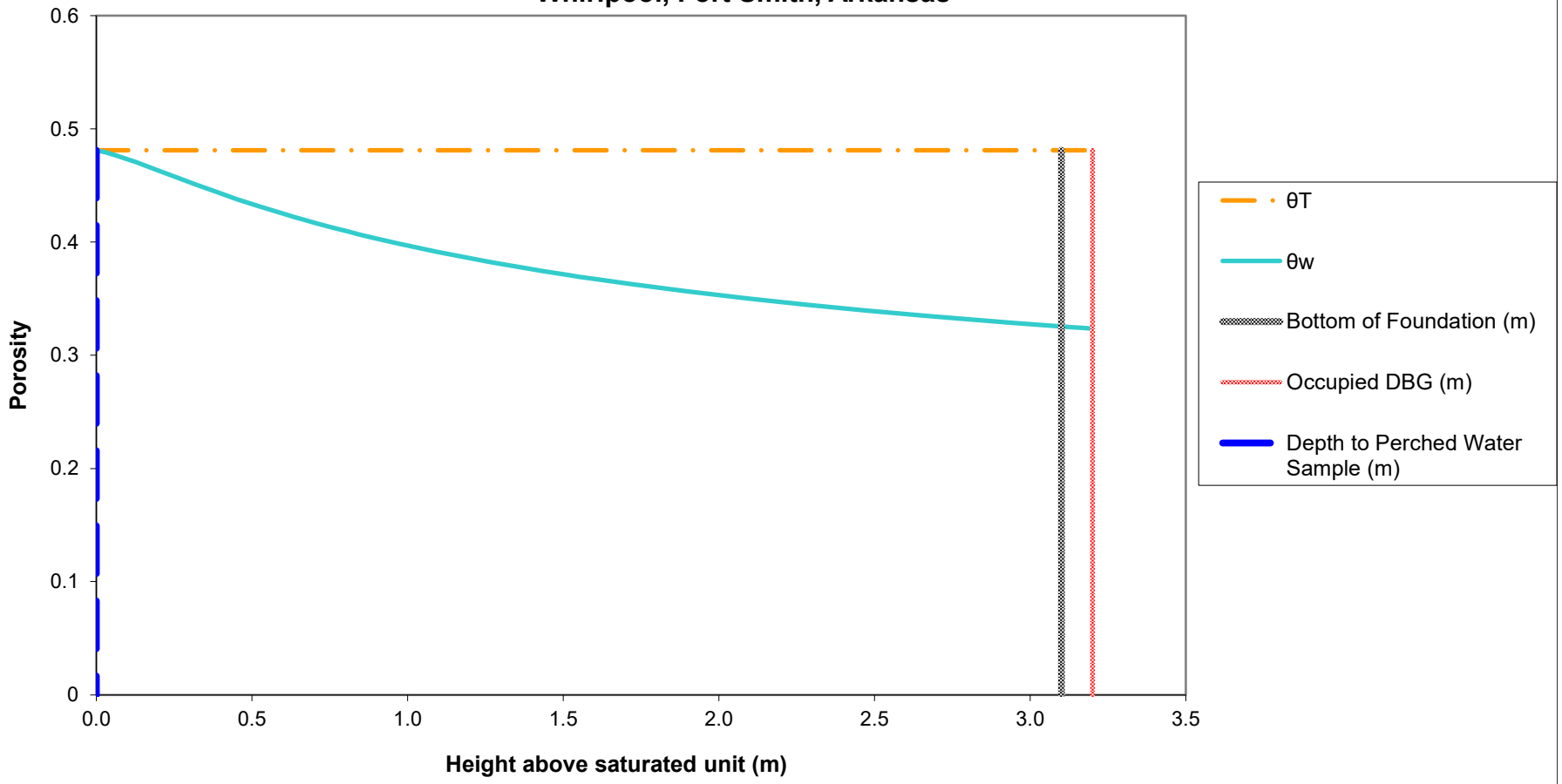
Attachment C.22: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at MW-178 (Parcel 5) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.68E-01	1.93E-02	1.09E-01	2.73E-03	2.99E-04	3.41E-04
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
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							
	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.23: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at MW-178 (Parcel 5) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	2.80E-03	9.54E-07					3.1E+01	3.0E-08
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.90E-04	2.51E-07						
							Cumulative Risk:				**HI:**	3E-08
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 2021 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.24: 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.25: 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	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	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
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20

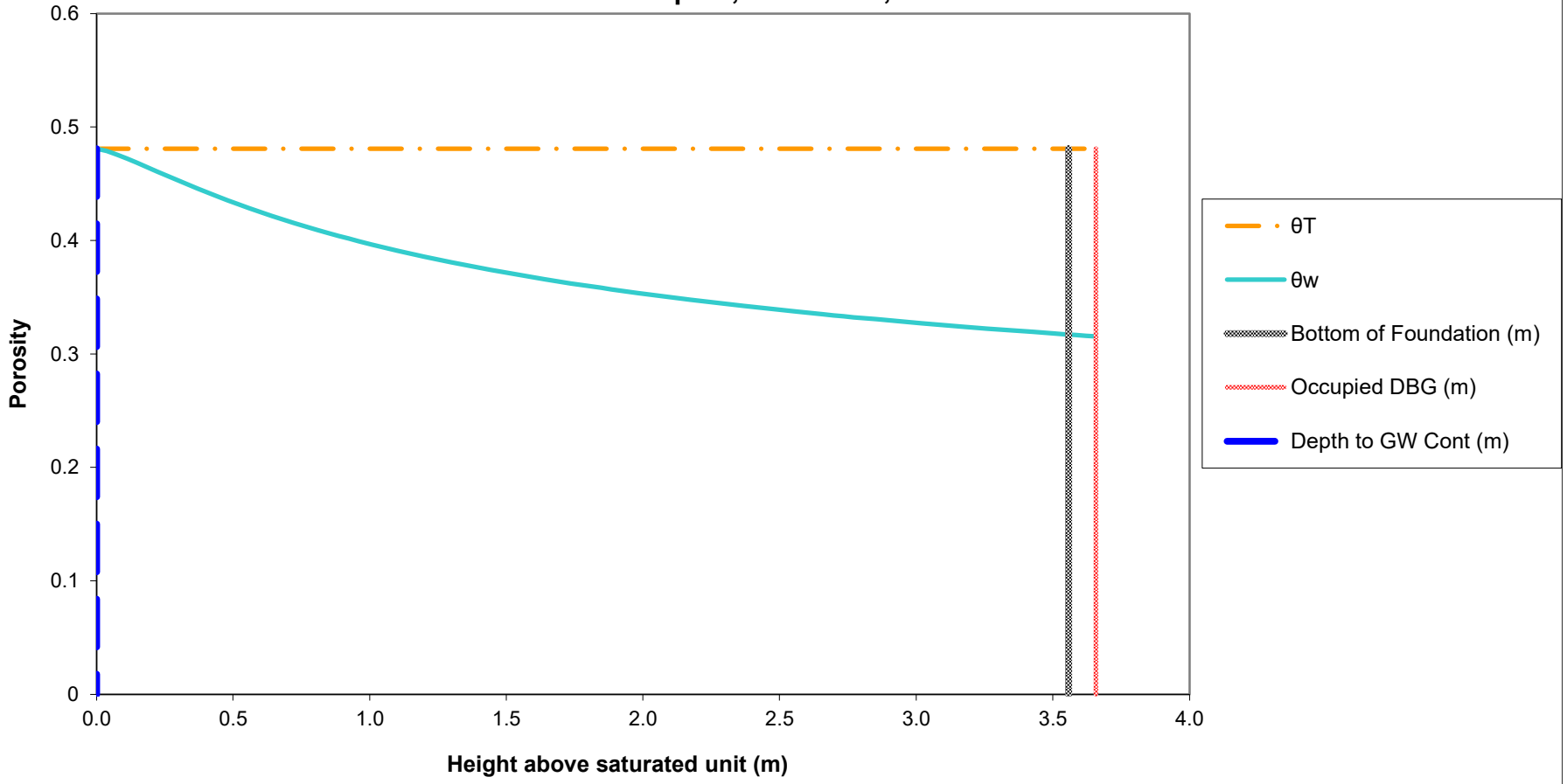
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, 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.26: 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	cis-1,2-Dichloroethene	156-59-2	ID	N	1.10E-03	1.37E-06						
VOC	Trichloroethene	79-01-6	HC	Y	2.56E-02	4.12E-05	4.1E-03	0.2439	9.5E-08		2.0E-03	2.0E-02
							Cumulative Risk:		1E-07		**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 2021 groundwater 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.27: 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.28: 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	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
	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.29: 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	cis-1,2-Dichloroethene	156-59-2	ID	N	1.10E-03	1.35E-06						
VOC	Trichloroethene	79-01-6	HC	Y	2.01E-02	3.22E-05	4.1E-03	0.2439	7.5E-08		2.0E-03	1.5E-02
							Cumulative Risk:		7E-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 2021 groundwater sample at MW-179 (Parcel 5) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C

Laboratory Analytical Data

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

November 15, 2021

Ian McQuaig
Ramboll US Consulting, Inc.
1807 Park 270 Dr.
Saint Louis, MO 63146

RE: Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Dear Ian McQuaig:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,

Carolynne Trout

Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures

cc: Haley Ahlers, Ramboll US Consulting, Inc.

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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

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(612)607-1700

SAMPLE SUMMARY

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10584567001	**AA-1-202110**	Air	10/19/21 14:31	10/22/21 12:50
10584567002	**Z5-OF-IA-202110**	Air	10/19/21 19:26	10/22/21 12:50
10584567003	**Z6-1-IA-202110**	Air	10/19/21 15:59	10/22/21 12:50
10584567004	**Z5-1-IA-202110**	Air	10/19/21 14:41	10/22/21 12:50
10584567005	**Z6-2-IA-202110**	Air	10/19/21 14:55	10/22/21 12:50
10584567006	**Z6-2-IA-202110 DUP**	Air	10/19/21 14:55	10/22/21 12:50
10584567007	**Z5-2-IA-202110**	Air	10/19/21 14:53	10/22/21 12:50
10584567008	**Z1-1-IA-202110**	Air	10/19/21 15:39	10/22/21 12:50
10584567009	**Z2-1-IA-202110**	Air	10/19/21 15:28	10/22/21 12:50
10584567010	**Z4-2-IA-202110**	Air	10/19/21 15:17	10/22/21 12:50
10584567011	**Z3-2-IA-202110**	Air	10/19/21 15:38	10/22/21 12:50
10584567012	**Z4-1-IA-202110**	Air	10/19/21 15:49	10/22/21 12:50
10584567013	**Z3-1-IA-202110**	Air	10/19/21 15:47	10/22/21 12:50
10584567014	**AA-2-202110**	Air	10/20/21 14:30	10/22/21 12:50
10584567015	**Z6-2-SS-202110**	Air	10/20/21 08:03	10/22/21 12:50
10584567016	**Z6-2-SS-202110 DUP**	Air	10/20/21 08:03	10/22/21 12:50
10584567017	**Z5-2-SS-202110**	Air	10/20/21 08:24	10/22/21 12:50
10584567018	**Z1-1-SS-202110**	Air	10/20/21 09:03	10/22/21 12:50
10584567019	**Z3-2-SS-202110**	Air	10/20/21 09:20	10/22/21 12:50
10584567020	**Z4-2-SS-202110**	Air	10/20/21 09:43	10/22/21 12:50
10584567021	**Z2-1-SS-202110**	Air	10/20/21 10:04	10/22/21 12:50
10584567022	**Z3-1-SS-202110**	Air	10/20/21 10:47	10/22/21 12:50
10584567023	**Z4-1-SS-202110**	Air	10/20/21 12:59	10/22/21 12:50
10584567024	**Z5-1-SS-202110**	Air	10/20/21 13:35	10/22/21 12:50
10584567025	**Z6-1-SS-202110**	Air	10/20/21 13:55	10/22/21 12:50
10584567026	**Z5-OF-SS-202110**	Air	10/20/21 14:13	10/22/21 12:50
10584567027	**Unused Canister #3225**	Air		10/22/21 12:50
10584567028	**Unused Canister #3763**	Air		10/22/21 12:50
10584567029	**Unused Canister #3650**	Air		10/22/21 12:50
10584567030	**Unused Canister #2686**	Air		10/22/21 12:50
10584567031	**Unused Canister #2817**	Air		10/22/21 12:50

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SAMPLE ANALYTE COUNT

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10584567001	**AA-1-202110**	TO-15	MJL	9
10584567002	**Z5-OF-IA-202110**	TO-15	MJL	9
10584567003	**Z6-1-IA-202110**	TO-15	MJL	9
10584567004	**Z5-1-IA-202110**	TO-15	MJL	9
10584567005	**Z6-2-IA-202110**	TO-15	MJL	9
10584567006	**Z6-2-IA-202110 DUP**	TO-15	MJL	9
10584567007	**Z5-2-IA-202110**	TO-15	MJL	9
10584567008	**Z1-1-IA-202110**	TO-15	MJL	9
10584567009	**Z2-1-IA-202110**	TO-15	MJL	9
10584567010	**Z4-2-IA-202110**	TO-15	MJL	9
10584567011	**Z3-2-IA-202110**	TO-15	MJL	9
10584567012	**Z4-1-IA-202110**	TO-15	MJL	9
10584567013	**Z3-1-IA-202110**	TO-15	MJL	9
10584567014	**AA-2-202110**	TO-15	MJL	9
10584567015	**Z6-2-SS-202110**	TO-15	MJL	9
10584567016	**Z6-2-SS-202110 DUP**	TO-15	MJL	9
10584567017	**Z5-2-SS-202110**	TO-15	MJL	9
10584567018	**Z1-1-SS-202110**	TO-15	MJL	9
10584567019	**Z3-2-SS-202110**	TO-15	MJL	9
10584567020	**Z4-2-SS-202110**	TO-15	MJL	9
10584567021	**Z2-1-SS-202110**	TO-15	MJL	9
10584567022	**Z3-1-SS-202110**	TO-15	MJL	9
10584567023	**Z4-1-SS-202110**	TO-15	MJL	9
10584567024	**Z5-1-SS-202110**	TO-15	MJL	9
10584567025	**Z6-1-SS-202110**	TO-15	MJL	9
10584567026	**Z5-OF-SS-202110**	TO-15	MJL	9

PASI-M = Pace Analytical Services - Minneapolis

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PROJECT NARRATIVE

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Method: **TO-15**
Description: TO15 MSV AIR
Client: Ramboll US Consulting, Inc
Date: November 15, 2021

General Information:
12 samples were analyzed for TO-15 by Pace Analytical Services Minneapolis. 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.

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.

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

QC Batch: 780461

R1: RPD value was outside control limits.
- DUP (Lab ID: 4157949)
  - Trichloroethene
  - Vinyl chloride

Additional Comments:

Analyte Comments:

QC Batch: 780461

C8: Result may be biased high due to carryover from previously analyzed sample.
- Z3-1-SS-202110 (Lab ID: 10584567022)
  - Trichloroethene
- Z4-2-SS-202110 (Lab ID: 10584567020)
  - Tetrachloroethene

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- DUP (Lab ID: 4157949)
  - Vinyl chloride

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PROJECT NARRATIVE

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Method: **TO-15**
Description: TO15 MSV AIR SIM SCAN
Client: Ramboll US Consulting, Inc
Date: November 15, 2021

General Information:
14 samples were analyzed for TO-15 by Pace Analytical Services Minneapolis. 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.

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.

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

Additional Comments:

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

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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: AA-1-202110 **Lab ID: 10584567001** Collected: 10/19/21 14:31 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/26/21 23:56	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/26/21 23:56	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/26/21 23:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/26/21 23:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/26/21 23:56	156-60-5	
Tetrachloroethene	**0.25**	ug/m3	0.11	1.64		10/26/21 23:56	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/26/21 23:56	71-55-6	
Trichloroethene	ND	ug/m3	0.090	1.64		10/26/21 23:56	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/26/21 23:56	75-01-4	

Sample: Z5-OF-IA-202110 **Lab ID: 10584567002** Collected: 10/19/21 19:26 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.17	2.01		10/27/21 00:31	75-34-3	
1,2-Dichloroethane	**0.48**	ug/m3	0.17	2.01		10/27/21 00:31	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.16	2.01		10/27/21 00:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.16	2.01		10/27/21 00:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.16	2.01		10/27/21 00:31	156-60-5	
Tetrachloroethene	**0.39**	ug/m3	0.14	2.01		10/27/21 00:31	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.22	2.01		10/27/21 00:31	71-55-6	
Trichloroethene	**5.1**	ug/m3	0.11	2.01		10/27/21 00:31	79-01-6	
Vinyl chloride	ND	ug/m3	0.052	2.01		10/27/21 00:31	75-01-4	

Sample: Z6-1-IA-202110 **Lab ID: 10584567003** Collected: 10/19/21 15:59 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 01:05	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 01:05	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 01:05	75-35-4	
cis-1,2-Dichloroethene	**0.15**	ug/m3	0.13	1.61		10/27/21 01:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 01:05	156-60-5	
Tetrachloroethene	**0.73**	ug/m3	0.11	1.61		10/27/21 01:05	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 01:05	71-55-6	
Trichloroethene	**1.8**	ug/m3	0.088	1.61		10/27/21 01:05	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 01:05	75-01-4	

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(612)607-1700

ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z5-1-IA-202110 **Lab ID: 10584567004** Collected: 10/19/21 14:41 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 01:40	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 01:40	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 01:40	75-35-4	
cis-1,2-Dichloroethene	**0.14**	ug/m3	0.13	1.64		10/27/21 01:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 01:40	156-60-5	
Tetrachloroethene	**0.72**	ug/m3	0.11	1.64		10/27/21 01:40	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/27/21 01:40	71-55-6	
Trichloroethene	**1.6**	ug/m3	0.090	1.64		10/27/21 01:40	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/27/21 01:40	75-01-4	

Sample: Z6-2-IA-202110 **Lab ID: 10584567005** Collected: 10/19/21 14:55 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 15:14	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 15:14	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 15:14	75-35-4	
cis-1,2-Dichloroethene	**0.17**	ug/m3	0.13	1.61		10/27/21 15:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 15:14	156-60-5	
Tetrachloroethene	**0.41**	ug/m3	0.11	1.61		10/27/21 15:14	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 15:14	71-55-6	
Trichloroethene	**4.9**	ug/m3	0.088	1.61		10/27/21 15:14	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 15:14	75-01-4	

Sample: Z6-2-IA-202110 DUP **Lab ID: 10584567006** Collected: 10/19/21 14:55 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.58		10/27/21 15:48	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.58		10/27/21 15:48	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.58		10/27/21 15:48	75-35-4	
cis-1,2-Dichloroethene	**0.17**	ug/m3	0.13	1.58		10/27/21 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.58		10/27/21 15:48	156-60-5	
Tetrachloroethene	**0.44**	ug/m3	0.11	1.58		10/27/21 15:48	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.58		10/27/21 15:48	71-55-6	
Trichloroethene	**4.8**	ug/m3	0.086	1.58		10/27/21 15:48	79-01-6	
Vinyl chloride	ND	ug/m3	0.041	1.58		10/27/21 15:48	75-01-4	

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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z5-2-IA-202110 **Lab ID: 10584567007** Collected: 10/19/21 14:53 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 16:23	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 16:23	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 16:23	75-35-4	
cis-1,2-Dichloroethene	**0.17**	ug/m3	0.13	1.64		10/27/21 16:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 16:23	156-60-5	
Tetrachloroethene	**0.42**	ug/m3	0.11	1.64		10/27/21 16:23	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/27/21 16:23	71-55-6	
Trichloroethene	**4.8**	ug/m3	0.090	1.64		10/27/21 16:23	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/27/21 16:23	75-01-4	

Sample: Z1-1-IA-202110 **Lab ID: 10584567008** Collected: 10/19/21 15:39 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 16:58	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 16:58	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 16:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 16:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 16:58	156-60-5	
Tetrachloroethene	**0.37**	ug/m3	0.11	1.61		10/27/21 16:58	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 16:58	71-55-6	
Trichloroethene	**0.38**	ug/m3	0.088	1.61		10/27/21 16:58	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 16:58	75-01-4	

Sample: Z2-1-IA-202110 **Lab ID: 10584567009** Collected: 10/19/21 15:28 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 17:33	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 17:33	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 17:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 17:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 17:33	156-60-5	
Tetrachloroethene	**0.57**	ug/m3	0.11	1.64		10/27/21 17:33	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/27/21 17:33	71-55-6	
Trichloroethene	**0.49**	ug/m3	0.090	1.64		10/27/21 17:33	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/27/21 17:33	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z4-2-IA-202110 **Lab ID: 10584567010** Collected: 10/19/21 15:17 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.14	1.68		11/10/21 15:26	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.14	1.68		11/10/21 15:26	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.14	1.68		11/10/21 15:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.14	1.68		11/10/21 15:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.14	1.68		11/10/21 15:26	156-60-5	
Tetrachloroethene	**0.69**	ug/m3	0.12	1.68		11/10/21 15:26	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.19	1.68		11/10/21 15:26	71-55-6	
Trichloroethene	**0.66**	ug/m3	0.092	1.68		11/10/21 15:26	79-01-6	
Vinyl chloride	ND	ug/m3	0.044	1.68		11/10/21 15:26	75-01-4	

Sample: Z3-2-IA-202110 **Lab ID: 10584567011** Collected: 10/19/21 15:38 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 18:42	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 18:42	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 18:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 18:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 18:42	156-60-5	
Tetrachloroethene	**0.43**	ug/m3	0.11	1.61		10/27/21 18:42	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 18:42	71-55-6	
Trichloroethene	**0.45**	ug/m3	0.088	1.61		10/27/21 18:42	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 18:42	75-01-4	

Sample: Z4-1-IA-202110 **Lab ID: 10584567012** Collected: 10/19/21 15:49 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:17	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:17	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:17	156-59-2	
trans-1,2-Dichloroethene	**0.66**	ug/m3	0.13	1.61		10/27/21 19:17	156-60-5	
Tetrachloroethene	**0.57**	ug/m3	0.11	1.61		10/27/21 19:17	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 19:17	71-55-6	
Trichloroethene	**0.67**	ug/m3	0.088	1.61		10/27/21 19:17	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 19:17	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z3-1-IA-202110 **Lab ID: 10584567013** Collected: 10/19/21 15:47 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:52	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:52	156-59-2	
trans-1,2-Dichloroethene	**0.29**	ug/m3	0.13	1.61		10/27/21 19:52	156-60-5	
Tetrachloroethene	**0.53**	ug/m3	0.11	1.61		10/27/21 19:52	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 19:52	71-55-6	
Trichloroethene	**0.51**	ug/m3	0.088	1.61		10/27/21 19:52	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 19:52	75-01-4	

Sample: AA-2-202110 **Lab ID: 10584567014** Collected: 10/20/21 14:30 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 20:27	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 20:27	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 20:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 20:27	156-60-5	
Tetrachloroethene	ND	ug/m3	0.11	1.61		10/27/21 20:27	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 20:27	71-55-6	
Trichloroethene	ND	ug/m3	0.088	1.61		10/27/21 20:27	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 20:27	75-01-4	

Sample: Z6-2-SS-202110 **Lab ID: 10584567015** Collected: 10/20/21 08:03 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 01:10	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 01:10	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 01:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 01:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 01:10	156-60-5	
Tetrachloroethene	**1.3**	ug/m3	1.3	1.83		10/30/21 01:10	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.83		10/30/21 01:10	71-55-6	
Trichloroethene	ND	ug/m3	1.0	1.83		10/30/21 01:10	79-01-6	
Vinyl chloride	ND	ug/m3	0.48	1.83		10/30/21 01:10	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z6-2-SS-202110 DUP **Lab ID: 10584567016** Collected: 10/20/21 08:03 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.8		10/30/21 06:29	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.8		10/30/21 06:29	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.8		10/30/21 06:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.8		10/30/21 06:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.8		10/30/21 06:29	156-60-5	
Tetrachloroethene	**1.6**	ug/m3	1.2	1.8		10/30/21 06:29	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.8		10/30/21 06:29	71-55-6	
Trichloroethene	ND	ug/m3	0.98	1.8		10/30/21 06:29	79-01-6	
Vinyl chloride	ND	ug/m3	0.47	1.8		10/30/21 06:29	75-01-4	

Sample: Z5-2-SS-202110 **Lab ID: 10584567017** Collected: 10/20/21 08:24 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.6	1.94		10/30/21 05:54	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.6	1.94		10/30/21 05:54	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.6	1.94		10/30/21 05:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.6	1.94		10/30/21 05:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	1.94		10/30/21 05:54	156-60-5	
Tetrachloroethene	**31.2**	ug/m3	1.3	1.94		10/30/21 05:54	127-18-4	
1,1,1-Trichloroethane	**114**	ug/m3	2.2	1.94		10/30/21 05:54	71-55-6	
Trichloroethene	**1560**	ug/m3	64.4	118		11/03/21 12:03	79-01-6	
Vinyl chloride	ND	ug/m3	0.50	1.94		10/30/21 05:54	75-01-4	

Sample: Z1-1-SS-202110 **Lab ID: 10584567018** Collected: 10/20/21 09:03 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 03:32	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 03:32	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 03:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 03:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 03:32	156-60-5	
Tetrachloroethene	**32.0**	ug/m3	3.7	2.71		11/02/21 17:09	127-18-4	
1,1,1-Trichloroethane	**2.1**	ug/m3	2.0	1.83		10/30/21 03:32	71-55-6	
Trichloroethene	**1.4**	ug/m3	1.0	1.83		10/30/21 03:32	79-01-6	
Vinyl chloride	ND	ug/m3	0.48	1.83		10/30/21 03:32	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z3-2-SS-202110 **Lab ID: 10584567019** Collected: 10/20/21 09:20 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.77		10/30/21 02:56	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.77		10/30/21 02:56	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.77		10/30/21 02:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.77		10/30/21 02:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.77		10/30/21 02:56	156-60-5	
Tetrachloroethene	**1020**	ug/m3	73.2	53.1		11/02/21 19:22	127-18-4	
1,1,1-Trichloroethane	**10**	ug/m3	2.0	1.77		10/30/21 02:56	71-55-6	
Trichloroethene	**323**	ug/m3	29.0	53.1		11/02/21 19:22	79-01-6	
Vinyl chloride	ND	ug/m3	0.46	1.77		10/30/21 02:56	75-01-4	

Sample: Z4-2-SS-202110 **Lab ID: 10584567020** Collected: 10/20/21 09:43 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**4.2**	ug/m3	1.4	1.74		10/30/21 02:21	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.4	1.74		10/30/21 02:21	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 02:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 02:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 02:21	156-60-5	
Tetrachloroethene	**20.2**	ug/m3	1.2	1.74		10/30/21 02:21	127-18-4	C8
1,1,1-Trichloroethane	**8.0**	ug/m3	1.9	1.74		10/30/21 02:21	71-55-6	
Trichloroethene	**1.5**	ug/m3	0.95	1.74		10/30/21 02:21	79-01-6	
Vinyl chloride	ND	ug/m3	0.45	1.74		10/30/21 02:21	75-01-4	

Sample: Z2-1-SS-202110 **Lab ID: 10584567021** Collected: 10/20/21 10:04 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.4	1.74		10/30/21 01:45	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.4	1.74		10/30/21 01:45	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 01:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 01:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 01:45	156-60-5	
Tetrachloroethene	**18500**	ug/m3	576	417.6		11/02/21 20:23	127-18-4	
1,1,1-Trichloroethane	**63.2**	ug/m3	1.9	1.74		10/30/21 01:45	71-55-6	
Trichloroethene	**17.1**	ug/m3	0.95	1.74		10/30/21 01:45	79-01-6	
Vinyl chloride	ND	ug/m3	0.45	1.74		10/30/21 01:45	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z3-1-SS-202110 **Lab ID: 10584567022** Collected: 10/20/21 10:47 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**348**	ug/m3	41.5	50.4		10/30/21 07:34	75-34-3	
1,2-Dichloroethane	ND	ug/m3	41.5	50.4		10/30/21 07:34	107-06-2	
1,1-Dichloroethene	ND	ug/m3	40.6	50.4		10/30/21 07:34	75-35-4	
cis-1,2-Dichloroethene	**121**	ug/m3	40.6	50.4		10/30/21 07:34	156-59-2	
trans-1,2-Dichloroethene	**1030**	ug/m3	40.6	50.4		10/30/21 07:34	156-60-5	
Tetrachloroethene	**406**	ug/m3	34.7	50.4		10/30/21 07:34	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	55.9	50.4		10/30/21 07:34	71-55-6	
Trichloroethene	**53.0**	ug/m3	27.5	50.4		10/30/21 07:34	79-01-6	C8
Vinyl chloride	**44500**	ug/m3	1680	6451		11/02/21 20:53	75-01-4	

Sample: Z4-1-SS-202110 **Lab ID: 10584567023** Collected: 10/20/21 12:59 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.87		10/30/21 05:18	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.87		10/30/21 05:18	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 05:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 05:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 05:18	156-60-5	
Tetrachloroethene	**97.7**	ug/m3	1.3	1.87		10/30/21 05:18	127-18-4	
1,1,1-Trichloroethane	**29.6**	ug/m3	2.1	1.87		10/30/21 05:18	71-55-6	
Trichloroethene	**7.4**	ug/m3	1.0	1.87		10/30/21 05:18	79-01-6	
Vinyl chloride	**1.2**	ug/m3	0.49	1.87		10/30/21 05:18	75-01-4	

Sample: Z5-1-SS-202110 **Lab ID: 10584567024** Collected: 10/20/21 13:35 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.87		10/30/21 07:04	75-34-3	
1,2-Dichloroethane	**2.2**	ug/m3	1.5	1.87		10/30/21 07:04	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 07:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 07:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 07:04	156-60-5	
Tetrachloroethene	**152**	ug/m3	1.3	1.87		10/30/21 07:04	127-18-4	
1,1,1-Trichloroethane	**71.0**	ug/m3	2.1	1.87		10/30/21 07:04	71-55-6	
Trichloroethene	**1280**	ug/m3	30.6	56.1		11/02/21 18:51	79-01-6	
Vinyl chloride	**2.3**	ug/m3	0.49	1.87		10/30/21 07:04	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z6-1-SS-202110 **Lab ID: 10584567025** Collected: 10/20/21 13:55 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**771**	ug/m3	88.9	108		11/02/21 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.8		10/30/21 04:07	107-06-2	
1,1-Dichloroethene	**7.6**	ug/m3	1.5	1.8		10/30/21 04:07	75-35-4	
cis-1,2-Dichloroethene	**29.6**	ug/m3	1.5	1.8		10/30/21 04:07	156-59-2	
trans-1,2-Dichloroethene	**8.6**	ug/m3	1.5	1.8		10/30/21 04:07	156-60-5	
Tetrachloroethene	**1510**	ug/m3	149	108		11/02/21 19:52	127-18-4	
1,1,1-Trichloroethane	**3600**	ug/m3	120	108		11/02/21 19:52	71-55-6	
Trichloroethene	**185**	ug/m3	0.98	1.8		10/30/21 04:07	79-01-6	
Vinyl chloride	ND	ug/m3	0.47	1.8		10/30/21 04:07	75-01-4	

Sample: Z5-OF-SS-202110 **Lab ID: 10584567026** Collected: 10/20/21 14:13 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**4.7**	ug/m3	1.7	2.02		10/30/21 04:43	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.7	2.02		10/30/21 04:43	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.6	2.02		10/30/21 04:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.6	2.02		10/30/21 04:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	2.02		10/30/21 04:43	156-60-5	
Tetrachloroethene	**106**	ug/m3	4.1	2.99		11/02/21 18:21	127-18-4	
1,1,1-Trichloroethane	**33.4**	ug/m3	2.2	2.02		10/30/21 04:43	71-55-6	
Trichloroethene	**33.1**	ug/m3	1.1	2.02		10/30/21 04:43	79-01-6	
Vinyl chloride	ND	ug/m3	0.53	2.02		10/30/21 04:43	75-01-4	

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 780461
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567015, 10584567016, 10584567017, 10584567018, 10584567019, 10584567020, 10584567021, 10584567022, 10584567023, 10584567024, 10584567025, 10584567026

METHOD BLANK: 4156570
Matrix: Air
Associated Lab Samples: 10584567015, 10584567016, 10584567017, 10584567018, 10584567019, 10584567020, 10584567021, 10584567022, 10584567023, 10584567024, 10584567025, 10584567026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	10/29/21 11:52	
1,1-Dichloroethane	ug/m3	ND	0.82	10/29/21 11:52	
1,1-Dichloroethene	ug/m3	ND	0.81	10/29/21 11:52	
1,2-Dichloroethane	ug/m3	ND	0.82	10/29/21 11:52	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	10/29/21 11:52	
Tetrachloroethene	ug/m3	ND	0.69	10/29/21 11:52	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	10/29/21 11:52	
Trichloroethene	ug/m3	ND	0.55	10/29/21 11:52	
Vinyl chloride	ug/m3	ND	0.26	10/29/21 11:52	

LABORATORY CONTROL SAMPLE: 4156571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	59.3	62.0	105	70-130	
1,1-Dichloroethane	ug/m3	43.9	44.3	101	70-133	
1,1-Dichloroethene	ug/m3	43.5	38.2	88	70-130	
1,2-Dichloroethane	ug/m3	44.4	45.8	103	70-132	
cis-1,2-Dichloroethene	ug/m3	43.4	44.1	101	70-137	
Tetrachloroethene	ug/m3	73.4	73.6	100	70-130	
trans-1,2-Dichloroethene	ug/m3	43.6	42.5	98	70-130	
Trichloroethene	ug/m3	58.4	58.4	100	70-130	
Vinyl chloride	ug/m3	28	25.6	91	70-137	

SAMPLE DUPLICATE: 4157949

Parameter	Units	10584567022 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	17.1J		25	
1,1-Dichloroethane	ug/m3	348	338	3	25	
1,1-Dichloroethene	ug/m3	ND	11J		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	121	113	6	25	
Tetrachloroethene	ug/m3	406	377	7	25	
trans-1,2-Dichloroethene	ug/m3	1030	971	6	25	
Trichloroethene	ug/m3	53.0	37.7	34	25	R1
Vinyl chloride	ug/m3	44500	21700	69	25	E,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 779479
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR SIM SCAN
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567001, 10584567002, 10584567003, 10584567004

METHOD BLANK: 4151358 Matrix: Air
Associated Lab Samples: 10584567001, 10584567002, 10584567003, 10584567004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.11	10/26/21 11:56	
1,1-Dichloroethane	ug/m3	ND	0.082	10/26/21 11:56	
1,1-Dichloroethene	ug/m3	ND	0.081	10/26/21 11:56	
1,2-Dichloroethane	ug/m3	ND	0.082	10/26/21 11:56	
cis-1,2-Dichloroethene	ug/m3	ND	0.081	10/26/21 11:56	
Tetrachloroethene	ug/m3	ND	0.069	10/26/21 11:56	
trans-1,2-Dichloroethene	ug/m3	ND	0.081	10/26/21 11:56	
Trichloroethene	ug/m3	ND	0.055	10/26/21 11:56	
Vinyl chloride	ug/m3	ND	0.026	10/26/21 11:56	

LABORATORY CONTROL SAMPLE: 4151359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	0.59	0.56	95	70-130	
1,1-Dichloroethane	ug/m3	0.44	0.42	95	70-133	
1,1-Dichloroethene	ug/m3	0.44	0.41	95	70-130	
1,2-Dichloroethane	ug/m3	0.44	0.42	94	70-132	
cis-1,2-Dichloroethene	ug/m3	0.43	0.42	98	70-137	
Tetrachloroethene	ug/m3	0.73	0.70	95	70-130	
trans-1,2-Dichloroethene	ug/m3	0.44	0.43	98	70-130	
Trichloroethene	ug/m3	0.58	0.58	100	70-130	
Vinyl chloride	ug/m3	0.28	0.27	96	70-137	

SAMPLE DUPLICATE: 4152351

Parameter	Units	10582126013 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	.031J		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	0.18	0.18	1	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 779758
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR SIM SCAN
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567005, 10584567006, 10584567007, 10584567008, 10584567009, 10584567011, 10584567012, 10584567013, 10584567014

METHOD BLANK: 4152813
Matrix: Air
Associated Lab Samples: 10584567005, 10584567006, 10584567007, 10584567008, 10584567009, 10584567011, 10584567012, 10584567013, 10584567014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.11	10/27/21 10:54	
1,1-Dichloroethane	ug/m3	ND	0.082	10/27/21 10:54	
1,1-Dichloroethene	ug/m3	ND	0.081	10/27/21 10:54	
1,2-Dichloroethane	ug/m3	ND	0.082	10/27/21 10:54	
cis-1,2-Dichloroethene	ug/m3	ND	0.081	10/27/21 10:54	
Tetrachloroethene	ug/m3	ND	0.069	10/27/21 10:54	
trans-1,2-Dichloroethene	ug/m3	ND	0.081	10/27/21 10:54	
Trichloroethene	ug/m3	ND	0.055	10/27/21 10:54	
Vinyl chloride	ug/m3	ND	0.026	10/27/21 10:54	

LABORATORY CONTROL SAMPLE: 4152814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	0.59	0.58	99	70-130	
1,1-Dichloroethane	ug/m3	0.44	0.42	97	70-133	
1,1-Dichloroethene	ug/m3	0.44	0.42	96	70-130	
1,2-Dichloroethane	ug/m3	0.44	0.42	95	70-132	
cis-1,2-Dichloroethene	ug/m3	0.43	0.45	105	70-137	
Tetrachloroethene	ug/m3	0.73	0.76	104	70-130	
trans-1,2-Dichloroethene	ug/m3	0.44	0.44	101	70-130	
Trichloroethene	ug/m3	0.58	0.60	103	70-130	
Vinyl chloride	ug/m3	0.28	0.28	100	70-137	

SAMPLE DUPLICATE: 4154283

Parameter	Units	10584567014 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	.095J		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	.084J		25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 782843
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR SIM SCAN
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567010

METHOD BLANK: 4167911
Matrix: Air
Associated Lab Samples: 10584567010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.11	11/10/21 11:21	
1,1-Dichloroethane	ug/m3	ND	0.082	11/10/21 11:21	
1,1-Dichloroethene	ug/m3	ND	0.081	11/10/21 11:21	
1,2-Dichloroethane	ug/m3	ND	0.082	11/10/21 11:21	
cis-1,2-Dichloroethene	ug/m3	ND	0.081	11/10/21 11:21	
Tetrachloroethene	ug/m3	ND	0.069	11/10/21 11:21	
trans-1,2-Dichloroethene	ug/m3	ND	0.081	11/10/21 11:21	
Trichloroethene	ug/m3	ND	0.055	11/10/21 11:21	
Vinyl chloride	ug/m3	ND	0.026	11/10/21 11:21	

LABORATORY CONTROL SAMPLE: 4167912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	0.59	0.64	107	70-130	
1,1-Dichloroethane	ug/m3	0.44	0.47	106	70-133	
1,1-Dichloroethene	ug/m3	0.44	0.47	108	70-130	
1,2-Dichloroethane	ug/m3	0.44	0.51	114	70-132	
cis-1,2-Dichloroethene	ug/m3	0.43	0.47	107	70-137	
Tetrachloroethene	ug/m3	0.73	0.81	110	70-130	
trans-1,2-Dichloroethene	ug/m3	0.44	0.46	106	70-130	
Trichloroethene	ug/m3	0.58	0.63	108	70-130	
Vinyl chloride	ug/m3	0.28	0.30	107	70-137	

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QUALIFIERS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C8	Result may be biased high due to carryover from previously analyzed sample.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10584567015	**Z6-2-SS-202110**	TO-15	780461		
10584567016	**Z6-2-SS-202110 DUP**	TO-15	780461		
10584567017	**Z5-2-SS-202110**	TO-15	780461		
10584567018	**Z1-1-SS-202110**	TO-15	780461		
10584567019	**Z3-2-SS-202110**	TO-15	780461		
10584567020	**Z4-2-SS-202110**	TO-15	780461		
10584567021	**Z2-1-SS-202110**	TO-15	780461		
10584567022	**Z3-1-SS-202110**	TO-15	780461		
10584567023	**Z4-1-SS-202110**	TO-15	780461		
10584567024	**Z5-1-SS-202110**	TO-15	780461		
10584567025	**Z6-1-SS-202110**	TO-15	780461		
10584567026	**Z5-OF-SS-202110**	TO-15	780461		
10584567001	**AA-1-202110**	TO-15	779479		
10584567002	**Z5-OF-IA-202110**	TO-15	779479		
10584567003	**Z6-1-IA-202110**	TO-15	779479		
10584567004	**Z5-1-IA-202110**	TO-15	779479		
10584567005	**Z6-2-IA-202110**	TO-15	779758		
10584567006	**Z6-2-IA-202110 DUP**	TO-15	779758		
10584567007	**Z5-2-IA-202110**	TO-15	779758		
10584567008	**Z1-1-IA-202110**	TO-15	779758		
10584567009	**Z2-1-IA-202110**	TO-15	779758		
10584567010	**Z4-2-IA-202110**	TO-15	782843		
10584567011	**Z3-2-IA-202110**	TO-15	779758		
10584567012	**Z4-1-IA-202110**	TO-15	779758		
10584567013	**Z3-1-IA-202110**	TO-15	779758		
10584567014	**AA-2-202110**	TO-15	779758		

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10584567

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Section A Required Client Information:

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Requested Due Date/TAT: STANDARD TAT

Section B Required Project Information:

Report To: imcquaig@ramboll.com
Copy To: cchavers@ramboll.com
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #: 39436

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other____

Location of Sampling by State _____

Reporting Units: ug/m³___ mg/m³___ PPBV___ PPMV___ Other___

Report Level II.___ III.___ IV.___ Other____

'Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tediar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	AA-1-202110	6LC	n/a	10/19/21	0723	10/19/21	1431	-29	-5	1592	0367							X			001
2	Z5-OF-IA-202110				0736		1926	-29	-8	2689	0132										002
3	Z6-1-IA-202110				0736		1559	-29	-4	1583	1369										003
4	Z5-1-IA-202110				0738		1441	-30	-6	2376	0089										004
5	Z6-2-IA-202110				0749		1455	-30	-6	1232	1805										005
6	Z6-2-IA-202110 DUP				0749		1455	-30	-4	0671	1038										006
7	Z5-2-IA-202110				0751		1453	-30	-6	3506	0878										007
8	Z1-1-IA-202110				0813		1539	-30	-6	2320	0094										008
9	Z2-1-IA-202110				0818		1528	-30	-6	0658	1280										009
10	Z4-2-IA-202110				0817		1517	-28	-5	0164	0321										010
11	Z3-2-IA-202110				0814		1538	-30	-5	3621	0280										011
12	Z4-1-IA-202110				0830		1549	-30	-4	0056	1068										012

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
IAN MCQUAIG / RAMBOLL	10/20/21	1715	[signature] Pace	10/22/21	12:50

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: IAN MCQUAIG

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY) 10/20/2021

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

Pace Analytical®
www.pacelabs.com

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

49742

Page: 2 of 3

Section A Required Client Information:

Company: RAMBOLL
Address: 1807 Park 270 Dr St. Louis, MO 63146
Email To: imcquaig@ramboll.com
Phone: Fax:
Requested Due Date/TAT: STANDARD TAT

Section B Required Project Information:

Report To: imcquaig@ramboll.com
Copy To: cchavers@ramboll.com
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #: 39436

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other____

Location of Sampling by State _____

Reporting Units: ug/m³___ mg/m³___ PPBV___ PPMV___ Other___

Report Level II.___ III.___ IV.___ Other____

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Method:

ITEM #	Sample ID	MEDIA CODE	PID Reading (Client only)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE - END/GRAB DATE	COMPOSITE - END/GRAB TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	Z3-1-IA-202110	6LC	n/a	10/19/21	0829	10/19/21	1547	-29	-5	4011	1438								X		013
2	AA-2-202110	6LC		10/20/21	0723	10/20/21	1430	-30	-5	2357	0052										014
3	Z6-2-SS-202110	1LC			0754		0803	-29	-3	3530	2896										015
4	Z6-2-SS-202110 DUP				0754		0803	-30	-3	0748	2988										016
5	Z5-2-SS-202110				0816		0824	-29	-3	2252	2657										017
6	Z1-1-SS-202110				0853		0903	-30	-3	3122	2967										018
7	Z3-2-SS-202110				0912		0920	-30	-2	3262	2713										019
8	Z4-2-SS-202110				0935		0943	-30	-2	0905	3008										020
9	Z2-1-SS-202110				0957		1004	-30	-4	2851	3207										021
10	Z3-1-SS-202110				1039		1047	-30	-1	3158	3010										022
11	Z4-1-SS-202110				1251		1259	-29	-3	2976	2772										023
12	Z5-1-SS-202110				1324		1335	-30	-2	3830	3095										024

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
IAN McQUAIG / RAMBOLL	10/20/21	1715	[signature] Pace	10/22/21	12:50

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: IAN McQUAIG
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM / DD / YY): 10/20/2021

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386 FC046Rev.01, 03Feb2010

Pace Analytical®
www.pacelabs.com

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

49743

Section A Required Client Information:

Company: RAMBOLL
Address: 1807 Park 270 Dr St. Louis, MO 63146
Email To: imcquaig@ramboll.com
Phone: Fax:
Requested Due Date/TAT: Standard TAT

Section B Required Project Information:

Report To: imcquaig@ramboll.com
Copy To: cchavers@ramboll.com
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #: 39436

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other____

Location of Sampling by State _____

Reporting Units: ug/m³ ___ mg/m³ ___ PPBV ___ PPMV ___ Other ___

Report Level II.___ III.___ IV.___ Other_____

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	'Section D Required Client Information AIR SAMPLE ID (Sample IDs MUST BE UNIQUE)	MEDIA CODE	PID Reading (Client only)	COLLECTED Composite Start DATE	Composite Start TIME	Composite - End/Grab DATE	Composite - End/Grab TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method: PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	Z6-1-SS-202110	1LC	N/a	10/20/21	1345	10/20/21	1355	-30	-4	3052	3203							X			025
2	Z5-OF-SS-202110	1LC	N/a	10/20/21	1405	10/20/21	1413	-29	-5	2633	2672							X			026
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
IAN MCQUAIG / RAMBOLL	10/20/21	1715	[signature] Pace	10/22/21	12:50

SAMPLE CONDITIONS

—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: IAN MCQUAIG

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY) 10/20/2021

ORIGINAL

Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR) - Air	Document Revised: 13Oct2021 Page 1 of 1
	Document No.: ENV-FRM-MIN4-0113 Rev.01	Pace Analytical Services - Minneapolis

Air Sample Condition Upon Receipt

Client Name: Ramboll

Project: **WO#: 10584567**

PM: CT1 **Due Date: 10/29/21**

CLIENT: ENVIRON

Courier: [X] FedEx [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial

Tracking Number: [X] See Exception

Custody Seal on Cooler/Box Present? [ ] Yes [X] No

Seals Intact? [ ] Yes [X] No

Packing Material: [ ] Bubble Wrap [ ] Bubble Bags [ ] Foam [X] None [ ] Tin Can [ ] Other:

Date & Initials of Person Examining Contents: RL 10/22/21

				Comments:
Chain of Custody Present?	[X] Yes	[ ] No		1.
Chain of Custody Filled Out?	[X] Yes	[ ] No		2.
Chain of Custody Relinquished?	[X] Yes	[ ] No		3.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	4.
Samples Arrived within Hold Time?	[X] Yes	[ ] No		5.
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No		6.
Rush Turn Around Time Requested?	[ ] Yes	[X] No		7.
Sufficient Volume?	[X] Yes	[ ] No		8.
Correct Containers Used? **(Tedlar bags not acceptable container for TO-15 or APH)**	[X] Yes	[ ] No		9.
-Pace Containers Used?	[X] Yes	[ ] No		
Containers Intact? **(visual inspection/no leaks when pressurized)**	[X] Yes	[ ] No		10.
Media: (Air Can) | Airbag				11. Individually Certified Cans? Y | (N) (list which samples)
Is sufficient information available to reconcile samples to the COC?	[X] Yes	[ ] No		12.
Do cans need to be pressurized? **(DO NOT PRESSURIZE 3C or ASTM 1946!!!)**	[X] Yes	[ ] No		13.

Gauge #: [ ] 10AIR26 [ ] 10AIR34 [ ] 10AIR35 [X] 10AIR17 [ ] 10AIR47 [ ] 10AIR48

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
AA-1	1592	367	-5.5	+5	Z6-2	3530	2896	-2.5	+10
Z5-OF	2689	132	-10	"	Z6-2 Dup	748	2988	-2	"
Z6-1	1583	1369	-5	"	Z5-2	2252	2657	-4	"
Z5-1	2376	89	-5.5	"	Z1-1	3122	2967	-2.5	"
Z6-2	1232	1805	-5	"	Z3-2	3262	2713	-1.5	"
Z6-2 Dup	671	1038	-4.5	"	Z4-2	905	3008	-1	"
Z5-2	3506	878	-5.5	"	Z2-1	2851	3207	-1	"
Z1-1	2320	94	-5	"	Z3-1	3158	3010	0	"
Z2-1	658	1280	-5.5	"	Z4-1	2976	2772	-3	"
Z4-2	164	321	-6	"	Z5-1	3830	3085	-3	"
Z3-2	3621	280	-5	"	Z6-1	3052	3203	-2	"
Z4-1	56	1068	-5	"	Z5-OF	2633	2672	-5	"
Z3-1	4011	1438	-5	"	unused	3225	3214	-29	
AA-2	2357	52	-5	+5	"	3763	2955	-29	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Carolynne Trout **Date:** 10/25/21

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

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - Air**	Document Revised: 13Oct2021 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0113 Rev.01**	Pace Analytical Services - **Minneapolis**

Air Sample Condition Upon Receipt

Client Name:

Project #: 10584567_cont.

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: _____ ☐ See Exception

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No

Seals Intact? ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Tin Can ☐ Other: _____

Date & Initials of Person Examining Contents: _____

				Comments:
Chain of Custody Present?	☐ Yes	☐ No		1.
Chain of Custody Filled Out?	☐ Yes	☐ No		2.
Chain of Custody Relinquished?	☐ Yes	☐ No		3.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☐ Yes	☐ No		5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☐ No		6.
Rush Turn Around Time Requested?	☐ Yes	☐ No		7.
Sufficient Volume?	☐ Yes	☐ No		8.
Correct Containers Used? **(Tedlar bags not acceptable container for TO-15 or APH)**	☐ Yes	☐ No		9.
-Pace Containers Used?	☐ Yes	☐ No		
Containers Intact? **(visual inspection/no leaks when pressurized)**	☐ Yes	☐ No		10.
Media: Air Can | Airbag				11. Individually Certified Cans? Y | N (list which samples)
Is sufficient information available to reconcile samples to the COC?	☐ Yes	☐ No		12.
Do cans need to be pressurized? **(DO NOT PRESSURIZE 3C or ASTM 1946!!!)**	☐ Yes	☐ No		13.

Gauge #: ☐ 10AIR26 ☐ 10AIR34 ☐ 10AIR35 ☐ 10AIR17 ☐ 10AIR47 ☐ 10AIR48

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
unused	3650	1381	-30						
"	26886	1402	-29						
"	2817	361	-30						

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Carolynne Trout **Date:** 10/25/21

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

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) Exception Form**	Document Revised: 04Jun2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0142 Rev.01**	Pace Analytical Services - **Minneapolis**

SCUR Exceptions:

Workorder #:

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank		
Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature	
9753 8446 3466	
3477	
3488	
3455	
3444	
3499	

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Comments:

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

November 23, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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without the written consent of Pace Analytical Services, LLC.

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

CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast

7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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without the written consent of Pace Analytical Services, LLC.

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383737001	**MW-187-202110**	Water	10/19/21 15:05	10/20/21 04:45
60383737002	**MW-203-202110**	Water	10/19/21 15:05	10/20/21 04:45
60383737003	**EB-02-202110**	Water	10/19/21 16:30	10/20/21 04:45
60383737004	**MW-188-202110**	Water	10/19/21 16:28	10/20/21 04:45
60383737005	**MW-55R-202110**	Water	10/19/21 16:53	10/20/21 04:45
60383737006	**TB-01-202110**	Water	10/19/21 07:00	10/20/21 04:45
60383737007	**TB-02-202110**	Water	10/19/21 07:00	10/20/21 04:45
60383737008	**TB-03-202110**	Water	10/19/21 07:00	10/20/21 04:45
60383737009	**MW-183R-202110**	Water	10/19/21 11:52	10/20/21 04:45
60383737010	**MW-200-202110**	Water	10/19/21 12:09	10/20/21 04:45
60383737011	**MW-184-202110**	Water	10/19/21 13:25	10/20/21 04:45
60383737012	**DUP-01-202110**	Water	10/19/21 13:25	10/20/21 04:45
60383737013	**MW-60R-202110**	Water	10/19/21 13:48	10/20/21 04:45
60383737014	**ITMW-2R-202110**	Water	10/19/21 13:47	10/20/21 04:45
60383737015	**MW-196-202110**	Water	10/19/21 14:07	10/20/21 04:45
60383737016	**ITMW-16-202110**	Water	10/19/21 10:45	10/20/21 04:45
60383737017	**MW-26-202110**	Water	10/19/21 09:50	10/20/21 04:45
60383737018	**TMW-27-202110**	Water	10/19/21 11:25	10/20/21 04:45
60383737019	**MW-201-202110**	Water	10/19/21 11:49	10/20/21 04:45
60383737020	**MW-29-202110**	Water	10/19/21 11:45	10/20/21 04:45
60383737021	**MW-195-202110**	Water	10/19/21 11:35	10/20/21 04:45
60383737022	**DUP-05-202110**	Water	10/19/21 11:35	10/20/21 04:45
60383737023	**MW-68-202110**	Water	10/19/21 09:07	10/20/21 04:45
60383737024	**MW-40R-202110**	Water	10/19/21 10:23	10/20/21 04:45
60383737025	**MW-96-202110**	Water	10/19/21 10:20	10/20/21 04:45
60383737026	**DUP-02-202110**	Water	10/19/21 10:20	10/20/21 04:45
60383737027	**TMW-29-202110**	Water	10/19/21 09:45	10/20/21 04:45
60383737028	**TMW-20-202110**	Water	10/19/21 10:33	10/20/21 04:45
60383737029	**TMW-35-202110**	Water	10/19/21 09:02	10/20/21 04:45
60383737030	**DUP-06-202110**	Water	10/19/21 09:02	10/20/21 04:45
60383737031	**MW-39R-202110**	Water	10/18/21 17:10	10/20/21 04:45
60383737032	**MW-191-202110**	Water	10/18/21 16:28	10/20/21 04:45
60383737033	**MW-27-202110**	Water	10/18/21 17:30	10/20/21 04:45
60383737034	**EB-01-202110**	Water	10/18/21 18:05	10/20/21 04:45
60383737035	**MW-98-202110**	Water	10/18/21 17:12	10/20/21 04:45
60383737036	**MW-62R-20210**	Water	10/18/21 18:20	10/20/21 04:45
60383737037	**MW-28-202110**	Water	10/18/21 18:00	10/20/21 04:45

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383737038	**ITMW-20-202110**	Water	10/19/21 09:03	10/20/21 04:45
60383737039	**DUP-03-202110**	Water	10/19/21 09:03	10/20/21 04:45
60383737040	**MW-97-202110**	Water	10/19/21 09:17	10/20/21 04:45
60383737041	**TMW-10-202110**	Water	10/19/21 14:31	10/20/21 04:45
60383737042	**MW-50R-202110**	Water	10/19/21 14:32	10/20/21 04:45
60383737043	**TMW-16-202110**	Water	10/19/21 11:55	10/20/21 04:45
60383737044	**MW-186-202110**	Water	10/19/21 14:10	10/20/21 04:45
60383737045	**TMW-36-202110**	Water	10/19/21 13:20	10/20/21 04:45
60383737046	**TMW-36B-202110**	Water	10/19/21 11:45	10/20/21 04:45
60383737047	**MW-99-202110**	Water	10/19/21 15:48	10/20/21 04:45
60383737048	**TMW-26-202110**	Water	10/19/21 16:25	10/20/21 04:45

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383737001	MW-187-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737002	MW-203-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737003	EB-02-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737004	MW-188-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737005	MW-55R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737006	TB-01-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737007	TB-02-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737008	TB-03-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737009	MW-183R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737010	MW-200-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737011	MW-184-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737012	DUP-01-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737013	MW-60R-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737014	ITMW-2R-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737015	MW-196-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737016	ITMW-16-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737017	MW-26-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737018	TMW-27-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737019	MW-201-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737020	MW-29-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737021	MW-195-202110	EPA 5030B/8260	VNH	38	PASI-K
60383737022	DUP-05-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737023	MW-68-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737024	MW-40R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737025	MW-96-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737026	DUP-02-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737027	TMW-29-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737028	TMW-20-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737029	TMW-35-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737030	DUP-06-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737031	MW-39R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737032	MW-191-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737033	MW-27-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737034	EB-01-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737035	MW-98-202110	EPA 5030B/8260	PGH	38	PASI-K
60383737036	MW-62R-20210	EPA 5030B/8260	PGH	38	PASI-K
60383737037	MW-28-202110	EPA 5030B/8260	PGH	38	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383737038	**ITMW-20-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383737039	**DUP-03-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383737040	**MW-97-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383737041	**TMW-10-202110**	AM20GAX	CWB	1	GCLA
		AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737042	**MW-50R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	1	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383737043	**TMW-16-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	KB	3	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737044	**MW-186-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383737045	**TMW-36-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737046	**TMW-36B-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	KB	3	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737047	**MW-99-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383737048	**TMW-26-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Date: November 23, 2021

In the [ANAL_METHOD] analysis, sample [LAB_SAMP][CUST_SAMP_ID] was conducted outside of the recognized method holding time.

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **AM20GAX**
Description: Indicator Gases Bubblestrip H2
Client: Ramboll_AR
Date: November 23, 2021

General Information:
1 sample was analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: November 23, 2021

General Information:
8 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: November 23, 2021

General Information:
8 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 23, 2021

General Information:
48 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

QC Batch: 751594

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

- LCS (Lab ID: 3009508)
  - 2-Butanone (MEK)

QC Batch: 751819

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

- LCS (Lab ID: 3010213)
  - Methylene Chloride

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

QC Batch: 751819

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737013

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

- MS (Lab ID: 3010214)

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 23, 2021

QC Batch: 751819

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737013

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

- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,2-Dichloropropane
- Bromodichloromethane
- Carbon tetrachloride
- Chlorobenzene
- Chloroform
- Dibromochloromethane
- Styrene
- cis-1,3-Dichloropropene
- trans-1,3-Dichloropropene

- MSD (Lab ID: 3010215)
  - 1,1,2-Trichloroethane
  - Bromodichloromethane
  - Carbon tetrachloride
  - Chloroform
  - Dibromochloromethane
  - Styrene

QC Batch: 751955

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

QC Batch: 752343

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737020,60383737023

R1: RPD value was outside control limits.

- MSD (Lab ID: 3011629)
  - 1,1-Dichloroethane
- MSD (Lab ID: 3011631)
  - 1,1-Dichloroethane

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 751612

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383950001

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

- MS (Lab ID: 3009541)
  - Sulfide, Total
- MSD (Lab ID: 3009542)
  - Sulfide, Total

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: November 23, 2021

General Information:
8 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll_AR
Date: November 23, 2021

General Information:
8 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis conducted outside the EPA method holding time.
- TMW-16-202110 (Lab ID: 60383737043)
- TMW-36B-202110 (Lab ID: 60383737046)

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753086

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737043,60384407001

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

- MS (Lab ID: 3014272)
  - Nitrogen, NO2 plus NO3
- MS (Lab ID: 3014274)
  - Nitrogen, NO2 plus NO3

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: November 23, 2021

General Information:
8 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: November 23, 2021

General Information:
7 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737047

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

- MS (Lab ID: 3017245)
  - Dissolved Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: November 23, 2021

General Information:
7 samples were analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Extraction or preparation was conducted outside of the recognized method holding time.
- TMW-10-202110 (Lab ID: 60383737041)

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-187-202110 **Lab ID: 60383737001** Collected: 10/19/21 15:05 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 23:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 23:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 23:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 23:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 23:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 23:09	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 23:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 23:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 23:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 23:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 23:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 23:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 23:09	124-48-1	
1,1-Dichloroethane	**0.67J**	ug/L	1.0	0.12	1		10/26/21 23:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 23:09	107-06-2	
1,1-Dichloroethene	**0.39J**	ug/L	1.0	0.22	1		10/26/21 23:09	75-35-4	
cis-1,2-Dichloroethene	**3.8**	ug/L	1.0	0.13	1		10/26/21 23:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 23:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 23:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 23:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 23:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 23:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 23:09	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 23:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 23:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 23:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 23:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 23:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 23:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 23:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 23:09	79-00-5	
Trichloroethene	**16.8**	ug/L	1.0	0.21	1		10/26/21 23:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 23:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 23:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/26/21 23:09	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 23:09	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 23:09	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 23:09		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-203-202110 **Lab ID: 60383737002** Collected: 10/19/21 15:05 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:33	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:33	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:33	124-48-1	
1,1-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		10/26/21 20:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:33	107-06-2	
1,1-Dichloroethene	**0.50J**	ug/L	1.0	0.22	1		10/26/21 20:33	75-35-4	
cis-1,2-Dichloroethene	**2.9**	ug/L	1.0	0.13	1		10/26/21 20:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:33	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:33	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:33	79-00-5	
Trichloroethene	**102**	ug/L	1.0	0.21	1		10/26/21 20:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 20:33	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 20:33	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/26/21 20:33	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:33		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: EB-02-202110 **Lab ID: 60383737003** Collected: 10/19/21 16:30 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:19	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 20:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:19	591-78-6	
Methylene Chloride	**0.43J**	ug/L	1.0	0.39	1		10/26/21 20:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 20:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 20:19	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 20:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 20:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-188-202110 **Lab ID: 60383737004** Collected: 10/19/21 16:28 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:47	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:47	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:47	75-35-4	
cis-1,2-Dichloroethene	**0.14J**	ug/L	1.0	0.13	1		10/26/21 20:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:47	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:47	79-00-5	
Trichloroethene	**1.1**	ug/L	1.0	0.21	1		10/26/21 20:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 20:47	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 20:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 20:47	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:47		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-55R-202110 **Lab ID: 60383737005** Collected: 10/19/21 16:53 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:01	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:01	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:01	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:01	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:01	107-06-2	
1,1-Dichloroethene	**0.37J**	ug/L	1.0	0.22	1		10/26/21 21:01	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.13	1		10/26/21 21:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:01	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:01	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:01	79-00-5	
Trichloroethene	**29.9**	ug/L	1.0	0.21	1		10/26/21 21:01	79-01-6	
Vinyl chloride	**0.19J**	ug/L	1.0	0.17	1		10/26/21 21:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 21:01	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 21:01	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 21:01	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:01		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TB-01-202110 **Lab ID: 60383737006** Collected: 10/19/21 07:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:36	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 19:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 19:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 19:36	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/26/21 19:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 19:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:36		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TB-02-202110 **Lab ID: 60383737007** Collected: 10/19/21 07:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:50	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 19:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:50	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 19:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 19:50	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 19:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 19:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:50		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TB-03-202110 **Lab ID: 60383737008** Collected: 10/19/21 07:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:04	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:04	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 20:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:04	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:04	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 20:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 20:04	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 20:04	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 20:04	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:04		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-183R-202110 **Lab ID: 60383737009** Collected: 10/19/21 11:52 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:15	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:15	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:15	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:15	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:15	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:15	79-00-5	
Trichloroethene	**0.67J**	ug/L	1.0	0.21	1		10/26/21 21:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 21:15	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 21:15	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 21:15	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:15		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-200-202110 **Lab ID: 60383737010** Collected: 10/19/21 12:09 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/25/21 23:45	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/25/21 23:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/25/21 23:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/25/21 23:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/25/21 23:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/25/21 23:45	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/25/21 23:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/25/21 23:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/25/21 23:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/25/21 23:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/25/21 23:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/25/21 23:45	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/25/21 23:45	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/25/21 23:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/25/21 23:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/25/21 23:45	75-35-4	
cis-1,2-Dichloroethene	**0.13J**	ug/L	1.0	0.13	1		10/25/21 23:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/25/21 23:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/25/21 23:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/25/21 23:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/25/21 23:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/25/21 23:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/25/21 23:45	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/25/21 23:45	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/25/21 23:45	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/25/21 23:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/25/21 23:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/25/21 23:45	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/25/21 23:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/25/21 23:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/25/21 23:45	79-00-5	
Trichloroethene	**1.0**	ug/L	1.0	0.21	1		10/25/21 23:45	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/25/21 23:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/25/21 23:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/25/21 23:45	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/25/21 23:45	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/25/21 23:45	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/25/21 23:45		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-184-202110 **Lab ID: 60383737011** Collected: 10/19/21 13:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 00:00	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 00:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 00:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 00:00	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 00:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 00:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 00:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 00:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 00:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 00:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 00:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 00:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 00:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 00:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 00:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 00:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 00:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 00:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 00:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 00:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 00:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 00:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 00:00	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 00:00	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 00:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 00:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 00:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 00:00	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 00:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 00:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 00:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 00:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 00:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 00:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 00:00	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 00:00	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 00:00	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 00:00		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-01-202110 **Lab ID: 60383737012** Collected: 10/19/21 13:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 00:17	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 00:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 00:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 00:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 00:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 00:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 00:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 00:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 00:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 00:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 00:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 00:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 00:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 00:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 00:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 00:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 00:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 00:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 00:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 00:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 00:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 00:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 00:17	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 00:17	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 00:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 00:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 00:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 00:17	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 00:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 00:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 00:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 00:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 00:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 00:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 00:17	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 00:17	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 00:17	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 00:17		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-60R-202110 **Lab ID: 60383737013** Collected: 10/19/21 13:48 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 00:32	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 00:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 00:32	75-27-4	M1
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 00:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 00:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 00:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 00:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 00:32	56-23-5	M1
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 00:32	108-90-7	M1
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 00:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 00:32	67-66-3	M1
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 00:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 00:32	124-48-1	M1
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 00:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 00:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 00:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 00:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 00:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 00:32	78-87-5	M1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 00:32	10061-01-5	M1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 00:32	10061-02-6	M1
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 00:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 00:32	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 00:32	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 00:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 00:32	100-42-5	M1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 00:32	79-34-5	M1
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 00:32	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 00:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 00:32	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 00:32	79-00-5	M1
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 00:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 00:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 00:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 00:32	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 00:32	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 00:32	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 00:32		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: ITMW-2R-202110 **Lab ID: 60383737014** Collected: 10/19/21 13:47 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 01:20	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 01:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 01:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 01:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 01:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 01:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 01:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 01:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 01:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 01:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 01:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 01:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 01:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 01:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 01:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 01:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 01:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 01:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 01:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 01:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 01:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 01:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 01:20	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 01:20	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 01:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 01:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 01:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 01:20	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 01:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 01:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 01:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 01:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 01:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 01:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 01:20	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 01:20	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 01:20	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 01:20		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-196-202110 **Lab ID: 60383737015** Collected: 10/19/21 14:07 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 01:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 01:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 01:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 01:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 01:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 01:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 01:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 01:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 01:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 01:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 01:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 01:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 01:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 01:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 01:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 01:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 01:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 01:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 01:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 01:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 01:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 01:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 01:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 01:36	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 01:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 01:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 01:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 01:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 01:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 01:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 01:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 01:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 01:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 01:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 01:36	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 01:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 01:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 01:36		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: ITMW-16-202110 **Lab ID: 60383737016** Collected: 10/19/21 10:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 01:52	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 01:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 01:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 01:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 01:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 01:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 01:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 01:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 01:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 01:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 01:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 01:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 01:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 01:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 01:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 01:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 01:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 01:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 01:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 01:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 01:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 01:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 01:52	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 01:52	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 01:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 01:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 01:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 01:52	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 01:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 01:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 01:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 01:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 01:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 01:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 01:52	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 01:52	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 01:52	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 01:52		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-26-202110 **Lab ID: 60383737017** Collected: 10/19/21 09:50 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:08	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:08	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:08	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:08	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:08	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 02:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 02:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 02:08	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 02:08	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 02:08	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:08		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-27-202110 **Lab ID: 60383737018** Collected: 10/19/21 11:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:24	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:24	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:24	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:24	127-18-4	
Toluene	**0.31J**	ug/L	1.0	0.25	1		10/26/21 02:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 02:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 02:24	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 02:24	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 02:24	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:24		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-201-202110 **Lab ID: 60383737019** Collected: 10/19/21 11:49 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:40	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:40	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:40	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:40	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 02:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 02:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 02:40	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 02:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 02:40	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:40		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-29-202110 **Lab ID: 60383737020** Collected: 10/19/21 11:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 12:35	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 12:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 12:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 12:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 12:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 12:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 12:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 12:35	56-23-5	
Chlorobenzene	**5.5**	ug/L	1.0	0.089	1		10/27/21 12:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 12:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 12:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 12:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 12:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 12:35	75-34-3	R1
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 12:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 12:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 12:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 12:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 12:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 12:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 12:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 12:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 12:35	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 12:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 12:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 12:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 12:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 12:35	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 12:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 12:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 12:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 12:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 12:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 12:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 12:35	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 12:35	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/27/21 12:35	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 12:35		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-195-202110 **Lab ID: 60383737021** Collected: 10/19/21 11:35 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 02:56	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 02:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 02:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 02:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 02:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 02:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 02:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 02:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 02:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 02:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 02:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 02:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 02:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 02:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 02:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 02:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 02:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 02:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 02:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 02:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 02:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 02:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 02:56	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 02:56	75-09-2	L1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 02:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 02:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 02:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 02:56	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 02:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 02:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 02:56	79-00-5	
Trichloroethene	**0.49J**	ug/L	1.0	0.21	1		10/26/21 02:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 02:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 02:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 02:56	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 02:56	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 02:56	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 02:56		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-05-202110 **Lab ID: 60383737022** Collected: 10/19/21 11:35 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 13:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 13:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 13:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 13:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 13:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 13:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 13:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 13:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 13:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 13:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 13:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 13:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 13:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 13:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 13:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 13:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 13:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 13:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 13:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 13:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 13:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 13:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 13:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 13:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 13:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 13:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 13:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 13:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 13:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 13:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 13:23	79-00-5	
Trichloroethene	**0.40J**	ug/L	1.0	0.21	1		10/27/21 13:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 13:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 13:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 13:23	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 13:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/27/21 13:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 13:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-68-202110 **Lab ID: 60383737023** Collected: 10/19/21 09:07 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 13:39	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 13:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 13:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 13:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 13:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 13:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 13:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 13:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 13:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 13:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 13:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 13:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 13:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 13:39	75-34-3	R1
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 13:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 13:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 13:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 13:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 13:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 13:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 13:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 13:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 13:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 13:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 13:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 13:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 13:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 13:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 13:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 13:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 13:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 13:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 13:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 13:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/27/21 13:39	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/27/21 13:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 13:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 13:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-40R-202110 **Lab ID: 60383737024** Collected: 10/19/21 10:23 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 14:27	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 14:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 14:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 14:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 14:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 14:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 14:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 14:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 14:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 14:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 14:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 14:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 14:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 14:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 14:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 14:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 14:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 14:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 14:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 14:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 14:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 14:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 14:27	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 14:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 14:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 14:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 14:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 14:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 14:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 14:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 14:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 14:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 14:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 14:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 14:27	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 14:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/27/21 14:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 14:27		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-96-202110 **Lab ID: 60383737025** Collected: 10/19/21 10:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 14:43	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 14:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 14:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 14:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 14:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 14:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 14:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 14:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 14:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 14:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 14:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 14:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 14:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 14:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 14:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 14:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 14:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 14:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 14:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 14:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 14:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 14:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 14:43	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 14:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 14:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 14:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 14:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 14:43	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 14:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 14:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 14:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 14:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 14:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 14:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 14:43	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/27/21 14:43	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/27/21 14:43	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 14:43		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-02-202110 **Lab ID: 60383737026** Collected: 10/19/21 10:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 14:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 14:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 14:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 14:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 14:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 14:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 14:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 14:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 14:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 14:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 14:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 14:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 14:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 14:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 14:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 14:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 14:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 14:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 14:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 14:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 14:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 14:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 14:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 14:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 14:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 14:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 14:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 14:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 14:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 14:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 14:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 14:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 14:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 14:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 14:59	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/27/21 14:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/27/21 14:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 14:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-29-202110 **Lab ID: 60383737027** Collected: 10/19/21 09:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 15:14	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 15:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 15:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 15:14	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 15:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 15:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 15:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 15:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 15:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 15:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 15:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 15:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 15:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 15:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 15:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 15:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 15:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 15:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 15:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 15:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 15:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 15:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 15:14	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 15:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 15:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 15:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 15:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 15:14	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 15:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 15:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 15:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 15:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 15:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 15:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/27/21 15:14	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 15:14	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/27/21 15:14	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 15:14		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-20-202110 **Lab ID: 60383737028** Collected: 10/19/21 10:33 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:12	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:12	75-35-4	
cis-1,2-Dichloroethene	**0.28J**	ug/L	1.0	0.13	1		10/26/21 09:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:12	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:12	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 09:12	460-00-4	
Toluene-d8 (S)	105	%	80-120		1		10/26/21 09:12	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 09:12	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:12		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-35-202110 **Lab ID: 60383737029** Collected: 10/19/21 09:02 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:26	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 09:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:26	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		10/26/21 09:26	460-00-4	
Toluene-d8 (S)	103	%	80-120		1		10/26/21 09:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 09:26	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:26		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-06-202110 **Lab ID: 60383737030** Collected: 10/19/21 09:02 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:40	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 09:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:40	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:40	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 09:40	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 09:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 09:40	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:40		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-39R-202110 **Lab ID: 60383737031** Collected: 10/18/21 17:10 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:29	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:29	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:29	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:29	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:29	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:29	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:29	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:29	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:29	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 21:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 21:29	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 21:29	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	107	%	80-120		1		10/26/21 21:29	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:29		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-191-202110 **Lab ID: 60383737032** Collected: 10/18/21 16:28 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:44	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:44	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:44	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:44	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:44	79-00-5	
Trichloroethene	**0.62J**	ug/L	1.0	0.21	1		10/26/21 21:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/26/21 21:44	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 21:44	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 21:44	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:44		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-27-202110 **Lab ID: 60383737033** Collected: 10/18/21 17:30 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:58	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:58	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:58	75-35-4	
cis-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.13	1		10/26/21 21:58	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.10	1		10/26/21 21:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:58	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:58	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:58	79-00-5	
Trichloroethene	**56.3**	ug/L	1.0	0.21	1		10/26/21 21:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 21:58	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 21:58	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 21:58	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:58		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: EB-01-202110 **Lab ID: 60383737034** Collected: 10/18/21 18:05 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:12	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:12	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:12	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:12	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 22:12	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 22:12	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 22:12	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:12		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-98-202110 **Lab ID: 60383737035** Collected: 10/18/21 17:12 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:26	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:26	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:26	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 22:26	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 22:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 22:26	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:26		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-62R-20210 **Lab ID: 60383737036** Collected: 10/18/21 18:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:40	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:40	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:40	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:40	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/26/21 22:40	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 22:40	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 22:40	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:40		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-28-202110 **Lab ID: 60383737037** Collected: 10/18/21 18:00 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 22:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 22:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 22:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 22:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 22:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 22:55	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 22:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 22:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 22:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 22:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 22:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 22:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 22:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 22:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 22:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 22:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 22:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 22:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 22:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 22:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 22:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 22:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 22:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 22:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 22:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 22:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 22:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 22:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 22:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 22:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 22:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 22:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 22:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 22:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 22:55	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 22:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 22:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 22:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: ITMW-20-202110 **Lab ID: 60383737038** Collected: 10/19/21 09:03 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 09:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 09:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 09:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 09:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 09:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 09:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 09:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 09:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 09:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 09:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 09:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 09:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 09:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 09:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 09:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 09:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 09:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 09:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 09:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 09:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 09:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 09:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 09:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 09:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 09:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 09:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 09:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 09:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 09:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 09:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 09:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 09:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 09:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 09:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 09:55	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 09:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 09:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 09:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: DUP-03-202110 **Lab ID: 60383737039** Collected: 10/19/21 09:03 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 10:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 10:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 10:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 10:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:09	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 10:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 10:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 10:09	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 10:09	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 10:09	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:09		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-97-202110 **Lab ID: 60383737040** Collected: 10/19/21 09:17 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 10:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 10:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 10:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 10:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 10:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 10:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 10:23	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 10:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 10:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-10-202110 **Lab ID: 60383737041** Collected: 10/19/21 14:31 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Bubblestrip H2	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Hydrogen	**2.5**	nM	1.9	0.49	1		11/02/21 12:22	1333-74-0	
Hydrogen	**1.9**	nM	1.9	0.49	1		10/28/21 11:33	1333-74-0	
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**11000**	ug/L	5.0	2.0	1		11/02/21 11:58	74-82-8	
Ethane	**1.0**	ug/L	1.0	0.17	1		11/02/21 11:58	74-84-0	
Ethene	**1.7**	ug/L	1.0	0.24	1		11/02/21 11:58	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/02/21 11:58	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**14400**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 15:58	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:05	67-64-1	
Benzene	**0.20J**	ug/L	1.0	0.14	1		10/26/21 11:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:05	75-35-4	
cis-1,2-Dichloroethene	**0.46J**	ug/L	1.0	0.13	1		10/26/21 11:05	156-59-2	
trans-1,2-Dichloroethene	**0.15J**	ug/L	1.0	0.10	1		10/26/21 11:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:05	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 11:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:05	127-18-4	
Toluene	**0.29J**	ug/L	1.0	0.25	1		10/26/21 11:05	108-88-3	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-10-202110 **Lab ID: 60383737041** Collected: 10/19/21 14:31 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:05	79-00-5	
Trichloroethene	**0.59J**	ug/L	1.0	0.21	1		10/26/21 11:05	79-01-6	
Vinyl chloride	**2.2**	ug/L	1.0	0.17	1		10/26/21 11:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 11:05	460-00-4	
Toluene-d8 (S)	103	%	80-120		1		10/26/21 11:05	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 11:05	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:05		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	**0.064**	mg/L	0.050	0.026	1		10/25/21 13:33	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**153**	mg/L	20.0	7.8	20		10/26/21 18:20	16887-00-6	
Sulfate	**1.3**	mg/L	1.0	0.42	1		10/26/21 17:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/21/21 08:49		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:49	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:49	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**2.3**	mg/L	1.0	0.30	1		10/28/21 15:34	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**2.6**	mg/L	1.0	0.30	1		10/29/21 10:34		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**5.2**	mg/L	5.0	0.53	10		11/17/21 08:36	50-21-5	H1
Acetic Acid	**3.2J**	mg/L	5.0	1.2	10		11/17/21 08:36	64-19-7	H1
Propionic Acid	ND	mg/L	5.0	0.53	10		11/17/21 08:36	79-09-4	H1
Formic acid	**51**	mg/L	5.0	0.55	10		11/17/21 08:36	64-18-6	H1
Butyric Acid	ND	mg/L	5.0	0.58	10		11/17/21 08:36	107-92-6	H1
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/17/21 08:36	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/17/21 08:36	503-74-2	H1
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/17/21 08:36	109-52-4	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-10-202110 **Lab ID: 60383737041** Collected: 10/19/21 14:31 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Low Level Volatile Fatty Acids	Analytical Method: AM23G Pace Analytical Gulf Coast								
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/17/21 08:36	646-07-1	H1
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/17/21 08:36	142-62-1	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-50R-202110 **Lab ID: 60383737042** Collected: 10/19/21 14:32 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**8.1**	ug/L	5.0	2.0	1		11/02/21 12:09	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/02/21 12:09	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 12:09	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/02/21 12:09	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**529**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:00	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:37	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 10:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 10:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 10:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 10:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:37	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:37	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:37	79-00-5	
Trichloroethene	**0.61J**	ug/L	1.0	0.21	1		10/26/21 10:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 10:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:37	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-50R-202110 **Lab ID: 60383737042** Collected: 10/19/21 14:32 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 10:37	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 10:37	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 10:37	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:37		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 13:33	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Sulfate	**16.0**	mg/L	2.0	0.84	2		10/26/21 19:00	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.14**	mg/L	0.10	0.066	1		10/21/21 08:52		
Nitrogen, Nitrate	**0.14**	mg/L	0.10	0.079	1		10/21/21 08:52	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:52	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.67J**	mg/L	1.0	0.30	1		10/28/21 12:54	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-16-202110 **Lab ID: 60383737043** Collected: 10/19/21 11:55 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**7600**	ug/L	5.0	2.0	1		11/02/21 18:22	74-82-8	
Ethane	**2.4**	ug/L	1.0	0.17	1		11/02/21 18:22	74-84-0	
Ethene	**1.9**	ug/L	1.0	0.24	1		11/02/21 18:22	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**9900**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:07	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 15:31	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.14	1		10/27/21 15:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 15:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 15:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 15:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 15:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 15:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 15:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 15:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 15:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 15:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 15:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 15:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 15:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 15:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 15:31	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.13	1		10/27/21 15:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 15:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 15:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 15:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 15:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 15:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 15:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 15:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 15:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 15:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 15:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 15:31	127-18-4	
Toluene	**0.37J**	ug/L	1.0	0.25	1		10/27/21 15:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 15:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 15:31	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.21	1		10/27/21 15:31	79-01-6	
Vinyl chloride	**0.77J**	ug/L	1.0	0.17	1		10/27/21 15:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 15:31	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-16-202110 **Lab ID: 60383737043** Collected: 10/19/21 11:55 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 15:31	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/27/21 15:31	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 15:31	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 15:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**240**	mg/L	20.0	7.8	20		10/26/21 10:40	16887-00-6	
Sulfate	**3.1**	mg/L	1.0	0.42	1		10/26/21 19:13	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 11:30		H1
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/29/21 11:30	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/29/21 11:30	14797-65-0	H1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 15:11		M1
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**12.0**	mg/L	2.0	0.59	2		10/28/21 13:08	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**7.1**	mg/L	1.0	0.30	1		10/29/21 11:01		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**4.6J**	mg/L	5.0	0.53	10		11/16/21 11:01	50-21-5	
Acetic Acid	**5.4**	mg/L	5.0	1.2	10		11/16/21 11:01	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 11:01	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 11:01	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:01	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 11:01	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 11:01	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:01	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:01	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:01	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-186-202110 **Lab ID: 60383737044** Collected: 10/19/21 14:10 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX								
	Pace Analytical Gulf Coast								
Methane	**7700**	ug/L	5.0	2.0	1		11/02/21 18:33	74-82-8	
Ethane	**0.39J**	ug/L	1.0	0.17	1		11/02/21 18:33	74-84-0	
Ethene	**0.26J**	ug/L	1.0	0.24	1		11/02/21 18:33	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Kansas City								
Iron	**14200**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:09	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:20	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 11:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:20	75-35-4	
cis-1,2-Dichloroethene	**0.66J**	ug/L	1.0	0.13	1		10/26/21 11:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 11:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:20	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 11:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:20	127-18-4	
Toluene	**0.33J**	ug/L	1.0	0.25	1		10/26/21 11:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:20	79-00-5	
Trichloroethene	**0.49J**	ug/L	1.0	0.21	1		10/26/21 11:20	79-01-6	
Vinyl chloride	**0.45J**	ug/L	1.0	0.17	1		10/26/21 11:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:20	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-186-202110 **Lab ID: 60383737044** Collected: 10/19/21 14:10 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	104	%	80-120		1		10/26/21 11:20	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 11:20	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 11:20	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**118**	mg/L	20.0	7.8	20		10/26/21 10:54	16887-00-6	
Sulfate	**0.94J**	mg/L	1.0	0.42	1		10/26/21 19:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.066J**	mg/L	0.10	0.066	1		10/21/21 08:47		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:47	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:47	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**17.1**	mg/L	10.0	3.0	10		10/28/21 13:21	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**8.3**	mg/L	1.0	0.30	1		10/29/21 11:14		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**4.6J**	mg/L	5.0	0.53	10		11/16/21 11:35	50-21-5	
Acetic Acid	**5.4**	mg/L	5.0	1.2	10		11/16/21 11:35	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 11:35	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 11:35	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:35	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 11:35	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 11:35	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:35	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 11:35	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 11:35	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36-202110 **Lab ID: 60383737045** Collected: 10/19/21 13:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**1500**	ug/L	5.0	2.0	1		11/02/21 18:45	74-82-8	
Ethane	**0.53J**	ug/L	1.0	0.17	1		11/02/21 18:45	74-84-0	
Ethene	**0.36J**	ug/L	1.0	0.24	1		11/02/21 18:45	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**3490**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:11	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 10:51	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 10:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 10:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 10:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 10:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 10:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 10:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 10:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 10:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 10:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 10:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 10:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 10:51	124-48-1	
1,1-Dichloroethane	**0.53J**	ug/L	1.0	0.12	1		10/26/21 10:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 10:51	107-06-2	
1,1-Dichloroethene	**0.94J**	ug/L	1.0	0.22	1		10/26/21 10:51	75-35-4	
cis-1,2-Dichloroethene	**64.3**	ug/L	1.0	0.13	1		10/26/21 10:51	156-59-2	
trans-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.10	1		10/26/21 10:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 10:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 10:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 10:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 10:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 10:51	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 10:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 10:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 10:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 10:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 10:51	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 10:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 10:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 10:51	79-00-5	
Trichloroethene	**110**	ug/L	1.0	0.21	1		10/26/21 10:51	79-01-6	
Vinyl chloride	**0.27J**	ug/L	1.0	0.17	1		10/26/21 10:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 10:51	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36-202110 **Lab ID: 60383737045** Collected: 10/19/21 13:20 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 10:51	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 10:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 10:51	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 10:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**105**	mg/L	20.0	7.8	20		10/26/21 11:07	16887-00-6	
Sulfate	**15.3**	mg/L	1.0	0.42	1		10/26/21 19:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.29**	mg/L	0.10	0.066	1		10/21/21 08:40		
Nitrogen, Nitrate	**0.29**	mg/L	0.10	0.079	1		10/21/21 08:40	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:40	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.68J**	mg/L	1.0	0.30	1		10/28/21 13:34	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.94J**	mg/L	1.0	0.30	1		10/29/21 11:41		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	ND	mg/L	5.0	0.53	10		11/16/21 12:10	50-21-5	
Acetic Acid	**5.5**	mg/L	5.0	1.2	10		11/16/21 12:10	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 12:10	79-09-4	
Formic acid	**53**	mg/L	5.0	0.55	10		11/16/21 12:10	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:10	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 12:10	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 12:10	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:10	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:10	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:10	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36B-202110 **Lab ID: 60383737046** Collected: 10/19/21 11:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**34**	ug/L	5.0	2.0	1		11/02/21 18:56	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/02/21 18:56	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 18:56	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**5450**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:13	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:48	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 11:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 11:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 11:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:48	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 11:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:48	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 11:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 11:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 11:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:48	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-36B-202110 **Lab ID: 60383737046** Collected: 10/19/21 11:45 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 11:48	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/26/21 11:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 11:48	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**384**	mg/L	20.0	7.8	20		10/26/21 11:21	16887-00-6	
Sulfate	**17.7**	mg/L	2.0	0.84	2		10/26/21 20:20	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.3**	mg/L	0.10	0.066	1		10/29/21 11:30		H1
Nitrogen, Nitrate	**1.3**	mg/L	0.10	0.079	1		10/29/21 11:30	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/29/21 11:30	14797-65-0	H1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 15:13		
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.61J**	mg/L	1.0	0.30	1		10/28/21 13:48	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.57J**	mg/L	1.0	0.30	1		10/29/21 11:54		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.5J**	mg/L	5.0	0.53	10		11/16/21 12:45	50-21-5	
Acetic Acid	**6.0**	mg/L	5.0	1.2	10		11/16/21 12:45	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 12:45	79-09-4	
Formic acid	**55**	mg/L	5.0	0.55	10		11/16/21 12:45	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:45	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 12:45	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 12:45	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:45	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 12:45	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 12:45	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-99-202110 **Lab ID: 60383737047** Collected: 10/19/21 15:48 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**7400**	ug/L	5.0	2.0	1		11/02/21 19:07	74-82-8	
Ethane	**1.1**	ug/L	1.0	0.17	1		11/02/21 19:07	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 19:07	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**12200**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:20	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 11:34	67-64-1	
Benzene	**0.16J**	ug/L	1.0	0.14	1		10/26/21 11:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 11:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 11:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 11:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 11:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 11:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 11:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 11:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 11:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 11:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 11:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 11:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 11:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 11:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 11:34	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	1.0	0.13	1		10/26/21 11:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 11:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 11:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 11:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 11:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 11:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 11:34	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 11:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.9J**	ug/L	10.0	0.74	1		10/26/21 11:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 11:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 11:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 11:34	127-18-4	
Toluene	**0.31J**	ug/L	1.0	0.25	1		10/26/21 11:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 11:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 11:34	79-00-5	
Trichloroethene	**0.26J**	ug/L	1.0	0.21	1		10/26/21 11:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 11:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 11:34	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: MW-99-202110 **Lab ID: 60383737047** Collected: 10/19/21 15:48 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/26/21 11:34	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 11:34	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/26/21 11:34	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 11:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**91.6**	mg/L	20.0	7.8	20		10/26/21 12:01	16887-00-6	
Sulfate	**3.2**	mg/L	1.0	0.42	1		10/26/21 20:34	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/21/21 08:54		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:54	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:54	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**56.4**	mg/L	25.0	7.4	25		10/28/21 14:01	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**55.6**	mg/L	25.0	7.4	25		11/03/21 11:59		M1
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**7.8**	mg/L	5.0	0.53	10		11/16/21 13:19	50-21-5	
Acetic Acid	**8.4**	mg/L	5.0	1.2	10		11/16/21 13:19	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 13:19	79-09-4	
Formic acid	**54**	mg/L	5.0	0.55	10		11/16/21 13:19	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 13:19	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 13:19	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 13:19	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:19	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:19	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 13:19	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-26-202110 **Lab ID: 60383737048** Collected: 10/19/21 16:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4500**	ug/L	5.0	2.0	1		11/02/21 19:19	74-82-8	
Ethane	**0.58J**	ug/L	1.0	0.17	1		11/02/21 19:19	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/02/21 19:19	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**20600**	ug/L	50.0	21.4	1	11/05/21 09:30	11/05/21 16:22	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 12:02	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 12:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 12:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 12:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 12:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 12:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 12:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 12:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 12:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 12:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 12:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 12:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 12:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 12:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 12:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 12:02	75-35-4	
cis-1,2-Dichloroethene	**0.88J**	ug/L	1.0	0.13	1		10/26/21 12:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 12:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 12:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 12:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 12:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 12:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 12:02	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 12:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 12:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 12:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 12:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 12:02	127-18-4	
Toluene	**2.0**	ug/L	1.0	0.25	1		10/26/21 12:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 12:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 12:02	79-00-5	
Trichloroethene	**2.7**	ug/L	1.0	0.21	1		10/26/21 12:02	79-01-6	
Vinyl chloride	**0.44J**	ug/L	1.0	0.17	1		10/26/21 12:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 12:02	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Sample: TMW-26-202110 **Lab ID: 60383737048** Collected: 10/19/21 16:25 Received: 10/20/21 04:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 12:02	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 12:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 12:02	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 12:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**172**	mg/L	20.0	7.8	20		10/26/21 12:14	16887-00-6	
Sulfate	**3.4**	mg/L	1.0	0.42	1		10/26/21 20:47	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/21/21 08:58		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/21/21 08:58	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/21/21 08:58	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**44.6**	mg/L	25.0	7.4	25		10/28/21 14:14	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**40.1**	mg/L	10.0	3.0	10		11/03/21 12:26		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.8J**	mg/L	5.0	0.53	10		11/16/21 13:54	50-21-5	
Acetic Acid	**5.6**	mg/L	5.0	1.2	10		11/16/21 13:54	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 13:54	79-09-4	
Formic acid	**55**	mg/L	5.0	0.55	10		11/16/21 13:54	64-18-6	
Butyric Acid	**0.71J**	mg/L	5.0	0.58	10		11/16/21 13:54	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 13:54	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 13:54	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:54	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 13:54	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 13:54	142-62-1	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725022
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Bubble Strip H2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041

METHOD BLANK: 2262602 Matrix: Air
Associated Lab Samples: 60383737041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hydrogen	nM	ND	1.9	0.49	10/28/21 11:06	

LABORATORY CONTROL SAMPLE & LCSD: 2262603 2262604

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hydrogen	nM	12	9.5	9.5	80	80	70-130	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725469
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Bubble Strip H2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041

METHOD BLANK: 2265165 Matrix: Air
Associated Lab Samples: 60383737041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hydrogen	nM	ND	1.9	0.49	11/02/21 11:45	

LABORATORY CONTROL SAMPLE & LCSD: 2265166 2265167

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hydrogen	nM	12	15	15	130	129	70-130	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725427
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041, 60383737042

METHOD BLANK: 2264858
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/02/21 07:56	
Ethane	ug/L	ND	1.0	0.17	11/02/21 07:56	
Ethene	ug/L	ND	1.0	0.24	11/02/21 07:56	
Acetylene	ug/L	ND	0.50	0.13	11/02/21 07:56	

LABORATORY CONTROL SAMPLE & LCSD: 2264859 2264860

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	430	400	111	105	70-130	6	20	
Ethane	ug/L	97	110	110	117	111	70-130	5	20	
Ethene	ug/L	120	140	130	113	108	70-130	5	20	
Acetylene	ug/L	30	34	32	110	105	70-130	5	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725466
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 2265154
Matrix: Water
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/02/21 17:16	
Ethane	ug/L	ND	1.0	0.17	11/02/21 17:16	
Ethene	ug/L	ND	1.0	0.24	11/02/21 17:16	

LABORATORY CONTROL SAMPLE & LCSD: 2265155 2265156

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	360	370	94	96	70-130	3	20	
Ethane	ug/L	97	97	100	100	104	70-130	4	20	
Ethene	ug/L	120	120	120	98	101	70-130	3	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 754327
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3019084
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/05/21 15:54	

LABORATORY CONTROL SAMPLE: 3019085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9750	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3019086 3019087

Parameter	Units	60383737042 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	529	10000	10000	10100	10100	95	95	75-125	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751594
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737001, 60383737002, 60383737003, 60383737004, 60383737005, 60383737006, 60383737007, 60383737008, 60383737009, 60383737031, 60383737032, 60383737033, 60383737034, 60383737035, 60383737036, 60383737037

METHOD BLANK: 3009507
Matrix: Water
Associated Lab Samples: 60383737001, 60383737002, 60383737003, 60383737004, 60383737005, 60383737006, 60383737007, 60383737008, 60383737009, 60383737031, 60383737032, 60383737033, 60383737034, 60383737035, 60383737036, 60383737037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/26/21 19:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/26/21 19:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/26/21 19:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/26/21 19:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/26/21 19:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/26/21 19:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/26/21 19:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/26/21 19:22	
2-Hexanone	ug/L	ND	10.0	1.1	10/26/21 19:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/26/21 19:22	
Acetone	ug/L	ND	10.0	2.5	10/26/21 19:22	
Benzene	ug/L	ND	1.0	0.14	10/26/21 19:22	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/26/21 19:22	
Bromoform	ug/L	ND	1.0	0.68	10/26/21 19:22	
Bromomethane	ug/L	ND	5.0	0.46	10/26/21 19:22	
Carbon disulfide	ug/L	ND	5.0	0.98	10/26/21 19:22	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/26/21 19:22	
Chlorobenzene	ug/L	ND	1.0	0.089	10/26/21 19:22	
Chloroethane	ug/L	ND	1.0	0.37	10/26/21 19:22	
Chloroform	ug/L	ND	1.0	0.22	10/26/21 19:22	
Chloromethane	ug/L	ND	1.0	0.28	10/26/21 19:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/26/21 19:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/26/21 19:22	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/26/21 19:22	
Ethylbenzene	ug/L	ND	1.0	0.12	10/26/21 19:22	
Methylene Chloride	ug/L	ND	1.0	0.39	10/26/21 19:22	
Styrene	ug/L	ND	1.0	0.12	10/26/21 19:22	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/26/21 19:22	
Toluene	ug/L	ND	1.0	0.25	10/26/21 19:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/26/21 19:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/26/21 19:22	
Trichloroethene	ug/L	ND	1.0	0.21	10/26/21 19:22	
Vinyl chloride	ug/L	ND	1.0	0.17	10/26/21 19:22	
Xylene (Total)	ug/L	ND	3.0	0.28	10/26/21 19:22	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/26/21 19:22	
4-Bromofluorobenzene (S)	%	98	80-120		10/26/21 19:22	
Toluene-d8 (S)	%	99	80-120		10/26/21 19:22	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3009508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.9	110	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	23.5	118	75-125	
1,1,2-Trichloroethane	ug/L	20	22.9	114	80-120	
1,1-Dichloroethane	ug/L	20	22.6	113	75-125	
1,1-Dichloroethene	ug/L	20	18.9	95	80-120	
1,2-Dichloroethane	ug/L	20	22.2	111	75-120	
1,2-Dichloropropane	ug/L	20	22.7	113	80-125	
2-Butanone (MEK)	ug/L	100	157	157	40-150	L1
2-Hexanone	ug/L	100	148	148	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	126	126	65-140	
Acetone	ug/L	100	175	175	20-175	
Benzene	ug/L	20	23.4	117	80-120	
Bromodichloromethane	ug/L	20	21.3	107	80-125	
Bromoform	ug/L	20	20.5	103	60-135	
Bromomethane	ug/L	20	19.1	96	10-165	
Carbon disulfide	ug/L	20	20.2	101	75-135	
Carbon tetrachloride	ug/L	20	20.8	104	80-125	
Chlorobenzene	ug/L	20	22.5	112	80-120	
Chloroethane	ug/L	20	22.7	113	70-130	
Chloroform	ug/L	20	21.4	107	80-120	
Chloromethane	ug/L	20	22.3	112	35-155	
cis-1,2-Dichloroethene	ug/L	20	23.2	116	80-120	
cis-1,3-Dichloropropene	ug/L	20	23.0	115	80-125	
Dibromochloromethane	ug/L	20	18.4	92	70-120	
Ethylbenzene	ug/L	20	22.6	113	80-120	
Methylene Chloride	ug/L	20	19.7	99	75-120	
Styrene	ug/L	20	23.0	115	80-120	
Tetrachloroethene	ug/L	20	20.9	105	80-120	
Toluene	ug/L	20	22.1	111	80-120	
trans-1,2-Dichloroethene	ug/L	20	23.2	116	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.3	107	75-120	
Trichloroethene	ug/L	20	21.7	108	80-120	
Vinyl chloride	ug/L	20	22.6	113	65-130	
Xylene (Total)	ug/L	60	67.5	112	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009509 3009510

Parameter	Units	60383737001 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	21.7	22.1	108	111	75-130	2	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.3	22.4	102	112	65-130	10	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.9	21.1	105	105	70-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009509 3009510

Parameter	Units	60383737001 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	0.67J	20	20	22.2	22.8	108	110	61-130	2	15	
1,1-Dichloroethene	ug/L	0.39J	20	20	18.9	18.4	92	90	60-135	3	25	
1,2-Dichloroethane	ug/L	ND	20	20	20.3	20.4	102	102	30-160	1	25	
1,2-Dichloropropane	ug/L	ND	20	20	20.7	20.3	103	101	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	98.5	97.0	99	97	30-130	2	25	
2-Hexanone	ug/L	ND	100	100	100	105	100	105	40-135	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	109	111	109	111	60-135	3	20	
Acetone	ug/L	ND	100	100	75.4	81.8	75	82	10-150	8	25	
Benzene	ug/L	ND	20	20	22.4	22.6	112	113	20-155	1	25	
Bromodichloromethane	ug/L	ND	20	20	20.2	20.2	101	101	70-130	0	15	
Bromoform	ug/L	ND	20	20	17.9	18.3	90	91	50-125	2	20	
Bromomethane	ug/L	ND	20	20	16.5	17.1	83	85	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.0	17.3	90	87	55-140	4	25	
Carbon tetrachloride	ug/L	ND	20	20	20.3	20.6	101	103	70-140	2	20	
Chlorobenzene	ug/L	ND	20	20	21.0	20.6	105	103	65-130	2	20	
Chloroethane	ug/L	ND	20	20	23.0	23.2	115	116	20-180	1	20	
Chloroform	ug/L	ND	20	20	20.3	20.6	102	103	70-125	1	20	
Chloromethane	ug/L	ND	20	20	21.8	23.4	109	117	20-160	7	30	
cis-1,2-Dichloroethene	ug/L	3.8	20	20	25.0	25.7	106	110	55-130	3	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	16.9	17.2	84	86	60-125	2	20	
Dibromochloromethane	ug/L	ND	20	20	16.6	16.8	83	84	65-120	1	20	
Ethylbenzene	ug/L	ND	20	20	21.7	21.7	109	109	20-160	0	25	
Methylene Chloride	ug/L	ND	20	20	18.6	17.6	93	88	60-125	5	25	
Styrene	ug/L	ND	20	20	19.9	21.0	100	105	40-145	5	30	
Tetrachloroethene	ug/L	ND	20	20	18.8	19.1	94	96	55-135	2	25	
Toluene	ug/L	ND	20	20	19.9	20.5	99	103	25-150	3	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.4	21.2	102	106	60-130	4	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.6	17.0	83	85	60-120	2	15	
Trichloroethene	ug/L	16.8	20	20	36.9	36.9	101	101	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	22.8	22.7	114	113	40-155	1	25	
Xylene (Total)	ug/L	ND	60	60	61.7	62.5	103	104	15-160	1	30	
1,2-Dichlorobenzene-d4 (S)	%						98	101	80-120			
4-Bromofluorobenzene (S)	%						95	99	80-120			
Toluene-d8 (S)	%						99	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009511 3009512

Parameter	Units	60383737009 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	23.3	23.2	116	116	75-130	1	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.7	20.6	108	103	65-130	5	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	21.1	21.3	106	107	70-120	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009511 3009512

Parameter	Units	60383737009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	22.2	22.7	111	114	61-130	2	15	
1,1-Dichloroethene	ug/L	ND	20	20	18.8	20.3	94	102	60-135	8	25	
1,2-Dichloroethane	ug/L	ND	20	20	20.9	21.0	105	105	30-160	1	25	
1,2-Dichloropropane	ug/L	ND	20	20	21.9	21.6	110	108	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	98.8	94.9	99	95	30-130	4	25	
2-Hexanone	ug/L	ND	100	100	106	106	106	106	40-135	0	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	112	112	112	112	60-135	0	20	
Acetone	ug/L	ND	100	100	83.9	89.1	84	89	10-150	6	25	
Benzene	ug/L	ND	20	20	23.0	23.1	115	116	20-155	1	25	
Bromodichloromethane	ug/L	ND	20	20	20.9	20.5	104	102	70-130	2	15	
Bromoform	ug/L	ND	20	20	18.0	18.6	90	93	50-125	3	20	
Bromomethane	ug/L	ND	20	20	18.4	17.9	92	89	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.7	19.7	94	98	55-140	5	25	
Carbon tetrachloride	ug/L	ND	20	20	21.6	21.9	108	110	70-140	2	20	
Chlorobenzene	ug/L	ND	20	20	20.9	21.5	105	108	65-130	3	20	
Chloroethane	ug/L	ND	20	20	23.6	24.0	118	120	20-180	1	20	
Chloroform	ug/L	ND	20	20	21.3	21.3	106	107	70-125	0	20	
Chloromethane	ug/L	ND	20	20	23.4	24.2	117	121	20-160	3	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	23.1	23.6	116	118	55-130	2	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.5	17.8	88	89	60-125	2	20	
Dibromochloromethane	ug/L	ND	20	20	17.4	16.9	87	84	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	21.4	22.3	107	112	20-160	4	25	
Methylene Chloride	ug/L	ND	20	20	19.1	18.1	96	91	60-125	5	25	
Styrene	ug/L	ND	20	20	21.7	21.8	109	109	40-145	0	30	
Tetrachloroethene	ug/L	ND	20	20	19.5	20.2	97	101	55-135	4	25	
Toluene	ug/L	ND	20	20	20.5	20.7	103	103	25-150	1	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.2	16.5	86	82	60-130	4	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	16.7	86	84	60-120	3	15	
Trichloroethene	ug/L	0.67J	20	20	21.5	21.6	104	105	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	23.3	23.2	116	116	40-155	0	25	
Xylene (Total)	ug/L	ND	60	60	64.1	64.4	107	107	15-160	0	30	
1,2-Dichlorobenzene-d4 (S)	%						101	100	80-120			
4-Bromofluorobenzene (S)	%						102	99	80-120			
Toluene-d8 (S)	%						98	102	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751819
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737010, 60383737011, 60383737012, 60383737013, 60383737014, 60383737015, 60383737016, 60383737017, 60383737018, 60383737019, 60383737021

METHOD BLANK: 3010212
Matrix: Water
Associated Lab Samples: 60383737010, 60383737011, 60383737012, 60383737013, 60383737014, 60383737015, 60383737016, 60383737017, 60383737018, 60383737019, 60383737021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/25/21 21:06	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/25/21 21:06	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/25/21 21:06	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/25/21 21:06	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/25/21 21:06	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/25/21 21:06	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/25/21 21:06	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/25/21 21:06	
2-Hexanone	ug/L	ND	10.0	1.1	10/25/21 21:06	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/25/21 21:06	
Acetone	ug/L	ND	10.0	2.5	10/25/21 21:06	
Benzene	ug/L	ND	1.0	0.14	10/25/21 21:06	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/25/21 21:06	
Bromoform	ug/L	ND	1.0	0.68	10/25/21 21:06	
Bromomethane	ug/L	ND	5.0	0.46	10/25/21 21:06	
Carbon disulfide	ug/L	ND	5.0	0.98	10/25/21 21:06	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/25/21 21:06	
Chlorobenzene	ug/L	ND	1.0	0.089	10/25/21 21:06	
Chloroethane	ug/L	ND	1.0	0.37	10/25/21 21:06	
Chloroform	ug/L	ND	1.0	0.22	10/25/21 21:06	
Chloromethane	ug/L	ND	1.0	0.28	10/25/21 21:06	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/25/21 21:06	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/25/21 21:06	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/25/21 21:06	
Ethylbenzene	ug/L	ND	1.0	0.12	10/25/21 21:06	
Methylene Chloride	ug/L	ND	1.0	0.39	10/25/21 21:06	
Styrene	ug/L	ND	1.0	0.12	10/25/21 21:06	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/25/21 21:06	
Toluene	ug/L	ND	1.0	0.25	10/25/21 21:06	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/25/21 21:06	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/25/21 21:06	
Trichloroethene	ug/L	ND	1.0	0.21	10/25/21 21:06	
Vinyl chloride	ug/L	ND	1.0	0.17	10/25/21 21:06	
Xylene (Total)	ug/L	ND	3.0	0.28	10/25/21 21:06	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120		10/25/21 21:06	
4-Bromofluorobenzene (S)	%	102	80-120		10/25/21 21:06	
Toluene-d8 (S)	%	98	80-120		10/25/21 21:06	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3010213

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.7	119	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	22.1	110	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	80-120	
1,1-Dichloroethane	ug/L	20	23.1	115	75-125	
1,1-Dichloroethene	ug/L	20	21.3	107	80-120	
1,2-Dichloroethane	ug/L	20	20.4	102	75-120	
1,2-Dichloropropane	ug/L	20	21.7	108	80-125	
2-Butanone (MEK)	ug/L	100	107	107	40-150	
2-Hexanone	ug/L	100	111	111	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	114	114	65-140	
Acetone	ug/L	100	95.0	95	20-175	
Benzene	ug/L	20	23.4	117	80-120	
Bromodichloromethane	ug/L	20	20.1	100	80-125	
Bromoform	ug/L	20	20.5	103	60-135	
Bromomethane	ug/L	20	19.8	99	10-165	
Carbon disulfide	ug/L	20	25.6	128	75-135	
Carbon tetrachloride	ug/L	20	22.5	112	80-125	
Chlorobenzene	ug/L	20	22.1	111	80-120	
Chloroethane	ug/L	20	22.3	112	70-130	
Chloroform	ug/L	20	21.3	107	80-120	
Chloromethane	ug/L	20	26.4	132	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.6	108	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.1	105	80-125	
Dibromochloromethane	ug/L	20	20.2	101	70-120	
Ethylbenzene	ug/L	20	22.5	113	80-120	
Methylene Chloride	ug/L	20	24.1	121	75-120	L1
Styrene	ug/L	20	21.6	108	80-120	
Tetrachloroethene	ug/L	20	20.8	104	80-120	
Toluene	ug/L	20	22.7	113	80-120	
trans-1,2-Dichloroethene	ug/L	20	21.8	109	80-120	
trans-1,3-Dichloropropene	ug/L	20	20.5	102	75-120	
Trichloroethene	ug/L	20	21.8	109	80-120	
Vinyl chloride	ug/L	20	23.8	119	65-130	
Xylene (Total)	ug/L	60	63.7	106	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010214 3010215

Parameter	Units	60383737013 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	13.7	14.9	68	75	75-130	9	15	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	12.0	13.7	60	69	65-130	13	15	M1
1,1,2-Trichloroethane	ug/L	ND	20	20	11.8	13.1	59	65	70-120	10	20	M1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010214 3010215

Parameter	Units	60383737013 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	13.4	15.0	67	75	61-130	11	15	
1,1-Dichloroethene	ug/L	ND	20	20	12.0	13.1	60	66	60-135	9	25	
1,2-Dichloroethane	ug/L	ND	20	20	11.5	12.9	58	64	30-160	11	25	
1,2-Dichloropropane	ug/L	ND	20	20	12.1	13.9	61	69	65-130	13	20	M1
2-Butanone (MEK)	ug/L	ND	100	100	47.8	54.7	48	55	30-130	14	25	
2-Hexanone	ug/L	ND	100	100	51.2	58.6	51	59	40-135	14	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	59.8	69.0	60	69	60-135	14	20	
Acetone	ug/L	ND	100	100	31.4	38.1	31	38	10-150	19	25	
Benzene	ug/L	ND	20	20	13.2	15.0	66	75	20-155	12	25	
Bromodichloromethane	ug/L	ND	20	20	11.2	13.0	56	65	70-130	14	15	M1
Bromoform	ug/L	ND	20	20	11.0	12.7	55	64	50-125	14	20	
Bromomethane	ug/L	ND	20	20	10.6	12.5	53	63	10-155	17	45	
Carbon disulfide	ug/L	ND	20	20	14.3	15.6	71	78	55-140	9	25	
Carbon tetrachloride	ug/L	ND	20	20	12.6	13.8	63	69	70-140	9	20	M1
Chlorobenzene	ug/L	ND	20	20	12.3	14.2	62	71	65-130	14	20	M1
Chloroethane	ug/L	ND	20	20	12.8	13.8	64	69	20-180	7	20	
Chloroform	ug/L	ND	20	20	12.2	13.9	61	69	70-125	13	20	M1
Chloromethane	ug/L	ND	20	20	14.5	16.4	73	82	20-160	12	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	12.1	14.2	60	71	55-130	16	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	11.5	13.3	57	67	60-125	15	20	M1
Dibromochloromethane	ug/L	ND	20	20	11.3	12.9	57	64	65-120	13	20	M1
Ethylbenzene	ug/L	ND	20	20	12.5	13.9	63	69	20-160	10	25	
Methylene Chloride	ug/L	ND	20	20	13.4	15.3	67	76	60-125	13	25	
Styrene	ug/L	ND	20	20	4.8	6.2	24	31	40-145	26	30	M1
Tetrachloroethene	ug/L	ND	20	20	11.7	12.5	58	63	55-135	7	25	
Toluene	ug/L	ND	20	20	12.5	14.2	63	71	25-150	13	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	12.1	14.2	61	71	60-130	16	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	10.9	12.5	55	63	60-120	14	15	M1
Trichloroethene	ug/L	ND	20	20	12.1	13.8	60	69	50-145	13	20	
Vinyl chloride	ug/L	ND	20	20	13.5	14.2	68	71	40-155	5	25	
Xylene (Total)	ug/L	ND	60	60	35.1	39.4	59	66	15-160	11	30	
1,2-Dichlorobenzene-d4 (S)	%						100	99	80-120			
4-Bromofluorobenzene (S)	%						103	102	80-120			
Toluene-d8 (S)	%						99	98	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751955
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737028, 60383737029, 60383737030, 60383737038, 60383737039, 60383737040, 60383737041, 60383737042, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3010465
Matrix: Water
Associated Lab Samples: 60383737028, 60383737029, 60383737030, 60383737038, 60383737039, 60383737040, 60383737041, 60383737042, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/26/21 07:33	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/26/21 07:33	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/26/21 07:33	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/26/21 07:33	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/26/21 07:33	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/26/21 07:33	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/26/21 07:33	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/26/21 07:33	
2-Hexanone	ug/L	ND	10.0	1.1	10/26/21 07:33	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/26/21 07:33	
Acetone	ug/L	ND	10.0	2.5	10/26/21 07:33	
Benzene	ug/L	ND	1.0	0.14	10/26/21 07:33	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/26/21 07:33	
Bromoform	ug/L	ND	1.0	0.68	10/26/21 07:33	
Bromomethane	ug/L	ND	5.0	0.46	10/26/21 07:33	
Carbon disulfide	ug/L	ND	5.0	0.98	10/26/21 07:33	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/26/21 07:33	
Chlorobenzene	ug/L	ND	1.0	0.089	10/26/21 07:33	
Chloroethane	ug/L	ND	1.0	0.37	10/26/21 07:33	
Chloroform	ug/L	ND	1.0	0.22	10/26/21 07:33	
Chloromethane	ug/L	ND	1.0	0.28	10/26/21 07:33	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/26/21 07:33	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/26/21 07:33	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/26/21 07:33	
Ethylbenzene	ug/L	ND	1.0	0.12	10/26/21 07:33	
Methylene Chloride	ug/L	ND	1.0	0.39	10/26/21 07:33	
Styrene	ug/L	ND	1.0	0.12	10/26/21 07:33	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/26/21 07:33	
Toluene	ug/L	ND	1.0	0.25	10/26/21 07:33	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/26/21 07:33	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/26/21 07:33	
Trichloroethene	ug/L	ND	1.0	0.21	10/26/21 07:33	
Vinyl chloride	ug/L	ND	1.0	0.17	10/26/21 07:33	
Xylene (Total)	ug/L	ND	3.0	0.28	10/26/21 07:33	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120		10/26/21 07:33	
4-Bromofluorobenzene (S)	%	98	80-120		10/26/21 07:33	
Toluene-d8 (S)	%	99	80-120		10/26/21 07:33	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3010466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	97	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	21.8	109	75-125	
1,1,2-Trichloroethane	ug/L	20	20.4	102	80-120	
1,1-Dichloroethane	ug/L	20	20.1	100	75-125	
1,1-Dichloroethene	ug/L	20	17.9	90	80-120	
1,2-Dichloroethane	ug/L	20	18.9	94	75-120	
1,2-Dichloropropane	ug/L	20	19.8	99	80-125	
2-Butanone (MEK)	ug/L	100	131	131	40-150	
2-Hexanone	ug/L	100	130	130	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	65-140	
Acetone	ug/L	100	169	169	20-175	
Benzene	ug/L	20	20.9	104	80-120	
Bromodichloromethane	ug/L	20	19.0	95	80-125	
Bromoform	ug/L	20	17.6	88	60-135	
Bromomethane	ug/L	20	20.2	101	10-165	
Carbon disulfide	ug/L	20	20.0	100	75-135	
Carbon tetrachloride	ug/L	20	18.7	93	80-125	
Chlorobenzene	ug/L	20	20.1	100	80-120	
Chloroethane	ug/L	20	21.6	108	70-130	
Chloroform	ug/L	20	19.1	95	80-120	
Chloromethane	ug/L	20	21.7	109	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.2	106	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.9	100	80-125	
Dibromochloromethane	ug/L	20	15.7	78	70-120	
Ethylbenzene	ug/L	20	20.6	103	80-120	
Methylene Chloride	ug/L	20	17.2	86	75-120	
Styrene	ug/L	20	20.2	101	80-120	
Tetrachloroethene	ug/L	20	19.0	95	80-120	
Toluene	ug/L	20	19.4	97	80-120	
trans-1,2-Dichloroethene	ug/L	20	16.4	82	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	75-120	
Trichloroethene	ug/L	20	19.0	95	80-120	
Vinyl chloride	ug/L	20	22.3	112	65-130	
Xylene (Total)	ug/L	60	62.1	104	80-120	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 752343
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737020, 60383737022, 60383737023, 60383737024, 60383737025, 60383737026, 60383737027, 60383737043

METHOD BLANK: 3011626
Matrix: Water
Associated Lab Samples: 60383737020, 60383737022, 60383737023, 60383737024, 60383737025, 60383737026, 60383737027, 60383737043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/27/21 12:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/27/21 12:03	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/27/21 12:03	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/27/21 12:03	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/27/21 12:03	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/27/21 12:03	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/27/21 12:03	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/27/21 12:03	
2-Hexanone	ug/L	ND	10.0	1.1	10/27/21 12:03	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/27/21 12:03	
Acetone	ug/L	ND	10.0	2.5	10/27/21 12:03	
Benzene	ug/L	ND	1.0	0.14	10/27/21 12:03	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/27/21 12:03	
Bromoform	ug/L	ND	1.0	0.68	10/27/21 12:03	
Bromomethane	ug/L	ND	5.0	0.46	10/27/21 12:03	
Carbon disulfide	ug/L	ND	5.0	0.98	10/27/21 12:03	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Chlorobenzene	ug/L	ND	1.0	0.089	10/27/21 12:03	
Chloroethane	ug/L	ND	1.0	0.37	10/27/21 12:03	
Chloroform	ug/L	ND	1.0	0.22	10/27/21 12:03	
Chloromethane	ug/L	ND	1.0	0.28	10/27/21 12:03	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/27/21 12:03	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/27/21 12:03	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/27/21 12:03	
Ethylbenzene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Methylene Chloride	ug/L	ND	1.0	0.39	10/27/21 12:03	
Styrene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/27/21 12:03	
Toluene	ug/L	ND	1.0	0.25	10/27/21 12:03	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/27/21 12:03	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/27/21 12:03	
Trichloroethene	ug/L	ND	1.0	0.21	10/27/21 12:03	
Vinyl chloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Xylene (Total)	ug/L	ND	3.0	0.28	10/27/21 12:03	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/27/21 12:03	
4-Bromofluorobenzene (S)	%	104	80-120		10/27/21 12:03	
Toluene-d8 (S)	%	98	80-120		10/27/21 12:03	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

LABORATORY CONTROL SAMPLE: 3011627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.9	99	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.4	92	75-125	
1,1,2-Trichloroethane	ug/L	20	19.5	97	80-120	
1,1-Dichloroethane	ug/L	20	16.7	84	75-125	
1,1-Dichloroethene	ug/L	20	20.3	102	80-120	
1,2-Dichloroethane	ug/L	20	19.1	96	75-120	
1,2-Dichloropropane	ug/L	20	19.6	98	80-125	
2-Butanone (MEK)	ug/L	100	100	100	40-150	
2-Hexanone	ug/L	100	102	102	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.2	97	65-140	
Acetone	ug/L	100	96.2	96	20-175	
Benzene	ug/L	20	20.3	101	80-120	
Bromodichloromethane	ug/L	20	19.3	96	80-125	
Bromoform	ug/L	20	18.2	91	60-135	
Bromomethane	ug/L	20	17.8	89	10-165	
Carbon disulfide	ug/L	20	19.6	98	75-135	
Carbon tetrachloride	ug/L	20	18.9	95	80-125	
Chlorobenzene	ug/L	20	19.7	99	80-120	
Chloroethane	ug/L	20	19.4	97	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	19.5	98	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.6	93	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-125	
Dibromochloromethane	ug/L	20	19.3	96	70-120	
Ethylbenzene	ug/L	20	20.0	100	80-120	
Methylene Chloride	ug/L	20	19.5	97	75-120	
Styrene	ug/L	20	22.4	112	80-120	
Tetrachloroethene	ug/L	20	20.2	101	80-120	
Toluene	ug/L	20	20.0	100	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.0	85	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	18.8	94	65-130	
Xylene (Total)	ug/L	60	61.5	102	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	18.7	19.1	93	96	75-130	2	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.9	17.5	85	88	65-130	3	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.2	18.9	91	95	70-120	4	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	15.3	18.1	77	91	61-130	17	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	18.5	19.9	92	100	60-135	8	25	
1,2-Dichloroethane	ug/L	ND	20	20	16.9	17.8	84	89	30-160	5	25	
1,2-Dichloropropane	ug/L	ND	20	20	17.9	18.0	89	90	65-130	1	20	
2-Butanone (MEK)	ug/L	ND	100	100	78.9	84.3	79	84	30-130	7	25	
2-Hexanone	ug/L	ND	100	100	85.5	89.6	85	90	40-135	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	83.5	85.2	83	85	60-135	2	20	
Acetone	ug/L	ND	100	100	73.0	75.8	73	76	10-150	4	25	
Benzene	ug/L	ND	20	20	18.8	19.4	94	96	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	16.8	17.2	84	86	70-130	2	15	
Bromoform	ug/L	ND	20	20	15.7	16.3	79	82	50-125	4	20	
Bromomethane	ug/L	ND	20	20	15.1	15.5	76	78	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.1	18.3	90	92	55-140	1	25	
Carbon tetrachloride	ug/L	ND	20	20	18.1	18.4	90	92	70-140	2	20	
Chlorobenzene	ug/L	5.5	20	20	23.9	24.5	92	95	65-130	2	20	
Chloroethane	ug/L	ND	20	20	17.5	18.4	87	92	20-180	5	20	
Chloroform	ug/L	ND	20	20	17.4	17.6	87	88	70-125	1	20	
Chloromethane	ug/L	ND	20	20	17.0	17.2	85	86	20-160	1	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.0	17.9	85	89	55-130	5	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.0	17.8	85	89	60-125	5	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.5	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	18.4	19.0	92	95	20-160	3	25	
Methylene Chloride	ug/L	ND	20	20	16.7	17.2	84	86	60-125	3	25	
Styrene	ug/L	ND	20	20	11.1	10.9	55	55	40-145	1	30	
Tetrachloroethene	ug/L	ND	20	20	19.8	19.7	99	98	55-135	1	25	
Toluene	ug/L	ND	20	20	18.4	19.1	92	95	25-150	4	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.8	16.2	79	81	60-130	2	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	18.3	86	91	60-120	6	15	
Trichloroethene	ug/L	ND	20	20	18.1	18.8	90	94	50-145	4	20	
Vinyl chloride	ug/L	ND	20	20	16.7	17.1	83	86	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	95	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						97	97	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						102	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	18.0	19.6	90	98	75-130	9	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.6	17.4	88	87	65-130	1	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.1	18.8	96	94	70-120	2	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	15.2	18.6	76	93	61-130	20	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	19.0	19.7	95	99	60-135	4	25	
1,2-Dichloroethane	ug/L	ND	20	20	17.6	18.3	88	91	30-160	3	25	
1,2-Dichloropropane	ug/L	ND	20	20	18.1	18.4	90	92	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	74.7	87.0	75	87	30-130	15	25	
2-Hexanone	ug/L	ND	100	100	89.1	89.9	89	90	40-135	1	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	89.5	90.1	89	90	60-135	1	20	
Acetone	ug/L	ND	100	100	75.8	74.3	76	74	10-150	2	25	
Benzene	ug/L	ND	20	20	19.3	20.0	97	100	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	17.6	17.5	88	88	70-130	0	15	
Bromoform	ug/L	ND	20	20	16.2	16.3	81	82	50-125	0	20	
Bromomethane	ug/L	ND	20	20	15.7	16.8	79	84	10-155	7	45	
Carbon disulfide	ug/L	ND	20	20	18.5	19.4	92	97	55-140	5	25	
Carbon tetrachloride	ug/L	ND	20	20	18.0	19.2	90	96	70-140	7	20	
Chlorobenzene	ug/L	ND	20	20	18.1	18.9	91	95	65-130	4	20	
Chloroethane	ug/L	ND	20	20	17.4	18.5	87	92	20-180	6	20	
Chloroform	ug/L	ND	20	20	15.9	18.1	80	90	70-125	13	20	
Chloromethane	ug/L	ND	20	20	17.0	17.6	85	88	20-160	4	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	15.5	18.3	78	91	55-130	16	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.9	18.5	90	93	60-125	3	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.6	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	19.3	19.6	96	98	20-160	2	25	
Methylene Chloride	ug/L	ND	20	20	17.8	18.0	89	90	60-125	1	25	
Styrene	ug/L	ND	20	20	20.2	21.3	101	106	40-145	5	30	
Tetrachloroethene	ug/L	ND	20	20	19.0	19.6	95	98	55-135	3	25	
Toluene	ug/L	ND	20	20	18.9	19.4	95	97	25-150	2	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.9	17.0	79	85	60-130	7	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.5	17.9	87	90	60-120	2	15	
Trichloroethene	ug/L	ND	20	20	19.1	19.0	95	95	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	17.3	17.9	87	89	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	94	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						103	100	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						101	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751612
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042

METHOD BLANK: 3009539 Matrix: Water
Associated Lab Samples: 60383737041, 60383737042

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/25/21 13:29	

LABORATORY CONTROL SAMPLE: 3009540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009541 3009542

Parameter	Units	60383950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.14	0.11	24	20	75-125	17	20	H1,M1

SAMPLE DUPLICATE: 3009543

Parameter	Units	60383950001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

SAMPLE DUPLICATE: 3009544

Parameter	Units	60383885002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 751896
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3010348
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/26/21 06:47	
Sulfate	mg/L	ND	1.0	0.42	10/26/21 06:47	

LABORATORY CONTROL SAMPLE: 3010349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010350 3010351

Parameter	Units	60383737041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	153	100	100	246	247	93	95	80-120	0	15	
Sulfate	mg/L	1.3	5	5	5.9	5.9	93	94	80-120	0	15	

MATRIX SPIKE SAMPLE: 3010352

Parameter	Units	60383996041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	92.7	100	181	88	80-120	
Sulfate	mg/L	1.9	5	6.4	90	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 750899
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737043, 60383737046

METHOD BLANK: 3006639
Matrix: Water
Associated Lab Samples: 60383737043, 60383737046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/29/21 11:24	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/29/21 11:24	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/29/21 11:24	

LABORATORY CONTROL SAMPLE: 3006640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	101	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 3006641

Parameter	Units	60383725024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.1	110	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	101	90-110	H1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.1	104	90-110	H1

SAMPLE DUPLICATE: 3006642

Parameter	Units	60383725004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	H1
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 750952
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737044, 60383737045, 60383737047, 60383737048

METHOD BLANK: 3006857 Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737044, 60383737045, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/21/21 08:36	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/21/21 08:36	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/21/21 08:36	

LABORATORY CONTROL SAMPLE: 3006858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.91	91	70-130	
Nitrogen, Nitrite	mg/L	1	0.99	99	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	95	90-110	

MATRIX SPIKE SAMPLE: 3006859

Parameter	Units	60383745004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.86	86	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	97	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	1.9	93	90-110	

MATRIX SPIKE SAMPLE: 3006861

Parameter	Units	60383725006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.89	89	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	1.9	93	90-110	

SAMPLE DUPLICATE: 3006860

Parameter	Units	60383745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 753086
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737043, 60383737046

METHOD BLANK: 3014270
Matrix: Water
Associated Lab Samples: 60383737043, 60383737046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/29/21 15:09	

LABORATORY CONTROL SAMPLE: 3014271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 3014272

Parameter	Units	60383737043 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.095J	5	90-110	M1

MATRIX SPIKE SAMPLE: 3014274

Parameter	Units	60384407001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.11	5	90-110	M1

SAMPLE DUPLICATE: 3014273

Parameter	Units	60384461001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 752649
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 3012426
Matrix: Water
Associated Lab Samples: 60383737041, 60383737042, 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/28/21 09:43	

LABORATORY CONTROL SAMPLE: 3012427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.3	105	80-120	

MATRIX SPIKE SAMPLE: 3012428

Parameter	Units	60383451003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	27.1	25	49.2	89	80-120	

SAMPLE DUPLICATE: 3012429

Parameter	Units	60383674005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	7.1	6.5	9	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 752988
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737041, 60383737043, 60383737044, 60383737045, 60383737046

METHOD BLANK: 3013841
Matrix: Water
Associated Lab Samples: 60383737041, 60383737043, 60383737044, 60383737045, 60383737046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 09:45	

LABORATORY CONTROL SAMPLE: 3013842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	93	80-120	

MATRIX SPIKE SAMPLE: 3013843

Parameter	Units	60383737041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.6	5	7.4	95	80-120	

SAMPLE DUPLICATE: 3013844

Parameter	Units	60383737044 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.3	8.2	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 753833
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383737047, 60383737048

METHOD BLANK: 3017243
Matrix: Water
Associated Lab Samples: 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	11/03/21 11:33	

LABORATORY CONTROL SAMPLE: 3017244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	95	80-120	

MATRIX SPIKE SAMPLE: 3017245

Parameter	Units	60383737047 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	55.6	125	206	121	80-120	M1

SAMPLE DUPLICATE: 3017246

Parameter	Units	60383996041 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.8	9.1	4	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 725711
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

METHOD BLANK: 2266432
Matrix: Water
Associated Lab Samples: 60383737043, 60383737044, 60383737045, 60383737046, 60383737047, 60383737048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/16/21 10:26	
Acetic Acid	mg/L	ND	0.50	0.12	11/16/21 10:26	
Propionic Acid	mg/L	ND	0.50	0.053	11/16/21 10:26	
Formic acid	mg/L	ND	0.50	0.055	11/16/21 10:26	
Butyric Acid	mg/L	ND	0.50	0.058	11/16/21 10:26	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/16/21 10:26	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/16/21 10:26	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/16/21 10:26	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/16/21 10:26	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/16/21 10:26	

LABORATORY CONTROL SAMPLE & LCSD: 2266433 2266434

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.3	2.3	117	117	70-130	0	20	
Acetic Acid	mg/L	2	2.1	2.1	107	107	70-130	0	20	
Propionic Acid	mg/L	2	2.3	2.3	117	115	70-130	2	20	
Formic acid	mg/L	2	2.1	2.1	105	104	70-130	1	20	
Butyric Acid	mg/L	2	2.1	2.2	107	110	70-130	3	20	
Pyruvic Acid	mg/L	2	2.3	2.3	117	117	70-130	1	20	
i-Pentanoic Acid	mg/L	2	2.3	2.3	114	115	70-130	0	20	
Pentanoic Acid	mg/L	2	2.1	2.1	104	107	70-130	3	20	
i-Hexanoic Acid	mg/L	2	2.3	2.2	117	113	70-130	4	20	
Hexanoic Acid	mg/L	2	2.2	2.1	108	106	70-130	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

QC Batch: 726862
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383737041

METHOD BLANK: 2273096
Matrix: Water
Associated Lab Samples: 60383737041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/17/21 17:16	
Acetic Acid	mg/L	ND	0.50	0.12	11/17/21 17:16	
Propionic Acid	mg/L	ND	0.50	0.053	11/17/21 17:16	
Formic acid	mg/L	ND	0.50	0.055	11/17/21 17:16	
Butyric Acid	mg/L	ND	0.50	0.058	11/17/21 17:16	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/17/21 17:16	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/17/21 17:16	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/17/21 17:16	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/17/21 17:16	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/17/21 17:16	

LABORATORY CONTROL SAMPLE & LCSD: 2273097 2273098

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.3	2.4	115	120	70-130	5	20	
Acetic Acid	mg/L	2	2.2	2.2	108	112	70-130	4	20	
Propionic Acid	mg/L	2	2.3	2.4	115	121	70-130	5	20	
Formic acid	mg/L	2	2.2	2.1	108	106	70-130	2	20	
Butyric Acid	mg/L	2	2.5	2.4	124	122	70-130	2	20	
Pyruvic Acid	mg/L	2	2.3	2.2	114	112	70-130	2	20	
i-Pentanoic Acid	mg/L	2	2.0	2.0	100	101	70-130	1	20	
Pentanoic Acid	mg/L	2	2.1	1.9	106	97	70-130	9	20	
i-Hexanoic Acid	mg/L	2	2.4	2.4	120	120	70-130	0	20	
Hexanoic Acid	mg/L	2	2.4	2.2	119	108	70-130	9	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 60383737

[1]	In the [ANAL_METHOD] analysis, sample [LAB_SAMP][CUST_SAMP_ID] was conducted outside of the recognized method holding time.

BATCH QUALIFIERS

Batch: 751955

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

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
H1	Extraction or preparation was conducted outside of the recognized method holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383737041	**TMW-10-202110**	AM20GAX	725022		
60383737041	**TMW-10-202110**	AM20GAX	725469		
60383737041	**TMW-10-202110**	AM20GAX	725427		
60383737042	**MW-50R-202110**	AM20GAX	725427		
60383737043	**TMW-16-202110**	AM20GAX	725466		
60383737044	**MW-186-202110**	AM20GAX	725466		
60383737045	**TMW-36-202110**	AM20GAX	725466		
60383737046	**TMW-36B-202110**	AM20GAX	725466		
60383737047	**MW-99-202110**	AM20GAX	725466		
60383737048	**TMW-26-202110**	AM20GAX	725466		
60383737041	**TMW-10-202110**	EPA 3010	754327	EPA 6010	754446
60383737042	**MW-50R-202110**	EPA 3010	754327	EPA 6010	754446
60383737043	**TMW-16-202110**	EPA 3010	754327	EPA 6010	754446
60383737044	**MW-186-202110**	EPA 3010	754327	EPA 6010	754446
60383737045	**TMW-36-202110**	EPA 3010	754327	EPA 6010	754446
60383737046	**TMW-36B-202110**	EPA 3010	754327	EPA 6010	754446
60383737047	**MW-99-202110**	EPA 3010	754327	EPA 6010	754446
60383737048	**TMW-26-202110**	EPA 3010	754327	EPA 6010	754446
60383737001	**MW-187-202110**	EPA 5030B/8260	751594		
60383737002	**MW-203-202110**	EPA 5030B/8260	751594		
60383737003	**EB-02-202110**	EPA 5030B/8260	751594		
60383737004	**MW-188-202110**	EPA 5030B/8260	751594		
60383737005	**MW-55R-202110**	EPA 5030B/8260	751594		
60383737006	**TB-01-202110**	EPA 5030B/8260	751594		
60383737007	**TB-02-202110**	EPA 5030B/8260	751594		
60383737008	**TB-03-202110**	EPA 5030B/8260	751594		
60383737009	**MW-183R-202110**	EPA 5030B/8260	751594		
60383737010	**MW-200-202110**	EPA 5030B/8260	751819		
60383737011	**MW-184-202110**	EPA 5030B/8260	751819		
60383737012	**DUP-01-202110**	EPA 5030B/8260	751819		
60383737013	**MW-60R-202110**	EPA 5030B/8260	751819		
60383737014	**ITMW-2R-202110**	EPA 5030B/8260	751819		
60383737015	**MW-196-202110**	EPA 5030B/8260	751819		
60383737016	**ITMW-16-202110**	EPA 5030B/8260	751819		
60383737017	**MW-26-202110**	EPA 5030B/8260	751819		
60383737018	**TMW-27-202110**	EPA 5030B/8260	751819		
60383737019	**MW-201-202110**	EPA 5030B/8260	751819		
60383737020	**MW-29-202110**	EPA 5030B/8260	752343		
60383737021	**MW-195-202110**	EPA 5030B/8260	751819		
60383737022	**DUP-05-202110**	EPA 5030B/8260	752343		
60383737023	**MW-68-202110**	EPA 5030B/8260	752343		
60383737024	**MW-40R-202110**	EPA 5030B/8260	752343		
60383737025	**MW-96-202110**	EPA 5030B/8260	752343		
60383737026	**DUP-02-202110**	EPA 5030B/8260	752343		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383737027	**TMW-29-202110**	EPA 5030B/8260	752343		
60383737028	**TMW-20-202110**	EPA 5030B/8260	751955		
60383737029	**TMW-35-202110**	EPA 5030B/8260	751955		
60383737030	**DUP-06-202110**	EPA 5030B/8260	751955		
60383737031	**MW-39R-202110**	EPA 5030B/8260	751594		
60383737032	**MW-191-202110**	EPA 5030B/8260	751594		
60383737033	**MW-27-202110**	EPA 5030B/8260	751594		
60383737034	**EB-01-202110**	EPA 5030B/8260	751594		
60383737035	**MW-98-202110**	EPA 5030B/8260	751594		
60383737036	**MW-62R-20210**	EPA 5030B/8260	751594		
60383737037	**MW-28-202110**	EPA 5030B/8260	751594		
60383737038	**ITMW-20-202110**	EPA 5030B/8260	751955		
60383737039	**DUP-03-202110**	EPA 5030B/8260	751955		
60383737040	**MW-97-202110**	EPA 5030B/8260	751955		
60383737041	**TMW-10-202110**	EPA 5030B/8260	751955		
60383737042	**MW-50R-202110**	EPA 5030B/8260	751955		
60383737043	**TMW-16-202110**	EPA 5030B/8260	752343		
60383737044	**MW-186-202110**	EPA 5030B/8260	751955		
60383737045	**TMW-36-202110**	EPA 5030B/8260	751955		
60383737046	**TMW-36B-202110**	EPA 5030B/8260	751955		
60383737047	**MW-99-202110**	EPA 5030B/8260	751955		
60383737048	**TMW-26-202110**	EPA 5030B/8260	751955		
60383737041	**TMW-10-202110**	SM 4500-S-2 D	751612		
60383737042	**MW-50R-202110**	SM 4500-S-2 D	751612		
60383737041	**TMW-10-202110**	EPA 300.0	751896		
60383737042	**MW-50R-202110**	EPA 300.0	751896		
60383737043	**TMW-16-202110**	EPA 300.0	751896		
60383737044	**MW-186-202110**	EPA 300.0	751896		
60383737045	**TMW-36-202110**	EPA 300.0	751896		
60383737046	**TMW-36B-202110**	EPA 300.0	751896		
60383737047	**MW-99-202110**	EPA 300.0	751896		
60383737048	**TMW-26-202110**	EPA 300.0	751896		
60383737041	**TMW-10-202110**	EPA 353.2	750952		
60383737042	**MW-50R-202110**	EPA 353.2	750952		
60383737043	**TMW-16-202110**	EPA 353.2	750899		
60383737044	**MW-186-202110**	EPA 353.2	750952		
60383737045	**TMW-36-202110**	EPA 353.2	750952		
60383737046	**TMW-36B-202110**	EPA 353.2	750899		
60383737047	**MW-99-202110**	EPA 353.2	750952		
60383737048	**TMW-26-202110**	EPA 353.2	750952		
60383737043	**TMW-16-202110**	EPA 353.2	753086		
60383737046	**TMW-36B-202110**	EPA 353.2	753086		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383737041	**TMW-10-202110**	SM 5310C	752649		
60383737042	**MW-50R-202110**	SM 5310C	752649		
60383737043	**TMW-16-202110**	SM 5310C	752649		
60383737044	**MW-186-202110**	SM 5310C	752649		
60383737045	**TMW-36-202110**	SM 5310C	752649		
60383737046	**TMW-36B-202110**	SM 5310C	752649		
60383737047	**MW-99-202110**	SM 5310C	752649		
60383737048	**TMW-26-202110**	SM 5310C	752649		
60383737041	**TMW-10-202110**	SM 5310C	752988		
60383737043	**TMW-16-202110**	SM 5310C	752988		
60383737044	**MW-186-202110**	SM 5310C	752988		
60383737045	**TMW-36-202110**	SM 5310C	752988		
60383737046	**TMW-36B-202110**	SM 5310C	752988		
60383737047	**MW-99-202110**	SM 5310C	753833		
60383737048	**TMW-26-202110**	SM 5310C	753833		
60383737041	**TMW-10-202110**	AM23G	726862		
60383737043	**TMW-16-202110**	AM23G	725711		
60383737044	**MW-186-202110**	AM23G	725711		
60383737045	**TMW-36-202110**	AM23G	725711		
60383737046	**TMW-36B-202110**	AM23G	725711		
60383737047	**MW-99-202110**	AM23G	725711		
60383737048	**TMW-26-202110**	AM23G	725711		

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www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60383737

60383737

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 ☑ SPLC

Thermometer Used: T299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.1 **Corr. Factor** 0.2 **Corrected** 1.9°C

Date and initials of person examining contents:

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	NOX 10/21/21 1155
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) LOT# 603173	☑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	SR 10/20/21
Headspace in VOA vials (>6mm):	☐Yes ☑No ☑N/A	SR 10/20/21
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: _____

REVIEWED
By jchurch at 9:04 pm, 10/20/21

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight
David Meyer

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **: 3

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight
David Meyer

Email To: thouseknight@ramboll.com
dmeyer@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required: _____

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample #, Comments
	MW-187-202110	GW	G	10-19-21	1505				3	X	
	MW-187-202110-MS	GW	G	10-19-21	1505				3	X	
	MW-187-202110-MSD	GW	G	10-19-21	1505				3	X	
	MW-203-202110	GW	G	10-19-21	1505				3	X	
	EB-02-202110	GW	G	10-19-21	1630				3	X	
	MW-188-202110	GW	G	10-19-21	1628				3	X	
	MW-55R-202110	GW	G	10-19-21	1653				3	X	
	TB-01-202110	TB	G	10-19-21	0700				2	X	
	TB-02-202110	TB	G	10-19-21	0700				2	X	
	TB-03-202110	TB	G	10-19-21	0700				2	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: _____
Cooler Temp Upon Receipt _____ oC
Cooler Therm Corr. Factor _____ oC
Cooler Temp Corrected 1.9 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SROGERS PACE	10/20/21 0445
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 1 of 7

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60383737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight
David Meyer

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com
dmeyer@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft. Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	MW-183R-202110-MS	GW	G	10-19-21	1152				3	X	
1	MW-183R-202110-MSD	GW	G	10-19-21	1152				3	X	
1	MW-200-202110	GW	G	10-19-21	1209				3	X	
1	~~TMW-16~~ MW-184-202110	GW	G	10-19-21	1325				3	X	
1	DUP-02-202110	GW	G	10-19-21	1325				3	X	
1	MW-60R-202110	GW	G	10-19-21	1348				3	X	
1	MW-60R-202110-MS	GW	G	10-19-21	1348				3	X	
1	MW-60R-202110-MSD	GW	G	10-19-21	1348				3	X	
1	ITMW-2R-202110	GW	G	10-19-21	1347				3	X	
1	MW-196-202110	GW	G	10-19-21	1407				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SPECTERS PACE	10/20/21 0645
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 2 of 4

F-ALL-C-010-rev 00, 05Jul2018

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 60383737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [✓] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	ITMW-16-202110	GW	G	10-19-21	1045				3	X	
1	MW-26-202110	GW	G	10-19-21	0950				3	X	
1	TMW-27-202110	GW	G	10-19-21	1125				3	X	
1	MW-201-202110	GW	G	10-19-21	1149				3	X	
1	MW-29-202110	GW	G	10-19-21	1145				3	X	
1	MW-29-202110-MS	GW	G	10-19-21	1145				3	X	
1	MW-29-202110_MSD	GW	G	10-19-21	1145				3	X	
1	MW-195-202110	GW	G	10-19-21	1135				3	X	
1	DUP-05-202110	GW	G	10-19-21	1135				3	X	
1	MW-183R-202110	GW	G	10-19-21	1152				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [✓] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ramboll	10-19-21 1800	SPECCERS PACE	10/20/21 0445
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

ACCT #:

Template:

Prelogin:

PM:

PB:

LAB Sample Temperature Info:

Temp Blank received: Y N NA

Therm ID #:

Cooler Temp Upon Receipt: oC

Cooler Therm Corr. Factor: oC

Cooler Temp Corrected: 1.9 oC

Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 3 of 7

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 603837 37

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: / PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample #, Comments
MW-68-202110	GW	G	10-19-21	0907				3	X	
MW-68-202110-MS	GW	G	10-19-21	0907				3	X	
MW-68-202110-MSD	GW	G	10-19-21	0907				3	X	
MW-40R-202110	GW	G	10-19-21	1023				3	X	
MW-96-202110	GW	G	10-19-21	1020				3	X	
DUP-02-202110	GW	G	10-19-21	1020				3	X	
TMW-29-202110	GW	G	10-19-21	0945				3	X	
TMW-20-202110	GW	G	10-19-21	1033				3	X	
TMW-35-202110	GW	G	10-19-21	0902				3	X	
DUP-06-202110	GW	G	10-19-21	0902				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [X] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SPOGERS PACE	10/20/21 0945
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 4 of 7

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 60JE 3>3>

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: LP

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [✓] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	MW-39R-202110	GW	G	10-18-21	1710	-	-		3	X	
1	MW-191-202110	GW	G	10-18-21	1628	-	-		3	X	
1	MW-27-202110	GW	G	10-18-21	1730	-	-		3	X	
1	EB-01-202110	GW	G	10-18-21	1805	-	-		3	X	
1	MW-98-202110	GW	G	10-18-21	1712	-	-		3	X	
1	MW-62R-20210	GW	G	10-18-21	1820	-	-		3	X	
1	MW-28-202110	GW	G	10-18-21	1800	-	-		3	X	
1	ITMW-20-202110	GW	G	10-19-21	0903	-	-		3	X	
1	DUP-03-202110	GW	G	10-19-21	0903	-	-		3	X	
1	MW-97-202110	GW	G	10-19-21	0917	-	-		3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [✓] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SROGERS PACE	10/20/21 0445
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #: _____

ACCT #: _____

Template: _____

Prelogin: _____

PM: _____

PB: _____

LAB Sample Temperature Info:

Temp Blank received: Y N NA

Therm ID #: _____

Cooler Temp Upon Receipt _____ oC

Cooler Therm Corr. Factor _____ oC

Cooler Temp Corrected 1.9 oC

Comments: _____

Trip Blank Received: Y N N/A

HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 5 of 7

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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6038 3737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thousekniht@ramboll.com

Copy To: Haley Ahlers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Container Preservative Type **: 3 U 5 U 2 U 1 0 0 0

Lab Project Manager: Jamie Church

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride, Sulfate, Nitrate	~~Sulfate~~ Sulfide	~~Nitrate~~ Hydrogen	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene, Ammonia, Acetylene	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
TMW-10-202110	GW	G	10-19-21	1431				14	X	X	X	X	X	X	X	X	X	X	
MW-SOR-202110	GW	G	10-19-21	1432				11	X	X	X	X	X		X			X	

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

DM

Customer Remarks/ Special Conditions/ Possible Hazards:
Do not analyze for chloride for Sample ~~TMW~~ MW-SOR-202110.

Type of Ice Used: Wet [X] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ramboll	10-19-21 1800	SROGERS PACE	10/20/21 0445

MTJL LAB USE ONLY
Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 6 of 6

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6037 3737

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Haley Ahlers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3 U U U 2 U 1 0 0

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	8260 VOCs	Chloride	Sulfate	Nitrate	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
3	TMW-16-202110	GW	G	10-19-21	1155	-	-		12	X	X	X	X	X	X	X	X	X	
3	MW-186-202110	GW	G	10-19-21	1410	-	-		12	X	X	X	X	X	X	X	X	X	
2	TMW-36-202110	GW	G	10-19-21	1320	-	-		12	X	X	X	X	X	X	X	X	X	
2	TMW-36B-202110	GW	G	10-19-21	1145	-	-		12	X	X	X	X	X	X	X	X	X	
3	MW-99-202110	GW	G	10-19-21	1548	-	-		12	X	X	X	X	X	X	X	X	X	
3	TMW-26-202110	GW	G	10-19-21	1625	-	-		12	X	X	X	X	X	X	X	X	X	

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 1.9 oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-19-21 1800	SCHEFERS PACE	10/20/21 0445
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeCH TSP Other

NonConformance(s): YES / NO

Page 7 of 7

F-ALL-C-010-rev.00, 05Jul2018

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

October 28, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383775

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383775

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383775001	**TMW-10-202110**	Water	10/19/21 14:31	10/20/21 08:00
60383775002	**MW-50R-202111**	Water	10/19/21 14:32	10/20/21 08:00

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

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

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

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REPORT TO:
Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS
email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)
Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS
email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

microbialinsights
10515 Research Dr
Knoxville, TN 37932
865-573-8188
www.microbe.com

Project Manager: Michael Wilson
Project Name: Whirlpool, Ft. Smith, AR
Project No.: 1690021278

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☒ More samples to follow
☐ No Additional Samples

Report Type: ☐ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (35%)

EDD type: ☐ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information						Analyses				CENSUS: Please select the target organism/gene																						
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers	PLFA	NGS	QuantArray Chlor	QuantArray Petro	DHC (Dehalococcoides)	DHC Functional genes (bvc, tce, vcr)	DHBt (Dehalobacter)	DHG (Dehalogenimonas)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Dentrifiers-nirS and nirK)	AMO (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Napthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	RNA (Expression Option)*	Other: VC - Reductase	Other:	Other:
060SJ1	TMW-10-202110	10/19/21	1431		1					X																					X		
2	MW-50R-202110	10/19/21	1432		1					X																					X		

Relinquished by: Caroline Chavers Date 10/19/21 Received by: Fedex Date 10/19/21 10/20/21

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

*Additional cost and sample preservation are associated with RNA samples.

**Saturday delivery: See sampling protocol for alternate shipping address.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Jamie Church
Pace Analytical Labs
4120 Seven Hills Dr
Florrisant, MO 63033

Phone:

Fax:

Identifier: 060SJ **Date Rec:** 10/20/2021 **Report Date:** 10/27/2021

Client Project #: 60383775 **Client Project Name:** Whirlpool, Ft. Smith, AR

Purchase Order #: SUB-105150

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

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

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Pace Analytical Labs**
Project: Whirlpool, Ft. Smith, AR

MI Project Number: **060SJ**
Date Received: 10/20/2021

Sample Information

Client Sample ID:	**TMW-10-202110**	**MW-50R-202110**
Sample Date:	10/19/2021	10/19/2021
Units:	cells/mL	cells/mL
Analyst/Reviewer:	BB/CS	BB/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**1.14E+03**	**2.50E+00**
tceA Reductase	TCE	**3.25E+02**	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	**2.90E+02**	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **10/20/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/20/2021	10/27/2021	0 °C	102%	non-detect	non-detect
BVC	10/20/2021	10/27/2021	0 °C	111%	non-detect	non-detect
TCE	10/20/2021	10/27/2021	0 °C	106%	non-detect	non-detect
VCR	10/20/2021	10/27/2021	0 °C	106%	non-detect	non-detect

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

November 22, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast

7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383878001	**TMW-25-202110**	Water	10/20/21 09:15	10/20/21 18:00
60383878002	**TMW-21-202110**	Water	10/20/21 11:20	10/20/21 18:00
60383878003	**MW-61R-202110**	Water	10/20/21 12:03	10/20/21 18:00
60383878004	**MW-194-202110**	Water	10/20/21 13:00	10/20/21 18:00
60383878005	**TMW-32-202110**	Water	10/20/21 14:58	10/20/21 18:00
60383878006	**TMW-34-202110**	Water	10/20/21 16:53	10/20/21 18:00
60383878007	**TMW-11-202110**	Water	10/20/21 09:10	10/20/21 18:00
60383878008	**MW-89-202110**	Water	10/20/21 13:55	10/20/21 18:00
60383878009	**MW-22-202110**	Water	10/20/21 09:15	10/20/21 18:00
60383878010	**MW-192-202110**	Water	10/20/21 08:50	10/20/21 18:00
60383878011	**ITMW-7-202110**	Water	10/20/21 09:12	10/20/21 18:00
60383878012	**MW-206-202110**	Water	10/20/21 10:35	10/20/21 18:00
60383878013	**ITMW-21-202110**	Water	10/20/21 10:38	10/20/21 18:00
60383878014	**DUP-04-202110**	Water	10/20/21 10:38	10/20/21 18:00
60383878015	**MW-176-202110**	Water	10/20/21 11:13	10/20/21 18:00
60383878016	**TMW-14-202110**	Water	10/20/21 12:43	10/20/21 18:00
60383878017	**MW-83-202110**	Water	10/20/21 13:38	10/20/21 18:00
60383878018	**MW-202-202110**	Water	10/20/21 13:30	10/20/21 18:00
60383878019	**VP-12-202110**	Water	10/20/21 15:25	10/20/21 18:00
60383878020	**MW-63R-202110**	Water	10/20/21 15:00	10/20/21 18:00
60383878021	**MW-204-202110**	Water	10/20/21 15:52	10/20/21 18:00
60383878022	**ITMW-1R-202110**	Water	10/20/21 16:27	10/20/21 18:00
60383878023	**TMW-23-202110**	Water	10/20/21 16:50	10/20/21 18:00
60383878024	**TB-04-202110**	Water	10/20/21 00:00	10/20/21 18:00
60383878026	**DUP-09-202110**	Water	10/20/21 17:01	10/20/21 18:00
60383878027	**TB-05-202110**	Water	10/20/21 00:00	10/20/21 18:00
60383878028	**EB-03-202110**	Water	10/20/21 17:30	10/20/21 18:00
60383878029	**MW-175-202110**	Water	10/20/21 09:18	10/20/21 18:00

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383878001	**TMW-25-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878002	**TMW-21-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878003	**MW-61R-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878004	**MW-194-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878005	**TMW-32-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878006	**TMW-34-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878007	**TMW-11-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383878008	**MW-89-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	LDB	1	PASI-K
		EPA 353.2	LDB	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383878009	**MW-22-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878010	**MW-192-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878011	**ITMW-7-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878012	**MW-206-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878013	**ITMW-21-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878014	**DUP-04-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878015	**MW-176-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878016	**TMW-14-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878017	**MW-83-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878018	**MW-202-202110**	EPA 5030B/8260	PGH	38	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383878019	**VP-12-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878020	**MW-63R-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878021	**MW-204-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878022	**ITMW-1R-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878023	**TMW-23-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878024	**TB-04-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878026	**DUP-09-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878027	**TB-05-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878028	**EB-03-202110**	EPA 5030B/8260	PGH	38	PASI-K
60383878029	**MW-175-202110**	EPA 5030B/8260	PGH	38	PASI-K

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 22, 2021

General Information:
28 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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: 752077

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

QC Batch: 752343

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737020,60383737023

R1: RPD value was outside control limits.

- MSD (Lab ID: 3011629)
  - 1,1-Dichloroethane
- MSD (Lab ID: 3011631)
  - 1,1-Dichloroethane

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: November 22, 2021

General Information:
2 samples were analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 751612

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383950001

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

- MS (Lab ID: 3009541)
  - Sulfide, Total
- MSD (Lab ID: 3009542)
  - Sulfide, Total

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

QC Batch: 751896

B: Analyte was detected in the associated method blank.
- BLANK for HBN 751896 [WETA/826 (Lab ID: 3010348)
  - 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: 752833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60384397008,60384476001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3013296)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3013297)
  - Chloride
  - Sulfate

R1: RPD value was outside control limits.
- MSD (Lab ID: 3013297)
  - Chloride
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: November 22, 2021

General Information:
8 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: November 22, 2021

General Information:
7 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737047

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

- MS (Lab ID: 3017245)
  - Dissolved Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: November 22, 2021

General Information:
7 samples were analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-25-202110 **Lab ID: 60383878001** Collected: 10/20/21 09:15 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**6700**	ug/L	5.0	2.0	1		11/03/21 13:04	74-82-8	
Ethane	**1.6**	ug/L	1.0	0.17	1		11/03/21 13:04	74-84-0	
Ethene	**0.55J**	ug/L	1.0	0.24	1		11/03/21 13:04	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**20500**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:19	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 16:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 16:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 16:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 16:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 16:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 16:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 16:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 16:36	56-23-5	
Chlorobenzene	**2.7**	ug/L	1.0	0.089	1		10/26/21 16:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 16:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 16:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 16:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 16:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 16:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 16:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 16:36	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.13	1		10/26/21 16:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 16:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 16:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 16:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 16:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 16:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 16:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 16:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 16:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 16:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 16:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 16:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 16:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 16:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 16:36	79-00-5	
Trichloroethene	**6.8**	ug/L	1.0	0.21	1		10/26/21 16:36	79-01-6	
Vinyl chloride	**0.45J**	ug/L	1.0	0.17	1		10/26/21 16:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 16:36	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-25-202110 **Lab ID: 60383878001** Collected: 10/20/21 09:15 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 16:36	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 16:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 16:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 16:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**98.3**	mg/L	20.0	7.8	20		10/26/21 13:34	16887-00-6	
Sulfate	**16.1**	mg/L	2.0	0.84	2		10/26/21 23:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.45**	mg/L	0.10	0.066	1		10/22/21 08:39		
Nitrogen, Nitrate	**0.45**	mg/L	0.10	0.079	1		10/22/21 08:39	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:39	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**6.2**	mg/L	2.0	0.59	2		10/29/21 18:59	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**3.8**	mg/L	1.0	0.30	1		10/29/21 13:13		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**4.6J**	mg/L	5.0	0.53	10		11/16/21 05:49	50-21-5	
Acetic Acid	**4.0J**	mg/L	5.0	1.2	10		11/16/21 05:49	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 05:49	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 05:49	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 05:49	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 05:49	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 05:49	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 05:49	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 05:49	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 05:49	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-21-202110 **Lab ID: 60383878002** Collected: 10/20/21 11:20 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4400**	ug/L	5.0	2.0	1		11/03/21 13:16	74-82-8	
Ethane	**0.43J**	ug/L	1.0	0.17	1		11/03/21 13:16	74-84-0	
Ethene	**1.5**	ug/L	1.0	0.24	1		11/03/21 13:16	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**11400**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:26	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 16:52	67-64-1	
Benzene	**0.19J**	ug/L	1.0	0.14	1		10/26/21 16:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 16:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 16:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 16:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 16:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 16:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 16:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 16:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 16:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 16:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 16:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 16:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 16:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 16:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 16:52	75-35-4	
cis-1,2-Dichloroethene	**2.1**	ug/L	1.0	0.13	1		10/26/21 16:52	156-59-2	
trans-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.10	1		10/26/21 16:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 16:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 16:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 16:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 16:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 16:52	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 16:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 16:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 16:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 16:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 16:52	127-18-4	
Toluene	**1.7**	ug/L	1.0	0.25	1		10/26/21 16:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 16:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 16:52	79-00-5	
Trichloroethene	**5.2**	ug/L	1.0	0.21	1		10/26/21 16:52	79-01-6	
Vinyl chloride	**1.7**	ug/L	1.0	0.17	1		10/26/21 16:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 16:52	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-21-202110 **Lab ID: 60383878002** Collected: 10/20/21 11:20 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 16:52	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 16:52	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 16:52	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 16:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**187**	mg/L	20.0	7.8	20		10/26/21 13:48	16887-00-6	
Sulfate	**10.3**	mg/L	2.0	0.84	2		10/26/21 23:14	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.082J**	mg/L	0.10	0.066	1		10/22/21 08:41		
Nitrogen, Nitrate	**0.082J**	mg/L	0.10	0.079	1		10/22/21 08:41	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:41	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.67J**	mg/L	1.0	0.30	1		10/29/21 19:13	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.72J**	mg/L	1.0	0.30	1		10/29/21 13:26		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.2J**	mg/L	5.0	0.53	10		11/16/21 06:24	50-21-5	
Acetic Acid	**2.8J**	mg/L	5.0	1.2	10		11/16/21 06:24	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 06:24	79-09-4	
Formic acid	**54**	mg/L	5.0	0.55	10		11/16/21 06:24	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:24	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 06:24	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 06:24	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:24	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:24	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:24	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-61R-202110 **Lab ID: 60383878003** Collected: 10/20/21 12:03 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2400**	ug/L	5.0	2.0	1		11/03/21 13:27	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/03/21 13:27	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 13:27	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**13900**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:32	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:07	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 17:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 17:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 17:07	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	1.0	0.13	1		10/26/21 17:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 17:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:07	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:07	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:07	79-00-5	
Trichloroethene	**6.9**	ug/L	1.0	0.21	1		10/26/21 17:07	79-01-6	
Vinyl chloride	**0.53J**	ug/L	1.0	0.17	1		10/26/21 17:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:07	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-61R-202110 **Lab ID: 60383878003** Collected: 10/20/21 12:03 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 17:07	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 17:07	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 17:07	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**121**	mg/L	20.0	7.8	20		10/26/21 14:01	16887-00-6	
Sulfate	**5.3**	mg/L	1.0	0.42	1		10/26/21 23:28	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/22/21 08:42		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/22/21 08:42	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:42	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.69J**	mg/L	1.0	0.30	1		10/29/21 19:26	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.86J**	mg/L	1.0	0.30	1		10/29/21 13:40		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.6J**	mg/L	5.0	0.53	10		11/16/21 06:58	50-21-5	
Acetic Acid	**2.6J**	mg/L	5.0	1.2	10		11/16/21 06:58	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 06:58	79-09-4	
Formic acid	**54**	mg/L	5.0	0.55	10		11/16/21 06:58	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:58	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 06:58	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 06:58	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:58	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 06:58	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 06:58	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-194-202110 **Lab ID: 60383878004** Collected: 10/20/21 13:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2700**	ug/L	5.0	2.0	1		11/03/21 13:38	74-82-8	
Ethane	**0.31J**	ug/L	1.0	0.17	1		11/03/21 13:38	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 13:38	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**8860**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:34	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 17:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 17:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 17:23	75-35-4	
cis-1,2-Dichloroethene	**1.8**	ug/L	1.0	0.13	1		10/26/21 17:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 17:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:23	79-00-5	
Trichloroethene	**4.1**	ug/L	1.0	0.21	1		10/26/21 17:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 17:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:23	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-194-202110 **Lab ID: 60383878004** Collected: 10/20/21 13:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 17:23	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 17:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 17:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**142**	mg/L	20.0	7.8	20		10/29/21 15:05	16887-00-6	
Sulfate	**9.1**	mg/L	1.0	0.42	1		11/01/21 17:12	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.084J**	mg/L	0.10	0.066	1		10/22/21 08:49		
Nitrogen, Nitrate	**0.084J**	mg/L	0.10	0.079	1		10/22/21 08:49	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:49	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.46J**	mg/L	1.0	0.30	1		10/29/21 20:06	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.74J**	mg/L	1.0	0.30	1		11/03/21 13:32		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.1J**	mg/L	5.0	0.53	10		11/16/21 07:33	50-21-5	
Acetic Acid	**2.8J**	mg/L	5.0	1.2	10		11/16/21 07:33	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 07:33	79-09-4	
Formic acid	**51**	mg/L	5.0	0.55	10		11/16/21 07:33	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 07:33	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 07:33	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 07:33	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 07:33	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 07:33	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 07:33	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-32-202110 **Lab ID: 60383878005** Collected: 10/20/21 14:58 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**5300**	ug/L	5.0	2.0	1		11/03/21 13:50	74-82-8	
Ethane	**0.41J**	ug/L	1.0	0.17	1		11/03/21 13:50	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 13:50	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**7110**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:37	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:39	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:39	56-23-5	
Chlorobenzene	**1.7**	ug/L	1.0	0.089	1		10/26/21 17:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 17:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 17:39	75-35-4	
cis-1,2-Dichloroethene	**5.2**	ug/L	1.0	0.13	1		10/26/21 17:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 17:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:39	79-00-5	
Trichloroethene	**24.9**	ug/L	1.0	0.21	1		10/26/21 17:39	79-01-6	
Vinyl chloride	**0.36J**	ug/L	1.0	0.17	1		10/26/21 17:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:39	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-32-202110 **Lab ID: 60383878005** Collected: 10/20/21 14:58 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		10/26/21 17:39	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 17:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/26/21 17:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**89.4**	mg/L	20.0	7.8	20		10/26/21 14:55	16887-00-6	B
Sulfate	**45.4**	mg/L	20.0	8.4	20		10/26/21 14:55	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/22/21 08:51		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/22/21 08:51	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:51	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.30	1		10/29/21 20:19	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**1.1**	mg/L	1.0	0.30	1		11/03/21 14:45		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.7J**	mg/L	5.0	0.53	10		11/16/21 08:07	50-21-5	
Acetic Acid	**2.9J**	mg/L	5.0	1.2	10		11/16/21 08:07	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 08:07	79-09-4	
Formic acid	**57**	mg/L	5.0	0.55	10		11/16/21 08:07	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:07	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 08:07	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 08:07	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:07	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:07	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:07	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-34-202110 **Lab ID: 60383878006** Collected: 10/20/21 16:53 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**1600**	ug/L	5.0	2.0	1		11/03/21 14:01	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/03/21 14:01	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 14:01	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**1550**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:39	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 17:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 17:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 17:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 17:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 17:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 17:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 17:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 17:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 17:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 17:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 17:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 17:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 17:55	124-48-1	
1,1-Dichloroethane	**0.55J**	ug/L	1.0	0.12	1		10/26/21 17:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 17:55	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.22	1		10/26/21 17:55	75-35-4	
cis-1,2-Dichloroethene	**65.5**	ug/L	1.0	0.13	1		10/26/21 17:55	156-59-2	
trans-1,2-Dichloroethene	**0.14J**	ug/L	1.0	0.10	1		10/26/21 17:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 17:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 17:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 17:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 17:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 17:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 17:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 17:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 17:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 17:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 17:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 17:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 17:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 17:55	79-00-5	
Trichloroethene	**126**	ug/L	1.0	0.21	1		10/26/21 17:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 17:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 17:55	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-34-202110 **Lab ID: 60383878006** Collected: 10/20/21 16:53 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 17:55	460-00-4	
Toluene-d8 (S)	94	%	80-120		1		10/26/21 17:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 17:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 17:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**38.4**	mg/L	5.0	1.9	5		10/26/21 23:54	16887-00-6	
Sulfate	**8.2**	mg/L	2.0	0.84	2		10/26/21 23:41	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.6**	mg/L	0.10	0.066	1		10/22/21 08:52		
Nitrogen, Nitrate	**1.6**	mg/L	0.10	0.079	1		10/22/21 08:52	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:52	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.61J**	mg/L	1.0	0.30	1		10/29/21 20:32	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.46J**	mg/L	1.0	0.30	1		11/03/21 14:58		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.7J**	mg/L	5.0	0.53	10		11/16/21 08:42	50-21-5	
Acetic Acid	**3.1J**	mg/L	5.0	1.2	10		11/16/21 08:42	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 08:42	79-09-4	
Formic acid	**52**	mg/L	5.0	0.55	10		11/16/21 08:42	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:42	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 08:42	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 08:42	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:42	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 08:42	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 08:42	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-11-202110 **Lab ID: 60383878007** Collected: 10/20/21 09:10 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4400**	ug/L	5.0	2.0	1		11/03/21 14:12	74-82-8	
Ethane	**0.60J**	ug/L	1.0	0.17	1		11/03/21 14:12	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 14:12	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/03/21 14:12	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**5580**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:41	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:11	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:11	75-35-4	
cis-1,2-Dichloroethene	**0.22J**	ug/L	1.0	0.13	1		10/26/21 18:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:11	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:11	127-18-4	
Toluene	**0.58J**	ug/L	1.0	0.25	1		10/26/21 18:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 18:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:11	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-11-202110 **Lab ID: 60383878007** Collected: 10/20/21 09:10 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 18:11	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 18:11	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 18:11	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:11		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	**0.030J**	mg/L	0.050	0.026	1		10/25/21 13:35	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**87.4**	mg/L	20.0	7.8	20		10/26/21 15:21	16887-00-6	B
Sulfate	**1.4**	mg/L	1.0	0.42	1		10/27/21 00:08	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/22/21 08:45		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/22/21 08:45	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/22/21 08:45	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**4.0**	mg/L	2.0	0.59	2		10/29/21 20:46	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**4.0**	mg/L	1.0	0.30	1		11/03/21 15:11		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**6.8**	mg/L	5.0	0.53	10		11/16/21 09:17	50-21-5	
Acetic Acid	**3.0J**	mg/L	5.0	1.2	10		11/16/21 09:17	64-19-7	
Propionic Acid	ND	mg/L	5.0	0.53	10		11/16/21 09:17	79-09-4	
Formic acid	**53**	mg/L	5.0	0.55	10		11/16/21 09:17	64-18-6	
Butyric Acid	ND	mg/L	5.0	0.58	10		11/16/21 09:17	107-92-6	
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/16/21 09:17	127-17-3	
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/16/21 09:17	503-74-2	
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 09:17	109-52-4	
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/16/21 09:17	646-07-1	
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/16/21 09:17	142-62-1	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-89-202110 **Lab ID: 60383878008** Collected: 10/20/21 13:55 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**56**	ug/L	5.0	2.0	1		11/03/21 14:24	74-82-8	
Ethane	ND	ug/L	1.0	0.17	1		11/03/21 14:24	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/03/21 14:24	74-85-1	
Acetylene	ND	ug/L	0.50	0.13	1		11/03/21 14:24	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**55.1**	ug/L	50.0	21.4	1	11/02/21 15:20	11/04/21 14:43	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:27	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:27	75-35-4	
cis-1,2-Dichloroethene	**0.30J**	ug/L	1.0	0.13	1		10/26/21 18:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:27	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 18:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:27	79-00-5	
Trichloroethene	**3.9**	ug/L	1.0	0.21	1		10/26/21 18:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:27	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-89-202110 **Lab ID: 60383878008** Collected: 10/20/21 13:55 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 18:27	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 18:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 18:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:27		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 13:35	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Sulfate	**2.4**	mg/L	1.0	0.42	1		10/27/21 00:21	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**53.8**	mg/L	2.0	1.3	20		10/22/21 08:56		
Nitrogen, Nitrate	**53.8**	mg/L	2.0	1.6	20		10/22/21 08:56	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	2.0	1.6	20		10/22/21 08:56	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**1.0**	mg/L	1.0	0.30	1		10/29/21 20:59	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-22-202110 **Lab ID: 60383878009** Collected: 10/20/21 09:15 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:43	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 18:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:43	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:43	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 18:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 18:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 18:43	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 18:43	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 18:43	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:43		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-192-202110 **Lab ID: 60383878010** Collected: 10/20/21 08:50 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 18:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 18:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 18:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 18:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 18:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 18:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 18:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 18:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 18:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 18:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 18:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 18:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 18:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 18:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 18:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 18:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 18:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 18:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 18:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 18:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 18:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 18:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 18:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 18:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 18:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 18:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 18:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 18:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 18:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 18:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 18:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/26/21 18:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 18:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 18:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 18:59	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/26/21 18:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 18:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 18:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: ITMW-7-202110 **Lab ID: 60383878011** Collected: 10/20/21 09:12 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:15	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.14	1		10/26/21 19:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:15	56-23-5	
Chlorobenzene	**5.5**	ug/L	1.0	0.089	1		10/26/21 19:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:15	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:15	75-35-4	
cis-1,2-Dichloroethene	**7.3**	ug/L	1.0	0.13	1		10/26/21 19:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:15	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:15	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:15	79-00-5	
Trichloroethene	**17.7**	ug/L	1.0	0.21	1		10/26/21 19:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 19:15	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 19:15	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 19:15	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:15		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-206-202110 **Lab ID: 60383878012** Collected: 10/20/21 10:35 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:31	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:31	75-35-4	
cis-1,2-Dichloroethene	**0.41J**	ug/L	1.0	0.13	1		10/26/21 19:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:31	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:31	79-00-5	
Trichloroethene	**1.2**	ug/L	1.0	0.21	1		10/26/21 19:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/26/21 19:31	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 19:31	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	96	%	80-120		1		10/26/21 19:31	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:31		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: ITMW-21-202110 **Lab ID: 60383878013** Collected: 10/20/21 10:38 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 19:47	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 19:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 19:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 19:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 19:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 19:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 19:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 19:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 19:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 19:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 19:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 19:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 19:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 19:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 19:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 19:47	75-35-4	
cis-1,2-Dichloroethene	**0.26J**	ug/L	1.0	0.13	1		10/26/21 19:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 19:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 19:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 19:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 19:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 19:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 19:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 19:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 19:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 19:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 19:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 19:47	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 19:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 19:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 19:47	79-00-5	
Trichloroethene	**4.9**	ug/L	1.0	0.21	1		10/26/21 19:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 19:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 19:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 19:47	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/26/21 19:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 19:47	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 19:47		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: DUP-04-202110 **Lab ID: 60383878014** Collected: 10/20/21 10:38 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:03	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:03	75-35-4	
cis-1,2-Dichloroethene	**0.22J**	ug/L	1.0	0.13	1		10/26/21 20:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:03	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:03	79-00-5	
Trichloroethene	**5.8**	ug/L	1.0	0.21	1		10/26/21 20:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/26/21 20:03	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 20:03	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 20:03	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:03		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-176-202110 **Lab ID: 60383878015** Collected: 10/20/21 11:13 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:19	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.22	1		10/26/21 20:19	75-35-4	
cis-1,2-Dichloroethene	**17.0**	ug/L	1.0	0.13	1		10/26/21 20:19	156-59-2	
trans-1,2-Dichloroethene	**0.38J**	ug/L	1.0	0.10	1		10/26/21 20:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:19	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:19	79-00-5	
Trichloroethene	**310**	ug/L	10.0	2.1	10		10/26/21 20:35	79-01-6	
Vinyl chloride	**19.3**	ug/L	1.0	0.17	1		10/26/21 20:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 20:19	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 20:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 20:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-14-202110 **Lab ID: 60383878016** Collected: 10/20/21 12:43 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 20:51	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 20:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 20:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 20:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 20:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 20:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 20:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 20:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 20:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 20:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 20:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 20:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 20:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 20:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 20:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 20:51	75-35-4	
cis-1,2-Dichloroethene	**0.64J**	ug/L	1.0	0.13	1		10/26/21 20:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 20:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 20:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 20:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 20:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 20:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 20:51	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 20:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 20:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 20:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 20:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 20:51	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 20:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 20:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 20:51	79-00-5	
Trichloroethene	**0.55J**	ug/L	1.0	0.21	1		10/26/21 20:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 20:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 20:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 20:51	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 20:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/26/21 20:51	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 20:51		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-83-202110 **Lab ID: 60383878017** Collected: 10/20/21 13:38 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:07	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:07	75-27-4	
Bromoform	**2.6**	ug/L	1.0	0.68	1		10/26/21 21:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:07	74-87-3	
Dibromochloromethane	**0.35J**	ug/L	1.0	0.30	1		10/26/21 21:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:07	75-35-4	
cis-1,2-Dichloroethene	**0.52J**	ug/L	1.0	0.13	1		10/26/21 21:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:07	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:07	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:07	79-00-5	
Trichloroethene	**27.8**	ug/L	1.0	0.21	1		10/26/21 21:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/26/21 21:07	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 21:07	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/26/21 21:07	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:07		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-202-202110 **Lab ID: 60383878018** Collected: 10/20/21 13:30 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 16:02	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 16:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 16:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 16:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 16:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 16:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 16:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 16:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 16:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 16:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 16:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 16:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 16:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 16:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 16:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 16:02	75-35-4	
cis-1,2-Dichloroethene	**6.1**	ug/L	1.0	0.13	1		10/27/21 16:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 16:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 16:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 16:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 16:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 16:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 16:02	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 16:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 16:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 16:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 16:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 16:02	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 16:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 16:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 16:02	79-00-5	
Trichloroethene	**67.3**	ug/L	1.0	0.21	1		10/27/21 16:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 16:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 16:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/21 16:02	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 16:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 16:02	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 16:02		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: VP-12-202110 **Lab ID: 60383878019** Collected: 10/20/21 15:25 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/26/21 21:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:23	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.21	1		10/26/21 21:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/26/21 21:23	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 21:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/26/21 21:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-63R-202110 **Lab ID: 60383878020** Collected: 10/20/21 15:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:39	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/26/21 21:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:39	75-35-4	
cis-1,2-Dichloroethene	**0.81J**	ug/L	1.0	0.13	1		10/26/21 21:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:39	79-00-5	
Trichloroethene	**3.9**	ug/L	1.0	0.21	1		10/26/21 21:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 21:39	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/26/21 21:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 21:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-204-202110 **Lab ID: 60383878021** Collected: 10/20/21 15:52 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/26/21 21:55	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/26/21 21:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/26/21 21:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/26/21 21:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/26/21 21:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/26/21 21:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/26/21 21:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/26/21 21:55	56-23-5	
Chlorobenzene	**0.77J**	ug/L	1.0	0.089	1		10/26/21 21:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/26/21 21:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/26/21 21:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/26/21 21:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/26/21 21:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/26/21 21:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/26/21 21:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/26/21 21:55	75-35-4	
cis-1,2-Dichloroethene	**3.2**	ug/L	1.0	0.13	1		10/26/21 21:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/26/21 21:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/26/21 21:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/26/21 21:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/26/21 21:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/26/21 21:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/26/21 21:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/26/21 21:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/26/21 21:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/26/21 21:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/26/21 21:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/26/21 21:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/26/21 21:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/26/21 21:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/26/21 21:55	79-00-5	
Trichloroethene	**49.6**	ug/L	1.0	0.21	1		10/26/21 21:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/26/21 21:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/26/21 21:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/26/21 21:55	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/26/21 21:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/26/21 21:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/26/21 21:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: ITMW-1R-202110 **Lab ID: 60383878022** Collected: 10/20/21 16:27 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 16:18	67-64-1	
Benzene	**0.23J**	ug/L	1.0	0.14	1		10/27/21 16:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 16:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 16:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 16:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 16:18	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 16:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 16:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 16:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 16:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 16:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 16:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 16:18	124-48-1	
1,1-Dichloroethane	**10.5**	ug/L	1.0	0.12	1		10/27/21 16:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 16:18	107-06-2	
1,1-Dichloroethene	**0.48J**	ug/L	1.0	0.22	1		10/27/21 16:18	75-35-4	
cis-1,2-Dichloroethene	**51.1**	ug/L	1.0	0.13	1		10/27/21 16:18	156-59-2	
trans-1,2-Dichloroethene	**0.31J**	ug/L	1.0	0.10	1		10/27/21 16:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 16:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 16:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 16:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 16:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 16:18	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 16:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 16:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 16:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 16:18	79-34-5	
Tetrachloroethene	**0.39J**	ug/L	1.0	0.33	1		10/27/21 16:18	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 16:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 16:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 16:18	79-00-5	
Trichloroethene	**31.1**	ug/L	1.0	0.21	1		10/27/21 16:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 16:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 16:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 16:18	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/27/21 16:18	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/27/21 16:18	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 16:18		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TMW-23-202110 **Lab ID: 60383878023** Collected: 10/20/21 16:50 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 16:34	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 16:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 16:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 16:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 16:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 16:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 16:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 16:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 16:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 16:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 16:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 16:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 16:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 16:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 16:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 16:34	75-35-4	
cis-1,2-Dichloroethene	**2.9**	ug/L	1.0	0.13	1		10/27/21 16:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 16:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 16:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 16:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 16:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 16:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 16:34	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 16:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 16:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 16:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 16:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 16:34	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 16:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 16:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 16:34	79-00-5	
Trichloroethene	**186**	ug/L	1.0	0.21	1		10/27/21 16:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 16:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 16:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/27/21 16:34	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 16:34	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/27/21 16:34	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 16:34		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TB-04-202110 **Lab ID: 60383878024** Collected: 10/20/21 00:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 17:06	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 17:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 17:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 17:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 17:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:06	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:06	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 17:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/21 17:06	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 17:06	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/27/21 17:06	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:06		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: DUP-09-202110 **Lab ID: 60383878026** Collected: 10/20/21 17:01 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**6.6J**	ug/L	10.0	2.5	1		10/27/21 17:22	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:22	75-27-4	
Bromoform	**6.7**	ug/L	1.0	0.68	1		10/27/21 17:22	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:22	67-66-3	
Chloromethane	**0.34J**	ug/L	1.0	0.28	1		10/27/21 17:22	74-87-3	
Dibromochloromethane	**0.35J**	ug/L	1.0	0.30	1		10/27/21 17:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:22	75-35-4	
cis-1,2-Dichloroethene	**0.45J**	ug/L	1.0	0.13	1		10/27/21 17:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:22	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:22	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:22	79-00-5	
Trichloroethene	**15.1**	ug/L	1.0	0.21	1		10/27/21 17:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/27/21 17:22	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/27/21 17:22	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/27/21 17:22	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:22		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: TB-05-202110 **Lab ID: 60383878027** Collected: 10/20/21 00:00 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 17:38	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 17:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:38	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 17:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 17:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 17:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:38	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:38	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 17:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/21 17:38	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/27/21 17:38	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/27/21 17:38	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:38		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: EB-03-202110 **Lab ID: 60383878028** Collected: 10/20/21 17:30 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 17:54	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 17:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 17:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 17:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 17:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 17:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 17:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 17:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 17:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 17:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 17:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 17:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 17:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 17:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/27/21 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 17:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 17:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 17:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 17:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 17:54	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 17:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 17:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 17:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 17:54	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 17:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 17:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 17:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/27/21 17:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 17:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 17:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/27/21 17:54	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 17:54	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	106	%	80-120		1		10/27/21 17:54	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 17:54		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Sample: MW-175-202110 **Lab ID: 60383878029** Collected: 10/20/21 09:18 Received: 10/20/21 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/27/21 18:10	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/27/21 18:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/27/21 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/27/21 18:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/27/21 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/27/21 18:10	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/27/21 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/27/21 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/27/21 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/27/21 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/27/21 18:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/27/21 18:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/27/21 18:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/21 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/27/21 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/27/21 18:10	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	1.0	0.13	1		10/27/21 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/27/21 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/27/21 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/27/21 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/27/21 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/27/21 18:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/27/21 18:10	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/27/21 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/27/21 18:10	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/21 18:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/21 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/27/21 18:10	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/27/21 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/21 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/27/21 18:10	79-00-5	
Trichloroethene	**91.1**	ug/L	1.0	0.21	1		10/27/21 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/27/21 18:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/27/21 18:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/27/21 18:10	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/27/21 18:10	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	97	%	80-120		1		10/27/21 18:10	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/27/21 18:10		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 725586
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 2265729
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/03/21 10:49	
Ethane	ug/L	ND	1.0	0.17	11/03/21 10:49	
Ethene	ug/L	ND	1.0	0.24	11/03/21 10:49	
Acetylene	ug/L	ND	0.50	0.13	11/03/21 10:49	

LABORATORY CONTROL SAMPLE & LCSD: 2265730 2265731

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	420	410	110	106	70-130	4	20	
Ethane	ug/L	97	110	110	115	110	70-130	5	20	
Ethene	ug/L	120	130	130	111	108	70-130	3	20	
Acetylene	ug/L	30	32	32	106	105	70-130	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 753530
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3016171
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/04/21 14:15	

LABORATORY CONTROL SAMPLE: 3016172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9270	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3016173 3016174

Parameter	Units	60383878001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	20500	10000	10000	30000	30400	96	99	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752077
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008, 60383878009, 60383878010, 60383878011, 60383878012, 60383878013, 60383878014, 60383878015, 60383878016, 60383878017, 60383878019, 60383878020, 60383878021

METHOD BLANK: 3010859
Matrix: Water

Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008, 60383878009, 60383878010, 60383878011, 60383878012, 60383878013, 60383878014, 60383878015, 60383878016, 60383878017, 60383878019, 60383878020, 60383878021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/26/21 16:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/26/21 16:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/26/21 16:20	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/26/21 16:20	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/26/21 16:20	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/26/21 16:20	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/26/21 16:20	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/26/21 16:20	
2-Hexanone	ug/L	ND	10.0	1.1	10/26/21 16:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/26/21 16:20	
Acetone	ug/L	ND	10.0	2.5	10/26/21 16:20	
Benzene	ug/L	ND	1.0	0.14	10/26/21 16:20	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/26/21 16:20	
Bromoform	ug/L	ND	1.0	0.68	10/26/21 16:20	
Bromomethane	ug/L	ND	5.0	0.46	10/26/21 16:20	
Carbon disulfide	ug/L	ND	5.0	0.98	10/26/21 16:20	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/26/21 16:20	
Chlorobenzene	ug/L	ND	1.0	0.089	10/26/21 16:20	
Chloroethane	ug/L	ND	1.0	0.37	10/26/21 16:20	
Chloroform	ug/L	ND	1.0	0.22	10/26/21 16:20	
Chloromethane	ug/L	ND	1.0	0.28	10/26/21 16:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/26/21 16:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/26/21 16:20	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/26/21 16:20	
Ethylbenzene	ug/L	ND	1.0	0.12	10/26/21 16:20	
Methylene Chloride	ug/L	ND	1.0	0.39	10/26/21 16:20	
Styrene	ug/L	ND	1.0	0.12	10/26/21 16:20	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/26/21 16:20	
Toluene	ug/L	ND	1.0	0.25	10/26/21 16:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/26/21 16:20	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/26/21 16:20	
Trichloroethene	ug/L	ND	1.0	0.21	10/26/21 16:20	
Vinyl chloride	ug/L	ND	1.0	0.17	10/26/21 16:20	
Xylene (Total)	ug/L	ND	3.0	0.28	10/26/21 16:20	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/26/21 16:20	
4-Bromofluorobenzene (S)	%	105	80-120		10/26/21 16:20	
Toluene-d8 (S)	%	99	80-120		10/26/21 16:20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

LABORATORY CONTROL SAMPLE: 3010860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	21.5	107	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	80-120	
1,1-Dichloroethane	ug/L	20	19.0	95	75-125	
1,1-Dichloroethene	ug/L	20	19.8	99	80-120	
1,2-Dichloroethane	ug/L	20	19.9	99	75-120	
1,2-Dichloropropane	ug/L	20	20.0	100	80-125	
2-Butanone (MEK)	ug/L	100	118	118	40-150	
2-Hexanone	ug/L	100	120	120	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	65-140	
Acetone	ug/L	100	129	129	20-175	
Benzene	ug/L	20	20.5	103	80-120	
Bromodichloromethane	ug/L	20	19.4	97	80-125	
Bromoform	ug/L	20	19.4	97	60-135	
Bromomethane	ug/L	20	18.9	94	10-165	
Carbon disulfide	ug/L	20	19.7	98	75-135	
Carbon tetrachloride	ug/L	20	19.2	96	80-125	
Chlorobenzene	ug/L	20	19.6	98	80-120	
Chloroethane	ug/L	20	18.9	94	70-130	
Chloroform	ug/L	20	18.9	95	80-120	
Chloromethane	ug/L	20	21.3	107	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.1	96	80-120	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	80-125	
Dibromochloromethane	ug/L	20	19.5	97	70-120	
Ethylbenzene	ug/L	20	19.9	100	80-120	
Methylene Chloride	ug/L	20	20.0	100	75-120	
Styrene	ug/L	20	22.1	111	80-120	
Tetrachloroethene	ug/L	20	18.8	94	80-120	
Toluene	ug/L	20	19.3	97	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.7	99	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	18.5	92	65-130	
Xylene (Total)	ug/L	60	60.6	101	80-120	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			96	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752343
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878018, 60383878022, 60383878023, 60383878024, 60383878026, 60383878027, 60383878028, 60383878029

METHOD BLANK: 3011626
Matrix: Water
Associated Lab Samples: 60383878018, 60383878022, 60383878023, 60383878024, 60383878026, 60383878027, 60383878028, 60383878029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/27/21 12:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/27/21 12:03	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/27/21 12:03	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/27/21 12:03	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/27/21 12:03	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/27/21 12:03	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/27/21 12:03	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/27/21 12:03	
2-Hexanone	ug/L	ND	10.0	1.1	10/27/21 12:03	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/27/21 12:03	
Acetone	ug/L	ND	10.0	2.5	10/27/21 12:03	
Benzene	ug/L	ND	1.0	0.14	10/27/21 12:03	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/27/21 12:03	
Bromoform	ug/L	ND	1.0	0.68	10/27/21 12:03	
Bromomethane	ug/L	ND	5.0	0.46	10/27/21 12:03	
Carbon disulfide	ug/L	ND	5.0	0.98	10/27/21 12:03	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Chlorobenzene	ug/L	ND	1.0	0.089	10/27/21 12:03	
Chloroethane	ug/L	ND	1.0	0.37	10/27/21 12:03	
Chloroform	ug/L	ND	1.0	0.22	10/27/21 12:03	
Chloromethane	ug/L	ND	1.0	0.28	10/27/21 12:03	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/27/21 12:03	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/27/21 12:03	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/27/21 12:03	
Ethylbenzene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Methylene Chloride	ug/L	ND	1.0	0.39	10/27/21 12:03	
Styrene	ug/L	ND	1.0	0.12	10/27/21 12:03	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/27/21 12:03	
Toluene	ug/L	ND	1.0	0.25	10/27/21 12:03	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/27/21 12:03	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/27/21 12:03	
Trichloroethene	ug/L	ND	1.0	0.21	10/27/21 12:03	
Vinyl chloride	ug/L	ND	1.0	0.17	10/27/21 12:03	
Xylene (Total)	ug/L	ND	3.0	0.28	10/27/21 12:03	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/27/21 12:03	
4-Bromofluorobenzene (S)	%	104	80-120		10/27/21 12:03	
Toluene-d8 (S)	%	98	80-120		10/27/21 12:03	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

LABORATORY CONTROL SAMPLE: 3011627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.9	99	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.4	92	75-125	
1,1,2-Trichloroethane	ug/L	20	19.5	97	80-120	
1,1-Dichloroethane	ug/L	20	16.7	84	75-125	
1,1-Dichloroethene	ug/L	20	20.3	102	80-120	
1,2-Dichloroethane	ug/L	20	19.1	96	75-120	
1,2-Dichloropropane	ug/L	20	19.6	98	80-125	
2-Butanone (MEK)	ug/L	100	100	100	40-150	
2-Hexanone	ug/L	100	102	102	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.2	97	65-140	
Acetone	ug/L	100	96.2	96	20-175	
Benzene	ug/L	20	20.3	101	80-120	
Bromodichloromethane	ug/L	20	19.3	96	80-125	
Bromoform	ug/L	20	18.2	91	60-135	
Bromomethane	ug/L	20	17.8	89	10-165	
Carbon disulfide	ug/L	20	19.6	98	75-135	
Carbon tetrachloride	ug/L	20	18.9	95	80-125	
Chlorobenzene	ug/L	20	19.7	99	80-120	
Chloroethane	ug/L	20	19.4	97	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	19.5	98	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.6	93	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-125	
Dibromochloromethane	ug/L	20	19.3	96	70-120	
Ethylbenzene	ug/L	20	20.0	100	80-120	
Methylene Chloride	ug/L	20	19.5	97	75-120	
Styrene	ug/L	20	22.4	112	80-120	
Tetrachloroethene	ug/L	20	20.2	101	80-120	
Toluene	ug/L	20	20.0	100	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.0	85	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	18.8	94	65-130	
Xylene (Total)	ug/L	60	61.5	102	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	18.7	19.1	93	96	75-130	2	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.9	17.5	85	88	65-130	3	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.2	18.9	91	95	70-120	4	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011628 3011629

Parameter	Units	60383737020 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	15.3	18.1	77	91	61-130	17	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	18.5	19.9	92	100	60-135	8	25	
1,2-Dichloroethane	ug/L	ND	20	20	16.9	17.8	84	89	30-160	5	25	
1,2-Dichloropropane	ug/L	ND	20	20	17.9	18.0	89	90	65-130	1	20	
2-Butanone (MEK)	ug/L	ND	100	100	78.9	84.3	79	84	30-130	7	25	
2-Hexanone	ug/L	ND	100	100	85.5	89.6	85	90	40-135	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	83.5	85.2	83	85	60-135	2	20	
Acetone	ug/L	ND	100	100	73.0	75.8	73	76	10-150	4	25	
Benzene	ug/L	ND	20	20	18.8	19.4	94	96	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	16.8	17.2	84	86	70-130	2	15	
Bromoform	ug/L	ND	20	20	15.7	16.3	79	82	50-125	4	20	
Bromomethane	ug/L	ND	20	20	15.1	15.5	76	78	10-155	3	45	
Carbon disulfide	ug/L	ND	20	20	18.1	18.3	90	92	55-140	1	25	
Carbon tetrachloride	ug/L	ND	20	20	18.1	18.4	90	92	70-140	2	20	
Chlorobenzene	ug/L	5.5	20	20	23.9	24.5	92	95	65-130	2	20	
Chloroethane	ug/L	ND	20	20	17.5	18.4	87	92	20-180	5	20	
Chloroform	ug/L	ND	20	20	17.4	17.6	87	88	70-125	1	20	
Chloromethane	ug/L	ND	20	20	17.0	17.2	85	86	20-160	1	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.0	17.9	85	89	55-130	5	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.0	17.8	85	89	60-125	5	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.5	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	18.4	19.0	92	95	20-160	3	25	
Methylene Chloride	ug/L	ND	20	20	16.7	17.2	84	86	60-125	3	25	
Styrene	ug/L	ND	20	20	11.1	10.9	55	55	40-145	1	30	
Tetrachloroethene	ug/L	ND	20	20	19.8	19.7	99	98	55-135	1	25	
Toluene	ug/L	ND	20	20	18.4	19.1	92	95	25-150	4	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.8	16.2	79	81	60-130	2	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	18.3	86	91	60-120	6	15	
Trichloroethene	ug/L	ND	20	20	18.1	18.8	90	94	50-145	4	20	
Vinyl chloride	ug/L	ND	20	20	16.7	17.1	83	86	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	95	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						97	97	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						102	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	18.0	19.6	90	98	75-130	9	15	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.6	17.4	88	87	65-130	1	15	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.1	18.8	96	94	70-120	2	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011630 3011631

Parameter	Units	60383737023 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	15.2	18.6	76	93	61-130	20	15	R1
1,1-Dichloroethene	ug/L	ND	20	20	19.0	19.7	95	99	60-135	4	25	
1,2-Dichloroethane	ug/L	ND	20	20	17.6	18.3	88	91	30-160	3	25	
1,2-Dichloropropane	ug/L	ND	20	20	18.1	18.4	90	92	65-130	2	20	
2-Butanone (MEK)	ug/L	ND	100	100	74.7	87.0	75	87	30-130	15	25	
2-Hexanone	ug/L	ND	100	100	89.1	89.9	89	90	40-135	1	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	89.5	90.1	89	90	60-135	1	20	
Acetone	ug/L	ND	100	100	75.8	74.3	76	74	10-150	2	25	
Benzene	ug/L	ND	20	20	19.3	20.0	97	100	20-155	3	25	
Bromodichloromethane	ug/L	ND	20	20	17.6	17.5	88	88	70-130	0	15	
Bromoform	ug/L	ND	20	20	16.2	16.3	81	82	50-125	0	20	
Bromomethane	ug/L	ND	20	20	15.7	16.8	79	84	10-155	7	45	
Carbon disulfide	ug/L	ND	20	20	18.5	19.4	92	97	55-140	5	25	
Carbon tetrachloride	ug/L	ND	20	20	18.0	19.2	90	96	70-140	7	20	
Chlorobenzene	ug/L	ND	20	20	18.1	18.9	91	95	65-130	4	20	
Chloroethane	ug/L	ND	20	20	17.4	18.5	87	92	20-180	6	20	
Chloroform	ug/L	ND	20	20	15.9	18.1	80	90	70-125	13	20	
Chloromethane	ug/L	ND	20	20	17.0	17.6	85	88	20-160	4	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	15.5	18.3	78	91	55-130	16	20	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.9	18.5	90	93	60-125	3	20	
Dibromochloromethane	ug/L	ND	20	20	17.0	17.6	85	88	65-120	3	20	
Ethylbenzene	ug/L	ND	20	20	19.3	19.6	96	98	20-160	2	25	
Methylene Chloride	ug/L	ND	20	20	17.8	18.0	89	90	60-125	1	25	
Styrene	ug/L	ND	20	20	20.2	21.3	101	106	40-145	5	30	
Tetrachloroethene	ug/L	ND	20	20	19.0	19.6	95	98	55-135	3	25	
Toluene	ug/L	ND	20	20	18.9	19.4	95	97	25-150	2	25	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.9	17.0	79	85	60-130	7	20	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.5	17.9	87	90	60-120	2	15	
Trichloroethene	ug/L	ND	20	20	19.1	19.0	95	95	50-145	0	20	
Vinyl chloride	ug/L	ND	20	20	17.3	17.9	87	89	40-155	3	25	
Xylene (Total)	ug/L	ND	60	60	56.7	58.0	94	97	15-160	2	30	
1,2-Dichlorobenzene-d4 (S)	%						103	100	80-120			
4-Bromofluorobenzene (S)	%						100	99	80-120			
Toluene-d8 (S)	%						101	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751612
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878007, 60383878008

METHOD BLANK: 3009539 Matrix: Water
Associated Lab Samples: 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/25/21 13:29	

LABORATORY CONTROL SAMPLE: 3009540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009541 3009542

Parameter	Units	60383950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.14	0.11	24	20	75-125	17	20	H1,M1

SAMPLE DUPLICATE: 3009543

Parameter	Units	60383950001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

SAMPLE DUPLICATE: 3009544

Parameter	Units	60383885002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751896
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3010348 Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/26/21 06:47	
Sulfate	mg/L	ND	1.0	0.42	10/26/21 06:47	

LABORATORY CONTROL SAMPLE: 3010349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010350 3010351

Parameter	Units	60383737041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	153	100	100	246	247	93	95	80-120	0	15	
Sulfate	mg/L	1.3	5	5	5.9	5.9	93	94	80-120	0	15	

MATRIX SPIKE SAMPLE: 3010352

Parameter	Units	60383996041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	92.7	100	181	88	80-120	
Sulfate	mg/L	1.9	5	6.4	90	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752833
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878004

METHOD BLANK: 3013294 Matrix: Water
Associated Lab Samples: 60383878004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	10/29/21 09:12	
Sulfate	mg/L	ND	1.0	0.42	10/29/21 09:12	

METHOD BLANK: 3016253 Matrix: Water
Associated Lab Samples: 60383878004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/01/21 10:05	
Sulfate	mg/L	ND	1.0	0.42	11/01/21 10:05	

METHOD BLANK: 3016685 Matrix: Water
Associated Lab Samples: 60383878004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/02/21 08:12	
Sulfate	mg/L	ND	1.0	0.42	11/02/21 08:12	

LABORATORY CONTROL SAMPLE: 3013295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3016254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.3	105	90-110	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

LABORATORY CONTROL SAMPLE: 3016686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013296 3013297

Parameter	Units	60384476001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	74400	100000	100000	195000	229000	121	154	80-120	16	15	M1,R1
Sulfate	mg/L	181000	50000	50000	177000	111000	-9	-141	80-120	46	15	M1,R1

MATRIX SPIKE SAMPLE: 3013298

Parameter	Units	60384397008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	169	100	272	104	80-120	
Sulfate	mg/L	ND	100	103	91	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751260
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003

METHOD BLANK: 3007859 Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/22/21 08:38	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/22/21 08:38	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/22/21 08:38	

LABORATORY CONTROL SAMPLE: 3007860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.90	90	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	102	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	96	90-110	

MATRIX SPIKE SAMPLE: 3007861

Parameter	Units	60383878001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.45	1	1.4	91	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.1	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	0.45	2	2.4	99	90-110	

SAMPLE DUPLICATE: 3007862

Parameter	Units	60383878003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 751261
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3007864
Matrix: Water
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/22/21 08:44	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/22/21 08:44	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/22/21 08:44	

LABORATORY CONTROL SAMPLE: 3007865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.88	88	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	96	90-110	

MATRIX SPIKE SAMPLE: 3007866

Parameter	Units	60383878007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.94	94	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.1	106	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.0	100	90-110	

SAMPLE DUPLICATE: 3007867

Parameter	Units	60383878008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	53.8	54.0	0	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	53.8	54.0	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 753113
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

METHOD BLANK: 3014344
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007, 60383878008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 16:06	

LABORATORY CONTROL SAMPLE: 3014345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.0	99	80-120	

MATRIX SPIKE SAMPLE: 3014346

Parameter	Units	60383674004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	231	500	785	111	80-120	

SAMPLE DUPLICATE: 3014347

Parameter	Units	60383996043 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	0.46J	0.45J		25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 752988
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878001, 60383878002, 60383878003

METHOD BLANK: 3013841 Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 09:45	

LABORATORY CONTROL SAMPLE: 3013842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	93	80-120	

MATRIX SPIKE SAMPLE: 3013843

Parameter	Units	60383737041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.6	5	7.4	95	80-120	

SAMPLE DUPLICATE: 3013844

Parameter	Units	60383737044 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.3	8.2	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 753833
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007

METHOD BLANK: 3017243
Matrix: Water
Associated Lab Samples: 60383878004, 60383878005, 60383878006, 60383878007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	11/03/21 11:33	

LABORATORY CONTROL SAMPLE: 3017244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	95	80-120	

MATRIX SPIKE SAMPLE: 3017245

Parameter	Units	60383737047 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	55.6	125	206	121	80-120	M1

SAMPLE DUPLICATE: 3017246

Parameter	Units	60383996041 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.8	9.1	4	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

QC Batch: 725360
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007

METHOD BLANK: 2264510
Matrix: Water
Associated Lab Samples: 60383878001, 60383878002, 60383878003, 60383878004, 60383878005, 60383878006, 60383878007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/16/21 03:31	
Acetic Acid	mg/L	ND	0.50	0.12	11/16/21 03:31	
Propionic Acid	mg/L	ND	0.50	0.053	11/16/21 03:31	
Formic acid	mg/L	ND	0.50	0.055	11/16/21 03:31	
Butyric Acid	mg/L	ND	0.50	0.058	11/16/21 03:31	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/16/21 03:31	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/16/21 03:31	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/16/21 03:31	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/16/21 03:31	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/16/21 03:31	

LABORATORY CONTROL SAMPLE & LCSD: 2264511 2264512

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.3	2.3	113	117	70-130	4	20	
Acetic Acid	mg/L	2	2.1	2.1	105	107	70-130	2	20	
Propionic Acid	mg/L	2	2.2	2.3	112	117	70-130	4	20	
Formic acid	mg/L	2	2.1	2.1	105	105	70-130	0	20	
Butyric Acid	mg/L	2	2.2	2.1	110	107	70-130	3	20	
Pyruvic Acid	mg/L	2	2.0	2.3	100	117	70-130	16	20	
i-Pentanoic Acid	mg/L	2	2.0	2.3	102	114	70-130	12	20	
Pentanoic Acid	mg/L	2	2.1	2.1	105	104	70-130	1	20	
i-Hexanoic Acid	mg/L	2	2.4	2.3	122	117	70-130	4	20	
Hexanoic Acid	mg/L	2	2.2	2.2	111	108	70-130	3	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 752077

[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.
H1	Analysis conducted outside the EPA method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383878001	**TMW-25-202110**	AM20GAX	725586		
60383878002	**TMW-21-202110**	AM20GAX	725586		
60383878003	**MW-61R-202110**	AM20GAX	725586		
60383878004	**MW-194-202110**	AM20GAX	725586		
60383878005	**TMW-32-202110**	AM20GAX	725586		
60383878006	**TMW-34-202110**	AM20GAX	725586		
60383878007	**TMW-11-202110**	AM20GAX	725586		
60383878008	**MW-89-202110**	AM20GAX	725586		
60383878001	**TMW-25-202110**	EPA 3010	753530	EPA 6010	753691
60383878002	**TMW-21-202110**	EPA 3010	753530	EPA 6010	753691
60383878003	**MW-61R-202110**	EPA 3010	753530	EPA 6010	753691
60383878004	**MW-194-202110**	EPA 3010	753530	EPA 6010	753691
60383878005	**TMW-32-202110**	EPA 3010	753530	EPA 6010	753691
60383878006	**TMW-34-202110**	EPA 3010	753530	EPA 6010	753691
60383878007	**TMW-11-202110**	EPA 3010	753530	EPA 6010	753691
60383878008	**MW-89-202110**	EPA 3010	753530	EPA 6010	753691
60383878001	**TMW-25-202110**	EPA 5030B/8260	752077		
60383878002	**TMW-21-202110**	EPA 5030B/8260	752077		
60383878003	**MW-61R-202110**	EPA 5030B/8260	752077		
60383878004	**MW-194-202110**	EPA 5030B/8260	752077		
60383878005	**TMW-32-202110**	EPA 5030B/8260	752077		
60383878006	**TMW-34-202110**	EPA 5030B/8260	752077		
60383878007	**TMW-11-202110**	EPA 5030B/8260	752077		
60383878008	**MW-89-202110**	EPA 5030B/8260	752077		
60383878009	**MW-22-202110**	EPA 5030B/8260	752077		
60383878010	**MW-192-202110**	EPA 5030B/8260	752077		
60383878011	**ITMW-7-202110**	EPA 5030B/8260	752077		
60383878012	**MW-206-202110**	EPA 5030B/8260	752077		
60383878013	**ITMW-21-202110**	EPA 5030B/8260	752077		
60383878014	**DUP-04-202110**	EPA 5030B/8260	752077		
60383878015	**MW-176-202110**	EPA 5030B/8260	752077		
60383878016	**TMW-14-202110**	EPA 5030B/8260	752077		
60383878017	**MW-83-202110**	EPA 5030B/8260	752077		
60383878018	**MW-202-202110**	EPA 5030B/8260	752343		
60383878019	**VP-12-202110**	EPA 5030B/8260	752077		
60383878020	**MW-63R-202110**	EPA 5030B/8260	752077		
60383878021	**MW-204-202110**	EPA 5030B/8260	752077		
60383878022	**ITMW-1R-202110**	EPA 5030B/8260	752343		
60383878023	**TMW-23-202110**	EPA 5030B/8260	752343		
60383878024	**TB-04-202110**	EPA 5030B/8260	752343		
60383878026	**DUP-09-202110**	EPA 5030B/8260	752343		
60383878027	**TB-05-202110**	EPA 5030B/8260	752343		
60383878028	**EB-03-202110**	EPA 5030B/8260	752343		
60383878029	**MW-175-202110**	EPA 5030B/8260	752343		
60383878007	**TMW-11-202110**	SM 4500-S-2 D	751612		
60383878008	**MW-89-202110**	SM 4500-S-2 D	751612		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383878

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383878001	**TMW-25-202110**	EPA 300.0	751896		
60383878002	**TMW-21-202110**	EPA 300.0	751896		
60383878003	**MW-61R-202110**	EPA 300.0	751896		
60383878004	**MW-194-202110**	EPA 300.0	752833		
60383878005	**TMW-32-202110**	EPA 300.0	751896		
60383878006	**TMW-34-202110**	EPA 300.0	751896		
60383878007	**TMW-11-202110**	EPA 300.0	751896		
60383878008	**MW-89-202110**	EPA 300.0	751896		
60383878001	**TMW-25-202110**	EPA 353.2	751260		
60383878002	**TMW-21-202110**	EPA 353.2	751260		
60383878003	**MW-61R-202110**	EPA 353.2	751260		
60383878004	**MW-194-202110**	EPA 353.2	751261		
60383878005	**TMW-32-202110**	EPA 353.2	751261		
60383878006	**TMW-34-202110**	EPA 353.2	751261		
60383878007	**TMW-11-202110**	EPA 353.2	751261		
60383878008	**MW-89-202110**	EPA 353.2	751261		
60383878001	**TMW-25-202110**	SM 5310C	753113		
60383878002	**TMW-21-202110**	SM 5310C	753113		
60383878003	**MW-61R-202110**	SM 5310C	753113		
60383878004	**MW-194-202110**	SM 5310C	753113		
60383878005	**TMW-32-202110**	SM 5310C	753113		
60383878006	**TMW-34-202110**	SM 5310C	753113		
60383878007	**TMW-11-202110**	SM 5310C	753113		
60383878008	**MW-89-202110**	SM 5310C	753113		
60383878001	**TMW-25-202110**	SM 5310C	752988		
60383878002	**TMW-21-202110**	SM 5310C	752988		
60383878003	**MW-61R-202110**	SM 5310C	752988		
60383878004	**MW-194-202110**	SM 5310C	753833		
60383878005	**TMW-32-202110**	SM 5310C	753833		
60383878006	**TMW-34-202110**	SM 5310C	753833		
60383878007	**TMW-11-202110**	SM 5310C	753833		
60383878001	**TMW-25-202110**	AM23G	725360		
60383878002	**TMW-21-202110**	AM23G	725360		
60383878003	**MW-61R-202110**	AM23G	725360		
60383878004	**MW-194-202110**	AM23G	725360		
60383878005	**TMW-32-202110**	AM23G	725360		
60383878006	**TMW-34-202110**	AM23G	725360		
60383878007	**TMW-11-202110**	AM23G	725360		

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Sample Condition Upon Receipt

WO#: 60383878

60383878

Client Name: RAMBOLT

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 ☑ SSLC

Thermometer Used: T296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.0 **Corr. Factor** -0.2 **Corrected** 2.8, 3.4

Temperature should be above freezing to 6°C 3.6

Date and initials of person examining contents: SP 10/22/21

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	N02/N03 10/22
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	ALL 3 OF SAMPLE
Containers intact:	~~☑Yes~~ ☑No ☐N/A	IW-78 @ 1701 10/20
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	ARE BROKEN
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	SAMPLE LABEL ON OTHER
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	MW-61R-202110 10/20/21 1203
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	ARE YTMW-21-202110 10/20/21 1203
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) LOT# C603173	☑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	received a set of trip
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	blanks for both coolers
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	4 VGA1
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

REVIEWED
By jchurch at 10:18 am, 10/22/21

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60 38 38 78

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: / PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3 U U U 2 U 1 D O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other SAK

Lab Project Manager: Jamie Church

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Analyses

	Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride	Sulfate	Nitrate	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
1	TMW-25-202110	GW	G	10-20-21	0915				12	X	X	X	X	X	X	X	X	X	
1	TMW-21-202110	GW	G	10-20-21	1120				12	X	X	X	X	X	X	X	X	X	
2	MW-61R-202110	GW	G	10-20-21	1203				12	X	X	X	X	X	X	X	X	X	
1	MW-19H-202110	GW	G	10-20-21	1300				12	X	X	X	X	X	X	X	X	X	
2	TMW-32-202110	GW	G	10-20-21	1458				12	X	X	X	X	X	X	X	X	X	
2	TMW-34-202110	GW	G	10-20-21	1653				12	X	X	X	X	X	X	X	X	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected oC
Comments:

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll ~~10-20-21~~	10-20-21 1800	SKYCHERS PACE	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page ____ of ____

F-ALL-C-010-rev.00, 05Jul2018

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CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3 U 4/5 U 2 U 1 D O D

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride, Sulfate, Nitrate	~~Sulfate~~	~~Nitrate~~ Hydrogen	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene / Acetylene	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
TMW-11-202110	GW	G	10-20-21	0910				14	X	X	X	X	X	X	X		X	X	
MW-89-202110	GW	G	10-20-21	1355				11	X	X	X	X	X		X			X	

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Remarks/ Special Conditions/ Possible Hazards:
MW-89- do not analyze for Chloride

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY
Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 1800	SPECKERS PACE	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60J83878

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State / County/City: AR / Ft. Smith

Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #: WP

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

Lab Project Manager: Jamie Church

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
2	VP-12-202110	GW	G	10-20-21	1525				3	X	
2	MW-63R-202110	GW	G	10-20-21	1900				3	X	
2	MW-204-202110	GW	G	10-20-21	1552				3	X	
2	~~ITMW-1 ITMW-1R-202110~~										
2	ITMW-1R-202110	GW	G	10-20-21	1627				3	X	
2	TMW-23-202110	GW	G	10-20-21	1650				3	X	
2	TB-04-202110	TB	G	10-20-21	1710				3	X	
2	IW-78-202110	GW	G	10-20-21	1701				3	X	
2	DUP-09-202110	GW	G	10-20-21	1701				3	X	
2	TB-05-202110	GW	G	10-20-21	1720				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: _____
Cooler Temp Upon Receipt _____ oC
Cooler Therm Corr. Factor _____ oC
Cooler Temp Corrected 3.4 oC
Comments: _____

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page _____ of _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 1800	Seegers Place	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3878

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

Lab Project Manager: Jamie Church

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
2	MW-22-202110	GW	G	10-20-21	0915				3	X	
2	MW-192-202110	GW	G	10-20-21	0850				3	X	
2	ITMW-7-202110	GW	G	10-20-21	0912				3	X	
2	MW-206-202110	GW	G	10-20-21	1035				3	X	
2	ITMW-21-202110	GW	G	10-20-21	1038				3	X	
2	DUP-04-202110	GW	G	10-20-21	1038				3	X	
2	MW-176-202110	GW	G	10-20-21	1113				3	X	
2	TMW-14-202110	GW	G	10-20-21	1243				3	X	
2	MW-83-202110	GW	G	10-20-21	1338				3	X	
2	MW-202-202110	GW	G	10-20-21	1330				3	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: _____
Cooler Temp Upon Receipt _____ oC
Cooler Therm Corr. Factor _____ oC
Cooler Temp Corrected 3.4 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 / 1800	Specters Pace	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time: 10/20/21
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page _____ of _____

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6038 3878

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft. Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Mayer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
2 EB-03-202110	GW	G	10-20-21	1730				3	X	
3 ~~MW-175-202110~~	GW	G	10-20-21	0918				3	X	

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 3.4 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s): YES / NO

Page of

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-20-21 1800	Sloggers Pace	10/20/21 1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

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

November 23, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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

CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast

7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383996001	**VP-14-202110**	Water	10/21/21 16:43	10/22/21 03:00
60383996002	**VP-8-202110**	Water	10/21/21 15:08	10/22/21 03:00
60383996003	**MW-190-202110**	Water	10/21/21 15:20	10/22/21 03:00
60383996004	**VP-10-202110**	Water	10/21/21 15:25	10/22/21 03:00
60383996005	**ITMW-6-202110**	Water	10/21/21 15:17	10/22/21 03:00
60383996006	**ITMW-5-202110**	Water	10/21/21 17:30	10/22/21 03:00
60383996007	**MW-84-202110**	Water	10/21/21 17:09	10/22/21 03:00
60383996008	**MW-46R-202110**	Water	10/21/21 17:24	10/22/21 03:00
60383996009	**EB-04-202110**	Water	10/21/21 17:15	10/22/21 03:00
60383996010	**TB-01-202110**	Water	10/21/21 00:00	10/22/21 03:00
60383996011	**TMW-30-202110**	Water	10/21/21 12:02	10/22/21 03:00
60383996012	**DUP-11-202110**	Water	10/21/21 12:02	10/22/21 03:00
60383996013	**MW-56R-202110**	Water	10/21/21 11:42	10/22/21 03:00
60383996014	**TMW-24-202110**	Water	10/21/21 12:25	10/22/21 03:00
60383996015	**MW-57R-202110**	Water	10/21/21 13:35	10/22/21 03:00
60383996016	**MW-93-202110**	Water	10/21/21 13:25	10/22/21 03:00
60383996017	**MW-205-202110**	Water	10/21/21 13:49	10/22/21 03:00
60383996018	**MW-189-202110**	Water	10/21/21 13:56	10/22/21 03:00
60383996019	**MW-178-202110**	Water	10/21/21 16:05	10/22/21 03:00
60383996020	**MW-179-202110**	Water	10/21/21 16:25	10/22/21 03:00
60383996021	**ITMW-18-202110**	Water	10/21/21 08:48	10/22/21 03:00
60383996022	**MW-199-202110**	Water	10/21/21 08:45	10/22/21 03:00
60383996023	**MW-24-202110**	Water	10/21/21 08:45	10/22/21 03:00
60383996024	**ITMW-19-202110**	Water	10/21/21 09:10	10/22/21 03:00
60383996025	**MW-182-202110**	Water	10/21/21 10:09	10/22/21 03:00
60383996026	**ITMW-10-202110**	Water	10/21/21 10:23	10/22/21 03:00
60383996027	**TMW-12-202110**	Water	10/21/21 10:25	10/22/21 03:00
60383996028	**DUP-08-202110**	Water	10/21/21 10:25	10/22/21 03:00
60383996029	**DUP-10-202110**	Water	10/21/21 10:09	10/22/21 03:00
60383996030	**DUP-07-202110**	Water	10/21/21 08:45	10/22/21 03:00
60383996031	**TB-07-202110**	Water	10/21/21 17:31	10/22/21 03:00
60383996032	**TB-08-202110**	Water	10/21/21 17:32	10/22/21 03:00
60383996033	**MW-38-202110**	Water	10/21/21 09:15	10/22/21 03:00
60383996034	**RW-69-202110**	Water	10/21/21 09:25	10/22/21 03:00
60383996035	**MW-87-202110**	Water	10/21/21 10:23	10/22/21 03:00
60383996036	**MW-198-202110**	Water	10/21/21 10:55	10/22/21 03:00
60383996037	**ITMW-9-202110**	Water	10/21/21 11:35	10/22/21 03:00

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383996038	**IW-73-202110**	Water	10/21/21 12:10	10/22/21 03:00
60383996039	**MW-58R-202110**	Water	10/21/21 13:30	10/22/21 03:00
60383996040	**MW-95-202110**	Water	10/21/21 14:35	10/22/21 03:00
60383996041	**MW-91-202110**	Water	10/21/21 15:25	10/22/21 03:00
60383996042	**TMW-22R-202110**	Water	10/21/21 15:15	10/22/21 03:00
60383996043	**MW-185-202110**	Water	10/21/21 16:25	10/22/21 03:00

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383996001	VP-14-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996002	VP-8-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996003	MW-190-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996004	VP-10-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996005	ITMW-6-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996006	ITMW-5-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996007	MW-84-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996008	MW-46R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996009	EB-04-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996010	TB-01-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996011	TMW-30-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996012	DUP-11-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996013	MW-56R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996014	TMW-24-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996015	MW-57R-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996016	MW-93-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996017	MW-205-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996018	MW-189-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996019	MW-178-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996020	MW-179-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996021	ITMW-18-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996022	MW-199-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996023	MW-24-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996024	ITMW-19-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996025	MW-182-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996026	ITMW-10-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996027	TMW-12-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996028	DUP-08-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996029	DUP-10-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996030	DUP-07-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996031	TB-07-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996032	TB-08-202110	EPA 5030B/8260	PGH	38	PASI-K
60383996033	MW-38-202110	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996034	**RW-69-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996035	**MW-87-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996036	**MW-198-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996037	**ITMW-9-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996038	**IW-73-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383996039	**MW-58R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996040	**MW-95-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MA1	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
60383996041	**MW-91-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383996042	**TMW-22R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA
60383996043	**MW-185-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	LDB	2	PASI-K
		EPA 353.2	BLA	3	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		AM23G	SLL2	10	GCLA

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Date: November 23, 2021

In the AM20_LHC analysis for HBN 725913, samples in WO 221102805 were ran out of hold due to issues locating the sample containers. The bag containing the vials was stored in an incorrect cooler.

In the [ANAL_METHOD] analysis, sample [LAB_SAMP][CUST_SAMP_ID] was conducted outside of the recognized method holding time.

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: November 23, 2021

General Information:
11 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Extraction or preparation was conducted outside of the recognized method holding time.
- ITMW-9-202110 (Lab ID: 60383996037)
- IW-73-202110 (Lab ID: 60383996038)
- MW-185-202110 (Lab ID: 60383996043)
- MW-198-202110 (Lab ID: 60383996036)
- MW-38-202110 (Lab ID: 60383996033)
- MW-58R-202110 (Lab ID: 60383996039)
- MW-87-202110 (Lab ID: 60383996035)
- MW-91-202110 (Lab ID: 60383996041)
- MW-95-202110 (Lab ID: 60383996040)
- RW-69-202110 (Lab ID: 60383996034)
- TMW-22R-202110 (Lab ID: 60383996042)

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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: November 23, 2021

General Information:
11 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 23, 2021

General Information:
43 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.
- MW-84-202110 (Lab ID: 60383996007)

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

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

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

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

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

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

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

QC Batch: 752748

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: 3012918)
  - 1,1-Dichloroethene

QC Batch: 753288

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- LCS (Lab ID: 3015423)
  - Bromoform

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

QC Batch: 752721

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

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 23, 2021

QC Batch: 752748

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

QC Batch: 752796

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

QC Batch: 753191

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

QC Batch: 753272

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

QC Batch: 753288

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

QC Batch: 753621

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: November 23, 2021

General Information:
8 samples were analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: November 23, 2021

General Information:
11 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

QC Batch: 752147

B: Analyte was detected in the associated method blank.

- BLANK for HBN 752147 [WETA/827 (Lab ID: 3011008)
  - Chloride
- BLANK for HBN 752147 [WETA/827 (Lab ID: 3014120)
  - Chloride
- BLANK for HBN 752147 [WETA/827 (Lab ID: 3014387)
  - 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: 752149

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383996038,60384139008

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

- MSD (Lab ID: 3011022)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll_AR
Date: November 23, 2021

General Information:
11 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: November 23, 2021

General Information:
11 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753114

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383395002

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

- MS (Lab ID: 3014350)
  - Total Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: November 23, 2021

General Information:
3 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753833

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737047

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

- MS (Lab ID: 3017245)
  - Dissolved Organic Carbon

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: November 23, 2021

General Information:
3 samples were analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Extraction or preparation was conducted outside of the recognized method holding time.
- MW-185-202110 (Lab ID: 60383996043)
- MW-91-202110 (Lab ID: 60383996041)
- TMW-22R-202110 (Lab ID: 60383996042)

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: VP-14-202110 **Lab ID: 60383996001** Collected: 10/21/21 16:43 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 20:02	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 20:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 20:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 20:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 20:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 20:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/28/21 20:02	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.13	1		10/28/21 20:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:02	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:02	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 20:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:02	79-00-5	
Trichloroethene	**25.6**	ug/L	1.0	0.21	1		10/28/21 20:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/28/21 20:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/28/21 20:02	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/28/21 20:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/28/21 20:02	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 20:02		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: VP-8-202110 **Lab ID: 60383996002** Collected: 10/21/21 15:08 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**61.6**	ug/L	10.0	2.5	1		10/28/21 20:17	67-64-1	
Benzene	**0.53J**	ug/L	1.0	0.14	1		10/28/21 20:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 20:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:17	74-83-9	
2-Butanone (MEK)	**5.1J**	ug/L	10.0	0.98	1		10/28/21 20:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 20:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 20:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/28/21 20:17	75-35-4	
cis-1,2-Dichloroethene	**0.13J**	ug/L	1.0	0.13	1		10/28/21 20:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:17	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:17	127-18-4	
Toluene	**0.31J**	ug/L	1.0	0.25	1		10/28/21 20:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:17	79-00-5	
Trichloroethene	**4.2**	ug/L	1.0	0.21	1		10/28/21 20:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/28/21 20:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/28/21 20:17	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/28/21 20:17	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/28/21 20:17	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 20:17		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-190-202110 **Lab ID: 60383996003** Collected: 10/21/21 15:20 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 20:33	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 20:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 20:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 20:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 20:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:33	124-48-1	
1,1-Dichloroethane	**0.34J**	ug/L	1.0	0.12	1		10/28/21 20:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:33	107-06-2	
1,1-Dichloroethene	**0.71J**	ug/L	1.0	0.22	1		10/28/21 20:33	75-35-4	
cis-1,2-Dichloroethene	**4.6**	ug/L	1.0	0.13	1		10/28/21 20:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:33	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:33	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 20:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:33	79-00-5	
Trichloroethene	**199**	ug/L	1.0	0.21	1		10/28/21 20:33	79-01-6	
Vinyl chloride	**0.22J**	ug/L	1.0	0.17	1		10/28/21 20:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/28/21 20:33	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/28/21 20:33	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/28/21 20:33	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 20:33		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: VP-10-202110 **Lab ID: 60383996004** Collected: 10/21/21 15:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 21:05	67-64-1	
Benzene	**0.23J**	ug/L	1.0	0.14	1		10/28/21 21:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 21:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 21:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 21:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 21:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 21:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 21:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 21:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 21:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 21:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 21:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 21:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 21:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 21:05	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.22	1		10/28/21 21:05	75-35-4	
cis-1,2-Dichloroethene	**12.4**	ug/L	1.0	0.13	1		10/28/21 21:05	156-59-2	
trans-1,2-Dichloroethene	**0.44J**	ug/L	1.0	0.10	1		10/28/21 21:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 21:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 21:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 21:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 21:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 21:05	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 21:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 21:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 21:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 21:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 21:05	127-18-4	
Toluene	**0.36J**	ug/L	1.0	0.25	1		10/28/21 21:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 21:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 21:05	79-00-5	
Trichloroethene	**177**	ug/L	5.0	1.0	5		11/02/21 22:34	79-01-6	
Vinyl chloride	**0.33J**	ug/L	1.0	0.17	1		10/28/21 21:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 21:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/21 21:05	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/28/21 21:05	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/28/21 21:05	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 21:05		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-6-202110 **Lab ID: 60383996005** Collected: 10/21/21 15:17 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 21:21	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 21:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 21:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 21:21	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 21:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 21:21	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 21:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 21:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 21:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 21:21	75-00-3	
Chloroform	**0.41J**	ug/L	1.0	0.22	1		10/28/21 21:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 21:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 21:21	124-48-1	
1,1-Dichloroethane	**0.34J**	ug/L	1.0	0.12	1		10/28/21 21:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 21:21	107-06-2	
1,1-Dichloroethene	**2.9**	ug/L	1.0	0.22	1		10/28/21 21:21	75-35-4	
cis-1,2-Dichloroethene	**18.2**	ug/L	1.0	0.13	1		10/28/21 21:21	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.10	1		10/28/21 21:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 21:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 21:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 21:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 21:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 21:21	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 21:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 21:21	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 21:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 21:21	79-34-5	
Tetrachloroethene	**0.70J**	ug/L	1.0	0.33	1		10/28/21 21:21	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 21:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 21:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 21:21	79-00-5	
Trichloroethene	**1980**	ug/L	20.0	4.2	20		11/01/21 13:52	79-01-6	
Vinyl chloride	**1.1**	ug/L	1.0	0.17	1		10/28/21 21:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 21:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/21 21:21	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/28/21 21:21	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/28/21 21:21	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 21:21		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-5-202110 **Lab ID: 60383996006** Collected: 10/21/21 17:30 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/28/21 21:37	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 21:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 21:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/28/21 21:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 21:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 21:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 21:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 21:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 21:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 21:37	75-00-3	
Chloroform	**0.63J**	ug/L	1.0	0.22	1		10/28/21 21:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/28/21 21:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 21:37	124-48-1	
1,1-Dichloroethane	**0.83J**	ug/L	1.0	0.12	1		10/28/21 21:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 21:37	107-06-2	
1,1-Dichloroethene	**5.2**	ug/L	1.0	0.22	1		10/28/21 21:37	75-35-4	
cis-1,2-Dichloroethene	**27.9**	ug/L	1.0	0.13	1		10/28/21 21:37	156-59-2	
trans-1,2-Dichloroethene	**0.32J**	ug/L	1.0	0.10	1		10/28/21 21:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 21:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 21:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 21:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 21:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 21:37	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 21:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 21:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 21:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 21:37	79-34-5	
Tetrachloroethene	**1.3**	ug/L	1.0	0.33	1		10/28/21 21:37	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 21:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 21:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 21:37	79-00-5	
Trichloroethene	**2420**	ug/L	20.0	4.2	20		11/01/21 14:08	79-01-6	
Vinyl chloride	**1.1**	ug/L	1.0	0.17	1		10/28/21 21:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 21:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/21 21:37	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/28/21 21:37	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		10/28/21 21:37	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/28/21 21:37		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-84-202110 **Lab ID: 60383996007** Collected: 10/21/21 17:09 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**4.5J**	ug/L	10.0	2.5	1		10/28/21 20:49	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/28/21 20:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/28/21 20:49	75-27-4	
Bromoform	**2.7**	ug/L	1.0	0.68	1		10/28/21 20:49	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/28/21 20:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/28/21 20:49	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/28/21 20:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/28/21 20:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/28/21 20:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/28/21 20:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/28/21 20:49	67-66-3	
Chloromethane	**2.1**	ug/L	1.0	0.28	1		10/28/21 20:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/28/21 20:49	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/21 20:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/28/21 20:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/28/21 20:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/28/21 20:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/28/21 20:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/28/21 20:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/28/21 20:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/28/21 20:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/28/21 20:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/28/21 20:49	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/28/21 20:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/28/21 20:49	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/21 20:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/21 20:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/28/21 20:49	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/28/21 20:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/21 20:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/28/21 20:49	79-00-5	
Trichloroethene	**7.8**	ug/L	1.0	0.21	1		10/28/21 20:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/28/21 20:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/28/21 20:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/28/21 20:49	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		10/28/21 20:49	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/28/21 20:49	2199-69-1	
Preservation pH	**6.0**		0.10		1		10/28/21 20:49		pH

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-46R-202110 **Lab ID: 60383996008** Collected: 10/21/21 17:24 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:09	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:09	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.22	1		10/29/21 12:09	75-35-4	L2
cis-1,2-Dichloroethene	**30.8**	ug/L	1.0	0.13	1		10/29/21 12:09	156-59-2	
trans-1,2-Dichloroethene	**0.42J**	ug/L	1.0	0.10	1		10/29/21 12:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:09	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:09	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:09	79-00-5	
Trichloroethene	**461**	ug/L	10.0	2.1	10		10/29/21 12:23	79-01-6	
Vinyl chloride	**0.63J**	ug/L	1.0	0.17	1		10/29/21 12:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/21 12:09	460-00-4	
Toluene-d8 (S)	105	%	80-120		1		10/29/21 12:09	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 12:09	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:09		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: EB-04-202110 **Lab ID: 60383996009** Collected: 10/21/21 17:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 08:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 08:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 08:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 08:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 08:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 08:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 08:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 08:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 08:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 08:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 08:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 08:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 08:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 08:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 08:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 08:50	75-35-4	L2
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 08:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 08:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 08:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 08:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 08:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 08:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 08:50	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 08:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 08:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 08:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 08:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 08:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 08:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 08:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 08:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 08:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 08:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 08:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/21 08:50	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 08:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 08:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 08:50		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TB-01-202110 **Lab ID: 60383996010** Collected: 10/21/21 00:00 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 09:04	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 09:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 09:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 09:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 09:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 09:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 09:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 09:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 09:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 09:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 09:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 09:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 09:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 09:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 09:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 09:04	75-35-4	L2
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 09:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 09:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 09:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 09:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 09:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 09:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 09:04	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 09:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 09:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 09:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 09:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 09:04	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 09:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 09:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 09:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 09:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 09:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 09:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	106	%	80-120		1		10/29/21 09:04	460-00-4	
Toluene-d8 (S)	113	%	80-120		1		10/29/21 09:04	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	106	%	80-120		1		10/29/21 09:04	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 09:04		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-30-202110 **Lab ID: 60383996011** Collected: 10/21/21 12:02 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	200	50.8	20		11/01/21 14:23	67-64-1	
Benzene	ND	ug/L	20.0	2.7	20		11/01/21 14:23	71-43-2	
Bromodichloromethane	ND	ug/L	20.0	3.1	20		11/01/21 14:23	75-27-4	
Bromoform	ND	ug/L	20.0	13.5	20		11/01/21 14:23	75-25-2	
Bromomethane	ND	ug/L	100	9.2	20		11/01/21 14:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	19.5	20		11/01/21 14:23	78-93-3	
Carbon disulfide	ND	ug/L	100	19.6	20		11/01/21 14:23	75-15-0	
Carbon tetrachloride	ND	ug/L	20.0	3.4	20		11/01/21 14:23	56-23-5	
Chlorobenzene	ND	ug/L	20.0	1.8	20		11/01/21 14:23	108-90-7	
Chloroethane	ND	ug/L	20.0	7.5	20		11/01/21 14:23	75-00-3	
Chloroform	ND	ug/L	20.0	4.4	20		11/01/21 14:23	67-66-3	
Chloromethane	ND	ug/L	20.0	5.7	20		11/01/21 14:23	74-87-3	
Dibromochloromethane	ND	ug/L	20.0	6.1	20		11/01/21 14:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	20.0	2.4	20		11/01/21 14:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	4.2	20		11/01/21 14:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	4.4	20		11/01/21 14:23	75-35-4	
cis-1,2-Dichloroethene	**3.5J**	ug/L	20.0	2.6	20		11/01/21 14:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	2.0	20		11/01/21 14:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	20.0	2.8	20		11/01/21 14:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	20.0	1.6	20		11/01/21 14:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	3.6	20		11/01/21 14:23	10061-02-6	
Ethylbenzene	ND	ug/L	20.0	2.4	20		11/01/21 14:23	100-41-4	
2-Hexanone	ND	ug/L	200	22.0	20		11/01/21 14:23	591-78-6	
Methylene Chloride	ND	ug/L	20.0	7.8	20		11/01/21 14:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	14.7	20		11/01/21 14:23	108-10-1	
Styrene	ND	ug/L	20.0	2.5	20		11/01/21 14:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	3.1	20		11/01/21 14:23	79-34-5	
Tetrachloroethene	ND	ug/L	20.0	6.6	20		11/01/21 14:23	127-18-4	
Toluene	ND	ug/L	20.0	5.1	20		11/01/21 14:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	20.0	2.2	20		11/01/21 14:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	2.8	20		11/01/21 14:23	79-00-5	
Trichloroethene	**8.7J**	ug/L	20.0	4.2	20		11/01/21 14:23	79-01-6	
Vinyl chloride	ND	ug/L	20.0	3.3	20		11/01/21 14:23	75-01-4	
Xylene (Total)	ND	ug/L	60.0	5.6	20		11/01/21 14:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		20		11/01/21 14:23	460-00-4	F1
Toluene-d8 (S)	97	%	80-120		20		11/01/21 14:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		20		11/01/21 14:23	2199-69-1	
Preservation pH	**1.0**		0.10		20		11/01/21 14:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-11-202110 **Lab ID: 60383996012** Collected: 10/21/21 12:02 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	200	50.8	20		11/01/21 14:39	67-64-1	
Benzene	ND	ug/L	20.0	2.7	20		11/01/21 14:39	71-43-2	
Bromodichloromethane	ND	ug/L	20.0	3.1	20		11/01/21 14:39	75-27-4	
Bromoform	ND	ug/L	20.0	13.5	20		11/01/21 14:39	75-25-2	
Bromomethane	ND	ug/L	100	9.2	20		11/01/21 14:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	19.5	20		11/01/21 14:39	78-93-3	
Carbon disulfide	ND	ug/L	100	19.6	20		11/01/21 14:39	75-15-0	
Carbon tetrachloride	ND	ug/L	20.0	3.4	20		11/01/21 14:39	56-23-5	
Chlorobenzene	ND	ug/L	20.0	1.8	20		11/01/21 14:39	108-90-7	
Chloroethane	ND	ug/L	20.0	7.5	20		11/01/21 14:39	75-00-3	
Chloroform	ND	ug/L	20.0	4.4	20		11/01/21 14:39	67-66-3	
Chloromethane	ND	ug/L	20.0	5.7	20		11/01/21 14:39	74-87-3	
Dibromochloromethane	ND	ug/L	20.0	6.1	20		11/01/21 14:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	20.0	2.4	20		11/01/21 14:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	4.2	20		11/01/21 14:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	4.4	20		11/01/21 14:39	75-35-4	
cis-1,2-Dichloroethene	**2.7J**	ug/L	20.0	2.6	20		11/01/21 14:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	2.0	20		11/01/21 14:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	20.0	2.8	20		11/01/21 14:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	20.0	1.6	20		11/01/21 14:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	3.6	20		11/01/21 14:39	10061-02-6	
Ethylbenzene	ND	ug/L	20.0	2.4	20		11/01/21 14:39	100-41-4	
2-Hexanone	ND	ug/L	200	22.0	20		11/01/21 14:39	591-78-6	
Methylene Chloride	ND	ug/L	20.0	7.8	20		11/01/21 14:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	14.7	20		11/01/21 14:39	108-10-1	
Styrene	ND	ug/L	20.0	2.5	20		11/01/21 14:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	3.1	20		11/01/21 14:39	79-34-5	
Tetrachloroethene	ND	ug/L	20.0	6.6	20		11/01/21 14:39	127-18-4	
Toluene	ND	ug/L	20.0	5.1	20		11/01/21 14:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	20.0	2.2	20		11/01/21 14:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	2.8	20		11/01/21 14:39	79-00-5	
Trichloroethene	**7.8J**	ug/L	20.0	4.2	20		11/01/21 14:39	79-01-6	
Vinyl chloride	ND	ug/L	20.0	3.3	20		11/01/21 14:39	75-01-4	
Xylene (Total)	ND	ug/L	60.0	5.6	20		11/01/21 14:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		20		11/01/21 14:39	460-00-4	F1
Toluene-d8 (S)	99	%	80-120		20		11/01/21 14:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		20		11/01/21 14:39	2199-69-1	
Preservation pH	**1.0**		0.10		20		11/01/21 14:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-56R-202110 **Lab ID: 60383996013** Collected: 10/21/21 11:42 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 15:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 15:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 15:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 15:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 15:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 15:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 15:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 15:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 15:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 15:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 15:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 15:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 15:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 15:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 15:59	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.22	1		11/01/21 15:59	75-35-4	
cis-1,2-Dichloroethene	**14.8**	ug/L	1.0	0.13	1		11/01/21 15:59	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.10	1		11/01/21 15:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 15:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 15:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 15:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 15:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 15:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 15:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 15:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 15:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 15:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 15:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 15:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 15:59	79-00-5	
Trichloroethene	**619**	ug/L	20.0	4.2	20		11/01/21 16:15	79-01-6	
Vinyl chloride	**0.20J**	ug/L	1.0	0.17	1		11/01/21 15:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 15:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		11/01/21 15:59	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		11/01/21 15:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		11/01/21 15:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 15:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-24-202110 **Lab ID: 60383996014** Collected: 10/21/21 12:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 13:47	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 13:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 13:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 13:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 13:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 13:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 13:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 13:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 13:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 13:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 13:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 13:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 13:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 13:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 13:47	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.22	1		10/29/21 13:47	75-35-4	
cis-1,2-Dichloroethene	**11.3**	ug/L	1.0	0.13	1		10/29/21 13:47	156-59-2	
trans-1,2-Dichloroethene	**0.19J**	ug/L	1.0	0.10	1		10/29/21 13:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 13:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 13:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 13:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 13:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 13:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 13:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 13:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 13:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 13:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 13:47	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 13:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 13:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 13:47	79-00-5	
Trichloroethene	**487**	ug/L	10.0	2.1	10		10/29/21 14:03	79-01-6	
Vinyl chloride	**0.24J**	ug/L	1.0	0.17	1		10/29/21 13:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 13:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		10/29/21 13:47	460-00-4	
Toluene-d8 (S)	104	%	80-120		1		10/29/21 13:47	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 13:47	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 13:47		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-57R-202110 **Lab ID: 60383996015** Collected: 10/21/21 13:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 16:26	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 16:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 16:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 16:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 16:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 16:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 16:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 16:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 16:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 16:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 16:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 16:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 16:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 16:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 16:26	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.22	1		10/29/21 16:26	75-35-4	
cis-1,2-Dichloroethene	**22.1**	ug/L	1.0	0.13	1		10/29/21 16:26	156-59-2	
trans-1,2-Dichloroethene	**0.21J**	ug/L	1.0	0.10	1		10/29/21 16:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 16:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 16:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 16:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 16:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 16:26	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 16:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 16:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 16:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 16:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 16:26	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 16:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 16:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 16:26	79-00-5	
Trichloroethene	**286**	ug/L	20.0	4.2	20		10/29/21 16:42	79-01-6	
Vinyl chloride	**0.38J**	ug/L	1.0	0.17	1		10/29/21 16:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 16:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/21 16:26	460-00-4	
Toluene-d8 (S)	90	%	80-120		1		10/29/21 16:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/29/21 16:26	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 16:26		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-93-202110 **Lab ID: 60383996016** Collected: 10/21/21 13:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 13:15	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 13:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 13:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 13:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 13:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 13:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 13:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 13:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 13:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 13:15	75-00-3	
Chloroform	**1.9**	ug/L	1.0	0.22	1		10/29/21 13:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 13:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 13:15	124-48-1	
1,1-Dichloroethane	**0.16J**	ug/L	1.0	0.12	1		10/29/21 13:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 13:15	107-06-2	
1,1-Dichloroethene	**10.8**	ug/L	1.0	0.22	1		10/29/21 13:15	75-35-4	
cis-1,2-Dichloroethene	**62.3**	ug/L	1.0	0.13	1		10/29/21 13:15	156-59-2	
trans-1,2-Dichloroethene	**4.8**	ug/L	1.0	0.10	1		10/29/21 13:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 13:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 13:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 13:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 13:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 13:15	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 13:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 13:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 13:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 13:15	79-34-5	
Tetrachloroethene	**3.1**	ug/L	1.0	0.33	1		10/29/21 13:15	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 13:15	108-88-3	
1,1,1-Trichloroethane	**0.11J**	ug/L	1.0	0.11	1		10/29/21 13:15	71-55-6	
1,1,2-Trichloroethane	**0.47J**	ug/L	1.0	0.14	1		10/29/21 13:15	79-00-5	
Trichloroethene	**8560**	ug/L	200	42.0	200		10/29/21 13:31	79-01-6	
Vinyl chloride	**0.90J**	ug/L	1.0	0.17	1		10/29/21 13:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 13:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 13:15	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/29/21 13:15	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 13:15	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 13:15		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-205-202110 **Lab ID: 60383996017** Collected: 10/21/21 13:49 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:43	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:43	124-48-1	
1,1-Dichloroethane	**0.97J**	ug/L	1.0	0.12	1		10/29/21 12:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:43	107-06-2	
1,1-Dichloroethene	**3.0**	ug/L	1.0	0.22	1		10/29/21 12:43	75-35-4	
cis-1,2-Dichloroethene	**135**	ug/L	1.0	0.13	1		10/29/21 12:43	156-59-2	
trans-1,2-Dichloroethene	**0.58J**	ug/L	1.0	0.10	1		10/29/21 12:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:43	591-78-6	
Methylene Chloride	**0.61J**	ug/L	1.0	0.39	1		10/29/21 12:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:43	79-34-5	
Tetrachloroethene	**0.94J**	ug/L	1.0	0.33	1		10/29/21 12:43	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:43	71-55-6	
1,1,2-Trichloroethane	**0.26J**	ug/L	1.0	0.14	1		10/29/21 12:43	79-00-5	
Trichloroethene	**400**	ug/L	10.0	2.1	10		11/02/21 23:22	79-01-6	
Vinyl chloride	**0.74J**	ug/L	1.0	0.17	1		10/29/21 12:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 12:43	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/29/21 12:43	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/29/21 12:43	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:43		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-189-202110 **Lab ID: 60383996018** Collected: 10/21/21 13:56 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 14:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 14:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 14:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 14:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 14:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 14:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 14:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 14:19	56-23-5	
Chlorobenzene	**0.12J**	ug/L	1.0	0.089	1		10/29/21 14:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 14:19	75-00-3	
Chloroform	**0.52J**	ug/L	1.0	0.22	1		10/29/21 14:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 14:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 14:19	124-48-1	
1,1-Dichloroethane	**0.56J**	ug/L	1.0	0.12	1		10/29/21 14:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 14:19	107-06-2	
1,1-Dichloroethene	**0.48J**	ug/L	1.0	0.22	1		10/29/21 14:19	75-35-4	
cis-1,2-Dichloroethene	**6.1**	ug/L	1.0	0.13	1		10/29/21 14:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 14:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 14:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 14:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 14:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 14:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 14:19	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 14:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 14:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 14:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 14:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 14:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 14:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 14:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 14:19	79-00-5	
Trichloroethene	**238**	ug/L	10.0	2.1	10		10/29/21 14:34	79-01-6	
Vinyl chloride	**0.25J**	ug/L	1.0	0.17	1		10/29/21 14:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 14:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 14:19	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 14:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 14:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 14:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-178-202110 **Lab ID: 60383996019** Collected: 10/21/21 16:05 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	**2.8J**	ug/L	10.0	2.5	1		10/29/21 10:35	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:35	75-35-4	
cis-1,2-Dichloroethene	**0.19J**	ug/L	1.0	0.13	1		10/29/21 10:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:35	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:35	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 10:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/29/21 10:35	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		10/29/21 10:35	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 10:35	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:35		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-179-202110 **Lab ID: 60383996020** Collected: 10/21/21 16:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 10:51	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:51	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.13	1		10/29/21 10:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:51	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:51	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:51	79-00-5	
Trichloroethene	**20.1**	ug/L	1.0	0.21	1		10/29/21 10:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 10:51	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/29/21 10:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		10/29/21 10:51	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:51		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-18-202110 **Lab ID: 60383996021** Collected: 10/21/21 08:48 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 14:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 14:50	71-43-2	
Bromodichloromethane	**0.52J**	ug/L	1.0	0.16	1		10/29/21 14:50	75-27-4	
Bromoform	**1.2**	ug/L	1.0	0.68	1		10/29/21 14:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 14:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 14:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 14:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 14:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 14:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 14:50	75-00-3	
Chloroform	**2.0**	ug/L	1.0	0.22	1		10/29/21 14:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 14:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 14:50	124-48-1	
1,1-Dichloroethane	**0.54J**	ug/L	1.0	0.12	1		10/29/21 14:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 14:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 14:50	75-35-4	
cis-1,2-Dichloroethene	**192**	ug/L	1.0	0.13	1		10/29/21 14:50	156-59-2	
trans-1,2-Dichloroethene	**37.7**	ug/L	1.0	0.10	1		10/29/21 14:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 14:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 14:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 14:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 14:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 14:50	591-78-6	
Methylene Chloride	**1.4**	ug/L	1.0	0.39	1		10/29/21 14:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 14:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 14:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 14:50	79-34-5	
Tetrachloroethene	**1.1**	ug/L	1.0	0.33	1		10/29/21 14:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 14:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 14:50	71-55-6	
1,1,2-Trichloroethane	**0.23J**	ug/L	1.0	0.14	1		10/29/21 14:50	79-00-5	
Trichloroethene	**2090**	ug/L	25.0	5.2	25		11/02/21 23:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 14:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 14:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 14:50	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 14:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 14:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 14:50		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-199-202110 **Lab ID: 60383996022** Collected: 10/21/21 08:45 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:07	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 11:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:07	56-23-5	
Chlorobenzene	**0.79J**	ug/L	1.0	0.089	1		10/29/21 11:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:07	124-48-1	
1,1-Dichloroethane	**0.16J**	ug/L	1.0	0.12	1		10/29/21 11:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:07	107-06-2	
1,1-Dichloroethene	**0.27J**	ug/L	1.0	0.22	1		10/29/21 11:07	75-35-4	
cis-1,2-Dichloroethene	**10.2**	ug/L	1.0	0.13	1		10/29/21 11:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:07	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:07	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:07	79-00-5	
Trichloroethene	**82.3**	ug/L	1.0	0.21	1		10/29/21 11:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 11:07	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/29/21 11:07	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1		10/29/21 11:07	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:07		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-24-202110 **Lab ID: 60383996023** Collected: 10/21/21 08:45 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:59	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:59	75-27-4	
Bromoform	**0.73J**	ug/L	1.0	0.68	1		10/29/21 12:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 12:59	75-35-4	
cis-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.13	1		10/29/21 12:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 12:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:59	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:59	79-00-5	
Trichloroethene	**10.4**	ug/L	1.0	0.21	1		10/29/21 12:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 12:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 12:59	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/29/21 12:59	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 12:59	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:59		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-19-202110 **Lab ID: 60383996024** Collected: 10/21/21 09:10 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 15:22	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 15:22	71-43-2	
Bromodichloromethane	**1.4**	ug/L	1.0	0.16	1		10/29/21 15:22	75-27-4	
Bromoform	**12.9**	ug/L	1.0	0.68	1		10/29/21 15:22	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 15:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 15:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 15:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 15:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 15:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 15:22	75-00-3	
Chloroform	**2.3**	ug/L	1.0	0.22	1		10/29/21 15:22	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 15:22	74-87-3	
Dibromochloromethane	**1.1**	ug/L	1.0	0.30	1		10/29/21 15:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 15:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 15:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 15:22	75-35-4	
cis-1,2-Dichloroethene	**13.6**	ug/L	1.0	0.13	1		10/29/21 15:22	156-59-2	
trans-1,2-Dichloroethene	**2.4**	ug/L	1.0	0.10	1		10/29/21 15:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 15:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 15:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 15:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 15:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 15:22	591-78-6	
Methylene Chloride	**0.46J**	ug/L	1.0	0.39	1		10/29/21 15:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 15:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 15:22	100-42-5	
1,1,2,2-Tetrachloroethane	**0.26J**	ug/L	1.0	0.15	1		10/29/21 15:22	79-34-5	
Tetrachloroethene	**0.85J**	ug/L	1.0	0.33	1		10/29/21 15:22	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 15:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 15:22	71-55-6	
1,1,2-Trichloroethane	**0.21J**	ug/L	1.0	0.14	1		10/29/21 15:22	79-00-5	
Trichloroethene	**1350**	ug/L	10.0	2.1	10		10/29/21 15:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 15:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 15:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/21 15:22	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 15:22	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 15:22	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 15:22		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-182-202110 **Lab ID: 60383996025** Collected: 10/21/21 10:09 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:39	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.14	1		10/29/21 11:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:39	56-23-5	
Chlorobenzene	**5.9**	ug/L	1.0	0.089	1		10/29/21 11:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 11:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 11:39	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.13	1		10/29/21 11:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:39	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:39	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:39	79-00-5	
Trichloroethene	**19.2**	ug/L	1.0	0.21	1		10/29/21 11:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/29/21 11:39	460-00-4	
Toluene-d8 (S)	97	%	80-120		1		10/29/21 11:39	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 11:39	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:39		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-10-202110 **Lab ID: 60383996026** Collected: 10/21/21 10:23 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 15:54	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 15:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 15:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 15:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 15:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 15:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 15:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 15:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 15:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 15:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 15:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 15:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 15:54	124-48-1	
1,1-Dichloroethane	**0.19J**	ug/L	1.0	0.12	1		10/29/21 15:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 15:54	107-06-2	
1,1-Dichloroethene	**0.55J**	ug/L	1.0	0.22	1		10/29/21 15:54	75-35-4	
cis-1,2-Dichloroethene	**4.4**	ug/L	1.0	0.13	1		10/29/21 15:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 15:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 15:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 15:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 15:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 15:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 15:54	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 15:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 15:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 15:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 15:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 15:54	127-18-4	
Toluene	**0.29J**	ug/L	1.0	0.25	1		10/29/21 15:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 15:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 15:54	79-00-5	
Trichloroethene	**302**	ug/L	10.0	2.1	10		10/29/21 16:10	79-01-6	
Vinyl chloride	**0.24J**	ug/L	1.0	0.17	1		10/29/21 15:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 15:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/29/21 15:54	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		10/29/21 15:54	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 15:54	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 15:54		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-12-202110 **Lab ID: 60383996027** Collected: 10/21/21 10:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:11	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:11	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.22	1		10/29/21 12:11	75-35-4	
cis-1,2-Dichloroethene	**8.9**	ug/L	1.0	0.13	1		10/29/21 12:11	156-59-2	
trans-1,2-Dichloroethene	**0.12J**	ug/L	1.0	0.10	1		10/29/21 12:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:11	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:11	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:11	79-00-5	
Trichloroethene	**366**	ug/L	10.0	2.1	10		11/01/21 17:03	79-01-6	
Vinyl chloride	**0.20J**	ug/L	1.0	0.17	1		10/29/21 12:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 12:11	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 12:11	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 12:11	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:11		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-08-202110 **Lab ID: 60383996028** Collected: 10/21/21 10:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 12:27	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 12:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 12:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 12:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 12:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 12:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 12:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 12:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 12:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 12:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 12:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 12:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 12:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 12:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 12:27	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.22	1		10/29/21 12:27	75-35-4	
cis-1,2-Dichloroethene	**9.6**	ug/L	1.0	0.13	1		10/29/21 12:27	156-59-2	
trans-1,2-Dichloroethene	**0.19J**	ug/L	1.0	0.10	1		10/29/21 12:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 12:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 12:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 12:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 12:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 12:27	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 12:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 12:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 12:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 12:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 12:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 12:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 12:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 12:27	79-00-5	
Trichloroethene	**359**	ug/L	10.0	2.1	10		11/01/21 17:19	79-01-6	
Vinyl chloride	**0.23J**	ug/L	1.0	0.17	1		10/29/21 12:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 12:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/21 12:27	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		10/29/21 12:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 12:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 12:27		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-10-202110 **Lab ID: 60383996029** Collected: 10/21/21 10:09 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:55	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.14	1		10/29/21 11:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:55	56-23-5	
Chlorobenzene	**6.0**	ug/L	1.0	0.089	1		10/29/21 11:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 11:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 11:55	75-35-4	
cis-1,2-Dichloroethene	**1.3**	ug/L	1.0	0.13	1		10/29/21 11:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:55	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:55	79-00-5	
Trichloroethene	**19.6**	ug/L	1.0	0.21	1		10/29/21 11:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/29/21 11:55	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 11:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 11:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:55		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: DUP-07-202110 **Lab ID: 60383996030** Collected: 10/21/21 08:45 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 11:23	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 11:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 11:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 11:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 11:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 11:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 11:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 11:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 11:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 11:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 11:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 11:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 11:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 11:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 11:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 11:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 11:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 11:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 11:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 11:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 11:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 11:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 11:23	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 11:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 11:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 11:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 11:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 11:23	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 11:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 11:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 11:23	79-00-5	
Trichloroethene	**10.0**	ug/L	1.0	0.21	1		10/29/21 11:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 11:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 11:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/21 11:23	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 11:23	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 11:23	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 11:23		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TB-07-202110 **Lab ID: 60383996031** Collected: 10/21/21 17:31 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 10:03	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 10:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:03	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:03	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 10:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 10:03	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 10:03	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 10:03	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:03		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TB-08-202110 **Lab ID: 60383996032** Collected: 10/21/21 17:32 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 10:19	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 10:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 10:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/29/21 10:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 10:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 10:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 10:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 10:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 10:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 10:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/29/21 10:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 10:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 10:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/21 10:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 10:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/29/21 10:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		10/29/21 10:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/29/21 10:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 10:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 10:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 10:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/29/21 10:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 10:19	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		10/29/21 10:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 10:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 10:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 10:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/29/21 10:19	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/29/21 10:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 10:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 10:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		10/29/21 10:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/29/21 10:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 10:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/21 10:19	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 10:19	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 10:19	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 10:19		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-38-202110 **Lab ID: 60383996033** Collected: 10/21/21 09:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**6.5**	ug/L	5.0	2.0	1		11/05/21 14:35	74-82-8	H1
Ethane	**0.28J**	ug/L	1.0	0.17	1		11/05/21 14:35	74-84-0	H1
Ethene	**2.3**	ug/L	1.0	0.24	1		11/05/21 14:35	74-85-1	H1
Acetylene	**0.15J**	ug/L	0.50	0.13	1		11/05/21 14:35	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**988**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:02	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/29/21 16:58	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/29/21 16:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/29/21 16:58	75-27-4	
Bromoform	**1.2**	ug/L	1.0	0.68	1		10/29/21 16:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/29/21 16:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/29/21 16:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/29/21 16:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/29/21 16:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/29/21 16:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/29/21 16:58	75-00-3	
Chloroform	**1.1**	ug/L	1.0	0.22	1		10/29/21 16:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/29/21 16:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/29/21 16:58	124-48-1	
1,1-Dichloroethane	**0.48J**	ug/L	1.0	0.12	1		10/29/21 16:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/29/21 16:58	107-06-2	
1,1-Dichloroethene	**3.2**	ug/L	1.0	0.22	1		10/29/21 16:58	75-35-4	
cis-1,2-Dichloroethene	**1060**	ug/L	25.0	3.2	25		10/29/21 17:14	156-59-2	
trans-1,2-Dichloroethene	**13.9**	ug/L	1.0	0.10	1		10/29/21 16:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/29/21 16:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/29/21 16:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/29/21 16:58	10061-02-6	
Ethylbenzene	**0.12J**	ug/L	1.0	0.12	1		10/29/21 16:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/29/21 16:58	591-78-6	
Methylene Chloride	**0.44J**	ug/L	1.0	0.39	1		10/29/21 16:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/29/21 16:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/21 16:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/21 16:58	79-34-5	
Tetrachloroethene	**3.2**	ug/L	1.0	0.33	1		10/29/21 16:58	127-18-4	
Toluene	**1.6**	ug/L	1.0	0.25	1		10/29/21 16:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/21 16:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/29/21 16:58	79-00-5	
Trichloroethene	**5830**	ug/L	50.0	10.5	50		11/01/21 17:35	79-01-6	
Vinyl chloride	**204**	ug/L	25.0	4.2	25		10/29/21 17:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/29/21 16:58	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-38-202110 **Lab ID: 60383996033** Collected: 10/21/21 09:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/29/21 16:58	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/29/21 16:58	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		10/29/21 16:58	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/29/21 16:58		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 13:59	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**221**	mg/L	20.0	7.8	20		10/28/21 19:55	16887-00-6	
Sulfate	**558**	mg/L	50.0	21.0	50		10/28/21 20:06	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.73**	mg/L	0.10	0.066	1		10/23/21 09:09		
Nitrogen, Nitrate	**0.73**	mg/L	0.10	0.079	1		10/23/21 09:09	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:09	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.37J**	mg/L	1.0	0.30	1		10/29/21 23:25	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: RW-69-202110 **Lab ID: 60383996034** Collected: 10/21/21 09:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**290**	ug/L	5.0	2.0	1		11/05/21 14:46	74-82-8	H1
Ethane	ND	ug/L	1.0	0.17	1		11/05/21 14:46	74-84-0	H1
Ethene	**0.46J**	ug/L	1.0	0.24	1		11/05/21 14:46	74-85-1	H1
Acetylene	**0.19J**	ug/L	0.50	0.13	1		11/05/21 14:46	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**16900**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:13	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 13:36	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 13:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 13:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 13:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 13:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 13:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 13:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 13:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 13:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 13:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 13:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 13:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 13:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 13:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 13:36	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.22	1		11/01/21 13:36	75-35-4	
cis-1,2-Dichloroethene	**49.3**	ug/L	1.0	0.13	1		11/01/21 13:36	156-59-2	
trans-1,2-Dichloroethene	**0.25J**	ug/L	1.0	0.10	1		11/01/21 13:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 13:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 13:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 13:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 13:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 13:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 13:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 13:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 13:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 13:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 13:36	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 13:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 13:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 13:36	79-00-5	
Trichloroethene	**44.4**	ug/L	1.0	0.21	1		11/01/21 13:36	79-01-6	
Vinyl chloride	**0.69J**	ug/L	1.0	0.17	1		11/01/21 13:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 13:36	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: RW-69-202110 **Lab ID: 60383996034** Collected: 10/21/21 09:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/01/21 13:36	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 13:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/01/21 13:36	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 13:36		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	**0.10**	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**247**	mg/L	20.0	7.8	20		10/28/21 20:17	16887-00-6	
Sulfate	**1.9**	mg/L	1.0	0.42	1		10/29/21 19:24	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:10		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:10	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:10	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/29/21 23:52	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-87-202110 **Lab ID: 60383996035** Collected: 10/21/21 10:23 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	ND	ug/L	5.0	2.0	1		11/05/21 14:57	74-82-8	H1
Ethane	ND	ug/L	1.0	0.17	1		11/05/21 14:57	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 14:57	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 14:57	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**341**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:15	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 16:31	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 16:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 16:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 16:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 16:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 16:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 16:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 16:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 16:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 16:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 16:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 16:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 16:31	124-48-1	
1,1-Dichloroethane	**0.85J**	ug/L	1.0	0.12	1		11/01/21 16:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 16:31	107-06-2	
1,1-Dichloroethene	**3.1**	ug/L	1.0	0.22	1		11/01/21 16:31	75-35-4	
cis-1,2-Dichloroethene	**20.6**	ug/L	1.0	0.13	1		11/01/21 16:31	156-59-2	
trans-1,2-Dichloroethene	**0.51J**	ug/L	1.0	0.10	1		11/01/21 16:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 16:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 16:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 16:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 16:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 16:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 16:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 16:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 16:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 16:31	79-34-5	
Tetrachloroethene	**3.1**	ug/L	1.0	0.33	1		11/01/21 16:31	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 16:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 16:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 16:31	79-00-5	
Trichloroethene	**276**	ug/L	10.0	2.1	10		11/01/21 16:47	79-01-6	
Vinyl chloride	**0.17J**	ug/L	1.0	0.17	1		11/01/21 16:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 16:31	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-87-202110 **Lab ID: 60383996035** Collected: 10/21/21 10:23 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		11/01/21 16:31	460-00-4	
Toluene-d8 (S)	101	%	80-120		1		11/01/21 16:31	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/01/21 16:31	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 16:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**82.8**	mg/L	20.0	7.8	20		10/28/21 20:40	16887-00-6	B
Sulfate	**12.9**	mg/L	2.0	0.84	2		10/29/21 19:36	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.5**	mg/L	0.10	0.066	1		10/23/21 09:12		
Nitrogen, Nitrate	**1.5**	mg/L	0.10	0.079	1		10/23/21 09:12	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:12	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.33J**	mg/L	1.0	0.30	1		10/30/21 00:05	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-198-202110 **Lab ID: 60383996036** Collected: 10/21/21 10:55 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**13**	ug/L	5.0	2.0	1		11/05/21 15:08	74-82-8	H1
Ethane	**3.7**	ug/L	1.0	0.17	1		11/05/21 15:08	74-84-0	H1
Ethene	**1.0**	ug/L	1.0	0.24	1		11/05/21 15:08	74-85-1	H1
Acetylene	**0.60**	ug/L	0.50	0.13	1		11/05/21 15:08	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**25.6J**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:17	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 14:55	67-64-1	
Benzene	**0.20J**	ug/L	1.0	0.14	1		11/01/21 14:55	71-43-2	
Bromodichloromethane	**0.44J**	ug/L	1.0	0.16	1		11/01/21 14:55	75-27-4	
Bromoform	**1.4**	ug/L	1.0	0.68	1		11/01/21 14:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 14:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 14:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 14:55	75-15-0	
Carbon tetrachloride	**0.56J**	ug/L	1.0	0.17	1		11/01/21 14:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 14:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 14:55	75-00-3	
Chloroform	**8.5**	ug/L	1.0	0.22	1		11/01/21 14:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 14:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 14:55	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.12	1		11/01/21 14:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 14:55	107-06-2	
1,1-Dichloroethene	**32.2**	ug/L	1.0	0.22	1		11/01/21 14:55	75-35-4	
cis-1,2-Dichloroethene	**1540**	ug/L	250	32.2	250		11/01/21 15:11	156-59-2	
trans-1,2-Dichloroethene	**57.7**	ug/L	1.0	0.10	1		11/01/21 14:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 14:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 14:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 14:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 14:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 14:55	591-78-6	
Methylene Chloride	**2.5**	ug/L	1.0	0.39	1		11/01/21 14:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 14:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 14:55	100-42-5	
1,1,2,2-Tetrachloroethane	**10.6**	ug/L	1.0	0.15	1		11/01/21 14:55	79-34-5	
Tetrachloroethene	**8.9**	ug/L	1.0	0.33	1		11/01/21 14:55	127-18-4	
Toluene	**0.93J**	ug/L	1.0	0.25	1		11/01/21 14:55	108-88-3	
1,1,1-Trichloroethane	**24.9**	ug/L	1.0	0.11	1		11/01/21 14:55	71-55-6	
1,1,2-Trichloroethane	**0.67J**	ug/L	1.0	0.14	1		11/01/21 14:55	79-00-5	
Trichloroethene	**22800**	ug/L	250	52.5	250		11/01/21 15:11	79-01-6	
Vinyl chloride	**86.5**	ug/L	1.0	0.17	1		11/01/21 14:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 14:55	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-198-202110 **Lab ID: 60383996036** Collected: 10/21/21 10:55 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/01/21 14:55	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 14:55	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/01/21 14:55	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 14:55		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**293**	mg/L	20.0	7.8	20		10/28/21 21:03	16887-00-6	
Sulfate	**217**	mg/L	20.0	8.4	20		10/28/21 21:03	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**1.1**	mg/L	0.10	0.066	1		10/23/21 09:12		
Nitrogen, Nitrate	**1.0**	mg/L	0.10	0.079	1		10/23/21 09:12	14797-55-8	
Nitrogen, Nitrite	**0.13**	mg/L	0.10	0.079	1		10/23/21 09:12	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.44J**	mg/L	1.0	0.30	1		10/30/21 00:19	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-9-202110 **Lab ID: 60383996037** Collected: 10/21/21 11:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**18**	ug/L	5.0	2.0	1		11/05/21 15:20	74-82-8	H1
Ethane	**0.22J**	ug/L	1.0	0.17	1		11/05/21 15:20	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 15:20	74-85-1	H1
Acetylene	**0.29J**	ug/L	0.50	0.13	1		11/05/21 15:20	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**32.4J**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:19	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 15:27	67-64-1	
Benzene	**1.4**	ug/L	1.0	0.14	1		11/01/21 15:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 15:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 15:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 15:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 15:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 15:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 15:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 15:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 15:27	75-00-3	
Chloroform	**1.0**	ug/L	1.0	0.22	1		11/01/21 15:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 15:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 15:27	124-48-1	
1,1-Dichloroethane	**3.7**	ug/L	1.0	0.12	1		11/01/21 15:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 15:27	107-06-2	
1,1-Dichloroethene	**15.4**	ug/L	1.0	0.22	1		11/01/21 15:27	75-35-4	
cis-1,2-Dichloroethene	**101**	ug/L	1.0	0.13	1		11/01/21 15:27	156-59-2	
trans-1,2-Dichloroethene	**5.4**	ug/L	1.0	0.10	1		11/01/21 15:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 15:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 15:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 15:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 15:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 15:27	591-78-6	
Methylene Chloride	**0.56J**	ug/L	1.0	0.39	1		11/01/21 15:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 15:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 15:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 15:27	79-34-5	
Tetrachloroethene	**3.6**	ug/L	1.0	0.33	1		11/01/21 15:27	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 15:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 15:27	71-55-6	
1,1,2-Trichloroethane	**0.20J**	ug/L	1.0	0.14	1		11/01/21 15:27	79-00-5	
Trichloroethene	**3620**	ug/L	50.0	10.5	50		11/01/21 15:43	79-01-6	
Vinyl chloride	**2.1**	ug/L	1.0	0.17	1		11/01/21 15:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 15:27	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: ITMW-9-202110 **Lab ID: 60383996037** Collected: 10/21/21 11:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/01/21 15:27	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		11/01/21 15:27	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/01/21 15:27	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 15:27		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**97.6**	mg/L	20.0	7.8	20		10/28/21 21:25	16887-00-6	
Sulfate	**27.9**	mg/L	5.0	2.1	5		10/29/21 19:47	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**6.4**	mg/L	0.50	0.33	5		10/23/21 09:24		
Nitrogen, Nitrate	**6.4**	mg/L	0.50	0.39	5		10/23/21 09:24	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.50	0.39	5		10/23/21 09:24	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.81J**	mg/L	1.0	0.30	1		10/30/21 00:32	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: IW-73-202110 **Lab ID: 60383996038** Collected: 10/21/21 12:10 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2.9J**	ug/L	5.0	2.0	1		11/05/21 15:31	74-82-8	H1
Ethane	**0.20J**	ug/L	1.0	0.17	1		11/05/21 15:31	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 15:31	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 15:31	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**360**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:21	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		11/01/21 17:22	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		11/01/21 17:22	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		11/01/21 17:22	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		11/01/21 17:22	75-25-2	L1
Bromomethane	ND	ug/L	25.0	2.3	5		11/01/21 17:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		11/01/21 17:22	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		11/01/21 17:22	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		11/01/21 17:22	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		11/01/21 17:22	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		11/01/21 17:22	75-00-3	
Chloroform	ND	ug/L	5.0	1.1	5		11/01/21 17:22	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		11/01/21 17:22	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		11/01/21 17:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.61	5		11/01/21 17:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		11/01/21 17:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.1	5		11/01/21 17:22	75-35-4	
cis-1,2-Dichloroethene	**6.8**	ug/L	5.0	0.64	5		11/02/21 22:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.51	5		11/01/21 17:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		11/01/21 17:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		11/01/21 17:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		11/01/21 17:22	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		11/01/21 17:22	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		11/01/21 17:22	591-78-6	
Methylene Chloride	ND	ug/L	5.0	2.0	5		11/01/21 17:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		11/01/21 17:22	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		11/01/21 17:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.77	5		11/01/21 17:22	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.6	5		11/01/21 17:22	127-18-4	
Toluene	**2.7J**	ug/L	5.0	1.3	5		11/01/21 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.54	5		11/01/21 17:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.71	5		11/01/21 17:22	79-00-5	
Trichloroethene	**198**	ug/L	5.0	1.0	5		11/01/21 17:22	79-01-6	
Vinyl chloride	**1.7J**	ug/L	5.0	0.84	5		11/01/21 17:22	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		11/01/21 17:22	1330-20-7	

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(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: IW-73-202110 **Lab ID: 60383996038** Collected: 10/21/21 12:10 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	89	%	80-120		5		11/01/21 17:22	460-00-4	
Toluene-d8 (S)	87	%	80-120		5		11/01/21 17:22	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		5		11/01/21 17:22	2199-69-1	
Preservation pH	**1.0**		0.10		5		11/01/21 17:22		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**178**	mg/L	20.0	7.8	20		10/27/21 09:13	16887-00-6	M1
Sulfate	**3.2**	mg/L	1.0	0.42	1		10/28/21 22:50	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.23**	mg/L	0.10	0.066	1		10/23/21 09:15		
Nitrogen, Nitrate	**0.23**	mg/L	0.10	0.079	1		10/23/21 09:15	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:15	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/30/21 00:45	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-58R-202110 **Lab ID: 60383996039** Collected: 10/21/21 13:30 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**22**	ug/L	5.0	2.0	1		11/05/21 15:42	74-82-8	H1
Ethane	**0.36J**	ug/L	1.0	0.17	1		11/05/21 15:42	74-84-0	H1
Ethene	**0.25J**	ug/L	1.0	0.24	1		11/05/21 15:42	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 15:42	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**318**	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:23	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		11/01/21 17:38	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		11/01/21 17:38	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		11/01/21 17:38	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		11/01/21 17:38	75-25-2	L1
Bromomethane	ND	ug/L	25.0	2.3	5		11/01/21 17:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		11/01/21 17:38	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		11/01/21 17:38	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		11/01/21 17:38	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		11/01/21 17:38	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		11/01/21 17:38	75-00-3	
Chloroform	ND	ug/L	5.0	1.1	5		11/01/21 17:38	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		11/01/21 17:38	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		11/01/21 17:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.61	5		11/01/21 17:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		11/01/21 17:38	107-06-2	
1,1-Dichloroethene	**1.4J**	ug/L	5.0	1.1	5		11/01/21 17:38	75-35-4	
cis-1,2-Dichloroethene	**8.2**	ug/L	5.0	0.64	5		11/02/21 23:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.51	5		11/01/21 17:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		11/01/21 17:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		11/01/21 17:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		11/01/21 17:38	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		11/01/21 17:38	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		11/01/21 17:38	591-78-6	
Methylene Chloride	ND	ug/L	5.0	2.0	5		11/01/21 17:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		11/01/21 17:38	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		11/01/21 17:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.77	5		11/01/21 17:38	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.6	5		11/01/21 17:38	127-18-4	
Toluene	ND	ug/L	5.0	1.3	5		11/01/21 17:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.54	5		11/01/21 17:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.71	5		11/01/21 17:38	79-00-5	
Trichloroethene	**208**	ug/L	5.0	1.0	5		11/01/21 17:38	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.84	5		11/01/21 17:38	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		11/01/21 17:38	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-58R-202110 **Lab ID: 60383996039** Collected: 10/21/21 13:30 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	89	%	80-120		5		11/01/21 17:38	460-00-4	
Toluene-d8 (S)	100	%	80-120		5		11/01/21 17:38	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		5		11/01/21 17:38	2199-69-1	
Preservation pH	**1.0**		0.10		5		11/01/21 17:38		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**223**	mg/L	20.0	7.8	20		10/27/21 10:08	16887-00-6	
Sulfate	**2.3**	mg/L	1.0	0.42	1		10/28/21 23:45	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:18		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:18	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:18	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/30/21 01:25	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-95-202110 **Lab ID: 60383996040** Collected: 10/21/21 14:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**2.8J**	ug/L	5.0	2.0	1		11/05/21 15:54	74-82-8	H1
Ethane	**0.59J**	ug/L	1.0	0.17	1		11/05/21 15:54	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 15:54	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 15:54	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	ND	ug/L	50.0	21.4	1	11/03/21 11:02	11/04/21 20:26	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	2000	508	200		11/01/21 17:54	67-64-1	
Benzene	ND	ug/L	200	27.2	200		11/01/21 17:54	71-43-2	
Bromodichloromethane	ND	ug/L	200	31.0	200		11/01/21 17:54	75-27-4	
Bromoform	ND	ug/L	200	135	200		11/01/21 17:54	75-25-2	L1
Bromomethane	ND	ug/L	1000	92.0	200		11/01/21 17:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	2000	195	200		11/01/21 17:54	78-93-3	
Carbon disulfide	ND	ug/L	1000	196	200		11/01/21 17:54	75-15-0	
Carbon tetrachloride	ND	ug/L	200	34.4	200		11/01/21 17:54	56-23-5	
Chlorobenzene	ND	ug/L	200	17.7	200		11/01/21 17:54	108-90-7	
Chloroethane	ND	ug/L	200	74.8	200		11/01/21 17:54	75-00-3	
Chloroform	ND	ug/L	200	44.0	200		11/01/21 17:54	67-66-3	
Chloromethane	ND	ug/L	200	56.6	200		11/01/21 17:54	74-87-3	
Dibromochloromethane	ND	ug/L	200	61.0	200		11/01/21 17:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	200	24.4	200		11/01/21 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	200	42.4	200		11/01/21 17:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	200	43.8	200		11/01/21 17:54	75-35-4	
cis-1,2-Dichloroethene	**402**	ug/L	200	25.8	200		11/02/21 23:54	156-59-2	
trans-1,2-Dichloroethene	**30.3J**	ug/L	200	20.4	200		11/01/21 17:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	200	27.8	200		11/01/21 17:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	200	15.6	200		11/01/21 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	200	36.4	200		11/01/21 17:54	10061-02-6	
Ethylbenzene	ND	ug/L	200	24.0	200		11/01/21 17:54	100-41-4	
2-Hexanone	ND	ug/L	2000	220	200		11/01/21 17:54	591-78-6	
Methylene Chloride	ND	ug/L	200	78.2	200		11/01/21 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2000	147	200		11/01/21 17:54	108-10-1	
Styrene	ND	ug/L	200	24.6	200		11/01/21 17:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	200	30.8	200		11/01/21 17:54	79-34-5	
Tetrachloroethene	ND	ug/L	200	66.0	200		11/01/21 17:54	127-18-4	
Toluene	ND	ug/L	200	50.6	200		11/01/21 17:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	200	21.8	200		11/01/21 17:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	200	28.4	200		11/01/21 17:54	79-00-5	
Trichloroethene	**28600**	ug/L	200	42.0	200		11/01/21 17:54	79-01-6	
Vinyl chloride	ND	ug/L	200	33.4	200		11/01/21 17:54	75-01-4	
Xylene (Total)	ND	ug/L	600	56.4	200		11/01/21 17:54	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-95-202110 **Lab ID: 60383996040** Collected: 10/21/21 14:35 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	90	%	80-120		200		11/01/21 17:54	460-00-4	
Toluene-d8 (S)	101	%	80-120		200		11/01/21 17:54	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		200		11/01/21 17:54	2199-69-1	
Preservation pH	**1.0**		0.10		200		11/01/21 17:54		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/25/21 14:02	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**331**	mg/L	20.0	7.8	20		10/27/21 10:26	16887-00-6	
Sulfate	**127**	mg/L	20.0	8.4	20		10/27/21 10:26	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.78**	mg/L	0.10	0.066	1		10/23/21 09:18		
Nitrogen, Nitrate	**0.78**	mg/L	0.10	0.079	1		10/23/21 09:18	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:18	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	ND	mg/L	1.0	0.30	1		10/30/21 01:39	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-91-202110 **Lab ID: 60383996041** Collected: 10/21/21 15:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**6100**	ug/L	5.0	2.0	1		11/05/21 16:05	74-82-8	H1
Ethane	**0.84J**	ug/L	1.0	0.17	1		11/05/21 16:05	74-84-0	H1
Ethene	**1.1**	ug/L	1.0	0.24	1		11/05/21 16:05	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 16:05	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**17200**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:32	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 17:34	67-64-1	
Benzene	**0.27J**	ug/L	1.0	0.14	1		11/01/21 17:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 17:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 17:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 17:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 17:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 17:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 17:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 17:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 17:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 17:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 17:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 17:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 17:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 17:34	107-06-2	
1,1-Dichloroethene	**0.43J**	ug/L	1.0	0.22	1		11/01/21 17:34	75-35-4	
cis-1,2-Dichloroethene	**70.3**	ug/L	1.0	0.13	1		11/01/21 17:34	156-59-2	
trans-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.10	1		11/01/21 17:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 17:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 17:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 17:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 17:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 17:34	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 17:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 17:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 17:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 17:34	79-34-5	
Tetrachloroethene	**0.45J**	ug/L	1.0	0.33	1		11/01/21 17:34	127-18-4	
Toluene	**1.4**	ug/L	1.0	0.25	1		11/01/21 17:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 17:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 17:34	79-00-5	
Trichloroethene	**9.5**	ug/L	1.0	0.21	1		11/01/21 17:34	79-01-6	
Vinyl chloride	**0.39J**	ug/L	1.0	0.17	1		11/01/21 17:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 17:34	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-91-202110 **Lab ID: 60383996041** Collected: 10/21/21 15:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		11/01/21 17:34	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		11/01/21 17:34	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120		1		11/01/21 17:34	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 17:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**92.7**	mg/L	20.0	7.8	20		10/26/21 21:27	16887-00-6	
Sulfate	**1.9**	mg/L	1.0	0.42	1		10/26/21 21:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:20		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:20	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:20	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**15.0**	mg/L	5.0	1.5	5		10/28/21 16:27	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**8.8**	mg/L	1.0	0.30	1		11/03/21 12:39		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.8**	mg/L	0.50	0.053	1		11/19/21 01:24	50-21-5	H1
Acetic Acid	**2.2**	mg/L	0.50	0.12	1		11/19/21 01:24	64-19-7	H1
Propionic Acid	ND	mg/L	0.50	0.053	1		11/19/21 01:24	79-09-4	H1
Formic acid	**5.8**	mg/L	0.50	0.055	1		11/19/21 01:24	64-18-6	H1
Butyric Acid	ND	mg/L	0.50	0.058	1		11/19/21 01:24	107-92-6	H1
Pyruvic Acid	ND	mg/L	0.50	0.060	1		11/19/21 01:24	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	0.50	0.061	1		11/19/21 01:24	503-74-2	H1
Pentanoic Acid	**0.98**	mg/L	0.50	0.056	1		11/19/21 01:24	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	0.50	0.056	1		11/19/21 01:24	646-07-1	H1
Hexanoic Acid	ND	mg/L	0.50	0.058	1		11/19/21 01:24	142-62-1	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-22R-202110 **Lab ID: 60383996042** Collected: 10/21/21 15:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**4100**	ug/L	5.0	2.0	1		11/05/21 16:16	74-82-8	H1
Ethane	**3.4**	ug/L	1.0	0.17	1		11/05/21 16:16	74-84-0	H1
Ethene	**13**	ug/L	1.0	0.24	1		11/05/21 16:16	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 16:16	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**14700**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:43	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 17:48	67-64-1	
Benzene	**0.17J**	ug/L	1.0	0.14	1		11/01/21 17:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 17:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 17:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 17:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 17:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 17:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 17:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 17:48	108-90-7	
Chloroethane	**3.9**	ug/L	1.0	0.37	1		11/01/21 17:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 17:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 17:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 17:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/21 17:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 17:48	107-06-2	
1,1-Dichloroethene	**0.32J**	ug/L	1.0	0.22	1		11/01/21 17:48	75-35-4	
cis-1,2-Dichloroethene	**24.7**	ug/L	1.0	0.13	1		11/01/21 17:48	156-59-2	
trans-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.10	1		11/01/21 17:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 17:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 17:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 17:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 17:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 17:48	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 17:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 17:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 17:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 17:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 17:48	127-18-4	
Toluene	**0.28J**	ug/L	1.0	0.25	1		11/01/21 17:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 17:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 17:48	79-00-5	
Trichloroethene	**21.9**	ug/L	1.0	0.21	1		11/01/21 17:48	79-01-6	
Vinyl chloride	**12.8**	ug/L	1.0	0.17	1		11/01/21 17:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 17:48	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: TMW-22R-202110 **Lab ID: 60383996042** Collected: 10/21/21 15:15 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		11/01/21 17:48	460-00-4	
Toluene-d8 (S)	96	%	80-120		1		11/01/21 17:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		11/01/21 17:48	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 17:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**188**	mg/L	20.0	7.8	20		10/26/21 13:08	16887-00-6	
Sulfate	**2.0**	mg/L	1.0	0.42	1		10/26/21 21:54	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/23/21 09:19		
Nitrogen, Nitrate	ND	mg/L	0.10	0.079	1		10/23/21 09:19	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.079	1		10/23/21 09:19	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.78J**	mg/L	1.0	0.30	1		10/29/21 17:00	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**1.2**	mg/L	1.0	0.30	1		11/03/21 13:06		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**3.9J**	mg/L	5.0	0.53	10		11/19/21 01:58	50-21-5	H1
Acetic Acid	**3.4J**	mg/L	5.0	1.2	10		11/19/21 01:58	64-19-7	H1
Propionic Acid	ND	mg/L	5.0	0.53	10		11/19/21 01:58	79-09-4	H1
Formic acid	**47**	mg/L	5.0	0.55	10		11/19/21 01:58	64-18-6	H1
Butyric Acid	ND	mg/L	5.0	0.58	10		11/19/21 01:58	107-92-6	H1
Pyruvic Acid	ND	mg/L	5.0	0.60	10		11/19/21 01:58	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	5.0	0.61	10		11/19/21 01:58	503-74-2	H1
Pentanoic Acid	ND	mg/L	5.0	0.56	10		11/19/21 01:58	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	5.0	0.56	10		11/19/21 01:58	646-07-1	H1
Hexanoic Acid	ND	mg/L	5.0	0.58	10		11/19/21 01:58	142-62-1	H1

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-185-202110 **Lab ID: 60383996043** Collected: 10/21/21 16:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**3.4J**	ug/L	5.0	2.0	1		11/05/21 16:27	74-82-8	H1
Ethane	ND	ug/L	1.0	0.17	1		11/05/21 16:27	74-84-0	H1
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 16:27	74-85-1	H1
Acetylene	ND	ug/L	0.50	0.13	1		11/05/21 16:27	74-86-2	H1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**105**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:45	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 18:03	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 18:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 18:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 18:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 18:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 18:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 18:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 18:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 18:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 18:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 18:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 18:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 18:03	124-48-1	
1,1-Dichloroethane	**0.70J**	ug/L	1.0	0.12	1		11/01/21 18:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 18:03	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.22	1		11/01/21 18:03	75-35-4	
cis-1,2-Dichloroethene	**11.7**	ug/L	1.0	0.13	1		11/01/21 18:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/01/21 18:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 18:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 18:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 18:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 18:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 18:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		11/01/21 18:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 18:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 18:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 18:03	79-34-5	
Tetrachloroethene	**0.34J**	ug/L	1.0	0.33	1		11/01/21 18:03	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 18:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 18:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 18:03	79-00-5	
Trichloroethene	**182**	ug/L	5.0	1.0	5		11/02/21 22:18	79-01-6	
Vinyl chloride	**0.25J**	ug/L	1.0	0.17	1		11/01/21 18:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 18:03	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Sample: MW-185-202110 **Lab ID: 60383996043** Collected: 10/21/21 16:25 Received: 10/22/21 03:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		11/01/21 18:03	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 18:03	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		11/01/21 18:03	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 18:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**40.2**	mg/L	5.0	1.9	5		10/26/21 22:21	16887-00-6	
Sulfate	**8.7**	mg/L	1.0	0.42	1		10/26/21 22:07	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**5.5**	mg/L	0.50	0.33	5		10/23/21 09:29		
Nitrogen, Nitrate	**5.5**	mg/L	0.50	0.39	5		10/23/21 09:29	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.50	0.39	5		10/23/21 09:29	14797-65-0	
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.46J**	mg/L	1.0	0.30	1		10/29/21 18:06	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**0.74J**	mg/L	1.0	0.30	1		11/03/21 13:19		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**2.2**	mg/L	0.50	0.053	1		11/19/21 02:33	50-21-5	H1
Acetic Acid	**0.25J**	mg/L	0.50	0.12	1		11/19/21 02:33	64-19-7	H1
Propionic Acid	ND	mg/L	0.50	0.053	1		11/19/21 02:33	79-09-4	H1
Formic acid	**5.6**	mg/L	0.50	0.055	1		11/19/21 02:33	64-18-6	H1
Butyric Acid	ND	mg/L	0.50	0.058	1		11/19/21 02:33	107-92-6	H1
Pyruvic Acid	ND	mg/L	0.50	0.060	1		11/19/21 02:33	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	0.50	0.061	1		11/19/21 02:33	503-74-2	H1
Pentanoic Acid	ND	mg/L	0.50	0.056	1		11/19/21 02:33	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	0.50	0.056	1		11/19/21 02:33	646-07-1	H1
Hexanoic Acid	ND	mg/L	0.50	0.058	1		11/19/21 02:33	142-62-1	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 725913
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

METHOD BLANK: 2267597
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/05/21 13:43	
Ethane	ug/L	ND	1.0	0.17	11/05/21 13:43	
Ethene	ug/L	ND	1.0	0.24	11/05/21 13:43	
Acetylene	ug/L	ND	0.50	0.13	11/05/21 13:43	

LABORATORY CONTROL SAMPLE & LCSD: 2267598 2267599

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	360	340	93	88	70-130	5	20	
Ethane	ug/L	97	98	95	101	98	70-130	3	20	
Ethene	ug/L	120	120	110	98	95	70-130	3	20	
Acetylene	ug/L	30	29	28	96	93	70-130	3	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753096
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3014307
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/03/21 18:28	

LABORATORY CONTROL SAMPLE: 3014308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10100	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014309 3014310

Parameter	Units	60383996041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	17200	10000	10000	27100	27100	99	99	75-125	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753826
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

METHOD BLANK: 3017217
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/04/21 19:57	

LABORATORY CONTROL SAMPLE: 3017218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9770	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017219 3017220

Parameter	Units	60383996033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	988	10000	10000	11000	11200	100	103	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752721
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996001, 60383996002, 60383996003, 60383996004, 60383996005, 60383996006, 60383996007

METHOD BLANK: 3012840
Matrix: Water
Associated Lab Samples: 60383996001, 60383996002, 60383996003, 60383996004, 60383996005, 60383996006, 60383996007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/28/21 17:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/28/21 17:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/28/21 17:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/28/21 17:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/28/21 17:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/28/21 17:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/28/21 17:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/28/21 17:22	
2-Hexanone	ug/L	ND	10.0	1.1	10/28/21 17:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/28/21 17:22	
Acetone	ug/L	ND	10.0	2.5	10/28/21 17:22	
Benzene	ug/L	ND	1.0	0.14	10/28/21 17:22	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/28/21 17:22	
Bromoform	ug/L	ND	1.0	0.68	10/28/21 17:22	
Bromomethane	ug/L	ND	5.0	0.46	10/28/21 17:22	
Carbon disulfide	ug/L	ND	5.0	0.98	10/28/21 17:22	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/28/21 17:22	
Chlorobenzene	ug/L	ND	1.0	0.089	10/28/21 17:22	
Chloroethane	ug/L	ND	1.0	0.37	10/28/21 17:22	
Chloroform	ug/L	ND	1.0	0.22	10/28/21 17:22	
Chloromethane	ug/L	ND	1.0	0.28	10/28/21 17:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/28/21 17:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/28/21 17:22	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/28/21 17:22	
Ethylbenzene	ug/L	ND	1.0	0.12	10/28/21 17:22	
Methylene Chloride	ug/L	ND	1.0	0.39	10/28/21 17:22	
Styrene	ug/L	ND	1.0	0.12	10/28/21 17:22	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/28/21 17:22	
Toluene	ug/L	ND	1.0	0.25	10/28/21 17:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/28/21 17:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/28/21 17:22	
Trichloroethene	ug/L	ND	1.0	0.21	10/28/21 17:22	
Vinyl chloride	ug/L	ND	1.0	0.17	10/28/21 17:22	
Xylene (Total)	ug/L	ND	3.0	0.28	10/28/21 17:22	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		10/28/21 17:22	
4-Bromofluorobenzene (S)	%	100	80-120		10/28/21 17:22	
Toluene-d8 (S)	%	98	80-120		10/28/21 17:22	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3012841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.6	93	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	75-125	
1,1,2-Trichloroethane	ug/L	20	20.1	100	80-120	
1,1-Dichloroethane	ug/L	20	15.1	76	75-125	
1,1-Dichloroethene	ug/L	20	19.0	95	80-120	
1,2-Dichloroethane	ug/L	20	18.3	91	75-120	
1,2-Dichloropropane	ug/L	20	18.2	91	80-125	
2-Butanone (MEK)	ug/L	100	89.0	89	40-150	
2-Hexanone	ug/L	100	93.3	93	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	89.4	89	65-140	
Acetone	ug/L	100	86.7	87	20-175	
Benzene	ug/L	20	18.8	94	80-120	
Bromodichloromethane	ug/L	20	17.9	89	80-125	
Bromoform	ug/L	20	16.5	82	60-135	
Bromomethane	ug/L	20	15.8	79	10-165	
Carbon disulfide	ug/L	20	17.2	86	75-135	
Carbon tetrachloride	ug/L	20	17.8	89	80-125	
Chlorobenzene	ug/L	20	18.9	94	80-120	
Chloroethane	ug/L	20	18.0	90	70-130	
Chloroform	ug/L	20	17.8	89	80-120	
Chloromethane	ug/L	20	16.0	80	35-155	
cis-1,2-Dichloroethene	ug/L	20	17.5	88	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.3	91	80-125	
Dibromochloromethane	ug/L	20	18.4	92	70-120	
Ethylbenzene	ug/L	20	19.0	95	80-120	
Methylene Chloride	ug/L	20	18.0	90	75-120	
Styrene	ug/L	20	21.8	109	80-120	
Tetrachloroethene	ug/L	20	19.7	98	80-120	
Toluene	ug/L	20	18.9	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	16.2	81	80-120	
trans-1,3-Dichloropropene	ug/L	20	17.2	86	75-120	
Trichloroethene	ug/L	20	18.6	93	80-120	
Vinyl chloride	ug/L	20	15.8	79	65-130	
Xylene (Total)	ug/L	60	59.6	99	80-120	
1,2-Dichlorobenzene-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752748
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996008, 60383996009, 60383996010

METHOD BLANK: 3012917
Matrix: Water
Associated Lab Samples: 60383996008, 60383996009, 60383996010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/21 07:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/21 07:39	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/29/21 07:39	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/29/21 07:39	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/29/21 07:39	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/29/21 07:39	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/29/21 07:39	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/29/21 07:39	
2-Hexanone	ug/L	ND	10.0	1.1	10/29/21 07:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/29/21 07:39	
Acetone	ug/L	ND	10.0	2.5	10/29/21 07:39	
Benzene	ug/L	ND	1.0	0.14	10/29/21 07:39	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/29/21 07:39	
Bromoform	ug/L	ND	1.0	0.68	10/29/21 07:39	
Bromomethane	ug/L	ND	5.0	0.46	10/29/21 07:39	
Carbon disulfide	ug/L	ND	5.0	0.98	10/29/21 07:39	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/29/21 07:39	
Chlorobenzene	ug/L	ND	1.0	0.089	10/29/21 07:39	
Chloroethane	ug/L	ND	1.0	0.37	10/29/21 07:39	
Chloroform	ug/L	ND	1.0	0.22	10/29/21 07:39	
Chloromethane	ug/L	ND	1.0	0.28	10/29/21 07:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/29/21 07:39	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/29/21 07:39	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/29/21 07:39	
Ethylbenzene	ug/L	ND	1.0	0.12	10/29/21 07:39	
Methylene Chloride	ug/L	ND	1.0	0.39	10/29/21 07:39	
Styrene	ug/L	ND	1.0	0.12	10/29/21 07:39	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/29/21 07:39	
Toluene	ug/L	ND	1.0	0.25	10/29/21 07:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/29/21 07:39	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/29/21 07:39	
Trichloroethene	ug/L	ND	1.0	0.21	10/29/21 07:39	
Vinyl chloride	ug/L	ND	1.0	0.17	10/29/21 07:39	
Xylene (Total)	ug/L	ND	3.0	0.28	10/29/21 07:39	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/29/21 07:39	
4-Bromofluorobenzene (S)	%	104	80-120		10/29/21 07:39	
Toluene-d8 (S)	%	100	80-120		10/29/21 07:39	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3012918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	22.7	113	75-125	
1,1,2-Trichloroethane	ug/L	20	21.3	107	80-120	
1,1-Dichloroethane	ug/L	20	20.6	103	75-125	
1,1-Dichloroethene	ug/L	20	15.9	79	80-120	L2
1,2-Dichloroethane	ug/L	20	20.2	101	75-120	
1,2-Dichloropropane	ug/L	20	20.5	102	80-125	
2-Butanone (MEK)	ug/L	100	134	134	40-150	
2-Hexanone	ug/L	100	139	139	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	114	114	65-140	
Acetone	ug/L	100	146	146	20-175	
Benzene	ug/L	20	21.3	106	80-120	
Bromodichloromethane	ug/L	20	19.7	98	80-125	
Bromoform	ug/L	20	19.4	97	60-135	
Bromomethane	ug/L	20	17.7	89	10-165	
Carbon disulfide	ug/L	20	16.1	80	75-135	
Carbon tetrachloride	ug/L	20	18.7	94	80-125	
Chlorobenzene	ug/L	20	21.1	105	80-120	
Chloroethane	ug/L	20	19.7	98	70-130	
Chloroform	ug/L	20	19.3	96	80-120	
Chloromethane	ug/L	20	19.7	99	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.5	107	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.5	108	80-125	
Dibromochloromethane	ug/L	20	17.9	90	70-120	
Ethylbenzene	ug/L	20	21.0	105	80-120	
Methylene Chloride	ug/L	20	16.4	82	75-120	
Styrene	ug/L	20	21.9	110	80-120	
Tetrachloroethene	ug/L	20	20.5	103	80-120	
Toluene	ug/L	20	20.4	102	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.9	99	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.1	105	75-120	
Trichloroethene	ug/L	20	19.6	98	80-120	
Vinyl chloride	ug/L	20	20.8	104	65-130	
Xylene (Total)	ug/L	60	64.9	108	80-120	
1,2-Dichlorobenzene-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			103	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752796
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60383996014, 60383996015, 60383996016, 60383996017, 60383996018, 60383996019, 60383996020, 60383996021, 60383996022, 60383996023, 60383996024, 60383996025, 60383996026, 60383996027, 60383996028, 60383996029, 60383996030, 60383996031, 60383996032, 60383996033

METHOD BLANK: 3013079
Matrix: Water

Associated Lab Samples: 60383996014, 60383996015, 60383996016, 60383996017, 60383996018, 60383996019, 60383996020, 60383996021, 60383996022, 60383996023, 60383996024, 60383996025, 60383996026, 60383996027, 60383996028, 60383996029, 60383996030, 60383996031, 60383996032, 60383996033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/21 09:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/21 09:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/29/21 09:47	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/29/21 09:47	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/29/21 09:47	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/29/21 09:47	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/29/21 09:47	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/29/21 09:47	
2-Hexanone	ug/L	ND	10.0	1.1	10/29/21 09:47	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/29/21 09:47	
Acetone	ug/L	ND	10.0	2.5	10/29/21 09:47	
Benzene	ug/L	ND	1.0	0.14	10/29/21 09:47	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/29/21 09:47	
Bromoform	ug/L	ND	1.0	0.68	10/29/21 09:47	
Bromomethane	ug/L	ND	5.0	0.46	10/29/21 09:47	
Carbon disulfide	ug/L	ND	5.0	0.98	10/29/21 09:47	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/29/21 09:47	
Chlorobenzene	ug/L	ND	1.0	0.089	10/29/21 09:47	
Chloroethane	ug/L	ND	1.0	0.37	10/29/21 09:47	
Chloroform	ug/L	ND	1.0	0.22	10/29/21 09:47	
Chloromethane	ug/L	ND	1.0	0.28	10/29/21 09:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/29/21 09:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/29/21 09:47	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/29/21 09:47	
Ethylbenzene	ug/L	ND	1.0	0.12	10/29/21 09:47	
Methylene Chloride	ug/L	ND	1.0	0.39	10/29/21 09:47	
Styrene	ug/L	ND	1.0	0.12	10/29/21 09:47	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/29/21 09:47	
Toluene	ug/L	ND	1.0	0.25	10/29/21 09:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/29/21 09:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/29/21 09:47	
Trichloroethene	ug/L	ND	1.0	0.21	10/29/21 09:47	
Vinyl chloride	ug/L	ND	1.0	0.17	10/29/21 09:47	
Xylene (Total)	ug/L	ND	3.0	0.28	10/29/21 09:47	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120		10/29/21 09:47	
4-Bromofluorobenzene (S)	%	96	80-120		10/29/21 09:47	
Toluene-d8 (S)	%	99	80-120		10/29/21 09:47	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3013080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.5	93	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.7	93	75-125	
1,1,2-Trichloroethane	ug/L	20	19.6	98	80-120	
1,1-Dichloroethane	ug/L	20	17.6	88	75-125	
1,1-Dichloroethene	ug/L	20	18.4	92	80-120	
1,2-Dichloroethane	ug/L	20	18.6	93	75-120	
1,2-Dichloropropane	ug/L	20	18.4	92	80-125	
2-Butanone (MEK)	ug/L	100	92.5	92	40-150	
2-Hexanone	ug/L	100	99.9	100	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.8	94	65-140	
Acetone	ug/L	100	90.1	90	20-175	
Benzene	ug/L	20	19.1	95	80-120	
Bromodichloromethane	ug/L	20	18.4	92	80-125	
Bromoform	ug/L	20	18.0	90	60-135	
Bromomethane	ug/L	20	16.5	83	10-165	
Carbon disulfide	ug/L	20	17.9	90	75-135	
Carbon tetrachloride	ug/L	20	18.1	91	80-125	
Chlorobenzene	ug/L	20	19.1	96	80-120	
Chloroethane	ug/L	20	17.6	88	70-130	
Chloroform	ug/L	20	17.9	90	80-120	
Chloromethane	ug/L	20	16.9	85	35-155	
cis-1,2-Dichloroethene	ug/L	20	17.9	89	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.9	94	80-125	
Dibromochloromethane	ug/L	20	18.8	94	70-120	
Ethylbenzene	ug/L	20	19.5	98	80-120	
Methylene Chloride	ug/L	20	20.5	103	75-120	
Styrene	ug/L	20	22.3	111	80-120	
Tetrachloroethene	ug/L	20	19.7	98	80-120	
Toluene	ug/L	20	19.5	98	80-120	
trans-1,2-Dichloroethene	ug/L	20	18.4	92	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.0	95	75-120	
Trichloroethene	ug/L	20	17.9	90	80-120	
Vinyl chloride	ug/L	20	16.0	80	65-130	
Xylene (Total)	ug/L	60	60.5	101	80-120	
1,2-Dichlorobenzene-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753191
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3015122
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 13:18	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 13:18	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 13:18	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 13:18	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 13:18	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 13:18	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 13:18	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 13:18	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 13:18	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 13:18	
Acetone	ug/L	ND	10.0	2.5	11/01/21 13:18	
Benzene	ug/L	ND	1.0	0.14	11/01/21 13:18	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 13:18	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 13:18	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 13:18	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 13:18	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 13:18	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 13:18	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 13:18	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 13:18	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 13:18	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/01/21 13:18	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 13:18	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 13:18	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 13:18	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 13:18	
Styrene	ug/L	ND	1.0	0.12	11/01/21 13:18	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 13:18	
Toluene	ug/L	ND	1.0	0.25	11/01/21 13:18	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 13:18	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 13:18	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 13:18	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 13:18	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 13:18	
1,2-Dichlorobenzene-d4 (S)	%	108	80-120		11/01/21 13:18	
4-Bromofluorobenzene (S)	%	101	80-120		11/01/21 13:18	
Toluene-d8 (S)	%	98	80-120		11/01/21 13:18	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3015123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.0	120	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	75-125	
1,1,2-Trichloroethane	ug/L	20	19.5	98	80-120	
1,1-Dichloroethane	ug/L	20	20.2	101	75-125	
1,1-Dichloroethene	ug/L	20	21.0	105	80-120	
1,2-Dichloroethane	ug/L	20	22.3	112	75-120	
1,2-Dichloropropane	ug/L	20	19.6	98	80-125	
2-Butanone (MEK)	ug/L	100	127	127	40-150	
2-Hexanone	ug/L	100	109	109	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	65-140	
Acetone	ug/L	100	167	167	20-175	
Benzene	ug/L	20	20.6	103	80-120	
Bromodichloromethane	ug/L	20	21.9	110	80-125	
Bromoform	ug/L	20	22.1	111	60-135	
Bromomethane	ug/L	20	12.5	63	10-165	
Carbon disulfide	ug/L	20	21.4	107	75-135	
Carbon tetrachloride	ug/L	20	23.3	117	80-125	
Chlorobenzene	ug/L	20	20.7	104	80-120	
Chloroethane	ug/L	20	20.6	103	70-130	
Chloroform	ug/L	20	21.4	107	80-120	
Chloromethane	ug/L	20	14.1	70	35-155	
cis-1,2-Dichloroethene	ug/L	20	21.2	106	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.7	109	80-125	
Dibromochloromethane	ug/L	20	19.1	96	70-120	
Ethylbenzene	ug/L	20	20.1	101	80-120	
Methylene Chloride	ug/L	20	22.1	110	75-120	
Styrene	ug/L	20	20.9	104	80-120	
Tetrachloroethene	ug/L	20	20.6	103	80-120	
Toluene	ug/L	20	18.4	92	80-120	
trans-1,2-Dichloroethene	ug/L	20	21.3	107	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-120	
Trichloroethene	ug/L	20	21.3	106	80-120	
Vinyl chloride	ug/L	20	18.1	91	65-130	
Xylene (Total)	ug/L	60	61.1	102	80-120	
1,2-Dichlorobenzene-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			97	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753272
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996005, 60383996006, 60383996011, 60383996012, 60383996013, 60383996027, 60383996028, 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

METHOD BLANK: 3015397
Matrix: Water
Associated Lab Samples: 60383996005, 60383996006, 60383996011, 60383996012, 60383996013, 60383996027, 60383996028, 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 12:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 12:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 12:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 12:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 12:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 12:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 12:32	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 12:32	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 12:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 12:32	
Acetone	ug/L	ND	10.0	2.5	11/01/21 12:32	
Benzene	ug/L	ND	1.0	0.14	11/01/21 12:32	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 12:32	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 12:32	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 12:32	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 12:32	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 12:32	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 12:32	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 12:32	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 12:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/01/21 12:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 12:32	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 12:32	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 12:32	
Styrene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 12:32	
Toluene	ug/L	ND	1.0	0.25	11/01/21 12:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 12:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 12:32	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 12:32	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 12:32	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/01/21 12:32	
4-Bromofluorobenzene (S)	%	99	80-120		11/01/21 12:32	
Toluene-d8 (S)	%	99	80-120		11/01/21 12:32	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3015398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.4	97	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	75-125	
1,1,2-Trichloroethane	ug/L	20	19.2	96	80-120	
1,1-Dichloroethane	ug/L	20	16.5	82	75-125	
1,1-Dichloroethene	ug/L	20	19.7	99	80-120	
1,2-Dichloroethane	ug/L	20	18.4	92	75-120	
1,2-Dichloropropane	ug/L	20	19.1	96	80-125	
2-Butanone (MEK)	ug/L	100	92.1	92	40-150	
2-Hexanone	ug/L	100	90.8	91	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	88.0	88	65-140	
Acetone	ug/L	100	93.3	93	20-175	
Benzene	ug/L	20	20.1	101	80-120	
Bromodichloromethane	ug/L	20	18.5	93	80-125	
Bromoform	ug/L	20	18.4	92	60-135	
Bromomethane	ug/L	20	17.2	86	10-165	
Carbon disulfide	ug/L	20	19.2	96	75-135	
Carbon tetrachloride	ug/L	20	19.1	95	80-125	
Chlorobenzene	ug/L	20	19.2	96	80-120	
Chloroethane	ug/L	20	18.2	91	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	17.3	86	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.3	96	80-125	
Dibromochloromethane	ug/L	20	18.7	93	70-120	
Ethylbenzene	ug/L	20	19.9	100	80-120	
Methylene Chloride	ug/L	20	19.2	96	75-120	
Styrene	ug/L	20	22.0	110	80-120	
Tetrachloroethene	ug/L	20	19.9	100	80-120	
Toluene	ug/L	20	18.8	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-120	
Trichloroethene	ug/L	20	18.9	94	80-120	
Vinyl chloride	ug/L	20	17.1	85	65-130	
Xylene (Total)	ug/L	60	60.2	100	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			96	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753288
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996038, 60383996039, 60383996040

METHOD BLANK: 3015422
Matrix: Water
Associated Lab Samples: 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 15:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 15:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 15:46	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 15:46	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 15:46	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 15:46	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 15:46	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 15:46	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 15:46	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 15:46	
Acetone	ug/L	ND	10.0	2.5	11/01/21 15:46	
Benzene	ug/L	ND	1.0	0.14	11/01/21 15:46	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 15:46	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 15:46	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 15:46	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 15:46	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 15:46	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 15:46	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 15:46	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 15:46	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 15:46	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 15:46	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 15:46	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 15:46	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 15:46	
Styrene	ug/L	ND	1.0	0.12	11/01/21 15:46	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 15:46	
Toluene	ug/L	ND	1.0	0.25	11/01/21 15:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 15:46	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 15:46	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 15:46	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 15:46	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 15:46	
1,2-Dichlorobenzene-d4 (S)	%	102	80-120		11/01/21 15:46	
4-Bromofluorobenzene (S)	%	90	80-120		11/01/21 15:46	
Toluene-d8 (S)	%	101	80-120		11/01/21 15:46	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3015423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	22.6	113	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	80-120	
1,1-Dichloroethane	ug/L	20	19.1	95	75-125	
1,1-Dichloroethene	ug/L	20	21.4	107	80-120	
1,2-Dichloroethane	ug/L	20	20.1	101	75-120	
1,2-Dichloropropane	ug/L	20	19.9	100	80-125	
2-Butanone (MEK)	ug/L	100	91.6	92	40-150	
2-Hexanone	ug/L	100	97.6	98	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.3	98	65-140	
Acetone	ug/L	100	85.4	85	20-175	
Benzene	ug/L	20	19.6	98	80-120	
Bromodichloromethane	ug/L	20	20.8	104	80-125	
Bromoform	ug/L	20	28.1	141	60-135	L1
Bromomethane	ug/L	20	18.1	91	10-165	
Carbon disulfide	ug/L	20	18.3	92	75-135	
Carbon tetrachloride	ug/L	20	21.8	109	80-125	
Chlorobenzene	ug/L	20	22.2	111	80-120	
Chloroethane	ug/L	20	17.0	85	70-130	
Chloroform	ug/L	20	20.6	103	80-120	
Chloromethane	ug/L	20	18.7	93	35-155	
cis-1,3-Dichloropropene	ug/L	20	20.5	103	80-125	
Dibromochloromethane	ug/L	20	22.6	113	70-120	
Ethylbenzene	ug/L	20	22.8	114	80-120	
Methylene Chloride	ug/L	20	19.2	96	75-120	
Styrene	ug/L	20	23.2	116	80-120	
Tetrachloroethene	ug/L	20	23.7	119	80-120	
Toluene	ug/L	20	21.2	106	80-120	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	80-120	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	75-120	
Trichloroethene	ug/L	20	20.7	104	80-120	
Vinyl chloride	ug/L	20	17.2	86	65-130	
Xylene (Total)	ug/L	60	68.3	114	80-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			90	80-120	
Toluene-d8 (S)	%			103	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753621
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996004, 60383996017, 60383996021, 60383996038, 60383996039, 60383996040, 60383996043

METHOD BLANK: 3016480
Matrix: Water
Associated Lab Samples: 60383996004, 60383996017, 60383996021, 60383996038, 60383996039, 60383996040, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/02/21 19:39	
Trichloroethene	ug/L	ND	1.0	0.21	11/02/21 19:39	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		11/02/21 19:39	
4-Bromofluorobenzene (S)	%	92	80-120		11/02/21 19:39	
Toluene-d8 (S)	%	99	80-120		11/02/21 19:39	

LABORATORY CONTROL SAMPLE: 3016481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	18.1	90	80-120	
Trichloroethene	ug/L	20	18.6	93	80-120	
1,2-Dichlorobenzene-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			94	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 751728
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

METHOD BLANK: 3009909
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/25/21 13:55	

LABORATORY CONTROL SAMPLE: 3009910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.49	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009911 3009912

Parameter	Units	60384060004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	0.5	0.5	0.53	0.54	104	104	75-125	0	20	

SAMPLE DUPLICATE: 3009913

Parameter	Units	60384060005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3009914

Parameter	Units	60383996037 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 751896
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3010348
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/26/21 06:47	
Sulfate	mg/L	ND	1.0	0.42	10/26/21 06:47	

LABORATORY CONTROL SAMPLE: 3010349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010350 3010351

Parameter	Units	60383737041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	153	100	100	246	247	93	95	80-120	0	15	
Sulfate	mg/L	1.3	5	5	5.9	5.9	93	94	80-120	0	15	

MATRIX SPIKE SAMPLE: 3010352

Parameter	Units	60383996041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	92.7	100	181	88	80-120	
Sulfate	mg/L	1.9	5	6.4	90	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752147
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

METHOD BLANK: 3011008 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/27/21 09:40	
Sulfate	mg/L	ND	1.0	0.42	10/27/21 09:40	

METHOD BLANK: 3014120 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/28/21 10:38	
Sulfate	mg/L	ND	1.0	0.42	10/28/21 10:38	

METHOD BLANK: 3014387 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.46J	1.0	0.39	10/29/21 12:58	
Sulfate	mg/L	ND	1.0	0.42	10/29/21 12:58	

METHOD BLANK: 3016249 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/01/21 10:05	
Sulfate	mg/L	ND	1.0	0.42	11/01/21 10:05	

METHOD BLANK: 3016993 Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/02/21 08:12	
Sulfate	mg/L	ND	1.0	0.42	11/02/21 08:12	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

LABORATORY CONTROL SAMPLE: 3011009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 3014121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 3014388

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.4	108	90-110	

LABORATORY CONTROL SAMPLE: 3016250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.3	105	90-110	

LABORATORY CONTROL SAMPLE: 3016994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011010 3011011

Parameter	Units	60384170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	215	250	250	441	433	91	87	80-120	2	15	
Sulfate	mg/L	352	250	250	584	572	93	88	80-120	2	15	

MATRIX SPIKE SAMPLE: 3011012

Parameter	Units	60383395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	174	100	274	100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

MATRIX SPIKE SAMPLE: 3011012

Parameter	Units	60383395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	3210	2500	5620	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011564 3011565

Parameter	Units	60383351001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.5	10	10	31.7	31.2	102	97	80-120	2	15	
Sulfate	mg/L	2070	1000	1000	3130	3110	106	105	80-120	0	15	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752149
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996038, 60383996039, 60383996040

METHOD BLANK: 3011019 Matrix: Water
Associated Lab Samples: 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.39J	1.0	0.39	10/27/21 07:53	
Sulfate	mg/L	ND	1.0	0.42	10/27/21 07:53	

METHOD BLANK: 3014118 Matrix: Water
Associated Lab Samples: 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	10/28/21 10:38	
Sulfate	mg/L	ND	1.0	0.42	10/28/21 10:38	

LABORATORY CONTROL SAMPLE: 3011020

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3014119

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011021 3011022

Parameter	Units	60383996038 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	178	100	100	293	301	115	123	80-120	3	15	M1
Sulfate	mg/L	3.2	5	5	8.0	8.0	97	97	80-120	0	15	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

MATRIX SPIKE SAMPLE: 3011023

Parameter	Units	60384139008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1.6	5	5.8	84	80-120	
Sulfate	mg/L	826	500	1330	100	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 751541
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

METHOD BLANK: 3008986
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040, 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.079	10/23/21 09:07	
Nitrogen, Nitrite	mg/L	ND	0.10	0.079	10/23/21 09:07	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/23/21 09:07	

LABORATORY CONTROL SAMPLE: 3008987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.93	93	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	1.9	96	90-110	

MATRIX SPIKE SAMPLE: 3008988

Parameter	Units	60383996034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.87	87	70-130	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	ND	2	1.9	94	90-110	

SAMPLE DUPLICATE: 3008989

Parameter	Units	60383996037 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	6.4	6.4	1	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	6.4	6.4	1	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 752649
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041

METHOD BLANK: 3012426
Matrix: Water
Associated Lab Samples: 60383996041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/28/21 09:43	

LABORATORY CONTROL SAMPLE: 3012427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.3	105	80-120	

MATRIX SPIKE SAMPLE: 3012428

Parameter	Units	60383451003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	27.1	25	49.2	89	80-120	

SAMPLE DUPLICATE: 3012429

Parameter	Units	60383674005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	7.1	6.5	9	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753113
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996042, 60383996043

METHOD BLANK: 3014344
Matrix: Water
Associated Lab Samples: 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 16:06	

LABORATORY CONTROL SAMPLE: 3014345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.0	99	80-120	

MATRIX SPIKE SAMPLE: 3014346

Parameter	Units	60383674004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	231	500	785	111	80-120	

SAMPLE DUPLICATE: 3014347

Parameter	Units	60383996043 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	0.46J	0.45J		25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753114
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

METHOD BLANK: 3014348
Matrix: Water
Associated Lab Samples: 60383996033, 60383996034, 60383996035, 60383996036, 60383996037, 60383996038, 60383996039, 60383996040

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 21:52	

LABORATORY CONTROL SAMPLE: 3014349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.1	102	80-120	

MATRIX SPIKE SAMPLE: 3014350

Parameter	Units	60383395002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	4.3	70	80-120	M1

SAMPLE DUPLICATE: 3014351

Parameter	Units	60383996033 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	0.37J	0.38J		25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 753833
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 3017243
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	11/03/21 11:33	

LABORATORY CONTROL SAMPLE: 3017244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	95	80-120	

MATRIX SPIKE SAMPLE: 3017245

Parameter	Units	60383737047 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	55.6	125	206	121	80-120	M1

SAMPLE DUPLICATE: 3017246

Parameter	Units	60383996041 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.8	9.1	4	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

QC Batch: 727035
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60383996041, 60383996042, 60383996043

METHOD BLANK: 2274006
Matrix: Water
Associated Lab Samples: 60383996041, 60383996042, 60383996043

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/19/21 05:26	
Acetic Acid	mg/L	ND	0.50	0.12	11/19/21 05:26	
Propionic Acid	mg/L	ND	0.50	0.053	11/19/21 05:26	
Formic acid	mg/L	ND	0.50	0.055	11/19/21 05:26	
Butyric Acid	mg/L	ND	0.50	0.058	11/19/21 05:26	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/19/21 05:26	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/19/21 05:26	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/19/21 05:26	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/19/21 05:26	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/19/21 05:26	

LABORATORY CONTROL SAMPLE & LCSD: 2274007 2274008

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.2	2.4	111	118	70-130	6	20	
Acetic Acid	mg/L	2	2.1	2.0	105	103	70-130	2	20	
Propionic Acid	mg/L	2	2.2	2.2	109	112	70-130	2	20	
Formic acid	mg/L	2	2.0	1.9	98	94	70-130	3	20	
Butyric Acid	mg/L	2	2.4	2.2	118	109	70-130	8	20	
Pyruvic Acid	mg/L	2	2.2	2.3	112	116	70-130	4	20	
i-Pentanoic Acid	mg/L	2	2.2	2.2	108	111	70-130	2	20	
Pentanoic Acid	mg/L	2	2.0	2.0	102	101	70-130	1	20	
i-Hexanoic Acid	mg/L	2	2.2	2.2	112	112	70-130	1	20	
Hexanoic Acid	mg/L	2	2.0	1.8	99	93	70-130	7	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 60383996

[1] In the AM20_LHC analysis for HBN 725913, samples in WO 221102805 were ran out of hold due to issues locating the sample containers. The bag containing the vials was stored in an incorrect cooler.

[2] In the [ANAL_METHOD] analysis, sample [LAB_SAMP][CUST_SAMP_ID] was conducted outside of the recognized method holding time.

BATCH QUALIFIERS

Batch: 752721

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

Batch: 752748

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

Batch: 752796

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

Batch: 753191

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

Batch: 753272

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

Batch: 753288

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

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

BATCH QUALIFIERS

Batch: 753621

[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.
F1	The sample was analyzed at a dilution due to foaming of the sample in the purge vessel.
H1	Extraction or preparation was conducted outside of the recognized method holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
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.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383996033	**MW-38-202110**	AM20GAX	725913		
60383996034	**RW-69-202110**	AM20GAX	725913		
60383996035	**MW-87-202110**	AM20GAX	725913		
60383996036	**MW-198-202110**	AM20GAX	725913		
60383996037	**ITMW-9-202110**	AM20GAX	725913		
60383996038	**IW-73-202110**	AM20GAX	725913		
60383996039	**MW-58R-202110**	AM20GAX	725913		
60383996040	**MW-95-202110**	AM20GAX	725913		
60383996041	**MW-91-202110**	AM20GAX	725913		
60383996042	**TMW-22R-202110**	AM20GAX	725913		
60383996043	**MW-185-202110**	AM20GAX	725913		
60383996033	**MW-38-202110**	EPA 3010	753826	EPA 6010	753911
60383996034	**RW-69-202110**	EPA 3010	753826	EPA 6010	753911
60383996035	**MW-87-202110**	EPA 3010	753826	EPA 6010	753911
60383996036	**MW-198-202110**	EPA 3010	753826	EPA 6010	753911
60383996037	**ITMW-9-202110**	EPA 3010	753826	EPA 6010	753911
60383996038	**IW-73-202110**	EPA 3010	753826	EPA 6010	753911
60383996039	**MW-58R-202110**	EPA 3010	753826	EPA 6010	753911
60383996040	**MW-95-202110**	EPA 3010	753826	EPA 6010	753911
60383996041	**MW-91-202110**	EPA 3010	753096	EPA 6010	753599
60383996042	**TMW-22R-202110**	EPA 3010	753096	EPA 6010	753599
60383996043	**MW-185-202110**	EPA 3010	753096	EPA 6010	753599
60383996001	**VP-14-202110**	EPA 5030B/8260	752721		
60383996002	**VP-8-202110**	EPA 5030B/8260	752721		
60383996003	**MW-190-202110**	EPA 5030B/8260	752721		
60383996004	**VP-10-202110**	EPA 5030B/8260	752721		
60383996004	**VP-10-202110**	EPA 5030B/8260	753621		
60383996005	**ITMW-6-202110**	EPA 5030B/8260	752721		
60383996005	**ITMW-6-202110**	EPA 5030B/8260	753272		
60383996006	**ITMW-5-202110**	EPA 5030B/8260	752721		
60383996006	**ITMW-5-202110**	EPA 5030B/8260	753272		
60383996007	**MW-84-202110**	EPA 5030B/8260	752721		
60383996008	**MW-46R-202110**	EPA 5030B/8260	752748		
60383996009	**EB-04-202110**	EPA 5030B/8260	752748		
60383996010	**TB-01-202110**	EPA 5030B/8260	752748		
60383996011	**TMW-30-202110**	EPA 5030B/8260	753272		
60383996012	**DUP-11-202110**	EPA 5030B/8260	753272		
60383996013	**MW-56R-202110**	EPA 5030B/8260	753272		
60383996014	**TMW-24-202110**	EPA 5030B/8260	752796		
60383996015	**MW-57R-202110**	EPA 5030B/8260	752796		
60383996016	**MW-93-202110**	EPA 5030B/8260	752796		
60383996017	**MW-205-202110**	EPA 5030B/8260	752796		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383996017	**MW-205-202110**	EPA 5030B/8260	753621		
60383996018	**MW-189-202110**	EPA 5030B/8260	752796		
60383996019	**MW-178-202110**	EPA 5030B/8260	752796		
60383996020	**MW-179-202110**	EPA 5030B/8260	752796		
60383996021	**ITMW-18-202110**	EPA 5030B/8260	752796		
60383996021	**ITMW-18-202110**	EPA 5030B/8260	753621		
60383996022	**MW-199-202110**	EPA 5030B/8260	752796		
60383996023	**MW-24-202110**	EPA 5030B/8260	752796		
60383996024	**ITMW-19-202110**	EPA 5030B/8260	752796		
60383996025	**MW-182-202110**	EPA 5030B/8260	752796		
60383996026	**ITMW-10-202110**	EPA 5030B/8260	752796		
60383996027	**TMW-12-202110**	EPA 5030B/8260	752796		
60383996027	**TMW-12-202110**	EPA 5030B/8260	753272		
60383996028	**DUP-08-202110**	EPA 5030B/8260	752796		
60383996028	**DUP-08-202110**	EPA 5030B/8260	753272		
60383996029	**DUP-10-202110**	EPA 5030B/8260	752796		
60383996030	**DUP-07-202110**	EPA 5030B/8260	752796		
60383996031	**TB-07-202110**	EPA 5030B/8260	752796		
60383996032	**TB-08-202110**	EPA 5030B/8260	752796		
60383996033	**MW-38-202110**	EPA 5030B/8260	752796		
60383996033	**MW-38-202110**	EPA 5030B/8260	753272		
60383996034	**RW-69-202110**	EPA 5030B/8260	753272		
60383996035	**MW-87-202110**	EPA 5030B/8260	753272		
60383996036	**MW-198-202110**	EPA 5030B/8260	753272		
60383996037	**ITMW-9-202110**	EPA 5030B/8260	753272		
60383996038	**IW-73-202110**	EPA 5030B/8260	753288		
60383996038	**IW-73-202110**	EPA 5030B/8260	753621		
60383996039	**MW-58R-202110**	EPA 5030B/8260	753288		
60383996039	**MW-58R-202110**	EPA 5030B/8260	753621		
60383996040	**MW-95-202110**	EPA 5030B/8260	753288		
60383996040	**MW-95-202110**	EPA 5030B/8260	753621		
60383996041	**MW-91-202110**	EPA 5030B/8260	753191		
60383996042	**TMW-22R-202110**	EPA 5030B/8260	753191		
60383996043	**MW-185-202110**	EPA 5030B/8260	753191		
60383996043	**MW-185-202110**	EPA 5030B/8260	753621		
60383996033	**MW-38-202110**	SM 4500-S-2 D	751728		
60383996034	**RW-69-202110**	SM 4500-S-2 D	751728		
60383996035	**MW-87-202110**	SM 4500-S-2 D	751728		
60383996036	**MW-198-202110**	SM 4500-S-2 D	751728		
60383996037	**ITMW-9-202110**	SM 4500-S-2 D	751728		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383996038	**IW-73-202110**	SM 4500-S-2 D	751728		
60383996039	**MW-58R-202110**	SM 4500-S-2 D	751728		
60383996040	**MW-95-202110**	SM 4500-S-2 D	751728		
60383996033	**MW-38-202110**	EPA 300.0	752147		
60383996034	**RW-69-202110**	EPA 300.0	752147		
60383996035	**MW-87-202110**	EPA 300.0	752147		
60383996036	**MW-198-202110**	EPA 300.0	752147		
60383996037	**ITMW-9-202110**	EPA 300.0	752147		
60383996038	**IW-73-202110**	EPA 300.0	752149		
60383996039	**MW-58R-202110**	EPA 300.0	752149		
60383996040	**MW-95-202110**	EPA 300.0	752149		
60383996041	**MW-91-202110**	EPA 300.0	751896		
60383996042	**TMW-22R-202110**	EPA 300.0	751896		
60383996043	**MW-185-202110**	EPA 300.0	751896		
60383996033	**MW-38-202110**	EPA 353.2	751541		
60383996034	**RW-69-202110**	EPA 353.2	751541		
60383996035	**MW-87-202110**	EPA 353.2	751541		
60383996036	**MW-198-202110**	EPA 353.2	751541		
60383996037	**ITMW-9-202110**	EPA 353.2	751541		
60383996038	**IW-73-202110**	EPA 353.2	751541		
60383996039	**MW-58R-202110**	EPA 353.2	751541		
60383996040	**MW-95-202110**	EPA 353.2	751541		
60383996041	**MW-91-202110**	EPA 353.2	751541		
60383996042	**TMW-22R-202110**	EPA 353.2	751541		
60383996043	**MW-185-202110**	EPA 353.2	751541		
60383996033	**MW-38-202110**	SM 5310C	753114		
60383996034	**RW-69-202110**	SM 5310C	753114		
60383996035	**MW-87-202110**	SM 5310C	753114		
60383996036	**MW-198-202110**	SM 5310C	753114		
60383996037	**ITMW-9-202110**	SM 5310C	753114		
60383996038	**IW-73-202110**	SM 5310C	753114		
60383996039	**MW-58R-202110**	SM 5310C	753114		
60383996040	**MW-95-202110**	SM 5310C	753114		
60383996041	**MW-91-202110**	SM 5310C	752649		
60383996042	**TMW-22R-202110**	SM 5310C	753113		
60383996043	**MW-185-202110**	SM 5310C	753113		
60383996041	**MW-91-202110**	SM 5310C	753833		
60383996042	**TMW-22R-202110**	SM 5310C	753833		
60383996043	**MW-185-202110**	SM 5310C	753833		
60383996041	**MW-91-202110**	AM23G	727035		
60383996042	**TMW-22R-202110**	AM23G	727035		
60383996043	**MW-185-202110**	AM23G	727035		

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Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60383996

60383996

Client Name: Ram Coll

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-296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 2.3, 2.5, 1.2 Corr. Factor T-296 -0.3 Corrected 2.0, 2.2, 0.9

Date and initials of person examining contents: JM 10/10

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	NO3
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: water	☐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) LOT# 6106001	☒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: AL	☐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: _____

REVIEWED
By jchurch at 10:28 am, 10/25/21

Project Manager Review: _____ Date: _____

F-KS-C-003-Rev.11, February 28, 2018

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Analyses

LAB Profile/Line: 7444 Line 1

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required: _____

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs		LAB USE ONLY: Lab Sample # / Comments
VP-14-202110	GW	G	10-21-21	1643				3	X	3(VOAH)	
VP-8-202110	GW	G	10-21-21	1508				3	X		
MW-190-202110	GW	G	10-21-21	1520				3	X		
VP-10-202110	GW	G	10-21-21	1525				3	X		
ITMW-6-202110	GW	G	10-21-21	1517				3	X		
ITMW-5-202110	GW	G	10-21-21	1730				3	X		
MW-84-202110	GW	G	10-21-21	1709				3	X	3(OTHR)	
MW-46R-202110	GW	G	10-21-21	1724				3	X	3(VOAH)	
EB-04-202110	GW	G	10-21-21	1715				3	X		
TB-01-202110	TB	G	10-21-21	1730				3	X	2(VOAH)	

Customer Remarks/ Special Conditions/ Possible Hazards: MW-84-202110 preserved with ascorbic acid

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt: 2.3, 2.5, 1.2 10/22/21
Cooler Therm Corr. Factor: -0.3 oC
Cooler Temp Corrected: 2.0, 2.2, 0.9 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Tamara Rambojl	10-21-21 1800	[signature]	10/22/21 03:00
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 1 of 6

F-ALL-C-010-rev.00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Analyses

LAB Profile/Line: 7444 Line 1

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR | County/City: Ft Smith | Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs								↓ LAB USE ONLY: ↓ Lab Sample # / Comments
TMW-30-202110	GW	G	10-21-21	1202				3	X			3(VG9H)					
DUP-1)-202110	GW	G	10-21-21	1202				3	X								
MW-56R-202110	GW	G	10-21-21	1142				3	X								
TMW-24-202110	GW	G	10-21-21	1225				3	X								
MW-57R-202110	GW	G	10-21-21	1335				3	X								
MW-93-202110	GW	G	10-21-21	1325				3	X								
MW-205-202110	GW	G	10-21-21	1349				3	X								
MW-189-202110	GW	G	10-21-21	1356				3	X								
MW-178-202110	GW	G	10-21-21	1605				3	X								
MW-179-202110	GW	G	10-21-21	1625				2	X			2(VG9H)					

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.0, 2.2, 0.9 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-21-21 1800	Pace	10/22/21 0300
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 2 of 6

F-ALL-C-010-rev.00, 05Jul2018

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Container Preservative Type **

Lab Project Manager: Jamie Church

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Copy To: Caroline Chavers

Site Collection Info/Address:

Analyses

LAB Profile/Line: 7444 Line 1

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required: _____

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs		↓ LAB USE ONLY: ↓ Lab Sample # / Comments
ITMW-18-202110	GW	G	10-21-21	0848				3	X	3 (VOAs)	
MW-199-202110	GW	G	10-21-21	0845				3	X		
MW-24-202110	GW	G	10-21-21	0845				3	X		
ITMW-19-202110	GW	G	10-21-21	0910				3	X		
MW-182-202110	GW	G	10-21-21	1009				3	X		
ITMW-10-202110	GW	G	10-21-21	1023				3	X		
TMW-12-202110	GW	G	10-21-21	1025				3	X		
DUP-08-202110	GW	G	10-21-21	1025				3	X		
DUP-10-202110	GW	G	10-21-21	1009				3	X		
DUP-07-202110	GW	G	10-21-21	0845				3	X		

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.0, 2.2, 0.9 oC
Comments: _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-21-21 1800		10/22/21 0300
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 3 of 4

F-ALL-C-010-rev 00, 05Jul2018

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60038 J996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Caroline Chavers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR / County/City: Ft Smith / Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses: 8260 VOCs

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
TB-07-202110	GW	G	10-21-21	1731				3	X	2(VGHA)
TB-08-202110	GW	G	10-21-21	1732				3	X	↓

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-296
Cooler Temp Upon Receipt 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.0, 2.2, 0.9 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 4 of 6

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
10-21-21 10:00 Ramboll	10-21-21 1900		10/22/21 03:00
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3 U 4/5 U 2 U 1 D O D

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride, Sulfate, Nitrate	~~Sulfate~~ (DM) Sulfide	~~Nitrate~~ (DM) Hydrogen	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene / Butylene	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
MW-38-202110	GW	G	10-21-21	0915				11	X	X	X	X	X		X		X (DM)	X	3(VG9H) 3(VG9U) 1(BP3N) 1(BP3S) 1(BP3N) 1(AG5U)
RW-69-202110	GW	G	10-21-21	0925				11	X	X	X	X	X		X			X	
MW-87-202110	GW	G	10-21-21	1023				11	X	X	X	X	X		X			X	
MW-198-202110	GW	G	10-21-21	1055				11	X	X	X	X	X		X			X	
IT-MW-9-202110	GW	G	10-21-21	1135				11	X	X	X	X	X		X			X	
IW-73-202110	GW	G	10-21-21	1210				11	X	X	X	X	X		X			X	
MW-58R-202110	GW	G	10-21-21	1330				11	X	X	X	X	X		X			X	
MW-95-202110	GW	G	10-21-21	1435				11	X	X	X	X	X		X			X	

DM

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ramboll	10-21-21 1800		10/22/21 0900
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

ACCT #:

Template:

Prelogin:

PM:

PB:

LAB Sample Temperature Info:

Temp Blank received: Y N NA

Therm ID #: T-296

Cooler Temp Upon Receipt 2.5, 2.3, 1.2 oC

Cooler Therm Corr. Factor -0.3 oC

Cooler Temp Corrected 2.0, 2.2, 0.9 oC

Comments:

Trip Blank Received: Y N N/A

HCL MeOH TSP Other

NonConformance(s) YES / NO

Page 5 of 6

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

6038 3996

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature): DM

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3 U U U 2 U 1 D O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

LAB Profile/Line: 7444 Line 1

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride	Sulfate	Nitrate	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
MW-91-202110	GW	G	10-21-21	1525				12	X	X	X	X	X	X	X	X	X	3(VGAH) 3(VGAU) 2(OTHER) 1(AG35) 1(BP3N) 1(BP3N) 1(AG2A)
TMW-22R-202110	GW	G	10-21-21	1515				12	X	X	X	X	X	X	X	X	X	3(VGAH) 3(VGAU) 2(OTHER) 1(AG35) 1(BP3N) 1(BP3N)
MW-185-202110	GW	G	10-21-21	1625				12	X	X	X	X	X	X	X	X	X	3(VGAH) 3(VGAU) 2(OTHER) 1(AG35) 1(BP3N) 1(BP3N) 1(AG2A)

DM

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T-256
Cooler Temp Upon Receipt: 2.3, 2.5, 1.2 oC
Cooler Therm Corr. Factor: -0.3 oC
Cooler Temp Corrected: 2.0, 2.2 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s): YES / NO

Page 6 of 6

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
DM Ramboll	10-21-21 1800	[signature]	10/22/21 03:00
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

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

October 28, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384159

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384159

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60384159001	**MW-89-202110**	Water	10/20/21 13:55	10/21/21 10:30
60384159002	**TMW-11-202110**	Water	10/20/21 09:10	10/21/21 10:30

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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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REPORT TO:

Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS

email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)

Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS

email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

microbialinsights

10515 Research Dr
Knoxville, TN 37932
865-573-8188

www.microbe.com

Project Manager: Michael Wilson
Project Name: Whirlpool - Ft. Smith, AR
Project No.: 16900-21278

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☒ More samples to follow
☐ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data (15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive (15%) ☐ Historical Interpretive (35%)

EDD type: ☒ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information						Analyses				CENSUS: Please select the target organism/gene																							
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers	PLFA	NGS	QuantArray Chlor	QuantArray Petro	DHC (Dehaloccoides)	DHC Functional genes (bvc, tce, vcr)	DHBt (Dehalobacter)	DHG (Dehalogenimonas)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Dentrifiers-nirS and nirK)	AMO (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Napthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	RNA (Expression Option)*	Other: VC Reductase	Other:	Other:
070551	MW-89-202110	10-20-21	1355		1					X																					X		
2	TMW-11-202110	10-20-21	0910		1					X																					X		

DM

Relinquished by: David Meyer Date 10-20-21 Received by: FedEx Date 10-20-21 AJ Hayde 10/21/21 1030

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

* additional cost and sample preservation are associated with RNA samples.

**Saturday delivery: See sampling protocol for alternate shipping address.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Jamie Church
Pace Analytical Labs
4120 Seven Hills Dr
Florrisant, MO 63033

Phone:

Fax:

Identifier: 070SJ **Date Rec:** 10/21/2021 **Report Date:** 10/27/2021

Client Project #: 60384159 **Client Project Name:** Whirlpool, Ft. Smith, AR

Purchase Order #:

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

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

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Pace Analytical Labs**
Project: Whirlpool, Ft. Smith, AR

MI Project Number: **070SJ**
Date Received: 10/21/2021

Sample Information

Client Sample ID:	**MW-89-202110**	**TMW-11-202110**
Sample Date:	10/20/2021	10/20/2021
Units:	cells/mL	cells/mL
Analyst/Reviewer:	BB/CS	BB/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**7.02E+01**	**2.14E+02**
tceA Reductase	TCE	<5.00E-01	**1.38E+01**
BAV1 Vinyl Chloride Reductase	BVC	**1.80E+00**	**1.00E+00**
Vinyl Chloride Reductase	VCR	**7.00E-01**	**1.21E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **10/21/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/21/2021	10/27/2021	0 °C	98%	non-detect	non-detect
BVC	10/21/2021	10/27/2021	0 °C	111%	non-detect	non-detect
TCE	10/21/2021	10/27/2021	0 °C	106%	non-detect	non-detect
VCR	10/21/2021	10/27/2021	0 °C	106%	non-detect	non-detect

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

November 09, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384161

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384161

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60384161001	**MW-38-202110**	Water	10/21/21 09:15	10/22/21 10:30
60384161002	**RW-64-202110**	Water	10/21/21 09:25	10/22/21 10:30
60384161003	**MW-87-202110**	Water	10/21/21 10:23	10/22/21 10:30
60384161004	**MW-198-202110**	Water	10/21/21 10:55	10/22/21 10:30
60384161005	**ITMW-9-202110**	Water	10/21/21 11:35	10/22/21 10:30
60384161006	**IW-73-202110**	Water	10/21/21 12:10	10/22/21 10:30
60384161007	**MW-58R-202110**	Water	10/21/21 13:30	10/22/21 10:30
60384161008	**MW-95-202110**	Water	10/21/21 14:35	10/22/21 10:30

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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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REPORT TO:

Name: David Meyer
Company: Ramboll
Address: 10851 Mastin Blvd Suite 100
Overland Park, KS

email: dmeyer@ramboll.com
Phone: 316-617-4785
Fax: –

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)

Name: David Meyer
Company: Ramboll
Address: 10851 Mastin Blvd, Ste 100

email: dmeyer@ramboll.com
Phone: 316-617-4785
Fax: –

microbialinsights

10515 Research Dr
Knoxville, TN 37932
865-573-8188

www.microbe.com

Project Manager: Michael Wilson
Project Name: Whirlpool
Project No.: –

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☒ More samples to follow
☐ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (35%)

EDD type: ☒ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information						Analyses				CENSUS: Please select the target organism/gene																				
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers	PLFA	NGS	QuantArray Chlor	QuantArray Petro	DHC (Dehalococcoides)	DHC Functional genes (bvc, tce, vcr)	DHBt (Dehalobacter)	DHG (Dehalogenimonas)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Denitrifiers-nirS and nirK)	AMO (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Napthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	RNA (Expression Option)*	Other: VC Reductase	Other:	Other:
075553 1	MW-38-202110	10-21-21	0915	GW	1					X																					X		
2	~~MW~~ RW-64-202110	10-21-21	0925	GW	1					X																					X		
3	MW-87-202110	10-21-21	1023	GW	1					X																					X		
4	MW-198-202110	10-21-21	1055	GW	1					X																					X		
5	ITMW-9-202110	10-21-21	1135	GW	1					X																					X		
6	IW-73-202110	10-21-21	1210	GW	1					X																					X		
7	MW-58R-202110	10-21-21	1330	GW	1					X																					X		
8	MW-95-202110	10-21-21	1435	GW	1					X																					X		

Relinquished by: David Meyer Date 10-21-21 Received by: [illegible] Date 10/22/21 1030

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Jamie Church
Pace Analytical Labs
4120 Seven Hills Dr
Florrisant, MO 63033

Phone:

Fax:

Identifier: 075SJ **Date Rec:** 10/22/2021 **Report Date:** 10/28/2021

Client Project #: **Client Project Name:** Whirlpool, Ft. Smith, AR

Purchase Order #:

Test results provided for: CENSUS

Reviewed By:

Charles Slater

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

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Pace Analytical Labs**
Project: Whirlpool, Ft. Smith, AR

MI Project Number: **075SJ**
Date Received: 10/22/2021

Sample Information

Client Sample ID:		**MW-38-202110**	**RW-69-202110**	**MW-87-202110**	**MW-198-202110**	**ITMW-9-202110**
Sample Date:		10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		CP/CS	CP/CS	CP/CS	CP/CS	CP/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**1.20E+00 (J)**	**2.40E+01**	**2.20E+00**	<5.00E-01	**1.95E+00**
tceA Reductase	TCE	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	**2.63E-01(J)**	**9.87E-01**	<5.00E-01	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	<5.00E-01	<5.00E-01	**1.21E-01(J)**	<5.00E-01	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Pace Analytical Labs**
Project: Whirlpool, Ft. Smith, AR

MI Project Number: **075SJ**
Date Received: 10/22/2021

Sample Information

Client Sample ID:	**IW-73-202110**	**MW-58R-202110**	**MW-95-202110**
Sample Date:	10/21/2021	10/21/2021	10/21/2021
Units:	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:	CP/CS	CP/CS	CP/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**1.06E+02**	**6.50E+00**	<5.00E-01
tceA Reductase	TCE	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	**1.92E+00**	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	<5.00E-01	**1.76E-01(J)**	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **10/22/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/22/2021	10/28/2021	0 °C	101%	non-detect	non-detect
BVC	10/22/2021	10/28/2021	0 °C	108%	non-detect	non-detect
TCE	10/22/2021	10/28/2021	0 °C	109%	non-detect	non-detect
VCR	10/22/2021	10/28/2021	0 °C	105%	non-detect	non-detect

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November 23, 2021

Michael Wilson
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Dear Michael Wilson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Gulf Coast
- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.

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CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Gulf Coast

7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60384461001	**MW-25R-202110**	Water	10/22/21 08:30	10/22/21 15:32
60384461002	**IW-77-202110**	Water	10/22/21 09:05	10/22/21 15:32
60384461003	**RW-1-202110**	Water	10/22/21 09:00	10/22/21 15:32
60384461004	**MW-82-202110**	Water	10/22/21 08:30	10/22/21 15:32
60384461005	**TB-06-202110**	Water	10/22/21 09:33	10/22/21 15:32
60384461006	**TMW-19-202110**	Water	10/22/21 09:06	10/22/21 15:32

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60384461001	**MW-25R-202110**	AM20GAX	AWE	4	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH, VNH	38	PASI-K
		SM 4500-S-2 D	AG1	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
60384461002	**IW-77-202110**	EPA 5030B/8260	VNH	38	PASI-K
60384461003	**RW-1-202110**	EPA 5030B/8260	PGH, VNH	38	PASI-K
60384461004	**MW-82-202110**	EPA 5030B/8260	PGH, VNH	38	PASI-K
60384461005	**TB-06-202110**	EPA 5030B/8260	PGH, VNH	38	PASI-K
60384461006	**TMW-19-202110**	AM20GAX	AWE	3	GCLA
		EPA 6010	MRV	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		EPA 300.0	ALH	2	PASI-K
		EPA 353.2	KB	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		SM 5310C	HM1	1	PASI-K
		AM23G	SLL2	10	GCLA

GCLA = Pace Analytical Gulf Coast
PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Date: November 23, 2021

In the [ANAL_METHOD] analysis, sample [LAB_SAMP][CUST_SAMP_ID] was conducted outside of the recognized method holding time.

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **AM20GAX**
Description: Indicator Gases Water LHC
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for AM20GAX by Pace Analytical Gulf Coast. 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.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: November 23, 2021

General Information:
6 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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: 753168

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

QC Batch: 753272

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll_AR
Date: November 23, 2021

General Information:
1 sample was analyzed for SM 4500-S-2 D by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 752763

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60384023001

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

- MS (Lab ID: 3012969)
  - Sulfide, Total
- MSD (Lab ID: 3012970)
  - Sulfide, Total

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

QC Batch: 753201

B: Analyte was detected in the associated method blank.

- BLANK for HBN 753201 [WETA/828 (Lab ID: 3015142)
  - Chloride
- BLANK for HBN 753201 [WETA/828 (Lab ID: 3017448)
  - 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: 753201

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60384461006,60384500001

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

- MS (Lab ID: 3015146)
  - Chloride
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for EPA 353.2 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

QC Batch: 753086

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60383737043,60384407001

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

- MS (Lab ID: 3014272)
  - Nitrogen, NO2 plus NO3
- MS (Lab ID: 3014274)
  - Nitrogen, NO2 plus NO3

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll_AR
Date: November 23, 2021

General Information:
2 samples were analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **SM 5310C**
Description: 5310C Diss. Organic Carbon LF
Client: Ramboll_AR
Date: November 23, 2021

General Information:
1 sample was analyzed for SM 5310C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Method: **AM23G**
Description: Low Level Volatile Fatty Acids
Client: Ramboll_AR
Date: November 23, 2021

General Information:
1 sample was analyzed for AM23G by Pace Analytical Gulf Coast. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Extraction or preparation was conducted outside of the recognized method holding time.
- TMW-19-202110 (Lab ID: 60384461006)

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: MW-25R-202110 **Lab ID: 60384461001** Collected: 10/22/21 08:30 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	**340**	ug/L	5.0	2.0	1		11/05/21 16:39	74-82-8	
Ethane	**3.5**	ug/L	1.0	0.17	1		11/05/21 16:39	74-84-0	
Ethene	**0.43J**	ug/L	1.0	0.24	1		11/05/21 16:39	74-85-1	
Acetylene	**0.34J**	ug/L	0.50	0.13	1		11/05/21 16:39	74-86-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**8790**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:47	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	**42.8J**	ug/L	100	25.4	10		10/30/21 16:45	67-64-1	
Benzene	**1.8J**	ug/L	10.0	1.4	10		10/30/21 16:45	71-43-2	
Bromodichloromethane	ND	ug/L	10.0	1.6	10		10/30/21 16:45	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		10/30/21 16:45	75-25-2	
Bromomethane	ND	ug/L	50.0	4.6	10		10/30/21 16:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	9.8	10		10/30/21 16:45	78-93-3	
Carbon disulfide	ND	ug/L	50.0	9.8	10		10/30/21 16:45	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	1.7	10		10/30/21 16:45	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.89	10		10/30/21 16:45	108-90-7	
Chloroethane	ND	ug/L	10.0	3.7	10		10/30/21 16:45	75-00-3	
Chloroform	**3.6J**	ug/L	10.0	2.2	10		10/30/21 16:45	67-66-3	
Chloromethane	ND	ug/L	10.0	2.8	10		10/30/21 16:45	74-87-3	
Dibromochloromethane	ND	ug/L	10.0	3.0	10		10/30/21 16:45	124-48-1	
1,1-Dichloroethane	**1.3J**	ug/L	10.0	1.2	10		10/30/21 16:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	2.1	10		10/30/21 16:45	107-06-2	
1,1-Dichloroethene	**8.2J**	ug/L	10.0	2.2	10		10/30/21 16:45	75-35-4	
cis-1,2-Dichloroethene	**2840**	ug/L	50.0	6.4	50		11/01/21 17:51	156-59-2	
trans-1,2-Dichloroethene	**64.0**	ug/L	10.0	1.0	10		10/30/21 16:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	1.4	10		10/30/21 16:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	10.0	0.78	10		10/30/21 16:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.8	10		10/30/21 16:45	10061-02-6	
Ethylbenzene	ND	ug/L	10.0	1.2	10		10/30/21 16:45	100-41-4	
2-Hexanone	ND	ug/L	100	11.0	10		10/30/21 16:45	591-78-6	
Methylene Chloride	**4.6J**	ug/L	10.0	3.9	10		10/30/21 16:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	7.4	10		10/30/21 16:45	108-10-1	
Styrene	ND	ug/L	10.0	1.2	10		10/30/21 16:45	100-42-5	
1,1,2,2-Tetrachloroethane	**3.0J**	ug/L	10.0	1.5	10		10/30/21 16:45	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	3.3	10		10/30/21 16:45	127-18-4	
Toluene	**7.1J**	ug/L	10.0	2.5	10		10/30/21 16:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	10.0	1.1	10		10/30/21 16:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		10/30/21 16:45	79-00-5	
Trichloroethene	**7440**	ug/L	50.0	10.5	50		11/01/21 17:51	79-01-6	
Vinyl chloride	**54.2**	ug/L	10.0	1.7	10		10/30/21 16:45	75-01-4	
Xylene (Total)	ND	ug/L	30.0	2.8	10		10/30/21 16:45	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: MW-25R-202110 **Lab ID: 60384461001** Collected: 10/22/21 08:30 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		10		10/30/21 16:45	460-00-4	
Toluene-d8 (S)	99	%	80-120		10		10/30/21 16:45	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		10		10/30/21 16:45	2199-69-1	
Preservation pH	**1.0**		0.10		10		10/30/21 16:45		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
	Pace Analytical Services - Kansas City								
Sulfide, Total	ND	mg/L	0.050	0.026	1		10/29/21 08:34	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**329**	mg/L	50.0	19.4	50		11/02/21 14:46	16887-00-6	
Sulfate	**716**	mg/L	50.0	21.0	50		11/02/21 14:46	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.066	1		10/29/21 15:14		
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**0.71J**	mg/L	1.0	0.30	1		11/03/21 15:38	7440-44-0	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: IW-77-202110 **Lab ID: 60384461002** Collected: 10/22/21 09:05 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		10/30/21 17:01	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		10/30/21 17:01	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		10/30/21 17:01	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		10/30/21 17:01	75-25-2	
Bromomethane	ND	ug/L	25.0	2.3	5		10/30/21 17:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		10/30/21 17:01	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		10/30/21 17:01	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		10/30/21 17:01	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		10/30/21 17:01	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		10/30/21 17:01	75-00-3	
Chloroform	ND	ug/L	5.0	1.1	5		10/30/21 17:01	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		10/30/21 17:01	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		10/30/21 17:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.61	5		10/30/21 17:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		10/30/21 17:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.1	5		10/30/21 17:01	75-35-4	
cis-1,2-Dichloroethene	**7.6**	ug/L	5.0	0.64	5		10/30/21 17:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.51	5		10/30/21 17:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		10/30/21 17:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		10/30/21 17:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		10/30/21 17:01	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		10/30/21 17:01	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		10/30/21 17:01	591-78-6	
Methylene Chloride	**2.6J**	ug/L	5.0	2.0	5		10/30/21 17:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		10/30/21 17:01	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		10/30/21 17:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.77	5		10/30/21 17:01	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.6	5		10/30/21 17:01	127-18-4	
Toluene	**2.4J**	ug/L	5.0	1.3	5		10/30/21 17:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.54	5		10/30/21 17:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.71	5		10/30/21 17:01	79-00-5	
Trichloroethene	**176**	ug/L	5.0	1.0	5		10/30/21 17:01	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.84	5		10/30/21 17:01	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		10/30/21 17:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		5		10/30/21 17:01	460-00-4	
Toluene-d8 (S)	99	%	80-120		5		10/30/21 17:01	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		5		10/30/21 17:01	2199-69-1	
Preservation pH	**1.0**		0.10		5		10/30/21 17:01		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: RW-1-202110 **Lab ID: 60384461003** Collected: 10/22/21 09:00 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	50.0	12.7	5		10/30/21 17:16	67-64-1	
Benzene	ND	ug/L	5.0	0.68	5		10/30/21 17:16	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.78	5		10/30/21 17:16	75-27-4	
Bromoform	ND	ug/L	5.0	3.4	5		10/30/21 17:16	75-25-2	
Bromomethane	ND	ug/L	25.0	2.3	5		10/30/21 17:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	5		10/30/21 17:16	78-93-3	
Carbon disulfide	ND	ug/L	25.0	4.9	5		10/30/21 17:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.86	5		10/30/21 17:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.44	5		10/30/21 17:16	108-90-7	
Chloroethane	ND	ug/L	5.0	1.9	5		10/30/21 17:16	75-00-3	
Chloroform	**4.9J**	ug/L	5.0	1.1	5		10/30/21 17:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1.4	5		10/30/21 17:16	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.5	5		10/30/21 17:16	124-48-1	
1,1-Dichloroethane	**0.79J**	ug/L	5.0	0.61	5		10/30/21 17:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.1	5		10/30/21 17:16	107-06-2	
1,1-Dichloroethene	**36.0**	ug/L	5.0	1.1	5		10/30/21 17:16	75-35-4	
cis-1,2-Dichloroethene	**2580**	ug/L	200	25.8	200		11/01/21 18:07	156-59-2	
trans-1,2-Dichloroethene	**4.1J**	ug/L	5.0	0.51	5		10/30/21 17:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.70	5		10/30/21 17:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.39	5		10/30/21 17:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.91	5		10/30/21 17:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.60	5		10/30/21 17:16	100-41-4	
2-Hexanone	ND	ug/L	50.0	5.5	5		10/30/21 17:16	591-78-6	
Methylene Chloride	**4.9J**	ug/L	5.0	2.0	5		10/30/21 17:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	3.7	5		10/30/21 17:16	108-10-1	
Styrene	ND	ug/L	5.0	0.62	5		10/30/21 17:16	100-42-5	
1,1,2,2-Tetrachloroethane	**1.4J**	ug/L	5.0	0.77	5		10/30/21 17:16	79-34-5	
Tetrachloroethene	**12.0**	ug/L	5.0	1.6	5		10/30/21 17:16	127-18-4	
Toluene	**3.5J**	ug/L	5.0	1.3	5		10/30/21 17:16	108-88-3	
1,1,1-Trichloroethane	**8.4**	ug/L	5.0	0.54	5		10/30/21 17:16	71-55-6	
1,1,2-Trichloroethane	**1.5J**	ug/L	5.0	0.71	5		10/30/21 17:16	79-00-5	
Trichloroethene	**36000**	ug/L	200	42.0	200		11/01/21 18:07	79-01-6	
Vinyl chloride	**12.7**	ug/L	5.0	0.84	5		10/30/21 17:16	75-01-4	
Xylene (Total)	ND	ug/L	15.0	1.4	5		10/30/21 17:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		5		10/30/21 17:16	460-00-4	
Toluene-d8 (S)	97	%	80-120		5		10/30/21 17:16	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		5		10/30/21 17:16	2199-69-1	
Preservation pH	**1.0**		0.10		5		10/30/21 17:16		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: MW-82-202110 **Lab ID: 60384461004** Collected: 10/22/21 08:30 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/30/21 17:32	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/30/21 17:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/30/21 17:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/30/21 17:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/30/21 17:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/30/21 17:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/30/21 17:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/30/21 17:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/30/21 17:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/30/21 17:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/30/21 17:32	67-66-3	
Chloromethane	**0.52J**	ug/L	1.0	0.28	1		10/30/21 17:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/30/21 17:32	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/21 17:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/30/21 17:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/30/21 17:32	75-35-4	
cis-1,2-Dichloroethene	**0.83J**	ug/L	1.0	0.13	1		11/01/21 13:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/30/21 17:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/30/21 17:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/30/21 17:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/30/21 17:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/30/21 17:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/30/21 17:32	591-78-6	
Methylene Chloride	**2.1**	ug/L	1.0	0.39	1		10/30/21 17:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/30/21 17:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/21 17:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/21 17:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/30/21 17:32	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/30/21 17:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/21 17:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/30/21 17:32	79-00-5	
Trichloroethene	**40.0**	ug/L	1.0	0.21	1		11/01/21 13:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/30/21 17:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/30/21 17:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/30/21 17:32	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		10/30/21 17:32	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/30/21 17:32	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/30/21 17:32		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: TB-06-202110 **Lab ID: 60384461005** Collected: 10/22/21 09:33 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		10/30/21 17:48	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		10/30/21 17:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		10/30/21 17:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		10/30/21 17:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		10/30/21 17:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		10/30/21 17:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		10/30/21 17:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		10/30/21 17:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		10/30/21 17:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		10/30/21 17:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		10/30/21 17:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		10/30/21 17:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		10/30/21 17:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/21 17:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		10/30/21 17:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/30/21 17:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		11/01/21 12:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		10/30/21 17:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		10/30/21 17:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		10/30/21 17:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		10/30/21 17:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		10/30/21 17:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		10/30/21 17:48	591-78-6	
Methylene Chloride	**2.4**	ug/L	1.0	0.39	1		10/30/21 17:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		10/30/21 17:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/21 17:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/21 17:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		10/30/21 17:48	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		10/30/21 17:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/21 17:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		10/30/21 17:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		11/01/21 12:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		10/30/21 17:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		10/30/21 17:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		10/30/21 17:48	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/30/21 17:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		10/30/21 17:48	2199-69-1	
Preservation pH	**1.0**		0.10		1		10/30/21 17:48		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: TMW-19-202110 **Lab ID: 60384461006** Collected: 10/22/21 09:06 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Indicator Gases Water LHC	Analytical Method: AM20GAX Pace Analytical Gulf Coast								
Methane	ND	ug/L	5.0	2.0	1		11/05/21 16:50	74-82-8	
Ethane	**0.20J**	ug/L	1.0	0.17	1		11/05/21 16:50	74-84-0	
Ethene	ND	ug/L	1.0	0.24	1		11/05/21 16:50	74-85-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Iron	**3270**	ug/L	50.0	21.4	1	11/02/21 11:00	11/03/21 18:49	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		11/01/21 13:20	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		11/01/21 13:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		11/01/21 13:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		11/01/21 13:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		11/01/21 13:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		11/01/21 13:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		11/01/21 13:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		11/01/21 13:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		11/01/21 13:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		11/01/21 13:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		11/01/21 13:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		11/01/21 13:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		11/01/21 13:20	124-48-1	
1,1-Dichloroethane	**0.32J**	ug/L	1.0	0.12	1		11/01/21 13:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		11/01/21 13:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		11/01/21 13:20	75-35-4	
cis-1,2-Dichloroethene	**2.6**	ug/L	1.0	0.13	1		11/01/21 13:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		11/01/21 13:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		11/01/21 13:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		11/01/21 13:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		11/01/21 13:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		11/01/21 13:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		11/01/21 13:20	591-78-6	
Methylene Chloride	**2.5**	ug/L	1.0	0.39	1		11/01/21 13:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		11/01/21 13:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/21 13:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/21 13:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		11/01/21 13:20	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		11/01/21 13:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/21 13:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		11/01/21 13:20	79-00-5	
Trichloroethene	**40.4**	ug/L	1.0	0.21	1		11/01/21 13:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		11/01/21 13:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		11/01/21 13:20	1330-20-7	

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Sample: TMW-19-202110 **Lab ID: 60384461006** Collected: 10/22/21 09:06 Received: 10/22/21 15:32 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Surrogates									
4-Bromofluorobenzene (S)	89	%	80-120		1		11/01/21 13:20	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		11/01/21 13:20	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	105	%	80-120		1		11/01/21 13:20	2199-69-1	
Preservation pH	**1.0**		0.10		1		11/01/21 13:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**81.1**	mg/L	20.0	7.8	20		11/01/21 15:45	16887-00-6	B,M1
Sulfate	**11.7**	mg/L	1.0	0.42	1		11/02/21 13:45	14808-79-8	M1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
	Pace Analytical Services - Kansas City								
Nitrogen, NO2 plus NO3	**0.13**	mg/L	0.10	0.066	1		10/29/21 15:15		
5310C TOC	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Total Organic Carbon	**1.4**	mg/L	1.0	0.30	1		11/03/21 15:51	7440-44-0	
5310C Diss. Organic Carbon LF	Analytical Method: SM 5310C								
	Pace Analytical Services - Kansas City								
Dissolved Organic Carbon	**1.4**	mg/L	1.0	0.30	1		10/29/21 13:00		
Low Level Volatile Fatty Acids	Analytical Method: AM23G								
	Pace Analytical Gulf Coast								
Lactic Acid	**1.1**	mg/L	0.50	0.053	1		11/20/21 00:25	50-21-5	H1
Acetic Acid	**0.27J**	mg/L	0.50	0.12	1		11/20/21 00:25	64-19-7	H1
Propionic Acid	ND	mg/L	0.50	0.053	1		11/20/21 00:25	79-09-4	H1
Formic acid	**5.4**	mg/L	0.50	0.055	1		11/20/21 00:25	64-18-6	H1
Butyric Acid	ND	mg/L	0.50	0.058	1		11/20/21 00:25	107-92-6	H1
Pyruvic Acid	ND	mg/L	0.50	0.060	1		11/20/21 00:25	127-17-3	H1
i-Pentanoic Acid	ND	mg/L	0.50	0.061	1		11/20/21 00:25	503-74-2	H1
Pentanoic Acid	ND	mg/L	0.50	0.056	1		11/20/21 00:25	109-52-4	H1
i-Hexanoic Acid	ND	mg/L	0.50	0.056	1		11/20/21 00:25	646-07-1	H1
Hexanoic Acid	**0.12J**	mg/L	0.50	0.058	1		11/20/21 00:25	142-62-1	H1

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 725913
QC Batch Method: AM20GAX
Analysis Method: AM20GAX
Analysis Description: Indicator Gases Water LHC
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 2267597
Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	5.0	2.0	11/05/21 13:43	
Ethane	ug/L	ND	1.0	0.17	11/05/21 13:43	
Ethene	ug/L	ND	1.0	0.24	11/05/21 13:43	
Acetylene	ug/L	ND	0.50	0.13	11/05/21 13:43	

LABORATORY CONTROL SAMPLE & LCSD: 2267598 2267599

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	380	360	340	93	88	70-130	5	20	
Ethane	ug/L	97	98	95	101	98	70-130	3	20	
Ethene	ug/L	120	120	110	98	95	70-130	3	20	
Acetylene	ug/L	30	29	28	96	93	70-130	3	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753096
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3014307 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	21.4	11/03/21 18:28	

LABORATORY CONTROL SAMPLE: 3014308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10100	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014309 3014310

Parameter	Units	60383996041 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	17200	10000	10000	27100	27100	99	99	75-125	0	20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753168
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461002, 60384461003, 60384461004, 60384461005

METHOD BLANK: 3014836
Matrix: Water
Associated Lab Samples: 60384461001, 60384461002, 60384461003, 60384461004, 60384461005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/21 13:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/21 13:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	10/30/21 13:02	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	10/30/21 13:02	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/30/21 13:02	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	10/30/21 13:02	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	10/30/21 13:02	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	10/30/21 13:02	
2-Hexanone	ug/L	ND	10.0	1.1	10/30/21 13:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	10/30/21 13:02	
Acetone	ug/L	ND	10.0	2.5	10/30/21 13:02	
Benzene	ug/L	ND	1.0	0.14	10/30/21 13:02	
Bromodichloromethane	ug/L	ND	1.0	0.16	10/30/21 13:02	
Bromoform	ug/L	ND	1.0	0.68	10/30/21 13:02	
Bromomethane	ug/L	ND	5.0	0.46	10/30/21 13:02	
Carbon disulfide	ug/L	ND	5.0	0.98	10/30/21 13:02	
Carbon tetrachloride	ug/L	ND	1.0	0.17	10/30/21 13:02	
Chlorobenzene	ug/L	ND	1.0	0.089	10/30/21 13:02	
Chloroethane	ug/L	ND	1.0	0.37	10/30/21 13:02	
Chloroform	ug/L	ND	1.0	0.22	10/30/21 13:02	
Chloromethane	ug/L	ND	1.0	0.28	10/30/21 13:02	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	10/30/21 13:02	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	10/30/21 13:02	
Dibromochloromethane	ug/L	ND	1.0	0.30	10/30/21 13:02	
Ethylbenzene	ug/L	ND	1.0	0.12	10/30/21 13:02	
Methylene Chloride	ug/L	ND	1.0	0.39	10/30/21 13:02	
Styrene	ug/L	ND	1.0	0.12	10/30/21 13:02	
Tetrachloroethene	ug/L	ND	1.0	0.33	10/30/21 13:02	
Toluene	ug/L	ND	1.0	0.25	10/30/21 13:02	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	10/30/21 13:02	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	10/30/21 13:02	
Trichloroethene	ug/L	ND	1.0	0.21	10/30/21 13:02	
Vinyl chloride	ug/L	ND	1.0	0.17	10/30/21 13:02	
Xylene (Total)	ug/L	ND	3.0	0.28	10/30/21 13:02	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/30/21 13:02	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/21 13:02	
Toluene-d8 (S)	%	101	80-120		10/30/21 13:02	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

LABORATORY CONTROL SAMPLE: 3014837

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	75-125	
1,1,2-Trichloroethane	ug/L	20	19.4	97	80-120	
1,1-Dichloroethane	ug/L	20	18.3	92	75-125	
1,1-Dichloroethene	ug/L	20	21.8	109	80-120	
1,2-Dichloroethane	ug/L	20	18.9	94	75-120	
1,2-Dichloropropane	ug/L	20	18.8	94	80-125	
2-Butanone (MEK)	ug/L	100	97.2	97	40-150	
2-Hexanone	ug/L	100	99.0	99	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.3	94	65-140	
Acetone	ug/L	100	112	112	20-175	
Benzene	ug/L	20	19.2	96	80-120	
Bromodichloromethane	ug/L	20	18.9	94	80-125	
Bromoform	ug/L	20	21.2	106	60-135	
Bromomethane	ug/L	20	19.7	99	10-165	
Carbon disulfide	ug/L	20	19.6	98	75-135	
Carbon tetrachloride	ug/L	20	19.5	98	80-125	
Chlorobenzene	ug/L	20	19.9	99	80-120	
Chloroethane	ug/L	20	17.8	89	70-130	
Chloroform	ug/L	20	19.0	95	80-120	
Chloromethane	ug/L	20	18.4	92	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.9	99	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.7	99	80-125	
Dibromochloromethane	ug/L	20	19.5	98	70-120	
Ethylbenzene	ug/L	20	20.4	102	80-120	
Methylene Chloride	ug/L	20	18.8	94	75-120	
Styrene	ug/L	20	20.8	104	80-120	
Tetrachloroethene	ug/L	20	20.1	100	80-120	
Toluene	ug/L	20	19.5	97	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.7	98	75-120	
Trichloroethene	ug/L	20	19.0	95	80-120	
Vinyl chloride	ug/L	20	18.4	92	65-130	
Xylene (Total)	ug/L	60	61.6	103	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			101	80-120	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753272
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461003, 60384461004, 60384461005, 60384461006

METHOD BLANK: 3015397
Matrix: Water
Associated Lab Samples: 60384461001, 60384461003, 60384461004, 60384461005, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/21 12:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/21 12:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	11/01/21 12:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	11/01/21 12:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	11/01/21 12:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	11/01/21 12:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	11/01/21 12:32	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	11/01/21 12:32	
2-Hexanone	ug/L	ND	10.0	1.1	11/01/21 12:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	11/01/21 12:32	
Acetone	ug/L	ND	10.0	2.5	11/01/21 12:32	
Benzene	ug/L	ND	1.0	0.14	11/01/21 12:32	
Bromodichloromethane	ug/L	ND	1.0	0.16	11/01/21 12:32	
Bromoform	ug/L	ND	1.0	0.68	11/01/21 12:32	
Bromomethane	ug/L	ND	5.0	0.46	11/01/21 12:32	
Carbon disulfide	ug/L	ND	5.0	0.98	11/01/21 12:32	
Carbon tetrachloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Chlorobenzene	ug/L	ND	1.0	0.089	11/01/21 12:32	
Chloroethane	ug/L	ND	1.0	0.37	11/01/21 12:32	
Chloroform	ug/L	ND	1.0	0.22	11/01/21 12:32	
Chloromethane	ug/L	ND	1.0	0.28	11/01/21 12:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	11/01/21 12:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	11/01/21 12:32	
Dibromochloromethane	ug/L	ND	1.0	0.30	11/01/21 12:32	
Ethylbenzene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Methylene Chloride	ug/L	ND	1.0	0.39	11/01/21 12:32	
Styrene	ug/L	ND	1.0	0.12	11/01/21 12:32	
Tetrachloroethene	ug/L	ND	1.0	0.33	11/01/21 12:32	
Toluene	ug/L	ND	1.0	0.25	11/01/21 12:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	11/01/21 12:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	11/01/21 12:32	
Trichloroethene	ug/L	ND	1.0	0.21	11/01/21 12:32	
Vinyl chloride	ug/L	ND	1.0	0.17	11/01/21 12:32	
Xylene (Total)	ug/L	ND	3.0	0.28	11/01/21 12:32	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		11/01/21 12:32	
4-Bromofluorobenzene (S)	%	99	80-120		11/01/21 12:32	
Toluene-d8 (S)	%	99	80-120		11/01/21 12:32	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

LABORATORY CONTROL SAMPLE: 3015398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.4	97	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	75-125	
1,1,2-Trichloroethane	ug/L	20	19.2	96	80-120	
1,1-Dichloroethane	ug/L	20	16.5	82	75-125	
1,1-Dichloroethene	ug/L	20	19.7	99	80-120	
1,2-Dichloroethane	ug/L	20	18.4	92	75-120	
1,2-Dichloropropane	ug/L	20	19.1	96	80-125	
2-Butanone (MEK)	ug/L	100	92.1	92	40-150	
2-Hexanone	ug/L	100	90.8	91	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	88.0	88	65-140	
Acetone	ug/L	100	93.3	93	20-175	
Benzene	ug/L	20	20.1	101	80-120	
Bromodichloromethane	ug/L	20	18.5	93	80-125	
Bromoform	ug/L	20	18.4	92	60-135	
Bromomethane	ug/L	20	17.2	86	10-165	
Carbon disulfide	ug/L	20	19.2	96	75-135	
Carbon tetrachloride	ug/L	20	19.1	95	80-125	
Chlorobenzene	ug/L	20	19.2	96	80-120	
Chloroethane	ug/L	20	18.2	91	70-130	
Chloroform	ug/L	20	18.6	93	80-120	
Chloromethane	ug/L	20	17.3	86	35-155	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.3	96	80-125	
Dibromochloromethane	ug/L	20	18.7	93	70-120	
Ethylbenzene	ug/L	20	19.9	100	80-120	
Methylene Chloride	ug/L	20	19.2	96	75-120	
Styrene	ug/L	20	22.0	110	80-120	
Tetrachloroethene	ug/L	20	19.9	100	80-120	
Toluene	ug/L	20	18.8	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-120	
Trichloroethene	ug/L	20	18.9	94	80-120	
Vinyl chloride	ug/L	20	17.1	85	65-130	
Xylene (Total)	ug/L	60	60.2	100	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			96	80-120	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 752763
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001

METHOD BLANK: 3012967
Matrix: Water
Associated Lab Samples: 60384461001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.026	10/29/21 08:31	

LABORATORY CONTROL SAMPLE: 3012968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012969 3012970

Parameter	Units	60384023001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	1.3	1	1	2.0	2.0	67	69	75-125	1	20	H1,M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753201
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3015142 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.44J	1.0	0.39	11/01/21 10:44	
Sulfate	mg/L	ND	1.0	0.42	11/01/21 10:44	

METHOD BLANK: 3016683 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.39	11/02/21 08:12	
Sulfate	mg/L	ND	1.0	0.42	11/02/21 08:12	

METHOD BLANK: 3017448 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.46J	1.0	0.39	11/03/21 08:08	
Sulfate	mg/L	ND	1.0	0.42	11/03/21 08:08	

LABORATORY CONTROL SAMPLE: 3015143

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 3016684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

LABORATORY CONTROL SAMPLE: 3017449

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	100	90-110	
Sulfate	mg/L	5	5.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3015144 3015145

Parameter	Units	60384500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	255	250	250	484	479	91	89	80-120	1	15	
Sulfate	mg/L	352	250	250	589	584	95	93	80-120	1	15	

MATRIX SPIKE SAMPLE: 3015146

Parameter	Units	60384461006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	81.1	100	207	126	80-120	M1
Sulfate	mg/L	11.7	5	19.3	152	80-120	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753086
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3014270
Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.066	10/29/21 15:09	

LABORATORY CONTROL SAMPLE: 3014271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 3014272

Parameter	Units	60383737043 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.095J	5	90-110	M1

MATRIX SPIKE SAMPLE: 3014274

Parameter	Units	60384407001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	2	0.11	5	90-110	M1

SAMPLE DUPLICATE: 3014273

Parameter	Units	60384461001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 753710
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461001, 60384461006

METHOD BLANK: 3016768 Matrix: Water
Associated Lab Samples: 60384461001, 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.30	11/02/21 17:10	

LABORATORY CONTROL SAMPLE: 3016769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	4.7	94	80-120	

MATRIX SPIKE SAMPLE: 3016770

Parameter	Units	60384565013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.6	5	7.5	97	80-120	

SAMPLE DUPLICATE: 3016771

Parameter	Units	60384565015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	2.7	2.6	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 752988
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60384461006

METHOD BLANK: 3013841
Matrix: Water
Associated Lab Samples: 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.30	10/29/21 09:45	

LABORATORY CONTROL SAMPLE: 3013842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5	4.7	93	80-120	

MATRIX SPIKE SAMPLE: 3013843

Parameter	Units	60383737041 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.6	5	7.4	95	80-120	

SAMPLE DUPLICATE: 3013844

Parameter	Units	60383737044 Result	Dup Result	RPD	Max RPD	Qualifiers
Dissolved Organic Carbon	mg/L	8.3	8.2	2	25	

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

QC Batch: 727188
QC Batch Method: AM23G
Analysis Method: AM23G
Analysis Description: Low Level Volatile Fatty Acids
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 60384461006

METHOD BLANK: 2275299
Matrix: Water
Associated Lab Samples: 60384461006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lactic Acid	mg/L	ND	0.50	0.053	11/20/21 03:18	
Acetic Acid	mg/L	ND	0.50	0.12	11/20/21 03:18	
Propionic Acid	mg/L	ND	0.50	0.053	11/20/21 03:18	
Formic acid	mg/L	ND	0.50	0.055	11/20/21 03:18	
Butyric Acid	mg/L	ND	0.50	0.058	11/20/21 03:18	
Pyruvic Acid	mg/L	ND	0.50	0.060	11/20/21 03:18	
i-Pentanoic Acid	mg/L	ND	0.50	0.061	11/20/21 03:18	
Pentanoic Acid	mg/L	ND	0.50	0.056	11/20/21 03:18	
i-Hexanoic Acid	mg/L	ND	0.50	0.056	11/20/21 03:18	
Hexanoic Acid	mg/L	ND	0.50	0.058	11/20/21 03:18	

LABORATORY CONTROL SAMPLE & LCSD: 2275300 2275301

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lactic Acid	mg/L	2	2.2	2.2	113	110	70-130	3	20	
Acetic Acid	mg/L	2	2.0	2.0	100	101	70-130	1	20	
Propionic Acid	mg/L	2	2.1	2.2	107	109	70-130	2	20	
Formic acid	mg/L	2	2.0	2.0	103	102	70-130	1	20	
Butyric Acid	mg/L	2	2.0	1.9	103	97	70-130	6	20	
Pyruvic Acid	mg/L	2	2.2	2.2	112	112	70-130	0	20	
i-Pentanoic Acid	mg/L	2	2.0	1.9	102	98	70-130	5	20	
Pentanoic Acid	mg/L	2	2.0	2.0	100	100	70-130	0	20	
i-Hexanoic Acid	mg/L	2	2.2	2.2	111	111	70-130	1	20	
Hexanoic Acid	mg/L	2	2.0	2.0	100	101	70-130	1	20	

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 60384461

[1]	In the [ANAL_METHOD] analysis, sample [LAB_SAMP][CUST_SAMP_ID] was conducted outside of the recognized method holding time.

BATCH QUALIFIERS

Batch: 753168

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

Batch: 753272

[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.
H1	Analysis conducted outside the EPA method holding time.
H1	Extraction or preparation was conducted outside of the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384461

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60384461001	**MW-25R-202110**	AM20GAX	725913		
60384461006	**TMW-19-202110**	AM20GAX	725913		
60384461001	**MW-25R-202110**	EPA 3010	753096	EPA 6010	753599
60384461006	**TMW-19-202110**	EPA 3010	753096	EPA 6010	753599
60384461001	**MW-25R-202110**	EPA 5030B/8260	753168		
60384461001	**MW-25R-202110**	EPA 5030B/8260	753272		
60384461002	**IW-77-202110**	EPA 5030B/8260	753168		
60384461003	**RW-1-202110**	EPA 5030B/8260	753168		
60384461003	**RW-1-202110**	EPA 5030B/8260	753272		
60384461004	**MW-82-202110**	EPA 5030B/8260	753168		
60384461004	**MW-82-202110**	EPA 5030B/8260	753272		
60384461005	**TB-06-202110**	EPA 5030B/8260	753168		
60384461005	**TB-06-202110**	EPA 5030B/8260	753272		
60384461006	**TMW-19-202110**	EPA 5030B/8260	753272		
60384461001	**MW-25R-202110**	SM 4500-S-2 D	752763		
60384461001	**MW-25R-202110**	EPA 300.0	753201		
60384461006	**TMW-19-202110**	EPA 300.0	753201		
60384461001	**MW-25R-202110**	EPA 353.2	753086		
60384461006	**TMW-19-202110**	EPA 353.2	753086		
60384461001	**MW-25R-202110**	SM 5310C	753710		
60384461006	**TMW-19-202110**	SM 5310C	753710		
60384461006	**TMW-19-202110**	SM 5310C	752988		
60384461006	**TMW-19-202110**	AM23G	727188		

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Sample Condition Upon Receipt

WO# : 60384461

60384461

Client Name: Rambo 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 ☒ 2pIC

Thermometer Used: T-299 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 0.3 **Corr. Factor** -0.2 **Corrected** 0.1

Date and initials of person examining contents: JLH 10/28/21

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:	☐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) LOT# 603222	☒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: _____

REVIEWED
By jchurch at 3:39 pm, 10/28/21

Project Manager Review: _____ Date: _____

F-KS-C-003-Rev 11, February 28, 2018

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60384461

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: Haley Ahlers

Site Collection Info/Address:

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR County/City: Ft Smith Time Zone Collected: PT MT (CT) ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected by (print): David Meyer

Purchase Order #:

DW PWS ID #:

Quote #:

DW Location Code #:

Collected by (signature):

Turnaround Date Required:

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH:
Same Day Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

Lab Project Manager: Jamie Church

Container Preservative Type **: 3 U 4/5 2 U 1 D O D

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAE

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	Chloride Sulfate, Nitrate	Sulfate (Dw) Sulfide	Nitrate (Dw)	TOC	DOC	6010 Iron	Methane/Ethane/Ethene AM20GAX	Volatile Fatty Acids	Methane / Ethane / Ethene / Acetylene	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
MW-2SR-202110	GW	G	10-22-21	0830					X	X	X		X		X			X	3VGAH 3DG9Q BPBU BPBN BPB2 AG3
IW-77-202110	GW	G	10-22-21	0905					X										↓
RW-1-202110	GW	G	10-22-21	0900					X										
MW-82-202110	GW	G	10-22-21	0830					X										
TB-06-202110	GW	G	10-22-21	0932					X										
+MW-19-202110	GW	G	10-22-21	0906				AG2U	X	X	X	X (Dw)	X	X	X	X	X	BPBU	2VGAH 3VGAH 3DG9Q 20THR ↓ ↓ ↓

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #:
Cooler Temp Upon Receipt oC
Cooler Therm Corr. Factor oC
Cooler Temp Corrected 0.1 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
(Ramboll)	10/22/21 1530		10-22/1532
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	10-22/1625	SPECKERS PACE	10/22/21 1532
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

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

October 28, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383775

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60383775

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383775001	**TMW-10-202110**	Water	10/19/21 14:31	10/20/21 08:00
60383775002	**MW-50R-202111**	Water	10/19/21 14:32	10/20/21 08:00

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

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

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

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without the written consent of Pace Analytical Services, LLC.

REPORT TO:
Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS
email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)
Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS
email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

microbialinsights
10515 Research Dr
Knoxville, TN 37932
865-573-8188
www.microbe.com

Project Manager: Michael Wilson
Project Name: Whirlpool, Ft. Smith, AR
Project No.: 1690021278

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☒ More samples to follow
☐ No Additional Samples

Report Type: ☐ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (35%)

EDD type: ☐ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information						Analyses				CENSUS: Please select the target organism/gene																						
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers	PLFA	NGS	QuantArray Chlor	QuantArray Petro	DHC (Dehalococcoides)	DHC Functional genes (bvc, tce, vcr)	DHBt (Dehalobacter)	DHG (Dehalogenimonas)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Dentrifiers-nirS and nirK)	AMO (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Napthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	RNA (Expression Option)*	Other: VC - Reductase	Other:	Other:
060SJ1	TMW-10-202110	10/19/21	1431		1					X																					X		
2	MW-50R-202110	10/19/21	1432		1					X																					X		

Relinquished by: Caroline Chavers Date 10/19/21 Received by: Fedex Date 10/19/21 10/20/21

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

*Additional cost and sample preservation are associated with RNA samples.

**Saturday delivery: See sampling protocol for alternate shipping address.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Jamie Church
Pace Analytical Labs
4120 Seven Hills Dr
Florrisant, MO 63033

Phone:

Fax:

Identifier: 060SJ **Date Rec:** 10/20/2021 **Report Date:** 10/27/2021

Client Project #: 60383775 **Client Project Name:** Whirlpool, Ft. Smith, AR

Purchase Order #: SUB-105150

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

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

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Pace Analytical Labs**
Project: Whirlpool, Ft. Smith, AR

MI Project Number: **060SJ**
Date Received: 10/20/2021

Sample Information

Client Sample ID:	**TMW-10-202110**	**MW-50R-202110**
Sample Date:	10/19/2021	10/19/2021
Units:	cells/mL	cells/mL
Analyst/Reviewer:	BB/CS	BB/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**1.14E+03**	**2.50E+00**
tceA Reductase	TCE	**3.25E+02**	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	**2.90E+02**	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **10/20/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/20/2021	10/27/2021	0 °C	102%	non-detect	non-detect
BVC	10/20/2021	10/27/2021	0 °C	111%	non-detect	non-detect
TCE	10/20/2021	10/27/2021	0 °C	106%	non-detect	non-detect
VCR	10/20/2021	10/27/2021	0 °C	106%	non-detect	non-detect

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

October 28, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384159

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

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

SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60384159

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60384159001	**MW-89-202110**	Water	10/20/21 13:55	10/21/21 10:30
60384159002	**TMW-11-202110**	Water	10/20/21 09:10	10/21/21 10:30

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Pace Analytical Services, LLC
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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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REPORT TO:

Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS

email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)

Name: David Meyer
Company: Ramboll
Address: 10851 Mastin, Suite 100
Overland Park, KS

email: dmeyer@ramboll.com
Phone: (316) 617-4785
Fax:

microbialinsights

10515 Research Dr
Knoxville, TN 37932
865-573-8188

www.microbe.com

Project Manager: Michael Wilson
Project Name: Whirlpool - Ft. Smith, AR
Project No.: 16900-21278

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☒ More samples to follow
☐ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data (15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive (15%) ☐ Historical Interpretive (35%)

EDD type: ☒ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information						Analyses				CENSUS: Please select the target organism/gene																							
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers	PLFA	NGS	QuantArray Chlor	QuantArray Petro	DHC (Dehaloccoides)	DHC Functional genes (bvc, tce, vcr)	DHBt (Dehalobacter)	DHG (Dehalogenimonas)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Dentrifiers-nirS and nirK)	AMO (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Napthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	RNA (Expression Option)*	Other: VC Reductase	Other:	Other:
070551	MW-89-202110	10-20-21	1355		1					X																					X		
2	TMW-11-202110	10-20-21	0910		1					X																					X		

DM

Relinquished by: David Meyer Date 10-20-21 Received by: FedEx Date 10-20-21 AJ Hayde 10/21/21 1030

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

* additional cost and sample preservation are associated with RNA samples.

**Saturday delivery: See sampling protocol for alternate shipping address.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Jamie Church
Pace Analytical Labs
4120 Seven Hills Dr
Florrisant, MO 63033

Phone:

Fax:

Identifier: 070SJ **Date Rec:** 10/21/2021 **Report Date:** 10/27/2021

Client Project #: 60384159 **Client Project Name:** Whirlpool, Ft. Smith, AR

Purchase Order #:

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

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

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Pace Analytical Labs**
Project: Whirlpool, Ft. Smith, AR

MI Project Number: **070SJ**
Date Received: 10/21/2021

Sample Information

Client Sample ID:	**MW-89-202110**	**TMW-11-202110**
Sample Date:	10/20/2021	10/20/2021
Units:	cells/mL	cells/mL
Analyst/Reviewer:	BB/CS	BB/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**7.02E+01**	**2.14E+02**
tceA Reductase	TCE	<5.00E-01	**1.38E+01**
BAV1 Vinyl Chloride Reductase	BVC	**1.80E+00**	**1.00E+00**
Vinyl Chloride Reductase	VCR	**7.00E-01**	**1.21E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **10/21/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/21/2021	10/27/2021	0 °C	98%	non-detect	non-detect
BVC	10/21/2021	10/27/2021	0 °C	111%	non-detect	non-detect
TCE	10/21/2021	10/27/2021	0 °C	106%	non-detect	non-detect
VCR	10/21/2021	10/27/2021	0 °C	106%	non-detect	non-detect

Attachment D

Data Validation Report

LEVEL II DATA VALIDATION REVIEW

Second Semi-Annual Groundwater Monitoring Event 2021

Whirlpool Corporation

Fort Smith, Arkansas

Laboratory Sample Delivery Groups (SDGs): 60383737, 60383878, 60383996, 60384461, and 10584567

Laboratory: Pace Analytical Services, LLC located in Lenexa, Kansas, and Minneapolis, Minnesota

Reviewer: Kristin Drucquer

Date: January 13, 2021

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 semi-annual groundwater sampling event at the Whirlpool Corporation, Fort Smith, Arkansas site (Site) from October 18-22, 2021.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following document: *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (OSWER 9355.0-136, EPA-540-R-2017-002, January 2017) and *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review* (OSWER 9355.0-135, EPA-540-R-2017-001, January 2017).

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness, and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability of the data.

One hundred one (101) groundwater samples, 23 air samples, 11 blind groundwater field duplicates, two air field duplicates, four equipment rinsate blanks and nine trip blanks were analyzed for one or more of the following analyses:

- Volatile organic compounds (VOCs) by USEPA 8260;
- VOCs by USEPA TO-15;
- Chloride and sulfate by USEPA 300.0;
- Nitrate, nitrite, and nitrogen as nitrite and nitrate by USEPA 353.2;
- Iron by USEPA 6010;
- Sulfide by Standard Method (SM) 4500-S2-D;
- Alkalinity, bicarbonate, and carbonate by SM2320B;
- Total organic carbon (TOC) and dissolved organic carbon (DOC) by SM5310C;
- Dissolved gases (acetylene, methane, ethane, ethene, and hydrogen) by Method AM20GAX; and
- Volatile fatty acids by Method AM23G.

Pace Analytical Services, LLC (Pace) located in Lenexa, Kansas, analyzed all the aqueous samples, with the exception of the analyses for dissolved gases and volatile fatty acids. Pace Analytical Gulf Coast located in Baton Rouge, Louisiana performed the analysis for dissolved gases and volatile fatty acids. The air analyses were performed by Pace located in Minneapolis, Minnesota.

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: 60383737			
MW-187-202110	SA	60383737001	Aqueous
MW-203-202110	SA	60383737002	Aqueous
EB-02-202110	EB	60383737003	Aqueous
MW-188-202110	SA	60383737004	Aqueous
MW-55R-202110	SA	60383737005	Aqueous
TB-01-202110	TB	60383737006	Aqueous
TB-02-202110	TB	60383737007	Aqueous
TB-03-202110	TB	60383737008	Aqueous
MW-183R-202110	SA	60383737009	Aqueous
MW-200-202110	SA	60383737010	Aqueous
MW-184-202110	SA	60383737011	Aqueous
DUP-01-202110	FD	60383737012	Aqueous
MW-60R-202110	SA	60383737013	Aqueous
ITMW-2R-202110	SA	60383737014	Aqueous
MW-196-202110	SA	60383737015	Aqueous
ITMW-16-202110	SA	60383737016	Aqueous
MW-26-202110	SA	60383737017	Aqueous
TMW-27-202110	SA	60383737018	Aqueous
MW-201-202110	SA	60383737019	Aqueous
MW-29-202110	SA	60383737020	Aqueous
MW-195-202110	SA	60383737021	Aqueous
DUP-05-202110	FD	60383737022	Aqueous
MW-68-202110	SA	60383737023	Aqueous
MW-40R-202110	SA	60383737024	Aqueous
MW-96-202110	SA	60383737025	Aqueous
DUP-02-202110	FD	60383737026	Aqueous
TMW-29-202110	SA	60383737027	Aqueous
TMW-20-202110	SA	60383737028	Aqueous
TMW-35-202110	SA	60383737029	Aqueous
DUP-06-202110	FD	60383737030	Aqueous
MW-39R-202110	SA	60383737031	Aqueous
MW-191-202110	SA	60383737032	Aqueous
MW-27-202110	SA	60383737033	Aqueous
EB-01-202110	EB	60383737034	Aqueous
MW-98-202110	SA	60383737035	Aqueous
MW-62R-202110	SA	60383737036	Aqueous
MW-28-202110	SA	60383737037	Aqueous
ITMW-20-202110	SA	60383737038	Aqueous
DUP-03-202110	FD	60383737039	Aqueous
MW-97-202110	SA	60383737040	Aqueous
TMW-10-202110	SA	60383737041	Aqueous
MW-50R-202110	SA	60383737042	Aqueous
TMW-16-202110	SA	60383737043	Aqueous
MW-186-202110	SA	60383737044	Aqueous
TWM-36-202110	SA	60383737045	Aqueous
TMW-36B-202110	SA	60383737046	Aqueous
MW-99-202110	SA	60383737047	Aqueous

Field ID	Sample Type	Lab ID	Matrix
TMW-26-202110	SA	60383737048	Aqueous
SDG: 60383878			
TMW-25-202110	SA	60383878001	Aqueous
TMW-21-202110	SA	60383878002	Aqueous
MW-61R-202110	SA	60383878003	Aqueous
MW-194-202110	SA	60383878004	Aqueous
TMW-32-202110	SA	60383878005	Aqueous
TMW-34-202110	SA	60383878006	Aqueous
TMW-11-202110	SA	60383878007	Aqueous
MW-89-202110	SA	60383878008	Aqueous
MW-22-202110	SA	60383878009	Aqueous
MW-195-202110	SA	60383878010	Aqueous
ITMW-7-202110	SA	60383878011	Aqueous
MW-206-202110	SA	60383878012	Aqueous
ITMW-21-202110	SA	60383878013	Aqueous
DUP-04-202110	FD	60383878014	Aqueous
MW-176-202110	SA	60383878015	Aqueous
TMW-14-202110	SA	60383878016	Aqueous
MW-83-202110	SA	60383878017	Aqueous
MW-202-202110	SA	60383878018	Aqueous
VP-12-202110	SA	60383878019	Aqueous
MW-63R-202110	SA	60383878020	Aqueous
MW-204-202110	SA	60383878021	Aqueous
ITMW-1R-202110	SA	60383878022	Aqueous
TMW-23-202110	SA	60383878023	Aqueous
TB-04-202110	TB	60383878024	Aqueous
DUP-09-202110	FD	60383878026	Aqueous
TB-05-202110	TB	60383878027	Aqueous
EB-03-202110	EB	60383878028	Aqueous
MW-175-202110	SA	60383878029	Aqueous
SDG: 60383996			
VP-14-202110	SA	60383996001	Aqueous
VP-8-202110	SA	60383996002	Aqueous
MW-190-202110	SA	60383996003	Aqueous
VP-10-202110	SA	60383996004	Aqueous
ITMW-6-202110	SA	60383996005	Aqueous
ITMW-5-202110	SA	60383996006	Aqueous
MW-84-202110	SA	60383996007	Aqueous
MW-46R-202110	SA	60383996008	Aqueous
EB-04-202110	EB	60383996009	Aqueous
TB-01-202110	TB	60383996010	Aqueous
TMW-30-202110	SA	60383996011	Aqueous
DUP-11-202110	FD	60383996012	Aqueous
MW-56R-202110	SA	60383996013	Aqueous
TMW-24-202110	SA	60383996014	Aqueous
MW-57R-202110	SA	60383996015	Aqueous
MW-93-202110	SA	60383996016	Aqueous
MW-205-202110	SA	60383996017	Aqueous
MW-189-202110	SA	60383996018	Aqueous
MW-178-202110	SA	60383996019	Aqueous
MW-179-202110	SA	60383996020	Aqueous

Field ID	Sample Type	Lab ID	Matrix
ITMW-18-202110	SA	60383996021	Aqueous
MW-199-202110	SA	60383996022	Aqueous
MW-24-202110	SA	60383996023	Aqueous
ITMW-19-202110	SA	60383996024	Aqueous
MW-182-202110	SA	60383996025	Aqueous
ITMW-10-202110	SA	60383996026	Aqueous
TMW-12-202110	SA	60383996027	Aqueous
DUP-08-202110	FD	60383996028	Aqueous
DUP-10-202110	FD	60383996029	Aqueous
DUP-07-202110	FD	60383996030	Aqueous
TB-07-202110	TB	60383996031	Aqueous
TB-08-202110	TB	60383996032	Aqueous
MW-38-202110	SA	60383996033	Aqueous
RW-69-202110	SA	60383996034	Aqueous
MW-87-202110	SA	60383996035	Aqueous
MW-189-202110	SA	60383996036	Aqueous
ITMW-9-202110	SA	60383996037	Aqueous
IW-73-202110	SA	60383996038	Aqueous
MW-58R-202110	SA	60383996039	Aqueous
MW-95-202110	SA	60383996040	Aqueous
MW-91-202110	SA	60383996041	Aqueous
TMW-22R-202110	SA	60383996042	Aqueous
MW-185-202110	SA	60383996043	Aqueous
SDG 60384461			
MW-25R-202110	SA	60384461001	Aqueous
IW-77-202110	SA	60384461002	Aqueous
RW-1-202110	SA	60384461003	Aqueous
MW-82-202110	SA	60384461004	Aqueous
TB-06-202110	TB	60384461005	Aqueous
TMW-19-202110	SA	60384461006	Aqueous
SDG 10584567			
AA-1-202110	SA	10584567001	Air
Z5-OF-IA-202110	SA	10584567002	Air
Z6-1-IA-202110	SA	10584567003	Air
Z5-1-IA-202110	SA	10584567004	Air
Z6-2-IA-202110	SA	10584567005	Air
Z6-2-IA-202110 DUP	FD	10584567006	Air
Z5-2-IA-202110	SA	10584567007	Air
Z1-1-IA-202110	SA	10584567008	Air
Z2-1-IA-202110	SA	10584567009	Air
Z4-2-IA-202110	SA	10584567010	Air
Z3-2-IA-202110	SA	10584567011	Air
Z4-1-IA-202110	SA	10584567012	Air
Z3-1-IA-202110	SA	10584567013	Air
AA-2-202110	SA	10584567014	Air
Z6-2-SS-202110	SA	10584567015	Air
Z6-2-SS-202110 DUP	FD	10584567016	Air
Z5-2-SS-202110	SA	10584567017	Air
Z1-1-SS-202110	SA	10584567018	Air
Z3-2-SS-202110	SA	10584567019	Air
Z4-2-SS-202110	SA	10584567020	Air

Field ID	Sample Type	Lab ID	Matrix
Z2-1-SS-202110	SA	10584567021	Air
Z3-1-SS-202110	SA	10584567022	Air
Z4-1-SS-202110	SA	10584567023	Air
Z5-1-SS-202110	SA	10584567024	Air
Z6-1-SS-202110	SA	10584567025	Air
Z5-OF-SS-202110	SA	10584567026	Air

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate EB = Equipment Blank

The laboratory reports were evaluated for the following QC elements:

- Data Package Completeness;
- Sample Preservation and Holding Times;
- Blanks;
- Surrogate Compound Recoveries;
- Laboratory Control Sample (LCS);
- Matrix Spike/Matrix Spike Duplicates (MS/MSD);
- Laboratory and Field Precision; and
- Overall Assessment of Data.

General Overall Assessment:

_____ Data are usable without qualification.

___X___ Data are usable with qualification (noted below).

___X___ Some or all data are unusable for any purpose (detailed below).

1.0 Data Package Completeness

Were all items delivered as specified on the chain-of-custody (COC) and is the data package complete?

The analyses were performed as requested on the COC record, with several exceptions:

- The laboratory did not report hydrogen analyses for 11 samples collected at locations TMW-11, MW-89, MW-50R, MW-38, RW-69, MW-87, MW-198, ITMW-9, IW-73, MW-58R, and MW-95. These samples were submitted to the laboratory for hydrogen analysis, but the samples were inadvertently disposed of before analysis.
- The analysis for nitrate was not reported for sample MW-25R-202110 due to a laboratory login error.
- The vials submitted for the sample collected at location IW-78 were received broken at the laboratory. Results were not reported for this sample.

Five results were rejected during data validation for nitrogen, nitrate, and nitrite analysis by USEPA 353.2. The percent completeness for method USEPA 353.2 is 94%, and 100% for all other methods, with no additional data rejected as a result of the data validation.

2.0 Technical Holding Times and Sample Preservation

Were samples received within the required temperature and preservation requirements?

No. All samples were received within the required temperature criteria. All samples were received within the required preservation requirements, with one exception. The post-analysis pH measurement for VOCs was measured at 6.0 for sample MW-84-202110. The analysis for VOCs was performed within 7-days for a non-preserved sample; therefore, no data were qualified.

Were samples extracted/analyzed within method specific holding time requirements?

No. Some samples submitted for volatile fatty acids, dissolved gases, and nitrogen (total, nitrate, and nitrite) were analyzed outside the required method hold times. The following data were qualified for hold time exceedances:

- Forty-four (44) results for dissolved gases were qualified as estimated "J" or estimated non-detect "UJ" in samples: ITMW-9-202110, ITMW-9-202110, MW-185-202110, MW-198-202110, MW-38-202110, MW-58R-202110, MW-87-202110, MW-91-202110, MW-95-202110, RW-69-202110, and TMW-22R-202110.
- Fifty (50) results for volatile fatty acids were qualified as estimated "J" or estimated non-detect "UJ" in samples: MW-185-202110, MW-91-202110, TMW-10-202110, TMW-19-202110, and TMW-22R-202110.
- Samples TMW-16-202110 and TMW-36B-202110 were analyzed outside the hold time for total nitrogen, nitrate, and nitrite. Non-detect results were qualified "R" as rejected because the hold time was grossly exceeded. Detected results for total nitrogen and nitrate for sample TMW-36B-202110 were qualified "J" as estimated.

3.0 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
60383737 60383878 60383996	3010348	Method	Chloride	0.45 J	mg/L
60383996	3011019	Method	Chloride	0.39 J	mg/L
60383996	3014118	Method	Chloride	0.45 J	mg/L
60384461	3015142	Method	Chloride	0.44 J	mg/L
60384461	3017448	Method	Chloride	0.46 J	mg/L
60383737	EB-02-202110	Equipment	Methylene Chloride	0.43 J	µg/L
60384461	TB-06-202110	Trip	Methylene Chloride	2.4	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
mg/L = milligrams per liter

The associated results were either non-detect or were greater than five times (10X) the associated blank concentrations; therefore, no data were qualified.

4.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes. Three surrogates (4-bromofluorobenzene, 1,2-dichloroethane-d4, and toluene-d8) were added to each aqueous sample analyzed for VOCs to evaluate the laboratory performance on individual

samples. Percent recoveries for all volatile surrogates in all samples analyzed for VOCs were within the laboratory acceptance limits.

5.0 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.

6.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No. The LCS, and laboratory control sample duplicate (LCSD) when analyzed, provide information on the accuracy of the analytical method and on the laboratory performance. LCS/LCSD recoveries which were outside acceptance evaluation criteria are summarized in the table below.

SDG	Batch ID	Analyte	LCS/LCSD Recovery (%)	LCS/LCSD Recovery Criteria (%)
60383737	751594	2-Butanone	157%	40-150
60383737	751819	Methylene Chloride	121%	75-120
60383996	752748	1,1-Dichloroethene	79%	80-120
60383996	753288	Bromoform	141%	60-135

LCS = Laboratory Control Sample LCSD = Laboratory Control Sample Duplicate % = Percent

Results that are qualified due to LCS recoveries are summarized in the table below.

SDG	Field ID	Analyte	Qualification
60383996	EB-04-202110	1,1-Dichloroethene	UJ
60383996	MW-46R-202110	1,1-Dichloroethene	J-
60383996	TB-01-202110	1,1-Dichloroethene	UJ

ID = Identification UJ = Estimated non-detect J = Estimated J+ = Estimated with a high bias
J- = Estimated with a low bias

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples reported as part of these SDGs?

Yes. MS/MSD data are used to assess long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery at the time of sample analysis.

Were MS/MSD recoveries within evaluation criteria?

No. MS/MSD recoveries which were outside acceptance evaluation criteria are summarized in the table below.

SDG	Sample ID	Analyte	MS/MSD Recovery (%)	MS/MSD Recovery Criteria (%)
60383737	MW-60R-202110	1,2-Dichloropropane	**61**/69	65-130
60383737	MW-60R-202110	Bromodichloromethane	**56/65**	70-130
60383737	MW-60R-202110	Carbon Tetrachloride	**63/69**	70-140
60383737	MW-60R-202110	Chlorobenzene	**62**/71	65-130
60383737	MW-60R-202110	Chloroform	**61/69**	70-125
60383737	MW-60R-202110	cis-1,3-Dichloropropene	**57/67**	60-125
60383737	MW-60R-202110	Dibromochloromethane	**57/64**	65-120
60383737	MW-60R-202110	Styrene	**24/31**	40-145
60383737	MW-60R-202110	trans-1,3-Dichloropropene	**55**/63	60-120
60383737	TMW-16-202110	Nitrogen	**5**	90-110
60383737	MW-99-202110	Dissolved Organic Carbon	**121**	80-120
60383996	IW-73-202110	Chloride	115/**123**	80-120
60384461	TMW-19-202110	Chloride	**126**	80-120
60384461	TMW-19-202110	Sulfate	**152**	80-120

MS = Matrix Spike MSD = Matrix Spike Duplicate % = Percent

Only the parent samples spiked were evaluated for qualification. Non-detect results associated with low recoveries were qualified "UJ" as estimated non-detect with a low bias. The result for nitrogen for sample TMW-16-202110 was rejected because the associated MS recovery was below 10%. Results associated with high recoveries were qualified "J+" as estimated with a high bias and non-detect result were not qualified. MS/MSD recoveries that were outside the control limits but the concentrations in the non-spiked samples exceeded 4x the spike concentrations were not evaluated. MS/MSD recoveries for non-project samples were not evaluated.

Results that are qualified due to MS/MSD recoveries are summarized in the table below.

SDG	Field ID	Analyte	Qualification
60383737	MW-60R-202110	Bromodichloromethane	UJ
60383737	MW-60R-202110	Carbon Tetrachloride	UJ
60383737	MW-60R-202110	Chloroform	UJ
60383737	MW-60R-202110	Chlorobenzene	UJ
60383737	MW-60R-202110	Dibromochloromethane	UJ
60383737	MW-60R-202110	Styrene	UJ
60383737	MW-60R-202110	cis-1,3-Dichloropropene	UJ
60383737	MW-60R-202110	1,2-Dichloropropane	UJ
60383737	MW-60R-202110	trans-1,3-Dichloropropene	UJ
60383737	TMW-16-202110	Nitrogen	R
60383737	MW-99-202110	Organic Carbon (dissolved)	J+
60383996	IW-73-202110	Chloride	J+
60384461	TMW-19-202110	Chloride	J+
60384461	TMW-19-202110	Sulfate	J+

ID = Identification UJ = Estimated non-detect J = Estimated J+ = Estimated with a high bias
J- = Estimated with a low bias R = Rejected

8.0 Laboratory Duplicate Results

Were laboratory duplicate samples performed as part of this SDG?

Yes, laboratory duplicates, when required by the method were analyzed. The RPDs for trichloroethene and vinyl chloride were above the acceptance limit of 25% for the laboratory duplicate prepared from air sample Z3-1-SS-202110. The results for vinyl chloride in the laboratory duplicate pair were above

the calibration range; therefore, the laboratory duplicate RPD was not used to assess precision. The result for trichloroethene was qualified "J" as estimate in sample Z3-1-SS-202110 for the laboratory duplicate nonconformance.

9.0 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 Identification
60383737	MW-184-202110	DUP-01-202110
60383737	MW-195-202110	DUP-05-202110
60383737	MW-196-202110	DUP-02-202110
60383737	TMW-35-202110	DUP-06-202110
60383737	ITMW-20-202110	DUP-03-202110
60383878	ITMW-21-202110	DUP-04-202110
60383878	IW-78-202110	DUP-09-202110
60383996	TMW-30-202110	DUP-11-202110
60383996	TMW-12-202110	DUP-08-202110
60383996	MW-182-202110	DUP-10-202110
60383996	MW-24-202110	DUP-07-202110
10584567	Z6-2-IA-202110	Z6-2-IA-202110 DUP
10584567	Z6-2-SS-202110	Z6-2-SS-202110 DUP

Were field duplicates within evaluation criteria?

Yes. RPDs were calculated for results that were above the reporting limit in both the parent sample and field duplicate. All calculated RPDs were within 30%. The sample containers for IW-78-202110, the parent sample for DUP-09-202110, were broken in transit to the laboratory and not anlayzed.

10.0 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 above the RL.

For samples that were not diluted and detected, were the results within calibration range?

Yes. Results reported between the MDL and RL were qualified "J" as estimated.

11.0 Additional Qualifications

Were additional qualifications applied?

No.

12.0 Overall Data Assessment

The data that are not rejected 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. Data qualified "R" as rejected are not usable. The table below summarizes the final qualifications for the analytical data.

Data Qualifier Summary:

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60384461002	IW-77-202110	Methylene Chloride	J	Result < RL
60384461002	IW-77-202110	Toluene	J	Result < RL
60384461006	TMW-19-202110	Ethane	J+	Result < RL
60384461006	TMW-19-202110	Butyric acid	J	Hold time exceeded
60384461006	TMW-19-202110	1-Butanecarboxylic Acid	J	Hold time exceeded
60384461006	TMW-19-202110	Pyruvic Acid	J	Hold time exceeded
60384461006	TMW-19-202110	1,1-Dichloroethane	J+	Result < RL
60384461006	TMW-19-202110	Propionic Acid	J	Hold time exceeded
60384461006	TMW-19-202110	Chloride	J+	MS recovery high
60384461006	TMW-19-202110	Sulfate	J+	MS recovery high
60384461006	TMW-19-202110	n-Hexanoic acid	J	Hold time exceeded; Result < RL
60384461006	TMW-19-202110	Lactic Acid	J	Hold time exceeded
60384461006	TMW-19-202110	3-methyl-Butanoic acid	J	Hold time exceeded
60384461006	TMW-19-202110	Formic acid	J	Hold time exceeded
60384461006	TMW-19-202110	Acetic acid	J	Hold time exceeded; Result < RL
60384461006	TMW-19-202110	4-methyl-pentanoic acid	J	Hold time exceeded
60383996028	DUP-08-202110	Vinyl Chloride	J	Result < RL
60383996028	DUP-08-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996029	DUP-10-202110	Benzene	J	Result < RL
60383996012	DUP-11-202110	Trichloroethene	J	Result < RL
60383996012	DUP-11-202110	cis-1,2-Dichloroethene	J	Result < RL
60383996009	EB-04-202110	1,1-Dichloroethene	UJ	LCS recovery low
60383996026	ITMW-10-202110	1,1-Dichloroethane	J	Result < RL
60383996026	ITMW-10-202110	1,1-Dichloroethene	J	Result < RL
60383996026	ITMW-10-202110	Vinyl Chloride	J	Result < RL
60383996026	ITMW-10-202110	Toluene	J	Result < RL
60383996024	ITMW-19-202110	1,1,2-Trichloroethane	J	Result < RL
60383996024	ITMW-19-202110	1,1,2,2-Tetrachloroethane	J	Result < RL
60383996024	ITMW-19-202110	Methylene Chloride	J	Result < RL
60383996024	ITMW-19-202110	Tetrachloroethene	J	Result < RL
60383996006	ITMW-5-202110	1,1-Dichloroethane	J	Result < RL
60383996006	ITMW-5-202110	Chloroform	J	Result < RL
60383996006	ITMW-5-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996018	MW-189-202110	1,1-Dichloroethane	J	Result < RL
60383996018	MW-189-202110	1,1-Dichloroethene	J	Result < RL
60383996018	MW-189-202110	Vinyl Chloride	J	Result < RL
60383996018	MW-189-202110	Chloroform	J	Result < RL
60383996018	MW-189-202110	Chlorobenzene	J	Result < RL
60383996003	MW-190-202110	1,1-Dichloroethane	J	Result < RL
60383996003	MW-190-202110	1,1-Dichloroethene	J	Result < RL
60383996003	MW-190-202110	Vinyl Chloride	J	Result < RL
60383996036	MW-198-202110	Methane	J	Hold time exceeded
60383996036	MW-198-202110	Ethane	J	Hold time exceeded
60383996036	MW-198-202110	Ethene	J	Hold time exceeded
60383996036	MW-198-202110	Acetylene	J	Hold time exceeded
60383996036	MW-198-202110	1,1,2-Trichloroethane	J	Result < RL
60383996036	MW-198-202110	Bromodichloromethane	J	Result < RL
60383996036	MW-198-202110	Carbon Tetrachloride	J	Result < RL
60383996036	MW-198-202110	Benzene	J	Result < RL
60383996036	MW-198-202110	Toluene	J	Result < RL
60383996036	MW-198-202110	Organic Carbon (total)	J	Result < RL

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60383996036	MW-198-202110	Iron	J	Result < RL
60383996022	MW-199-202110	1,1-Dichloroethene	J	Result < RL
60383996022	MW-199-202110	1,1-Dichloroethane	J	Result < RL
60383996022	MW-199-202110	Chlorobenzene	J	Result < RL
60383996017	MW-205-202110	1,1,2-Trichloroethane	J	Result < RL
60383996017	MW-205-202110	1,1-Dichloroethane	J	Result < RL
60383996017	MW-205-202110	Vinyl Chloride	J	Result < RL
60383996017	MW-205-202110	Methylene Chloride	J	Result < RL
60383996017	MW-205-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996017	MW-205-202110	Tetrachloroethene	J	Result < RL
60383996023	MW-24-202110	Bromoform	J	Result < RL
60383996023	MW-24-202110	cis-1,2-Dichloroethene	J	Result < RL
60383996033	MW-38-202110	Methane	J	Hold time exceeded
60383996033	MW-38-202110	Ethane	J	Hold time exceeded; Result < RL
60383996033	MW-38-202110	Ethene	J	Hold time exceeded
60383996033	MW-38-202110	Acetylene	J	Hold time exceeded; Result < RL
60383996033	MW-38-202110	1,1-Dichloroethane	J	Result < RL
60383996033	MW-38-202110	Methylene Chloride	J	Result < RL
60383996033	MW-38-202110	Organic Carbon (total)	J	Result < RL
60383996033	MW-38-202110	Ethyl Benzene	J	Result < RL
60383996008	MW-46R-202110	1,1-Dichloroethene	J-	LCS recovery low
60383996008	MW-46R-202110	Vinyl Chloride	J	Result < RL
60383996008	MW-46R-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996040	MW-95-202110	Methane	J	Hold time exceeded; Result < RL
60383996040	MW-95-202110	Ethane	J	Hold time exceeded; Result < RL
60383996040	MW-95-202110	Ethene	UJ	Hold time exceeded
60383996040	MW-95-202110	Acetylene	UJ	Hold time exceeded
60383996040	MW-95-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996034	RW-69-202110	Methane	J	Hold time exceeded
60383996034	RW-69-202110	Ethane	UJ	Hold time exceeded
60383996034	RW-69-202110	Ethene	J	Hold time exceeded; Result < RL
60383996034	RW-69-202110	Acetylene	J	Hold time exceeded; Result < RL
60383996034	RW-69-202110	Vinyl Chloride	J	Result < RL
60383996034	RW-69-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996010	TB-01-202110	1,1-Dichloroethene	UJ	LCS recovery low
60383996027	TMW-12-202110	Vinyl Chloride	J	Result < RL
60383996027	TMW-12-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996014	TMW-24-202110	Vinyl Chloride	J	Result < RL
60383996014	TMW-24-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996011	TMW-30-202110	Trichloroethene	J	Result < RL
60383996011	TMW-30-202110	cis-1,2-Dichloroethene	J	Result < RL
60383996004	VP-10-202110	Vinyl Chloride	J	Result < RL
60383996004	VP-10-202110	Benzene	J	Result < RL
60383996004	VP-10-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996004	VP-10-202110	Toluene	J	Result < RL
60383878014	DUP-04-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878021	MW-204-202110	Chlorobenzene	J	Result < RL
60383878012	MW-206-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878003	MW-61R-202110	Vinyl Chloride	J	Result < RL
60383878003	MW-61R-202110	Organic Carbon (dissolved)	J	Result < RL

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60383878003	MW-61R-202110	Organic Carbon (total)	J	Result < RL
60383878003	MW-61R-202110	Lactic Acid	J	Result < RL
60383878003	MW-61R-202110	Acetic acid	J	Result < RL
60383878020	MW-63R-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878017	MW-83-202110	Dibromochloromethane	J	Result < RL
60383878017	MW-83-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878005	TMW-32-202110	Ethane	J	Result < RL
60383878005	TMW-32-202110	Vinyl Chloride	J	Result < RL
60383878005	TMW-32-202110	Organic Carbon (total)	J	Result < RL
60383878005	TMW-32-202110	Lactic Acid	J	Result < RL
60383878005	TMW-32-202110	Acetic acid	J	Result < RL
60383878019	VP-12-202110	Trichloroethene	J	Result < RL
60383737003	EB-02-202110	Methylene Chloride	J	Result < RL
60383737009	MW-183R-202110	Trichloroethene	J	Result < RL
60383737044	MW-186-202110	Ethane	J	Result < RL
60383737044	MW-186-202110	Ethene	J	Result < RL
60383737044	MW-186-202110	Trichloroethene	J	Result < RL
60383737044	MW-186-202110	Vinyl Chloride	J	Result < RL
60383737044	MW-186-202110	cis-1,2-Dichloroethene	J	Result < RL
60383737044	MW-186-202110	Toluene	J	Result < RL
60383737044	MW-186-202110	Sulfate	J	Result < RL
60383737044	MW-186-202110	Nitrogen	J	Result < RL
60383737044	MW-186-202110	Lactic Acid	J	Result < RL
60383737002	MW-203-202110	1,1-Dichloroethane	J	Result < RL
60383737002	MW-203-202110	1,1-Dichloroethene	J	Result < RL
60383737042	MW-50R-202110	Trichloroethene	J	Result < RL
60383737042	MW-50R-202110	Organic Carbon (total)	J	Result < RL
60383737013	MW-60R-202110	Bromodichloromethane	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	1,2-Dichloropropane	UJ	MS recovery low
60383737013	MW-60R-202110	Carbon Tetrachloride	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	Chloroform	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	Chlorobenzene	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	Dibromochloromethane	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	Styrene	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	cis-1,3-Dichloropropene	UJ	MS and MSD recoveries low
60383737013	MW-60R-202110	trans-1,3-Dichloropropene	UJ	MS recovery low
60383737041	TMW-10-202110	Trichloroethene	J	Result < RL
60383737041	TMW-10-202110	Benzene	J	Result < RL
60383737041	TMW-10-202110	cis-1,2-Dichloroethene	J	Result < RL
60383737041	TMW-10-202110	trans-1,2-Dichloroethene	J	Result < RL
60383737041	TMW-10-202110	Toluene	J	Result < RL
60383737041	TMW-10-202110	Formic acid	J	Hold time exceeded
60383737041	TMW-10-202110	Acetic acid	J	Hold time exceeded; Result < RL
60383737041	TMW-10-202110	4-methyl-pentanoic acid	UJ	Hold time exceeded
60383737041	TMW-10-202110	Propionic Acid	UJ	Hold time exceeded
60383737041	TMW-10-202110	Butyric acid	UJ	Hold time exceeded
60383737041	TMW-10-202110	1-Butanecarboxylic Acid	UJ	Hold time exceeded
60383737041	TMW-10-202110	Pyruvic Acid	UJ	Hold time exceeded

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60383737041	TMW-10-202110	n-Hexanoic acid	UJ	Hold time exceeded
60383737041	TMW-10-202110	Lactic Acid	J	Hold time exceeded
60383737041	TMW-10-202110	3-methyl-Butanoic acid	J	Hold time exceeded
60383737028	TMW-20-202110	cis-1,2-Dichloroethene	J	Result < RL
60383737048	TMW-26-202110	Ethane	J	Result < RL
60383737048	TMW-26-202110	Vinyl Chloride	J	Result < RL
60383737048	TMW-26-202110	cis-1,2-Dichloroethene	J	Result < RL
60383737048	TMW-26-202110	Butyric acid	J	Result < RL
60383737048	TMW-26-202110	Lactic Acid	J	Result < RL
60383737018	TMW-27-202110	Toluene	J	Result < RL
60383737045	TMW-36-202110	Ethane	J	Result < RL
60383737045	TMW-36-202110	Ethene	J	Result < RL
60383737045	TMW-36-202110	1,1-Dichloroethane	J	Result < RL
60383737045	TMW-36-202110	1,1-Dichloroethene	J	Result < RL
60383737045	TMW-36-202110	Vinyl Chloride	J	Result < RL
60383737045	TMW-36-202110	trans-1,2-Dichloroethene	J	Result < RL
60383737045	TMW-36-202110	Organic Carbon (total)	J	Result < RL
60383737045	TMW-36-202110	Organic Carbon (dissolved)	J	Result < RL
60383996035	MW-87-202110	1,1-Dichloroethane	J	Result < RL
60383996015	MW-57R-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996015	MW-57R-202110	Vinyl Chloride	J	Result < RL
60383996037	ITMW-9-202110	Methylene Chloride	J	Result < RL
60383996037	ITMW-9-202110	1,1,2-Trichloroethane	J	Result < RL
60383878007	TMW-11-202110	Toluene	J	Result < RL
60383878007	TMW-11-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878007	TMW-11-202110	Acetic acid	J	Result < RL
60383996035	MW-87-202110	Methane	UJ	Hold time exceeded
60383996035	MW-87-202110	Ethane	UJ	Hold time exceeded
60383996035	MW-87-202110	Ethene	UJ	Hold time exceeded
60383996035	MW-87-202110	Acetylene	UJ	Hold time exceeded
60383996037	ITMW-9-202110	Methane	J	Hold time exceeded
60383996037	ITMW-9-202110	Ethane	J	Hold time exceeded; Result < RL
60383996037	ITMW-9-202110	Ethene	UJ	Hold time exceeded
60383996037	ITMW-9-202110	Acetylene	J	Hold time exceeded; Result < RL
60383878007	TMW-11-202110	Ethane	J	Result < RL
60383878011	ITMW-7-202110	Benzene	J	Result < RL
60383996035	MW-87-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996035	MW-87-202110	Vinyl Chloride	J	Result < RL
60383878007	TMW-11-202110	Sulfide (total)	J	Result < RL
60383996035	MW-87-202110	Organic Carbon (total)	J	Result < RL
60383996037	ITMW-9-202110	Organic Carbon (total)	J	Result < RL
60383996037	ITMW-9-202110	Iron	J	Result < RL
60383737001	MW-187-202110	1,1-Dichloroethane	J	Result < RL
60383737001	MW-187-202110	1,1-Dichloroethene	J	Result < RL
60383737022	DUP-05-202110	Trichloroethene	J	Result < RL
60383737004	MW-188-202110	cis-1,2-Dichloroethene	J	Result < RL
60384461003	RW-1-202110	Toluene	J	Result < RL
60384461003	RW-1-202110	trans-1,2-Dichloroethene	J	Result < RL
60384461003	RW-1-202110	Chloroform	J	Result < RL
60384461003	RW-1-202110	Methylene Chloride	J	Result < RL
60384461003	RW-1-202110	1,1-Dichloroethane	J	Result < RL
60384461003	RW-1-202110	1,1,2-Trichloroethane	J	Result < RL
60384461003	RW-1-202110	1,1,2,2-Tetrachloroethane	J	Result < RL

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60383737043	TMW-16-202110	Nitrogen	R	Hold time exceeded
60383737043	TMW-16-202110	Nitrogen, Nitrate (As N)	R	Hold time exceeded
60383737043	TMW-16-202110	Nitrogen, Nitrite	R	Hold time exceeded
60383737043	TMW-16-202110	Nitrogen	R	MS recovery <10%
60383878002	TMW-21-202110	Nitrogen	J	Result < RL
60383878002	TMW-21-202110	Nitrogen, Nitrate (As N)	J	Result < RL
60383996043	MW-185-202110	Methane	J	Hold time exceeded; Result < RL
60383996043	MW-185-202110	Ethane	UJ	Hold time exceeded
60383996043	MW-185-202110	Ethene	UJ	Hold time exceeded
60383996043	MW-185-202110	Acetylene	UJ	Hold time exceeded
60383878002	TMW-21-202110	Ethane	J	Result < RL
60383996043	MW-185-202110	Butyric acid	UJ	Hold time exceeded
60383996043	MW-185-202110	1-Butanecarboxylic Acid	UJ	Hold time exceeded
60383996043	MW-185-202110	Pyruvic Acid	UJ	Hold time exceeded
60383996043	MW-185-202110	n-Hexanoic acid	UJ	Hold time exceeded
60383996043	MW-185-202110	Lactic Acid	J	Hold time exceeded
60383996043	MW-185-202110	3-methyl-Butanoic acid	UJ	Hold time exceeded
60383996043	MW-185-202110	Formic acid	J	Hold time exceeded
60383996043	MW-185-202110	Acetic acid	J	Hold time exceeded; Result < RL
60383996043	MW-185-202110	4-methyl-pentanoic acid	UJ	Hold time exceeded
60383996043	MW-185-202110	Propionic Acid	UJ	Hold time exceeded
60383878006	TMW-34-202110	Lactic Acid	J	Result < RL
60383878006	TMW-34-202110	Acetic acid	J	Result < RL
60383878002	TMW-21-202110	Lactic Acid	J	Result < RL
60383878002	TMW-21-202110	Acetic acid	J	Result < RL
60383737043	TMW-16-202110	Lactic Acid	J	Result < RL
60383737033	MW-27-202110	trans-1,2-Dichloroethene	J	Result < RL
60383737021	MW-195-202110	Trichloroethene	J	Result < RL
60383878002	TMW-21-202110	trans-1,2-Dichloroethene	J	Result < RL
60383878002	TMW-21-202110	Benzene	J	Result < RL
60383878006	TMW-34-202110	trans-1,2-Dichloroethene	J	Result < RL
60383878006	TMW-34-202110	1,1-Dichloroethane	J	Result < RL
60383878006	TMW-34-202110	Organic Carbon (total)	J	Result < RL
60383878006	TMW-34-202110	Organic Carbon (dissolved)	J	Result < RL
60383878002	TMW-21-202110	Organic Carbon (dissolved)	J	Result < RL
60383878002	TMW-21-202110	Organic Carbon (total)	J	Result < RL
60383996043	MW-185-202110	Organic Carbon (dissolved)	J	Result < RL
60383996043	MW-185-202110	Organic Carbon (total)	J	Result < RL
60383737043	TMW-16-202110	Toluene	J	Result < RL
60383737043	TMW-16-202110	Benzene	J	Result < RL
60383737043	TMW-16-202110	Vinyl Chloride	J	Result < RL
60383737043	TMW-16-202110	Trichloroethene	J	Result < RL
60383996043	MW-185-202110	Tetrachloroethene	J	Result < RL
60383996043	MW-185-202110	Vinyl Chloride	J	Result < RL
60383996043	MW-185-202110	1,1-Dichloroethane	J	Result < RL
60383996019	MW-178-202110	cis-1,2-Dichloroethene	J	Result < RL
60383996019	MW-178-202110	Acetone	J	Result < RL
60383878015	MW-176-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996016	MW-93-202110	1,1,1-Trichloroethane	J	Result < RL
60383996016	MW-93-202110	Vinyl Chloride	J	Result < RL
60383996016	MW-93-202110	1,1-Dichloroethane	J	Result < RL
60383996016	MW-93-202110	1,1,2-Trichloroethane	J	Result < RL
60383996007	MW-84-202110	Acetone	J	Result < RL

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60384461001	MW-25R-202110	1,1-Dichloroethane	J	Result < RL
60384461001	MW-25R-202110	1,1-Dichloroethene	J	Result < RL
60384461001	MW-25R-202110	1,1,2,2-Tetrachloroethane	J	Result < RL
60383996005	ITMW-6-202110	Tetrachloroethene	J	Result < RL
60383996005	ITMW-6-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996005	ITMW-6-202110	Chloroform	J	Result < RL
60383996005	ITMW-6-202110	1,1-Dichloroethane	J	Result < RL
60383996021	ITMW-18-202110	Bromodichloromethane	J	Result < RL
60383996021	ITMW-18-202110	1,1-Dichloroethane	J	Result < RL
60383996021	ITMW-18-202110	1,1,2-Trichloroethane	J	Result < RL
60384461001	MW-25R-202110	Toluene	J	Result < RL
60384461001	MW-25R-202110	Acetone	J	Result < RL
60384461001	MW-25R-202110	Chloroform	J	Result < RL
60384461001	MW-25R-202110	Benzene	J	Result < RL
60384461001	MW-25R-202110	Methylene Chloride	J	Result < RL
60383996002	VP-8-202110	Toluene	J	Result < RL
60383996002	VP-8-202110	cis-1,2-Dichloroethene	J	Result < RL
60383996002	VP-8-202110	Benzene	J	Result < RL
60383996002	VP-8-202110	2-Butanone	J	Result < RL
60383996042	TMW-22R-202110	Toluene	J	Result < RL
60383996042	TMW-22R-202110	Benzene	J	Result < RL
60383996042	TMW-22R-202110	1,1-Dichloroethene	J	Result < RL
60383996013	MW-56R-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996013	MW-56R-202110	Vinyl Chloride	J	Result < RL
60383996038	IW-73-202110	Toluene	J	Result < RL
60383996038	IW-73-202110	Vinyl Chloride	J	Result < RL
60383878008	MW-89-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878026	DUP-09-202110	Dibromochloromethane	J	Result < RL
60383878026	DUP-09-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878026	DUP-09-202110	Acetone	J	Result < RL
60383878026	DUP-09-202110	Chloromethane	J	Result < RL
60383878013	ITMW-21-202110	cis-1,2-Dichloroethene	J	Result < RL
60384461001	MW-25R-202110	Ethene	J	Result < RL
60384461001	MW-25R-202110	Acetylene	J	Result < RL
60383996042	TMW-22R-202110	Methane	J	Hold time exceeded
60383996042	TMW-22R-202110	Ethane	J	Hold time exceeded
60383996042	TMW-22R-202110	Ethene	J	Hold time exceeded
60383996042	TMW-22R-202110	Acetylene	UJ	Hold time exceeded
60383996038	IW-73-202110	Methane	J	Hold time exceeded; Result < RL
60383996038	IW-73-202110	Ethane	J	Hold time exceeded; Result < RL
60383996038	IW-73-202110	Ethene	UJ	Hold time exceeded
60383996038	IW-73-202110	Acetylene	UJ	Hold time exceeded
60383996042	TMW-22R-202110	Butyric acid	UJ	Hold time exceeded
60383996042	TMW-22R-202110	1-Butanecarboxylic Acid	UJ	Hold time exceeded
60383996042	TMW-22R-202110	Pyruvic Acid	UJ	Hold time exceeded
60383996042	TMW-22R-202110	n-Hexanoic acid	UJ	Hold time exceeded
60383996042	TMW-22R-202110	Lactic Acid	J	Hold time exceeded; Result < RL
60383996042	TMW-22R-202110	3-methyl-Butanoic acid	UJ	Hold time exceeded
60383996042	TMW-22R-202110	Formic acid	J	Hold time exceeded
60383996042	TMW-22R-202110	Acetic acid	J	Hold time exceeded; Result < RL
60383996042	TMW-22R-202110	4-methyl-pentanoic acid	UJ	Hold time exceeded

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60383996042	TMW-22R-202110	Propionic Acid	UJ	Hold time exceeded
60383737046	TMW-36B-202110	Lactic Acid	J	Result < RL
60383737046	TMW-36B-202110	Nitrogen	J	Hold time exceeded
60383737046	TMW-36B-202110	Nitrogen, Nitrate (As N)	J	Hold time exceeded
60383737046	TMW-36B-202110	Nitrogen, Nitrite	R	Hold time exceeded
60383996038	IW-73-202110	Chloride	J+	MS and MSD recoveries high
60384461001	MW-25R-202110	Organic Carbon (total)	J	Result < RL
60383737046	TMW-36B-202110	Organic Carbon (total)	J	Result < RL
60383737046	TMW-36B-202110	Organic Carbon (dissolved)	J	Result < RL
60383996042	TMW-22R-202110	Organic Carbon (total)	J	Result < RL
60383737005	MW-55R-202110	Vinyl Chloride	J	Result < RL
60383737005	MW-55R-202110	1,1-Dichloroethene	J	Result < RL
60384461004	MW-82-202110	Chloromethane	J	Result < RL
60384461004	MW-82-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878022	ITMW-1R-202110	Tetrachloroethene	J	Result < RL
60383878022	ITMW-1R-202110	trans-1,2-Dichloroethene	J	Result < RL
60383878022	ITMW-1R-202110	Benzene	J	Result < RL
60383878022	ITMW-1R-202110	1,1-Dichloroethene	J	Result < RL
60383996041	MW-91-202110	Butyric acid	UJ	Hold time exceeded
60383996041	MW-91-202110	1-Butanecarboxylic Acid	J	Hold time exceeded
60383996041	MW-91-202110	Pyruvic Acid	UJ	Hold time exceeded
60383996041	MW-91-202110	n-Hexanoic acid	UJ	Hold time exceeded
60383996041	MW-91-202110	Lactic Acid	J	Hold time exceeded
60383996041	MW-91-202110	3-methyl-Butanoic acid	UJ	Hold time exceeded
60383996041	MW-91-202110	Formic acid	J	Hold time exceeded
60383996041	MW-91-202110	Acetic acid	J	Hold time exceeded
60383996041	MW-91-202110	4-methyl-pentanoic acid	UJ	Hold time exceeded
60383996041	MW-91-202110	Propionic Acid	UJ	Hold time exceeded
60383878001	TMW-25-202110	Lactic Acid	J	Result < RL
60383878001	TMW-25-202110	Acetic acid	J	Result < RL
60383878004	MW-194-202110	Lactic Acid	J	Result < RL
60383996041	MW-91-202110	Methane	J	Hold time exceeded
60383996041	MW-91-202110	Ethane	J	Hold time exceeded; Result < RL
60383996041	MW-91-202110	Ethene	J	Hold time exceeded
60383996041	MW-91-202110	Acetylene	UJ	Hold time exceeded
60383996039	MW-58R-202110	Methane	J	Hold time exceeded
60383996039	MW-58R-202110	Ethane	J	Hold time exceeded; Result < RL
60383996039	MW-58R-202110	Ethene	J	Hold time exceeded; Result < RL
60383996039	MW-58R-202110	Acetylene	UJ	Hold time exceeded
60383878001	TMW-25-202110	Ethene	J	Result < RL
60383878004	MW-194-202110	Ethane	J	Result < RL
60383737047	MW-99-202110	Organic Carbon (dissolved)	J+	MS recovery high
60383878004	MW-194-202110	Organic Carbon (total)	J	Result < RL
60383878004	MW-194-202110	Organic Carbon (dissolved)	J	Result < RL
60383737047	MW-99-202110	4-Methyl-2-pentanone	J	Result < RL
60383737047	MW-99-202110	Toluene	J	Result < RL
60383737047	MW-99-202110	Benzene	J	Result < RL
60383878004	MW-194-202110	Acetic acid	J	Result < RL
60383878004	MW-194-202110	Nitrogen	J	Result < RL
60383878004	MW-194-202110	Nitrogen, Nitrate (As N)	J	Result < RL
60383878001	TMW-25-202110	Vinyl Chloride	J	Result < RL

Lab Sample ID	Field ID	Analyte	Qualifier	Reason for Qualification
60383878016	TMW-14-202110	cis-1,2-Dichloroethene	J	Result < RL
60383878016	TMW-14-202110	Trichloroethene	J	Result < RL
60383737047	MW-99-202110	Trichloroethene	J	Result < RL
60383737010	MW-200-202110	cis-1,2-Dichloroethene	J	Result < RL
60383737032	MW-191-202110	Trichloroethene	J	Result < RL
60383996041	MW-91-202110	Tetrachloroethene	J	Result < RL
60383996041	MW-91-202110	trans-1,2-Dichloroethene	J	Result < RL
60383996041	MW-91-202110	Benzene	J	Result < RL
60383996041	MW-91-202110	Vinyl Chloride	J	Result < RL
60383996041	MW-91-202110	1,1-Dichloroethene	J	Result < RL
60383996039	MW-58R-202110	1,1-Dichloroethene	J	Result < RL
60383996025	MW-182-202110	Benzene	J	Result < RL
10584567022	Z3-1-SS-202110	Trichloroethene	J	Lab duplicate RPD above control limit

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.

J+ = Estimated with a high bias. The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise.

J- = Estimated with a low bias. 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 another spike recovery.

R = Rejected. The sample results are unusable due to the quality of the data generated.

Attachment E

Supplemental Investigation Supporting Information

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-16		Date(s):	8/2/2021
Location:	Fort Smith, Arkansas		
Logged By:	D. Meyer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Soil Boring/Hydropunch
Drilling Method:	Direct Push	GS Elevation: 474.29 ft amsl	TOC Elevation: Not available
Sampling Method:	Continuous Sampler	North: 368005.59	East: 592078.36
Well Construction:		Borehole Dia.: 4 inches	Total Depth: 30.0 feet
Blank Casing:	Sch. 40 PVC 1 Inch 0 FT to 20 FT	Project Number:	1690017901
Screen:	Sch. 40 1 Inch 0.010 PVC 22.5 FT to 30 FT	Project Name:	Whirlpool Corporation
Annular Fill:	Outer rods acted as annular seal	Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		2.5					Concrete and gravel base		
				0.0		MH	Reddish brown silty clay, trace gravel, subrounded, stiff, moderate plasticity, dry		
		5				MH	Yellowish brown silty clay with gray mottling, moderate plasticity, stiff, dry, stiffness increases with depth		
470	5			0.0					
		5							
465	10			0.0					
		5							
460	15			0.0					
						MH	Yellowish brown silty clay with gray mottling, trace fine-grained sand, moderate plasticity, stiff, dry		
		5				SP	Reddish brown clayey sand, fine-grained, cohesive, soft, slightly moist		
455						CH	Reddish brown sandy clay		
	20			0.0		SP	Brown clayey sand, with gray mottling, medium stiffness, slightly moist		
		2				GP	Reddish brown clayey gravel, subrounded, trace sand, cohesive, soft, wet		
450				6.8					
	25	2.5				GP	Reddish brown clayey gravel, subrounded, trace sand, cohesive, medium stiffness, dry, slightly moist at bottom		
				0.0					
		2.5							
				53.0					
445							Dark gray shale, dry, fissile		

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-17/MW-205		Date(s):	8/3/2021
Location:	Fort Smith, Arkansas		
Logged By:	D. Meyer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Monitoring Well
Drilling Method:	Hollow Stem Auger/Direct Push	GS Elevation:	474.81 ft amsl
		TOC Elevation:	474.66 ft amsl
Sampling Method:	Continuous Sampler	North:	368113.90
		East:	592095.48
Borehole Dia.:	8.25 inches	Total Depth:	29.0 feet
Project Number:	1690017901		
Project Name:	Whirlpool Corporation		
Remarks:			

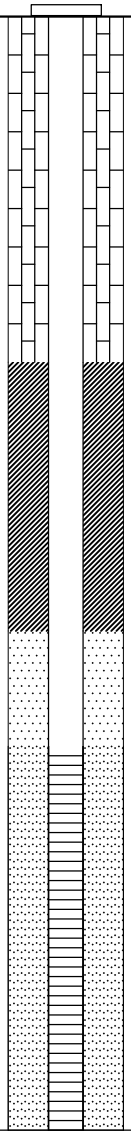
Well Construction:

Blank Casing:	Sch. 40 PVC 2 Inch	0 FT to 19 FT
Screen:	Sch. 40 2 Inch 0.010 PVC	19 FT to 29 FT
Annular Fill:	Cement Grout	0 FT to 9 FT
	Bentonite	9 FT to 16 FT
	Sand	16 FT to 29 FT

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level
		2		0.0			Concrete with subbase material	
						MH	Light brown clayey silt, trace black nodules, stiff, slightly plastic, dry	
		5						
470	5			0.0		MH	Reddish brown silty clay, frequent black nodules, stiff, moderate plasticity, dry	
		4		0.0				
465	10	2.5		0.0		CH	Reddish brown sandy clay, fine-grained, trace black nodules, non-plastic, cohesive, medium stiffness, dry	
		3.5		0.0				
460	15	2.5		1.1		SP	Reddish brown clayey sand, fine-grained, cohesive, soft, moist	
		5				GP	Reddish brown gravel with sand and clay, fine-grained, gravel subrounded, cohesive, soft, wet	
455	20			2.5				
		3				GP	Reddish brown gravel with sand and clay, fine-grained, gravel subrounded, cohesive, soft, dry	
450	25			1.0		GP	Reddish brown gravel with sand and clay, fine-grained, gravel subrounded, cohesive, soft, wet	
		2		4.0		GP	Reddish brown gravel with sand and clay, fine-grained, gravel subrounded, cohesive, soft, moist	
							Shale	

Well Construction

Flush Mount



Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-18		Date(s):	8/3/2021
Location:	Fort Smith, Arkansas		
Logged By:	D. Meyer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Soil Boring/Hydropunch
Drilling Method:	Direct Push	GS Elevation: 469.79 ft amsl	TOC Elevation: Not available
Sampling Method:	Continuous Sampler	North: 367852.28	East: 592077.89
Borehole Dia.:	4 inches	Total Depth:	29.0 feet
Project Number:	1690017901		
Project Name:	Whirlpool Corporation		
Remarks:			

Well Construction:

Blank Casing: Sch. 40 PVC 1 Inch 0 FT to 19 FT

Screen: Sch. 40 1 Inch 0.010 PVC 19 FT to 29 FT

Annular Fill: Bentonite 15 FT to 17 FT; Sand 17 FT to 29 FT

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		4		0.0			Concrete and sub-base		
						MH	Reddish brown clayey silt, trace black nodules, trace gravel, subrounded, slightly plastic, stiff, dry		
		5					Unable to remove sample from outer casing		
465	5			0.0					
		2		0.0		MH	Reddish brown silty clay, with gray mottling, moderate plasticity, stiff, dry		
460	10	4		0.0					
		3		0.0			Increasing softness with depth		
455	15	4		0.0					
		2.5		0.0		SP	Light brown clayey sand, trace gray mottling, trace fine-grained sand, soft, cohesive, moist at bottom 6"		
450	20	2.5		0.0		GP	Brown gravel with sand and clay, subrounded, cohesive, soft, moist		
		3.5				GP	Brown gravel with sand and clay, subrounded, cohesive, soft, wet		
445	25			0.0		GP	Brown gravel with sand and clay, subrounded, cohesive, soft, saturated		
		3		0.0		GP	Brown gravel with sand and clay, subrounded, cohesive, soft, wet		
						MH	Reddish brown clayey silt, stiff, noncohesive, non-plastic, dry		
							Dark gray shale, hard, laminated		

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-19/MW-206		Date(s): **8/4/2021**	
Location: **Fort Smith, Arkansas**			
Logged By: **D. Meyer**		Checked By: **M. Wilson**	
Contractor: **Environmental Works, Inc.**		Purpose: **Soil Boring/Hydropunch**	
Drilling Method: **Direct Push**		GS Elevation: **476.74 ft amsl**	TOC Elevation: **476.43 ft amsl**
Sampling Method: **Continuous Sampler**		North: **367378.02**	East: **590376.54**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **32.5 feet**
Blank Casing: Sch. 40 PVC 2 Inch	0 FT to 22 FT	Project Number: **1690017901**	
Screen: Sch. 40 2 Inch 0.010 PVC	22 FT to 32 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	0 FT to 20 FT	Remarks:	
Sand	20 FT to 32 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		3					Concrete with sub-base gravel		
475				0.0		MH	Dark brown silty clay, with gravel, subangular, stiff, dry		
	5	1				MH	Reddish brown silty clay, non-plastic, stiff, dry		
470		5		0.0		MH	Brown silty clay, with red mottling, trace gravel, subrounded, up to 1/4", moderate plasticity, stiff, dry		
	10	5		0.0		MH	Brown silty clay, with gray mottling, slightly plastic, stiff, dry		
465		5				MH	Brown silty clay, with gray mottling, trace black nodules, slightly plastic, stiff, dry		
	15			0.0					
460		5		0.0		CL	Reddish brown sandy clay, with gray mottling, trace fine-grained sand, soft, plastic, dry		
	20	5		0.0					
455		4		0.0		CL	Brown sandy clay, with gray mottling, non-plastic, stiff, dry		
						SP	Brown clayey sand, trace gray mottling, trace sand and silt, cohesive, plastic, soft, moist		
	25	4				SP	Brown clayey sand, fine-grained, medium stiffness, cohesive, very moist		
450				0.0		SP	Light brown clayey sand, fine-grained, soft, saturated		
		3				GP	Clayey gravel, up to 1/2", subangular, stiff, dry		
				0.0		MH	Light brown silty clay, plastic, very stiff, slightly moist		

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-19/MW-206

Project Name: **Whirlpool Corporation**

Project Number: **1690017901**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
445		4				CL	Brown sandy clay, fine-grained, soft, cohesive, very moist		
						GP	Brown clayey gravel, with trace sand, fine-grained, subangular, slightly moist		
						MH	Clay, stiff		
							Gray shale, hard, laminated		
	35								
440									
	40								
435									
	45								
430									
	50								
425									
	55								
420									
	60								
415									
	65								
410									

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-20		Date(s): **8/4/2021**	
Location: **Fort Smith, Arkansas**			
Logged By: **D. Meyer**		Checked By: **M. Wilson**	
Contractor: **Environmental Works, Inc.**		Purpose: **Soil Boring/Hydropunch**	
Drilling Method: **Direct Push**		GS Elevation: **469.03 ft amsl**	TOC Elevation: **Not available**
Sampling Method: **Continuous Sampler**		North: **367461.49**	East: **590084.12**
Well Construction:		Borehole Dia.: **4 inches**	Total Depth: **25.0 feet**
Blank Casing: Sch. 40 PVC 1 Inch	0 FT to 18 FT	Project Number: **1690017901**	
Screen: Sch. 40 1 Inch 0.010 PVC	18 FT to 25 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	14 FT to 16 FT	Remarks:	
Sand	16 FT to 25 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		3		0.0			Asphalt with black sub-base gravel material		
465	5	2		0.0		MH	Light brown silty clay, trace gray mottling, soft, moderate plasticity, dry		
		3.5		0.0		MH	Reddish brown silty clay, with gray mottling, plastic, stiff, dry		
460	10	3		0.0		CL	Reddish brown sandy clay, with gray mottling, fine-grained, stiff, plastic, dry		
		5		0.0		MH	Reddish brown silty clay, with gray mottling, trace black nodules, stiff, moderate plasticity, dry		
455	15	2.5		0.0		SP	Light brown sand, fine-grained, soft, saturated		
450	20	2.5		1.7		CL	Reddish brown sandy clay, soft, cohesive, slightly moist		
						GP	Sandy gravel, trace clay, subrounded, up to 1/2", soft moist		
		3		0.6		CL	Brown sandy clay, trace gravel, with gray mottling, moderately stiff, moderate plasticity, slightly moist		
						GP	Reddish brown sandy gravel, 1/4' diameter, subrounded, soft, moist		
445	25					MH	Brown silty clay, slightly laminated, plastic, very stiff, dry		
							Dark gray shale, crumbly, laminated, stiff, dry		
440									

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-21		Date(s):	9/20/2021
Location:	Fort Smith, Arkansas		
Logged By:	D. Meyer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Soil Boring/Hydropunch
Drilling Method:	Direct Push	GS Elevation: 483.34 ft amsl	TOC Elevation: Not available
Sampling Method:	Continuous Sampler	North: 367626.26	East: 591460.31
Well Construction:		Borehole Dia.: 4 inches	Total Depth: 38.5 feet
Blank Casing:	Sch. 40 PVC 1 Inch 0 FT to 28.5 FT	Project Number:	1690017901
Screen:	Sch. 40 1 Inch 0.010 PVC 28.5 FT to 38.5 FT	Project Name:	Whirlpool Corporation
Annular Fill:		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		4					Asphalt with gravel subbase		
				0.0		MH	Brown clayey silt, stiff, dry		
480						MH	Yellowish brown silty clay, with gray and reddish brown mottling, soft, medium plasticity, dry		
	5	5		0.0					
475									
	10	5				MH	Reddish brown silty clay, trace black nodules, trace angular gravel, stiff, dry Increasing black nodules and stiffness with depth		
				0.0					
470									
	15	5				MH	Reddish brown silty clay, with gray mottling, stiff, moderate plasticity		
				0.0					
		5				MH	Reddish brown silty clay, trace gravel, with gray mottling, stiff, low plasticity, dry		
465	20			0.0					
		2.5				MH	Light brown silty clay with sand, fine-grained, with gray mottling, moderate stiffness and plasticity, dry Increasing sand content with depth		
460				0.0		CL	Brown sandy clay with gravel, fine-grained, subrounded, cohesive, moist, high plasticity		
	25	2.5		0.0					
		4				CL	Sandy clay with gravel, fine to coarse, subangular, moderate plasticity		
455				0.0					

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-21

Project Name: **Whirlpool Corporation**

Project Number: **1690017901**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
		4		0.0		CL			
		5							
450									
	35			0.0		SP	Light brown sand with gravel, non-cohesive, wet, gravel content increasing with depth		
445							Dark gray shale, hard, laminated, dry		
	40								
440									
	45								
435									
	50								
430									
	55								
425									
	60								
420									
	65								
415									

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-22		Date(s):	9/20/2021
Location:	Fort Smith, Arkansas		
Logged By:	D. Meyer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Soil Boring/Hydropunch
Drilling Method:	Direct Push	GS Elevation: 472.84 ft amsl	TOC Elevation: Not available
Sampling Method:	Continuous Sampler	North: 368223.13	East: 592333.47
Well Construction:		Borehole Dia.: 4 inches	Total Depth: 27.0 feet
Blank Casing:	Sch. 40 PVC 1 Inch 0 FT to 17 FT	Project Number:	1690017901
Screen:	Sch. 40 1 Inch 0.010 PVC 17 FT to 27 FT	Project Name:	Whirlpool Corporation
Annular Fill:	Bentonite 14 FT to 15 FT Sand 15 FT to 27 FT	Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		5					Light brown fill material		
470				0.0		CH	Dark brown clayey silt, soft, slightly plastic, dry		
	5	5				CH	Reddish brown clayey silt, with gray mottling, stiff, dry		
465				0.0		MH	Reddish brown silty clay, moderate stiffness, low plasticity, dry		
	10	5		0.0					
460		3		0.0		MH	Reddish brown silty clay, trace sand, fine-grained, with gray mottling, moderate stiffness, low plasticity, dry		
	15	4		0.0					
455		4		0.0		CL	Reddish brown sandy clay, fine-grained, moderate stiffness, slightly moist		
						CH	Reddish brown silty sandy clay, with gray mottling, stiff, low plasticity, slightly moist		
						SC	Reddish brown clayey sand, fine-grained, slightly moist		
	20	2.5		0.0		CL	Brown silty clay with gravel, subangular, stiff, non-plastic, slightly moist		
450						SP	Light brown sand with gravel, wet, soft		
	25					SC	Dark brown clayey sand with gravel, soft, non-cohesive, wet, subrounded		
						MH	Dark brown silty clay, hard, low plasticity, dry		
445							Dark gray shale, hard, dry		

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RAMBOLL

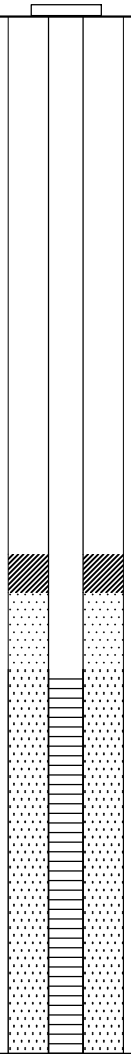
1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-23		Date(s):	9/20/2021
Location:	Fort Smith, Arkansas		
Logged By:	D. Meyer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Soil Boring/Hydropunch
Drilling Method:	Direct Push	GS Elevation: 476.63 ft amsl	TOC Elevation: Not available
Sampling Method:	Continuous Sampler	North: 368518.88	East: 592221.59
Well Construction:		Borehole Dia.: 4 inches	Total Depth: 27.0 feet
Blank Casing:	Sch. 40 PVC 1 Inch 0 FT to 17 FT	Project Number:	1690017901
Screen:	Sch. 40 1 Inch 0.010 PVC 17 FT to 27 FT	Project Name:	Whirlpool Corporation
Annular Fill:	Bentonite 14 FT to 15 FT Sand 15 FT to 27 FT	Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level
		4					Light brown silty fill, non-plastic, dry	
475				0.0		MH	Silty clay, hard, non-plastic, dry	
						MH	Brown silty clay, low plasticity, stiff, dry	
	5	4.5				MH	Dark brown silt with clay, soft, non-plastic, slightly moist	
470				0.0		MH	Reddish brown silty clay, with gray mottling, moderate plasticity, dry	
	10	5		0.0.		MH	Reddish brown silty clay, trace gray mottling, moderate plasticity, trace gravel, dry	
465		2		0.0		MH	Reddish brown silty clay, with gray mottling and trace black nodules, moderate plasticity, dry	
	15	5						
460				0.0				
	20	5						
455				0.0				
						SC	Light brown clayey sand, non-cohesive, non-plastic, soft, very moist	
	25	2.5		0.0		CL	Brown silty clay with gravel, trace sand, subrounded, fine to medium grained, cohesive, wet	
450							Dark gray shale, laminated, hard	

Well Construction

Flush Mount



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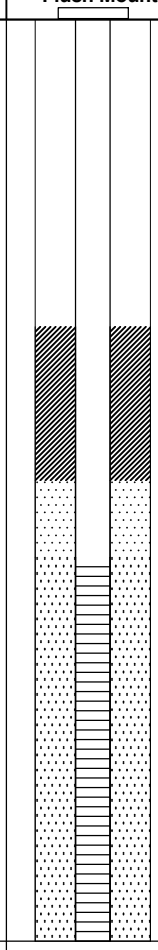
RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-24	Date(s): **9/21/2021**
Location: **Fort Smith, Arkansas**	
Logged By: **D. Meyer**	Checked By: **M. Wilson**
Contractor: **Environmental Works, Inc.**	Purpose: **Soil Boring/Hydropunch**
Drilling Method: **Direct Push**	GS Elevation: **469.90 ft amsl** / TOC Elevation: **Not available**
Sampling Method: **Continuous Sampler**	North: **368730.96** / East: **592367.49**
Well Construction:	Borehole Dia.: **4 inches** / Total Depth: **24.0 feet**
Blank Casing: Sch. 40 PVC 1 Inch 0 FT to 14 FT	Project Number: **1690017901**
Screen: Sch. 40 1 Inch 0.010 PVC 14 FT to 24 FT	Project Name: **Whirlpool Corporation**
Annular Fill: Bentonite 8 FT to 12 FT; Sand 12 FT to 24 FT	Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
		5					Asphalt		
							Dark brown fill material, soft, wet		
				0.0		CH	Reddish brown clayey silt, trace gray mottling, moderately stiff, moderate plasticity, dry		
465	5	5				CH	Light brown silty sandy clay, with gray mottling, trace black nodules, fine-grained, stiff, low plasticity, dry		
				0.0					
460	10								
		2.5					Dark black material, possible chipped asphalt		
				0.0		CH	Reddish brown clayey silt, stiff, dry		
455	15	3				MH	Dark brown silty clay, with gray mottling, stiff, dry		
				0.0		MH	Reddish brown silty clay, trace sand, with gray mottling, stiff, dry		
		2.5							
				0.0		SP	Tan sand, wet		
						CL	Light brown sandy clay, with gray mottling, soft, moderate plasticity, moist		
450	20	3.5				MH	Brown silty clay, trace gravel, low plasticity, moist		
						CL	Brown silty clay with gravel, subrounded up to 3/4", stiff, slightly moist		
				0.0		CL	Reddish brown silty clay with gravel, subrounded up to 1/4", stiff, slightly moist		
							Dark gray shale, laminated, dry		
445	25								



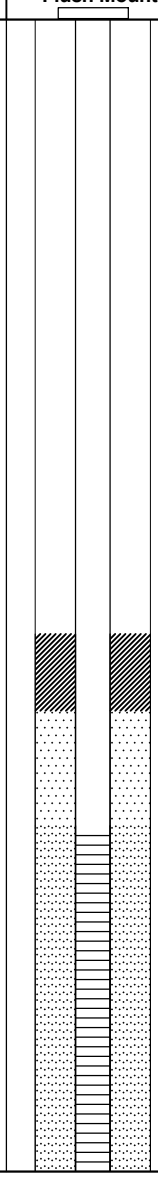
Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-25	Date(s): **9/21/2021**
Location: **Fort Smith, Arkansas**	
Logged By: **D. Meyer**	Checked By: **M. Wilson**
Contractor: **Environmental Works, Inc.**	Purpose: **Soil Boring/Hydropunch**
Drilling Method: **Direct Push**	GS Elevation: **475.73 ft amsl** / TOC Elevation: **Not available**
Sampling Method: **Continuous Sampler**	North: **368317.02** / East: **592217.37**
Well Construction:	Borehole Dia.: **4 inches** / Total Depth: **31.0 feet**
Blank Casing: Sch. 40 PVC 1 Inch 0 FT to 21 FT	Project Number: **1690017901**
Screen: Sch. 40 1 Inch 0.010 PVC 21 FT to 31 FT	Project Name: **Whirlpool Corporation**
Annular Fill: Bentonite 16 FT to 18 FT; Sand 18 FT to 31 FT	Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
475		4		0.0			Brown to dark brown silty fill, soft, dry		
						MH	Brown silty clay, soft, low plasticity, slightly moist		
470	5	5		0.0		MH	Brown silty clay, with gray mottling, trace black nodules, stiff, low plasticity, dry		
465	10	5		0.0					
460	15	4		0.0					
		2.5				CH	Brown silty sandy clay, fine-grained, cohesive, soft, non-plastic, slightly moist		
455	20	5				CH	Brown silty sandy clay, trace gray mottling, fine-grained, cohesive, soft, non-plastic, slightly moist		
						GP	Dark brown gravel with silty clay, up to 1/4", cohesive, moist		
				0.0		CL	Brown silty clay with gravel, subangular, up to 1/4", cohesive, slightly stiff, moist		
450	25	2.5		2.3		GC	Brown silty clay with gravel and sand, subrounded, up to 1", fine to medium-grained, cohesive, wet		
		3.5		0.0		MH	Brown silty clay, slightly laminated at bottom, slightly plastic, slightly stiff, dry		



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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-25

Project Name: **Whirlpool Corporation**

Project Number: **1690017901**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
445		3.5		0.0			Dark gray shale, stiff, laminated		
440	35								
435	40								
430	45								
425	50								
420	55								
415	60								
410	65								

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21

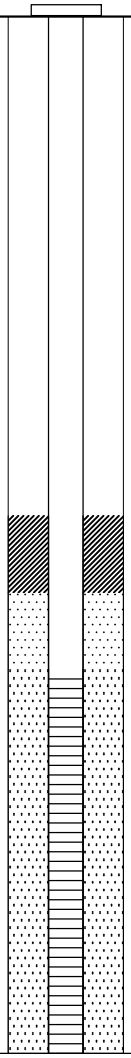
RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-26	Date(s): **9/21/2021**
Location: **Fort Smith, Arkansas**	
Logged By: **D. Meyer**	Checked By: **M. Wilson**
Contractor: **Environmental Works, Inc.**	Purpose: **Soil Boring/Hydropunch**
Drilling Method: **Direct Push**	GS Elevation: **471.36 ft amsl** / TOC Elevation: **Not available**
Sampling Method: **Continuous Sampler**	North: **368416.07** / East: **592345.55**
Well Construction:	Borehole Dia.: **4 inches** / Total Depth: **27.0 feet**
Blank Casing: Sch. 40 PVC 1 Inch 0 FT to 17 FT	Project Number: **1690017901**
Screen: Sch. 40 1 Inch 0.010 PVC 17 FT to 27 FT	Project Name: **Whirlpool Corporation**
Annular Fill: Bentonite 13 FT to 15 FT; Sand 15 FT to 27 FT	Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level
470		5					Light brown silty fill material, slightly stiff, dry	
				0.0		MH	Brown silty clay, with gray mottling, moderate plasticity, moderate stiffness, dry	
	5	5						
465				0.0		MH	Reddish brown silty clay, with gray mottling, stiff, low plasticity, dry	
	10	5				MH	Reddish brown silty clay, with gray mottling, trace black nodules, stiff, low plasticity, dry	
460				0.0				
	15	4						
455				0.0				
		3						
				0.0		MH	Reddish brown silty clay, trace fine-grained sand, with gray mottling, trace black nodules, stiff, low plasticity, dry	
	20	2.5						
450				0.3		MH	Brown silty clay, trace gravel, subangular, 1/4", trace fine-grained sand, slightly moist	
						CL	Brown silty clay and gravel, trace fine-grained sand, subangular, up to 1/4", cohesive, moist	
	25	5				MH	Reddish brown silty clay, trace gravel, up to 1/2", subangular, stiff, slightly laminated, low plasticity, dry	
445							Dark gray shale, laminated, hard, dry	

Well Construction: **Flush Mount**



Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: HP-27	Date(s): **9/22/2021**
Location: **Fort Smith, Arkansas**	
Logged By: **D. Meyer**	Checked By: **M. Wilson**
Contractor: **Environmental Works, Inc.**	Purpose: **Soil Boring/Hydropunch**
Drilling Method: **Direct Push**	GS Elevation: **486.96 ft amsl** / TOC Elevation: **Not available**
Sampling Method: **Continuous Sampler**	North: **367722.75** / East: **591114.02**
Well Construction:	Borehole Dia.: **4 inches** / Total Depth: **39.0 feet**
Blank Casing: Sch. 40 PVC 1 Inch 0 FT to 29 FT	Project Number: **1690017901**
Screen: Sch. 40 1 Inch 0.010 PVC 29 FT to 39 FT	Project Name: **Whirlpool Corporation**
Annular Fill:	Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
485		5		N/A			Brown fill material, dry		
							Light gray with brown fill material, clayey silt, stiff, non-plastic, dry		
	5	3.5							
480				0.0		MH	Reddish brown silty clay, with gray mottling, trace fine-grained sand, medium stiffness, moderate plasticity, dry		
	10	5							
475				0.0		MH	Reddish brown silty clay, stiff, low plasticity, dry		
	15	4		0.0		MH	Reddish brown silty clay, trace black nodules, moderate stiffness, non-plastic, dry		
470		5				MH	Reddish brown silty clay, with gray mottling, trace black nodules, moderate stiffness, non-plastic, dry		
	20			0.0					
465		4		0.0		MH	Reddish brown silty clay, with gray mottling, moderate stiffness, medium plasticity, dry		
	25	5		0.0					
460		5		0.0					

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

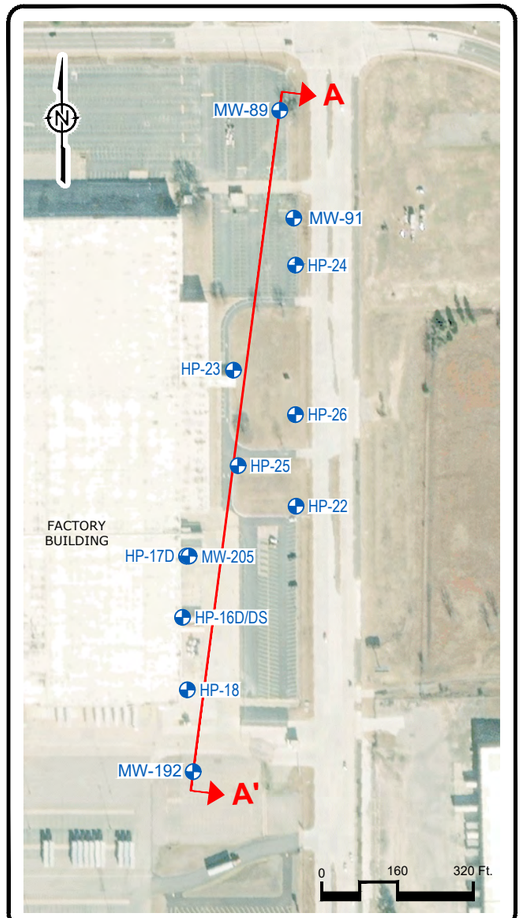
Site ID: HP-27

Project Name: **Whirlpool Corporation**

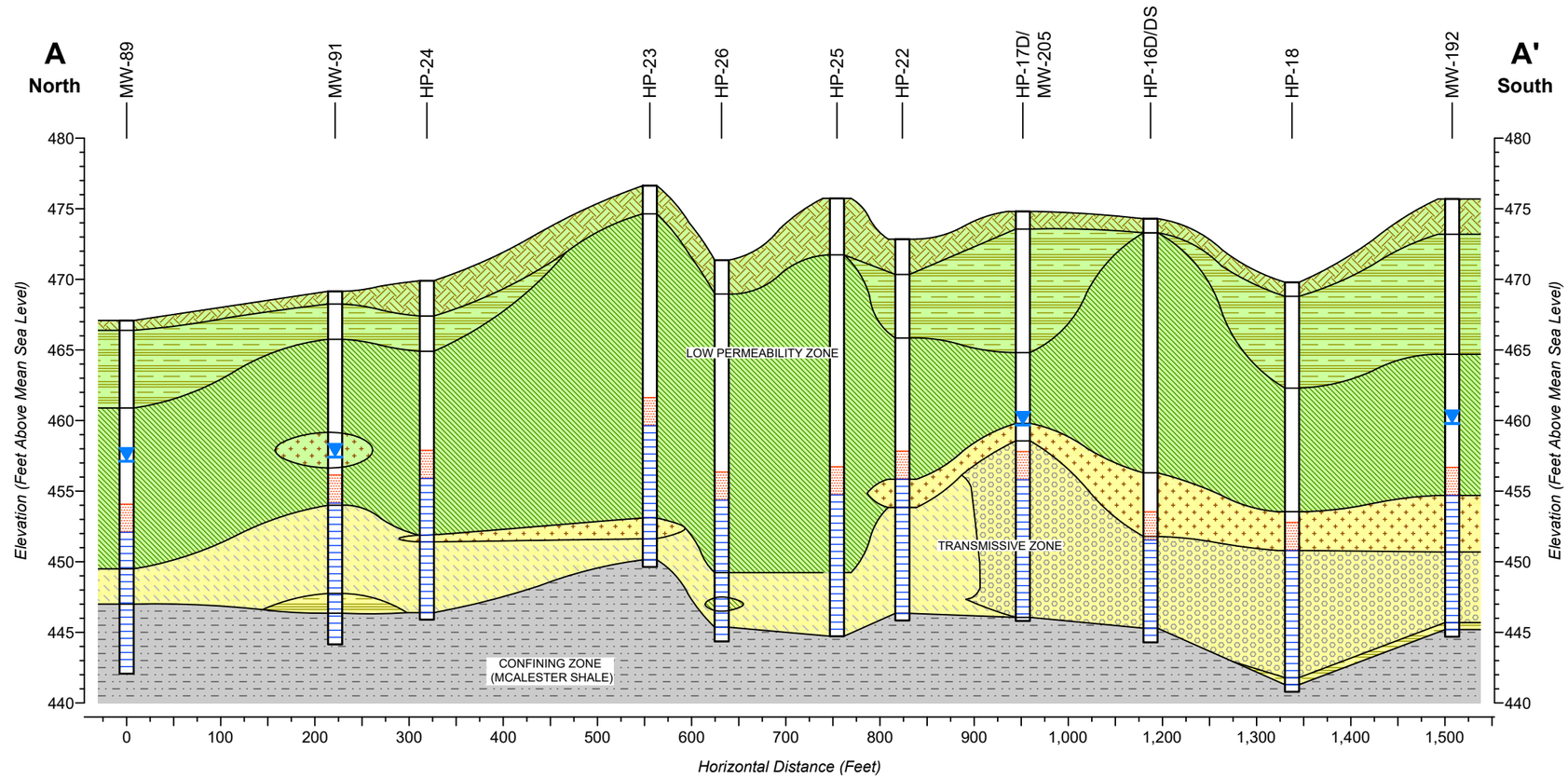
Project Number: **1690017901**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
455		5		0.0		MH			
		5		0.0		CL	Reddish brown sandy clay, trace gray mottling, fine-grained, soft, cohesive, wet		
	35	2		0.8		CL	Reddish brown sandy clay with gravel, up to 1/4", fine-grained, cohesive, slightly stiff, moist		
450						CL	Reddish brown silty clay with gravel, trace fine-grained sand, up to 1", subrounded, cohesive, stiff, non-plastic, moist		
		1.5		2.4		GP	Reddish brown gravel with sand and silty clay, fine to coarse, subrounded, up to 1", cohesive, wet		
							Dark gray shale, hard, laminated, dry		
	40								
445									
	45								
440									
	50								
435									
	55								
430									
	60								
425									
	65								
420									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 10/28/21



CROSS-SECTION OVERVIEW



LITHOLOGY

- SHALE
- SILTY/SANDY CLAY
- CLAYEY SILT
- GRAVELLY CLAY
- CLAYEY SAND
- CLAYEY GRAVEL
- FILL/TOPSOIL

MONITORING WELL

- BORING
- SAND PACK
- SCREEN

LEGEND

- MONITORING WELLS
- WATER LEVEL, OCTOBER 2021
- BORING
- LOW PERMEABILITY ZONE
- TRANSMISSIVE ZONE
- CONFINING ZONE (MCALESTER SHALE)

HORIZONTAL SCALE (Ft.)
0 150

VERTICAL SCALE (Ft.)
0 10

VERTICAL EXAGGERATION = 15

RAMBOLL

DRAFTED BY: CKL | DATE: 1/10/2022

CROSS-SECTION A-A'

WHIRLPOOL FACILITY
FORT SMITH, ARKANSAS

FIGURE
1

1690023020

L:\Loop Project Files_CAD\1690023020_Whirlpool_Ft_Smith_2021_Tsk_1-Work_Plans\2-12_Cross-Section E.dwg

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

August 04, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on August 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

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CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60376577001	**HP-16D-WG-20210803**	Water	08/03/21 11:20	08/04/21 06:43
60376577002	**HP-17D-WG-20210803**	Water	08/03/21 15:50	08/04/21 06:43
60376577003	**HP-17S-WG-20210803**	Water	08/03/21 16:25	08/04/21 06:43
60376577004	**HP-18D-WG-20210803**	Water	08/03/21 16:55	08/04/21 06:43
60376577005	**TB-20210803**	Water	08/03/21 17:15	08/04/21 06:43

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60376577001	**HP-16D-WG-20210803**	EPA 5030B/8260	PGH	38	PASI-K
60376577002	**HP-17D-WG-20210803**	EPA 5030B/8260	PGH	38	PASI-K
60376577003	**HP-17S-WG-20210803**	EPA 5030B/8260	PGH	38	PASI-K
60376577004	**HP-18D-WG-20210803**	EPA 5030B/8260	PGH	38	PASI-K
60376577005	**TB-20210803**	EPA 5030B/8260	PGH	38	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: August 04, 2021

General Information:
5 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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: 735997

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Sample: HP-16D-WG-20210803 **Lab ID: 60376577001** Collected: 08/03/21 11:20 Received: 08/04/21 06:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/04/21 09:04	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/04/21 09:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/04/21 09:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/04/21 09:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		08/04/21 09:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/04/21 09:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/04/21 09:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/04/21 09:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		08/04/21 09:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/04/21 09:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		08/04/21 09:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/04/21 09:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/04/21 09:04	124-48-1	
1,1-Dichloroethane	**0.62J**	ug/L	1.0	0.12	1		08/04/21 09:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/04/21 09:04	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.22	1		08/04/21 09:04	75-35-4	
cis-1,2-Dichloroethene	**13.2**	ug/L	1.0	0.13	1		08/04/21 09:04	156-59-2	
trans-1,2-Dichloroethene	**0.17J**	ug/L	1.0	0.10	1		08/04/21 09:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/04/21 09:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/04/21 09:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/04/21 09:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/04/21 09:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/04/21 09:04	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		08/04/21 09:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/04/21 09:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/04/21 09:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/04/21 09:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		08/04/21 09:04	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/04/21 09:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/04/21 09:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		08/04/21 09:04	79-00-5	
Trichloroethene	**179**	ug/L	1.0	0.21	1		08/04/21 09:04	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.17	1		08/04/21 09:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/04/21 09:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		08/04/21 09:04	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		08/04/21 09:04	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		08/04/21 09:04	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/04/21 09:04		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Sample: HP-17D-WG-20210803 **Lab ID: 60376577002** Collected: 08/03/21 15:50 Received: 08/04/21 06:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/04/21 09:18	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/04/21 09:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/04/21 09:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/04/21 09:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		08/04/21 09:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/04/21 09:18	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/04/21 09:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/04/21 09:18	56-23-5	
Chlorobenzene	**0.11J**	ug/L	1.0	0.089	1		08/04/21 09:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/04/21 09:18	75-00-3	
Chloroform	**0.24J**	ug/L	1.0	0.22	1		08/04/21 09:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/04/21 09:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/04/21 09:18	124-48-1	
1,1-Dichloroethane	**1.0**	ug/L	1.0	0.12	1		08/04/21 09:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/04/21 09:18	107-06-2	
1,1-Dichloroethene	**3.4**	ug/L	1.0	0.22	1		08/04/21 09:18	75-35-4	
cis-1,2-Dichloroethene	**134**	ug/L	1.0	0.13	1		08/04/21 09:18	156-59-2	
trans-1,2-Dichloroethene	**0.72J**	ug/L	1.0	0.10	1		08/04/21 09:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/04/21 09:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/04/21 09:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/04/21 09:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/04/21 09:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/04/21 09:18	591-78-6	
Methylene Chloride	**0.75J**	ug/L	1.0	0.39	1		08/04/21 09:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/04/21 09:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/04/21 09:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/04/21 09:18	79-34-5	
Tetrachloroethene	**1.1**	ug/L	1.0	0.33	1		08/04/21 09:18	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/04/21 09:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/04/21 09:18	71-55-6	
1,1,2-Trichloroethane	**0.42J**	ug/L	1.0	0.14	1		08/04/21 09:18	79-00-5	
Trichloroethene	**398**	ug/L	10.0	2.1	10		08/04/21 11:39	79-01-6	
Vinyl chloride	**0.89J**	ug/L	1.0	0.17	1		08/04/21 09:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/04/21 09:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		08/04/21 09:18	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		08/04/21 09:18	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120		1		08/04/21 09:18	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/04/21 09:18		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Sample: HP-17S-WG-20210803 **Lab ID: 60376577003** Collected: 08/03/21 16:25 Received: 08/04/21 06:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/04/21 09:32	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/04/21 09:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/04/21 09:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/04/21 09:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		08/04/21 09:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/04/21 09:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/04/21 09:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/04/21 09:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		08/04/21 09:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/04/21 09:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		08/04/21 09:32	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/04/21 09:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/04/21 09:32	124-48-1	
1,1-Dichloroethane	**0.70J**	ug/L	1.0	0.12	1		08/04/21 09:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/04/21 09:32	107-06-2	
1,1-Dichloroethene	**2.8**	ug/L	1.0	0.22	1		08/04/21 09:32	75-35-4	
cis-1,2-Dichloroethene	**120**	ug/L	1.0	0.13	1		08/04/21 09:32	156-59-2	
trans-1,2-Dichloroethene	**0.59J**	ug/L	1.0	0.10	1		08/04/21 09:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/04/21 09:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/04/21 09:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/04/21 09:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/04/21 09:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/04/21 09:32	591-78-6	
Methylene Chloride	**0.69J**	ug/L	1.0	0.39	1		08/04/21 09:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/04/21 09:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/04/21 09:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/04/21 09:32	79-34-5	
Tetrachloroethene	**0.70J**	ug/L	1.0	0.33	1		08/04/21 09:32	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/04/21 09:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/04/21 09:32	71-55-6	
1,1,2-Trichloroethane	**0.37J**	ug/L	1.0	0.14	1		08/04/21 09:32	79-00-5	
Trichloroethene	**321**	ug/L	10.0	2.1	10		08/04/21 11:53	79-01-6	
Vinyl chloride	**0.70J**	ug/L	1.0	0.17	1		08/04/21 09:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/04/21 09:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		08/04/21 09:32	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		08/04/21 09:32	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		08/04/21 09:32	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/04/21 09:32		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Sample: HP-18D-WG-20210803 **Lab ID: 60376577004** Collected: 08/03/21 16:55 Received: 08/04/21 06:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/04/21 12:08	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/04/21 12:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/04/21 12:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/04/21 12:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		08/04/21 12:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/04/21 12:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/04/21 12:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/04/21 12:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		08/04/21 12:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/04/21 12:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		08/04/21 12:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/04/21 12:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/04/21 12:08	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		08/04/21 12:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/04/21 12:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		08/04/21 12:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		08/04/21 12:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		08/04/21 12:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/04/21 12:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/04/21 12:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/04/21 12:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/04/21 12:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/04/21 12:08	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		08/04/21 12:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/04/21 12:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/04/21 12:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/04/21 12:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		08/04/21 12:08	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/04/21 12:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/04/21 12:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		08/04/21 12:08	79-00-5	
Trichloroethene	**0.33J**	ug/L	1.0	0.21	1		08/04/21 12:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		08/04/21 12:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/04/21 12:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		08/04/21 12:08	460-00-4	
Toluene-d8 (S)	99	%	80-120		1		08/04/21 12:08	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1		08/04/21 12:08	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/04/21 12:08		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Sample: TB-20210803 **Lab ID: 60376577005** Collected: 08/03/21 17:15 Received: 08/04/21 06:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/04/21 08:50	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/04/21 08:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/04/21 08:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/04/21 08:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.46	1		08/04/21 08:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/04/21 08:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/04/21 08:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/04/21 08:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		08/04/21 08:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/04/21 08:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		08/04/21 08:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/04/21 08:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/04/21 08:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		08/04/21 08:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/04/21 08:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		08/04/21 08:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		08/04/21 08:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		08/04/21 08:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/04/21 08:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/04/21 08:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/04/21 08:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/04/21 08:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/04/21 08:50	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		08/04/21 08:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/04/21 08:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/04/21 08:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/04/21 08:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		08/04/21 08:50	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/04/21 08:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/04/21 08:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		08/04/21 08:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		08/04/21 08:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		08/04/21 08:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/04/21 08:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		08/04/21 08:50	460-00-4	
Toluene-d8 (S)	98	%	80-120		1		08/04/21 08:50	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1		08/04/21 08:50	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/04/21 08:50		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

QC Batch: 735997
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60376577001, 60376577002, 60376577003, 60376577004, 60376577005

METHOD BLANK: 2951870
Matrix: Water
Associated Lab Samples: 60376577001, 60376577002, 60376577003, 60376577004, 60376577005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	08/04/21 07:53	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	08/04/21 07:53	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	08/04/21 07:53	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	08/04/21 07:53	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	08/04/21 07:53	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	08/04/21 07:53	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	08/04/21 07:53	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	08/04/21 07:53	
2-Hexanone	ug/L	ND	10.0	1.1	08/04/21 07:53	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	08/04/21 07:53	
Acetone	ug/L	ND	10.0	2.5	08/04/21 07:53	
Benzene	ug/L	ND	1.0	0.14	08/04/21 07:53	
Bromodichloromethane	ug/L	ND	1.0	0.16	08/04/21 07:53	
Bromoform	ug/L	ND	1.0	0.68	08/04/21 07:53	
Bromomethane	ug/L	ND	5.0	0.46	08/04/21 07:53	
Carbon disulfide	ug/L	ND	5.0	0.98	08/04/21 07:53	
Carbon tetrachloride	ug/L	ND	1.0	0.17	08/04/21 07:53	
Chlorobenzene	ug/L	ND	1.0	0.089	08/04/21 07:53	
Chloroethane	ug/L	ND	1.0	0.37	08/04/21 07:53	
Chloroform	ug/L	ND	1.0	0.22	08/04/21 07:53	
Chloromethane	ug/L	ND	1.0	0.28	08/04/21 07:53	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	08/04/21 07:53	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	08/04/21 07:53	
Dibromochloromethane	ug/L	ND	1.0	0.30	08/04/21 07:53	
Ethylbenzene	ug/L	ND	1.0	0.12	08/04/21 07:53	
Methylene Chloride	ug/L	ND	1.0	0.39	08/04/21 07:53	
Styrene	ug/L	ND	1.0	0.12	08/04/21 07:53	
Tetrachloroethene	ug/L	ND	1.0	0.33	08/04/21 07:53	
Toluene	ug/L	ND	1.0	0.25	08/04/21 07:53	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	08/04/21 07:53	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	08/04/21 07:53	
Trichloroethene	ug/L	ND	1.0	0.21	08/04/21 07:53	
Vinyl chloride	ug/L	ND	1.0	0.17	08/04/21 07:53	
Xylene (Total)	ug/L	ND	3.0	0.28	08/04/21 07:53	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		08/04/21 07:53	
4-Bromofluorobenzene (S)	%	95	80-120		08/04/21 07:53	
Toluene-d8 (S)	%	98	80-120		08/04/21 07:53	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

LABORATORY CONTROL SAMPLE: 2951871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.3	96	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	17.4	87	75-125	
1,1,2-Trichloroethane	ug/L	20	18.2	91	80-120	
1,1-Dichloroethane	ug/L	20	19.5	98	75-125	
1,1-Dichloroethene	ug/L	20	20.9	104	80-120	
1,2-Dichloroethane	ug/L	20	19.9	99	75-120	
1,2-Dichloropropane	ug/L	20	18.2	91	80-125	
2-Butanone (MEK)	ug/L	100	98.7	99	40-150	
2-Hexanone	ug/L	100	88.8	89	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	86.1	86	65-140	
Acetone	ug/L	100	102	102	20-175	
Benzene	ug/L	20	18.3	91	80-120	
Bromodichloromethane	ug/L	20	19.2	96	80-125	
Bromoform	ug/L	20	18.5	92	60-135	
Bromomethane	ug/L	20	17.2	86	10-165	
Carbon disulfide	ug/L	20	20.4	102	75-135	
Carbon tetrachloride	ug/L	20	19.8	99	80-125	
Chlorobenzene	ug/L	20	19.3	97	80-120	
Chloroethane	ug/L	20	20.4	102	70-130	
Chloroform	ug/L	20	20.1	100	80-120	
Chloromethane	ug/L	20	19.3	97	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.1	95	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.7	93	80-125	
Dibromochloromethane	ug/L	20	19.4	97	70-120	
Ethylbenzene	ug/L	20	18.6	93	80-120	
Methylene Chloride	ug/L	20	18.8	94	75-120	
Styrene	ug/L	20	19.0	95	80-120	
Tetrachloroethene	ug/L	20	19.6	98	80-120	
Toluene	ug/L	20	17.7	88	80-120	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	75-120	
Trichloroethene	ug/L	20	18.8	94	80-120	
Vinyl chloride	ug/L	20	19.9	99	65-130	
Xylene (Total)	ug/L	60	55.3	92	80-120	
1,2-Dichlorobenzene-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			98	80-120	

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

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QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

BATCH QUALIFIERS

Batch: 735997

[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: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376577

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60376577001	**HP-16D-WG-20210803**	EPA 5030B/8260	735997		
60376577002	**HP-17D-WG-20210803**	EPA 5030B/8260	735997		
60376577003	**HP-17S-WG-20210803**	EPA 5030B/8260	735997		
60376577004	**HP-18D-WG-20210803**	EPA 5030B/8260	735997		
60376577005	**TB-20210803**	EPA 5030B/8260	735997		

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www.pacelabs.com

Sample Condition Upon Receipt

WO#: 60376577

60376577

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: T296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 0.5 **Corr. Factor** -0.3 **Corrected** 0.2

Date and initials of person examining contents: 8/4/2021 KK

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) LOT#	☐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	2 VG9H
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: _____

REVIEWED
By jchurch at 9:19 am, 8/4/21

Project Manager Review: _____ Date: _____

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

60376577

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Billing Information: Tamara House-Knight

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Email To: thouseknight@ramboll.com

Copy To: ~~Haley Ahlers~~ David Meyer dmeyer@ramboll.com

Site Collection Info/Address: Ft Smith, AR

Customer Project Name/Number: Whirlpool, Fort Smith AR

State: AR | County/City: Ft Smith | Time Zone Collected: / PT MT (CT) ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): IAN McQUAIG

Purchase Order #

DW PWS ID #:

Quote #

DW Location Code #:

Collected by (signature):

Turnaround Date Required: SAME DAY

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive _____
[ ] Hold _____

RUSH: (Same Day) Next Day 2 Day 3 Day 4 Day 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager: Jamie Church

Analyses

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

Customer Sample ID	Matrix*	Comp/ Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs	↓ LAB USE ONLY: ↓ Lab Sample # / Comments
HP-16D-WG-20210803	GW	G	8/3/21	1120	N/A	N/A		3	X	
HP-17D-WG-20210803	GW	G	8/3/21	1550	N/A	N/A		3	X	
HP-17S-WG-20210803	GW	G	8/3/21	1625	N/A	N/A		3	X	
HP-18D-WG-20210803	GW	G	8/3/21	1655	N/A	N/A		3	X	
TB-20210803	TB	\	8/3/21	1715	N/A	N/A		2	X	

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ]Client [ ] Courier [ ] Pace Courier

MTJL LAB USE ONLY

Table #: _____
ACCT #: _____
Template: _____
Prelogin: _____
PM: _____
PB: _____

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T296
Cooler Temp Upon Receipt 0.5 oC
Cooler Therm Corr. Factor ~0.3 oC
Cooler Temp Corrected 0.2 oC
Comments: _____

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page _____ of _____

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
IAN McQUAIG/REH	8/3/21 1800	[signature]	1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
		[signature]	8-4-21 0643
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

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

August 05, 2021

Tamara House-Knight
Ramboll US Consulting, Inc.
3600 Green Court
Suite 750
Ann Arbor, MI 48105

RE: Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Dear Tamara House-Knight:

Enclosed are the analytical results for sample(s) received by the laboratory on August 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

cc: Caroline Chavers, Ramboll US Consulting, Inc.
Kristen Drucquer, Ramboll US Consulting, Inc.
David Meyer, Ramboll US Consulting, Inc.
M. Wilson, Ramboll US Consulting, Inc.

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CERTIFICATIONS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60376702001	**HP-19-WG-20210804**	Water	08/04/21 11:00	08/05/21 02:00
60376702002	**TB-01-20210804**	Water	08/04/21 11:00	08/05/21 02:00

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60376702001	**HP-19-WG-20210804**	EPA 5030B/8260	CJC	38	PASI-K
60376702002	**TB-01-20210804**	EPA 5030B/8260	CJC	38	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll_AR
Date: August 05, 2021

General Information:
2 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. 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: 736254

B: Analyte was detected in the associated method blank.

- BLANK for HBN 736254 [MSV/1157 (Lab ID: 2952708)
  - Bromomethane

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

QC Batch: 736254

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

- LCS (Lab ID: 2952709)
  - Bromomethane

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Sample: HP-19-WG-20210804 **Lab ID: 60376702001** Collected: 08/04/21 11:00 Received: 08/05/21 02:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/05/21 09:42	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/05/21 09:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/05/21 09:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/05/21 09:42	75-25-2	
Bromomethane	**1.0J**	ug/L	5.0	0.46	1		08/05/21 09:42	74-83-9	B,L1
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/05/21 09:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/05/21 09:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/05/21 09:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		08/05/21 09:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/05/21 09:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		08/05/21 09:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/05/21 09:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/05/21 09:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		08/05/21 09:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/05/21 09:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		08/05/21 09:42	75-35-4	
cis-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.13	1		08/05/21 09:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		08/05/21 09:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/05/21 09:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/05/21 09:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/05/21 09:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/05/21 09:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/05/21 09:42	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		08/05/21 09:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/05/21 09:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/05/21 09:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/05/21 09:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		08/05/21 09:42	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/05/21 09:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/05/21 09:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		08/05/21 09:42	79-00-5	
Trichloroethene	**0.35J**	ug/L	1.0	0.21	1		08/05/21 09:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		08/05/21 09:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/05/21 09:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	80-120		1		08/05/21 09:42	460-00-4	
Toluene-d8 (S)	106	%	80-120		1		08/05/21 09:42	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	115	%	80-120		1		08/05/21 09:42	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/05/21 09:42		

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ANALYTICAL RESULTS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Sample: TB-01-20210804 **Lab ID: 60376702002** Collected: 08/04/21 11:00 Received: 08/05/21 02:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	2.5	1		08/05/21 09:17	67-64-1	
Benzene	ND	ug/L	1.0	0.14	1		08/05/21 09:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.16	1		08/05/21 09:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		08/05/21 09:17	75-25-2	
Bromomethane	**0.52J**	ug/L	5.0	0.46	1		08/05/21 09:17	74-83-9	B,L1
2-Butanone (MEK)	ND	ug/L	10.0	0.98	1		08/05/21 09:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.98	1		08/05/21 09:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.17	1		08/05/21 09:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.089	1		08/05/21 09:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.37	1		08/05/21 09:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.22	1		08/05/21 09:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.28	1		08/05/21 09:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.30	1		08/05/21 09:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.12	1		08/05/21 09:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.21	1		08/05/21 09:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		08/05/21 09:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		08/05/21 09:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.10	1		08/05/21 09:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.14	1		08/05/21 09:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.078	1		08/05/21 09:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.18	1		08/05/21 09:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.12	1		08/05/21 09:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.1	1		08/05/21 09:17	591-78-6	
Methylene Chloride	ND	ug/L	1.0	0.39	1		08/05/21 09:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.74	1		08/05/21 09:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		08/05/21 09:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		08/05/21 09:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.33	1		08/05/21 09:17	127-18-4	
Toluene	ND	ug/L	1.0	0.25	1		08/05/21 09:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		08/05/21 09:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		08/05/21 09:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.21	1		08/05/21 09:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.17	1		08/05/21 09:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.28	1		08/05/21 09:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	87	%	80-120		1		08/05/21 09:17	460-00-4	
Toluene-d8 (S)	107	%	80-120		1		08/05/21 09:17	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	112	%	80-120		1		08/05/21 09:17	2199-69-1	
Preservation pH	**1.0**		0.10		1		08/05/21 09:17		

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QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

QC Batch: 736254
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60376702001, 60376702002

METHOD BLANK: 2952708
Matrix: Water
Associated Lab Samples: 60376702001, 60376702002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	08/05/21 08:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	08/05/21 08:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.14	08/05/21 08:47	
1,1-Dichloroethane	ug/L	ND	1.0	0.12	08/05/21 08:47	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	08/05/21 08:47	
1,2-Dichloroethane	ug/L	ND	1.0	0.21	08/05/21 08:47	
1,2-Dichloropropane	ug/L	ND	1.0	0.14	08/05/21 08:47	
2-Butanone (MEK)	ug/L	ND	10.0	0.98	08/05/21 08:47	
2-Hexanone	ug/L	ND	10.0	1.1	08/05/21 08:47	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.74	08/05/21 08:47	
Acetone	ug/L	ND	10.0	2.5	08/05/21 08:47	
Benzene	ug/L	ND	1.0	0.14	08/05/21 08:47	
Bromodichloromethane	ug/L	ND	1.0	0.16	08/05/21 08:47	
Bromoform	ug/L	ND	1.0	0.68	08/05/21 08:47	
Bromomethane	ug/L	0.79J	5.0	0.46	08/05/21 08:47	
Carbon disulfide	ug/L	ND	5.0	0.98	08/05/21 08:47	
Carbon tetrachloride	ug/L	ND	1.0	0.17	08/05/21 08:47	
Chlorobenzene	ug/L	ND	1.0	0.089	08/05/21 08:47	
Chloroethane	ug/L	ND	1.0	0.37	08/05/21 08:47	
Chloroform	ug/L	ND	1.0	0.22	08/05/21 08:47	
Chloromethane	ug/L	ND	1.0	0.28	08/05/21 08:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.13	08/05/21 08:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.078	08/05/21 08:47	
Dibromochloromethane	ug/L	ND	1.0	0.30	08/05/21 08:47	
Ethylbenzene	ug/L	ND	1.0	0.12	08/05/21 08:47	
Methylene Chloride	ug/L	ND	1.0	0.39	08/05/21 08:47	
Styrene	ug/L	ND	1.0	0.12	08/05/21 08:47	
Tetrachloroethene	ug/L	ND	1.0	0.33	08/05/21 08:47	
Toluene	ug/L	ND	1.0	0.25	08/05/21 08:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.10	08/05/21 08:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.18	08/05/21 08:47	
Trichloroethene	ug/L	ND	1.0	0.21	08/05/21 08:47	
Vinyl chloride	ug/L	ND	1.0	0.17	08/05/21 08:47	
Xylene (Total)	ug/L	ND	3.0	0.28	08/05/21 08:47	
1,2-Dichlorobenzene-d4 (S)	%	111	80-120		08/05/21 08:47	
4-Bromofluorobenzene (S)	%	87	80-120		08/05/21 08:47	
Toluene-d8 (S)	%	112	80-120		08/05/21 08:47	

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

QUALITY CONTROL DATA

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

LABORATORY CONTROL SAMPLE: 2952709

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.6	93	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	15.7	79	75-125	
1,1,2-Trichloroethane	ug/L	20	18.9	95	80-120	
1,1-Dichloroethane	ug/L	20	17.4	87	75-125	
1,1-Dichloroethene	ug/L	20	20.6	103	80-120	
1,2-Dichloroethane	ug/L	20	16.7	83	75-120	
1,2-Dichloropropane	ug/L	20	16.8	84	80-125	
2-Butanone (MEK)	ug/L	100	93.0	93	40-150	
2-Hexanone	ug/L	100	96.1	96	45-150	
4-Methyl-2-pentanone (MIBK)	ug/L	100	70.1	70	65-140	
Acetone	ug/L	100	112	112	20-175	
Benzene	ug/L	20	18.5	93	80-120	
Bromodichloromethane	ug/L	20	18.6	93	80-125	
Bromoform	ug/L	20	24.3	121	60-135	
Bromomethane	ug/L	20	40.3	202	10-165	L1
Carbon disulfide	ug/L	20	16.5	82	75-135	
Carbon tetrachloride	ug/L	20	21.7	108	80-125	
Chlorobenzene	ug/L	20	22.3	111	80-120	
Chloroethane	ug/L	20	16.9	84	70-130	
Chloroform	ug/L	20	17.9	90	80-120	
Chloromethane	ug/L	20	20.3	101	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	80-120	
cis-1,3-Dichloropropene	ug/L	20	18.2	91	80-125	
Dibromochloromethane	ug/L	20	22.9	115	70-120	
Ethylbenzene	ug/L	20	21.3	107	80-120	
Methylene Chloride	ug/L	20	18.7	94	75-120	
Styrene	ug/L	20	21.5	108	80-120	
Tetrachloroethene	ug/L	20	23.5	117	80-120	
Toluene	ug/L	20	20.6	103	80-120	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	75-120	
Trichloroethene	ug/L	20	19.8	99	80-120	
Vinyl chloride	ug/L	20	17.9	90	65-130	
Xylene (Total)	ug/L	60	64.9	108	80-120	
1,2-Dichlorobenzene-d4 (S)	%			110	80-120	
4-Bromofluorobenzene (S)	%			87	80-120	
Toluene-d8 (S)	%			108	80-120	

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

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

ANALYTE QUALIFIERS

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

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Lenexa, KS 66219
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL, FORT SMITH AR
Pace Project No.: 60376702

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60376702001	**HP-19-WG-20210804**	EPA 5030B/8260	736254		
60376702002	**TB-01-20210804**	EPA 5030B/8260	736254		

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www.pacelabs.com

Sample Condition Upon Receipt

WO#: 60376702
60376702

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: T29ie **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2.7 **Corr. Factor** -0.3 **Corrected** 2.4

Date and initials of person examining contents: 8/5/21 SR

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) LOT#	☐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: _____

REVIEWED
By jchurch at 9:40 am, 8/5/21

Project Manager Review: _____ Date: _____

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Ramboll

Address: 7500 College Blvd., Ste 925 Overland Park, KS 66210

Report To: Tamara House-Knight

Copy To: ~~Haley Ahlers~~ david Meyer dmeyer@ramboll.com

Customer Project Name/Number: Whirlpool, Fort Smith AR

Billing Information: Tamara House-Knight

Email To: thouseknight@ramboll.com

Site Collection Info/Address: Ft Smith, AR

State: AR County/City: Fort Smith Time Zone Collected: PT MT CT ET

Phone:
Email:

Site/Facility ID #

Compliance Monitoring? [ ] Yes [ ] No

Collected by (print): Ian McQuaig

Purchase Order #

DW PWS ID #

Quote #

DW Location Code #

Collected by (signature): [signature]

Turnaround Date Required: SAME DAY

Immediately Packed on Ice? [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive
[ ] Hold

RUSH: Same Day Next Day 2 Day 3 Day 4 Day 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No N/A

Analysis:

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager: Jamie Church

Analyses

60376702

LAB Profile/Line: 7444 Line 1

LAB Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples received on ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in holding time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

↓ LAB USE ONLY: ↓
Lab Sample # / Comments

Customer Sample ID	Matrix*	Comp/Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	8260 VOCs
HP-19-W6-20210804	GW	G	8/4/21	1100	N/A	N/A		3	X

Customer Remarks/ Special Conditions/ Possible Hazards:

Type of Ice Used: Wet [ ] Blue [ ] Dry [ ] None [ ]

SHORT HOLDS PRESENT (< 72 hours): Y N N/A

Packing Material Used:

LAB Tracking #:

Radchem sample(s) screened: (<500 cpm): [ ] Y [ ] N [ ] NA

Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]

MTJL LAB USE ONLY

Table #:
ACCT #:
Template:
Prelogin:
PM:
PB:

LAB Sample Temperature Info:
Temp Blank received: Y N NA
Therm ID #: T296
Cooler Temp Upon Receipt 2.7 oC
Cooler Therm Corr. Factor -0.3 oC
Cooler Temp Corrected 2.4 oC
Comments:

Trip Blank Received: Y N N/A
HCL MeOH TSP Other

NonConformance(s) YES / NO

Page of

Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:
Ian McQuaig / REH [signature]	8/4/21 1740	[signature]	1800
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature) [signature]	Date/Time: 08/5/21 0200
Relinquished by/Company : (Signature)	Date/Time:	Received by/Company : (Signature)	Date/Time:

F-ALL-C-010-rev.00, 05Jul2018

American Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

Generator

Generator's Name: _____

Mailing Address: _____

City State Zip

Point of Generation Address: _____

City State Zip

Contact: _____

Name Phone

Manifest Job No. _____

Bill to Name: _____

Address: _____

City State Zip

Contact: _____

Name Phone

Common Name of Waste Material	Container No.	Container Type	Total Quantity	Unit
	14			

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name _____ Signature _____ Shipment Date _____

Transporter

Transporter Name: _____

Address: _____

City, State Zip: _____

Driver Name (Print): David Ryan

Tag No. _____ State: CA

USDOT No. 875510

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ Ship Date 10/20/21

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ Delivery Date 10/20/21

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Name of Authorized Agent _____ Signature _____ Receipt Date _____

White – Destination Retention • Yellow – Return to Bill to • Pink – Transporter Retain • Goldenrod – Generator Retain

American Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

Generator

Generator's Name: Whirlpool Corporation

Mailing Address: [illegible]

City State Zip

Point of Generation Address:

City State Zip

Contact:

Name Phone

Manifest Job No.

Bill to Name:

Address:

City State Zip

Contact:

Name Phone

Common Name of Waste Material	Container No.	Container Type	Total Quantity	Unit
Purge water	2	Tote	600	GAL.
	10	DRUM		

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name Signature Shipment Date

Transporter

Transporter Name:

Address:

City, State Zip:

Driver Name (Print): David Pyeatt

Tag No. State: OK

USDOT No. 3975510

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt

Name of Authorized Agent Signature Receipt Date

White – Destination Retention • Yellow – Return to Bill to • Pink – Transporter Retain • Goldenrod – Generator Retain

Location Fort Smith, AR Date 4-15-21

Project / Client Whirlpool

75°F Sunny

1420 - Collected transducer # 25843/0121070215 from MW-89

1430 - Collected transducer #30284/0121070995 from ITMW-4

1441 - Collected transducer # 18512/0121068986 and Barologger from ITMW-21

1500 - Finished clean up of staging area

1505 - David Meyer left Site

DM

Location Fort Smith, AR Date 8-2-21

Project / Client Whirlpool

75° F Partly Cloudy

0630 - D. Meyer and I. McQuaig onsite
- Driller Anthony love Sean Mahl

0635 - Conduct H&S meeting
- Topics include rig safety, traffic

0700 - Driller did not bring GPR unit
Sean will leave site to obtain GPR

0705 - Jon & David scoping drilling locations

0710 - located HP-05 in east area
and confirmed sewer locations

0730 - Mob to South Boring location
to review SSC Checklist

0900 - Waiting for GPR

1000 - D.M. and J.M. left Site for picking
up lunch

1030 - Back onsite waiting for Driller
return with GPR

1210 - Sean Back onsite with GPR

1230 - Mob to Mons Petcare to GPR
location HP-16

1315 - Begin set up at ~~PM~~ HP-16
on east side of Mons Petcare

~~13~~

DM

Location Fort Smith Ar Date 8-2-21

Project / Client Whirlpool

80°F

1320 - Begin Soil Boring log at HP-16 using Geoprobe 3230DT model with 4 inch diameter dual tube

1322 - ~~Asphalt~~ Concrete at Surface to 5 inches

- push #1 - 0.5-2.5ft - recovery 2.5ft PID → 0.0
  - Gravel Base dark grey for 0.5 to 1ft bgs
  - silty clay reddish Brown trace gravel Subrounded, Stiff, moderate plasticity
  - dry - 1-2.5 Bgs
- Push #2 2.5 → 7.5 - recovery 5ft PID → 0.0
  - Silty clay - Yellowish Brown with grey mottling, moderate plasticity - Stiff dry stiffness increases with depth.

push #3 7.5 → 12.5 - recovery of 5ft PID → 0.0
- Same as above - Stiff

push #4 12.5 → 17.5 - recovery 5ft PID - 0.0
- Silty clay as above from 12.5-16.5
- 16.5-17.5 as above with trace Sand - fine

Push #5 17.5-22.5 - recovery 5ft PID → 0.0
~~@20ft~~ 17.5-18 - Clayey Sand red brown fine sand Cohesive, soft slightly moist
18-20 - Sandy clay reddish brown
20-22.5 clayey sand - brown with grey mottling medium stiffness [illegible] moist

Location Fort Smith, AR Date 8-2-21

Project / Client Whirlpool

85°F

push #6 22.5-25ft recovery of 2ft - PID → 96.8 ppm
- clayey gravel reddish Brown
- trace sand gravel subrounded cohesive - soft, wet

push #7 25-27.5ft recovery 2.5ft PID → 0.0
- Same as above harder and dry but slightly moist at bottom

push #8 - 27.5 - 30ft recovery 2.5ft PID → 53
- 27.5-29: clayey gravel A/A, sl. moist to dry
- 29-30: shale, grey/dk grey, dry, fissile

1530 - Construct temp well screened from 30-22.5 feet BGS using 8 feet of 0.010 slotted screen and 22 feet of riser 1 inch diameter

1630 - PVC screen broke off in well and detritus covered PVC at depth. - Hole was abandoned due to lack of ability to obtain sample

1655 - Bentonite chips used to plug hole - used bags Solids each

1715 Begin installing HP-16 - Shallow HP/GS

1750 Ion McQuoig left site

Location Fort Smith, AR Date 8-2-21

Project / Client Whirlpool

85°F

1830 - Completed install of HP-16S
will leave overnight to collect water

1910 - Drillers and D. Meyer left site

DM

Location Fort Smith AR Date 8-3-21

Project / Client Whirlpool

73°F

0600 D. Meyer and Jon McQuay onsite
- Drillers onsite with toy and Sean

0605 - D. Meyer conduct Health and Safety meeting - topics include traffic safety

0610 HP-16S - DTW 22.78
will wait to sample

0620 - Mob to staging area to Decontaminate Drill tooling

0705 - Sean and Jon left site to obtain fittings for flow meter

0720 - Finished Decon using Brush, Alconox, and pressure washer

0725 - Mob to HP-16 to redrill borehole

0735 - Begin Borehole with 2inch OD casing
- Drilled to depth of 27ft
Set well with 10.5 foot screen
Pulled casing back to 22.5 feet

0830 HP-16D PVC TD: 27.5,
screen exposed 22.5-27.5

0833 HP-16D dry, will wait to recharge;
- D. Meyer + Ewi performing GPR on next location (North)

0845 HP-16D still dry

Location Fort Smith, AR
Project / Client Whirlpool
Date 8-3-21
75°

13 0900 - Mob to ~~AA~~ HP-17D on East Side of Building onsite North of HP-16

13 0915 - Begin Drilling and logging soil core
- push #1 - 0-2.5 feet - recovery 2 feet PID 0.0
- 0-1.25 ft concrete - subbase material
- 1.25 - 2.5 - clayey silt - light brown trace black nodules - stiff slightly plastic dry

push #2 - 2.5 feet → 7.5 ft recovery 5 ft → PID 0.0
2.5 to 4 - Same as above
4 - 7.5 - silty clay, reddish brown frequent black nodules, stiff moderate plasticity dry

push #3 - 7.5 - 10 ft - recovery 4 feet - PID 0.0
- Same as above

push #4 - 10-12.5 ft - recovery 2.5 feet - PID 0.0
- Sandy clay - reddish brown - trace black nodules, non plastic with sand fine cohesive, ~~soft~~ reddish saffron dry

push #5 - 12.5 - 15 feet recovery of 3.5 feet PID 0.0
- Same as above

push #6 - 15 - 17.5 - recovery 2.5 ft PID 1.1
- 15 - 16.25 clayey sand reddish brown sand fine - cohesive soft and moist

Location Fort Smith, AR
Project / Client Whirlpool
Date 8-3-21
78°F

push #6 continued
16.25 - 17.5
Gravel - reddish brown with sand fine, ~~silt~~ with clay, gravel subrounded cohesive soft wet

push #7 17.5 - 22.5 - recovery 5 ft - PID 2.5 ppm
- Same as above

push #8 22.5 - 26 - recovery 3.0 ft PID 1.0
- Same as above except 22.5 - 23.5 is dry and 23.5 - 26 ft is ~~dry~~ moist

push #9 26 - 29 ft - recovery ~~2.0 ft~~ PID - NO
- Shale at 29 ft
~~likely~~ coarse gravel from 26 - 29 ft S.S

1030 - ~~Begin Purging~~ - pulling back outer casing to expose 29 ft to 26 ft to collect deep sample

1045 IM set up on HP16D
TD: 27.61 ft bgs
DTW: 14.45 ft bgs

1050 Begin purge HP 16 Deep
water milky brown

1120 ~4 gal purged, cleared in color now slightly brown and

Location Fort Smith, AR
Project / Client Whirlpool
Date 8/3/21
82° F

1120 SAMPLE
HP-16-DEEP - 210803
Post-purge DTW: 14.40 ft bgs
1122- Finished setting shallow well HP-17S from surface to 22ft deep. Sealed from 22-17 feet
1145- Drillers left site for lunch
- Ian and David left site
1220 IM + EWI on site
- pulling 4" rods from deep boring HP-17D, will put sand + bentonite around screen, screen 24-29' bgs
- HP-17S + D both dry
- Sand (filter pack) from 24-29' bgs, bentonite chips (hydrated) from 9'-24' bgs
1240- Ian McQuay left site to dump water
1245- Mob to HP-18 to begin setup
1325- Begin Boring HP-18 with 4 inch outer rods
push #1 - 0-2.5 ft recovery of 4 feet - PID → 0.0
- 0-.12 - Concrete and sub-base (8 inch break)
- 2.5- clayey silt, reddish brown with [illegible] black nodules trace gravel [illegible] stiff

Location Fort Smith, AR
Project / Client Whirlpool
Date 8-3-21
82°F

push #2 - 2.5 → 7 feet recovery of 5ft - PID 0.0
- Core is stuck in inner casing
- likely will be clay or silt similar to the above by the look of the visible ends
will attempt recovery at a later time
push #3 - 7.5-10 feet recovery 2 feet PID-0.0
- silty clay reddish brown with grey mottling, moderate plasticity, stiff dry
push #4 - 10-12.5 - recovery 4.4 feet PID-0.0
- Same as above
push #5 12.5-15 feet - recovery of 3ft PID 0.0
- Same as above soften with depth
- Silty clay
push #6 - 15-17.5 - recovery 4ft PID 0.0
- 15-16.25 - Same as above
- 16.25-17.5 - Clayey sand light brown, some gray mottling with clay fine sand, soft cohesive, moist in bottom 6 inches
push #7 - 17.5-20.0 recovery of 2.5 feet PID 0.0
- 17.5-19.0 - Same as above
- 19.0-20.0 - gravel - brown, with fine sand, clay - subrounded gravel, cohesive soft moist

98

Location Ft Smith, AR Date 8/03/21

Project / Client Whirlpool

85°

~~20.0~~ ~~push~~ - Boring log at HP-18 continued

- push #8 - 20.0 - 22.5 recovery of 2.5 feet PID-

- 20.0 - 21.25 - some gravel as above ~~but~~

21.25-22.5 - Some gravel as above but it is wet

push #9 - 22.5 - 27.5 feet recovery of 3.5 feet PID-0.0

- Some gravel as above

- wet from 22.5 - 25 feet

- Saturated from 25-27.5 feet

push #10 - 27.5 - 29 feet - recovery 3 feet - PID-0.0

27.5 to 28 feet some gravel as above wet

28-28.5 feet - clayey silt - reddish brown

- stiff non cohesive - non plastic, dry

28.5-29 - Shale - dark grey hard laminated

1505 - Construct temp well screened from 29-19 feet BGS - riser from 19-0 feet bgs with outer casing removed

- Constructed temp well with Sand from 29-17 feet BGS and Bentonite from 17-15 feet BGS

1520 IM setting up to sample HP-17 Deep

DTW: 14.74 ft bgs

TD: 29.25 ft bgs

99

Location Fort Smith, AR Date 8-3-21

Project / Client Whirlpool

1535 Begin purging HP-17 Deep; water brown

1550 ~2 gal purged, water clear w/tan tint

SAMPLE
HP-17D-WG-210803

Post-purge DTW: 23.10 ft bgs

1600 Setting up to sample HP-17 Shallow;

DTW: 15.15 ft bgs

TD: 22.75 ft bgs

1602 Begin purging HP 17 Shallow

- water milky brown

1625 ~2 gal purged, water brown

SAMPLE
HP-17S-WG-210803

- DTW post purge: 16.45 ft bgs

1632 Setting up -- HP-16 Shallow

DTW: 22.56 ft bgs

TD: 22.84 ft bgs

- less than a half foot water, will move on to HP-18 and let sit

1637 Setting up on HP-18

DTW: 13.87 ft bgs

TD: 29.50 ft bgs

Location Ft. Smith, AR Date 8/03/21

Project / Client Whirlpool

870

1645 Begin purging HP-18, water milky brown

1655 ~1 gal purged, water clear

SAMPLE
HP-18 - 210803

Post purge DTW: 13.80

1715 DM offsite, IM filling out COC

1730 IM offsite for sample ice refill

1800 Samples given to courier

- IM offsite; EOD

Location Ft. Smith, AR Date 8-4-21

Project / Client Whirlpool

73°F

0630 - P. Meyer and Ian McQuiz onsite
- Drillers from EWI onsite - Tony, Sean

0635 - P. Meyer Conducted Health and Safety meeting Topics include Heat Stress

0645 - Begin Setup at HP-19

0650 - Ian McQuiz calibrated PID meter

0655 - Calibration Successful

0658 - Begin Boring log at HP-19 - 4 inch boring

push #1 - 0-5 feet recovery of 3 feet PID → 0.0
- 4 inches of concrete
- 8 inches of Subbase gravel
1-5 feet - Silty clay with gravel
Dark Brown gravel subangular stiff dry

push #2 5-7.5 feet recovery of 1 foot PID →
- 5-7.5 - Silty clay reddish Brown non plastic - stiff dry

push #3 7.5-10 feet recovery of 5 feet - PID 0.0
- Silty clay Brown with red mottling - trace gravel - subrounded up to 1/4 inch - moderate plasticity, stiff dry

push #4. 10-12.5 recovery of 5 feet - PID 0.8
- Silty clay - Brown with grey mottling

push #5 - 12-5 - slightly plastic, stiff, dry
- 15 feet recovery 0 feet PID → —
- 15 feet

Location Ft Smith, AR Date 8/4/21

Project / Client Whirlpool

75°F

Boring log at HP-19 continued

push #6 ~~17.5-22.5~~ (DM) recovery of 5 feet - PID 0.0

12.5-17.5 - silty clay - Brown with gray mottling trace black nodules - slightly plastic stiff dry

push #7 ~~22.5-25~~ (DM) feet - recovery of 5 feet PID 0.0

17.5-20 - Sandy clay - reddish Brown with gray mottling - soft plastic, dry trace sand very fine

push #8 ~~25-27.5~~ (DM) feet - recovery 5 feet PID 0.0

20-22.5 ~~25-27~~ (DM) Same as above 20-22 feet

22-22.5 ~~27-27.5~~ (DM) ft Sandy clay - Brown some gray mottling - fine sand - some silt cohesive plastic soft - moist

22.5-25

push #9 ~~27.5-30~~ (DM) feet recovery 4 feet PID 0.0

~~27.5-28.75~~ (DM) - clayey sand - Brown fine sand

23.75-25 ft medium stiffness cohesive very moist

~~28.75-30~~ (DM) - ~~Clay~~ (DM) Sandy clay Brown with gray mottling ~~[illegible]~~ (DM) nonplastic stiff dry

Smith - driller rank top and Bottom wrong

25-27.5

push #10 ~~30-32.5~~ (DM) feet - recovery of 4 feet - PID 0.0

~~32-32.5~~ (DM) ~~30-30.5~~ (DM) clayey gravel - gravel up to 1 inch - Subangular - Stiff dry

27-27.5

~~30-32~~ (DM) ~~30.5-32.5~~ (DM) clayey sand, decreasing clay content with depth light brown sand - fine grain soft saturated

25-27 ft

Location Fort Smith, AR Date 8/4/21

Project / Client Whirlpool

75°F

27.5-30.0

push #11 - ~~32.5-35~~ (DM) recovery of 3 feet - PID 0.0

27.5-28.5 ~~32.5-33.5~~ (DM) Same gravel as above - dry

28.5-30.0 ~~33.5-35~~ (DM) silty clay light brown plastic very stiff slightly moist

push #12 ~~32~~ (DM) ~~35~~ (DM) ~~35~~ (DM) ~~37.5~~ (DM) recovery 4 feet PID

30-32.5 - ~~35-35.5~~ (DM) Sandy clay Brown

30-30.5 fine sand soft cohesive very moist

30.5-31.5 - ~~35.5-36.5~~ (DM) clayey gravel with trace sand fine. Brown gravel subangular ~~[illegible]~~ (DM) - slightly moist

31.5-32.5 ~~36.5-37.5~~ (DM) stiff clay that transitions to shale

clay is dry hard laminated

shale is grey hard laminated

0915 - Boring complete

0940 - temp well constructed with screen from 33-23 feet with riser to surface

- Hole collapsed from 37-33 feet unable to get pvc temp well pushed to bottom

- Sand to 33 to 21 feet BGS

- 3 feet of Bentonite seal from 18-21

0950 - DTW 17.5 TTL Depth 33 feet

1012 - Begin Purging HP-19

Location ~~Fort~~ Smith, AR
Project / Client Whirlpool
Date 8/4/21
75°F

1100 - Collected Sample HP-19-W6-20210804
- Purged 1.5 gallons

1045 - Begin Drilling HP-20
push#1 - 0-5feet - recovery of 5feet PID 0.0
- 2 inches of Asphalt
- 0.2-5feet Black subbase gravel
moteria
push#2 - 5-7.5feet recovery of 2feet PID 0.0
- silty clay - light Brown
some grey mottling soft moist plasticity dry
push#3 - 7.5-10feet - recovery of 3.5feet PID 0.0
- silty clay - Reddish Brown with gray
mottling plastic stiff dry
push#4 - 10-12.5feet recovery of 3feet - PID 0.0
- 10-11feet - Same as above
- 11-12.5 - sandy clay - red brown with
fine sand gray mottling - Stiff plastic dry
push#5 - 12.5-17.5feet - recovery of 5feet PID 0.0
- silty clay - reddish brown with gray
mottling, stiff - plastic moderate plasticity. dry
- trace black nodules
push#6 17.5-20feet recovery of 2.5feet PID 0.0
- 17.5-18.5 - Same as above
18.5-19.5 - Sand - light Brown,

Location Fort Smith, AR
Project / Client Whirlpool
Date 8-4-21
76°F

- Boring log continued
18.5-19.5 - light Brown - soft fine grain
saturated -
19.5-20 sandy clay - reddish Brown
soft cohesive, slightly moist
push#7 - 20-22.5 recovery of 2.5feet PID 1.7
~~20-20.5 - Same as above~~
~~20.5~~
20-21.5 Sandy gravel with trace clay
gravel subrounded up to 1/2 inch
- Soft - moist
21.5-22.5 - sandy clay with trace gravel
- Moderately stiff, Brown with gray
mottling, moderate plasticity, ~~dry~~ slightly
moist
push#8 - 22.5-25feet recovery of 3feet PID 1.6
- 22.5-23.5 - sandy gravel,
reddish brown, soft gravel 1/4 inch diameter
subrounded - moist
- 23.5-24.5 - silty clay Brown
slightly laminated, plastic very stiff
dry
- 24.5-25 - Shale, dark gray
crumbly laminated stiff dry

Location Fort Smith AR Date 8-4-21

Project / Client Whirlpool

75 °F

1205 - Begin temporary well construction
- Total depth of 25 feet
- temporary screen from 25-18 feet
riser from 18-0 feet BGS
- Sand pack from 25-16 feet
- 16-14 feet bentonite seal

1245 - Jan David and Drillers left site for lunch

1315 - Back onsite and mob to Mars Pet Care - Fast Investigation location to pull remaining casing out of boreholes.

1340 - Mob to HP-16S -
- measured DTW - 21.6 ft BGS
- Total Depth - 22.4 ft BGS

1345 - Determined that there was not enough water after 48 hours to sample the shallow interval

1415 Removing rods from HP-16, 17 & 18 locations

1455 MW-205 will be set at HP-17D location, screened 19-29', TD 29'
- setting up rig to HSA drill + install MW-205

Location Fort Smith AR Date 8-4-21

Project / Client Whirlpool

76°F

1525 Breaking concrete at MW-205 location

1600 HSA drilling at MW-205, 1m to HP-20 to check DTW

1605 HP-20 dry, DM assisting with plugging well

1705 HP-20 dry still

1750 - HP-20 dry - Jan left site to deliver cooler to courier

1730 - Begin well construction of MW-205
- well depth at 29 feet Below Ground Surface
- Sand pack from 29-16 feet BGS
- Screened from 29-19 feet BGS
- Bentonite seal from 16-2 feet BGS
- riser from 19-0 feet BGS
- Sand used S. 50 bags of Sand NSF/ANSI-61
- Used 8 bags of 3/8 inch Bentonite chips
- Borehole diameter is 8.25 inches in diameter

1745 - Completed well installation

1800 - Drillers and D. Meyer left site

DM

Location: Fort Smith, AR
Date: 8-5-21
Project / Client: Whirlpool
75°F

0730 D. Meyer and Ian McQuaig onsite
0745 - Drillers onsite Tony and Ken
0750 - Conducted Health and Safety meeting
- Topics include Slip trips and falls
0755 - Tom to go check water level at HP-20
- Drillers will begin Auger Decon and well completion at HP-17
0800 IM to HP-20 to check DTW
DTW: 23.62 ft bgs
TD: 25.88 ft bgs
- plunging in attempt to surge water in well through screen
0825 HP-20 DTW: 23.50 ft bgs
- Setting up to purge & sample
0830 IM dropping off VOAs
0900 HP-20 DTW: 23.40 ft bgs, begin purge
0915 SAMPLE HP-20-GW-20210805
- water clear with no odor
- slow recharge
- ~0.75 gal purged
0935 - Mob to Staging Area to Begin Decon of Augers using Alconox and Power washer
1030 - Finished Decon of Augers

Location: Fort Smith, AR
Date: 8-5-21
Project / Client: Whirlpool
76°F

1100 Drillers left site to obtain more tooling
1105 D. Meyer and I. McQuaig left site for lunch
1140 Drillers and D. Meyer and I. McQuaig all onsite and mob to MW-26 formerly HP-19
1145 Begin Hollow Stem Auger drilling for MW-26 - 8.25 inch Borehole
1200 Augers turning
1315 - At total Depth of 32 feet BGS
1325 - Set in 10 feet of 2 inch 0.010 slotted Screen and 22 feet of riser 2 inch Sch 40 PVC
1415 - Removed all Augers and while removing Augers put in Sand ~~up to~~ from 32 - 25 feet
1420 - Filled Sand pack from 32 - 20 feet BGS used 5 bags of Quartz Sand NSP / ANSI 61 Sand
1430 - Used 8 bags of Bentonite 3/8 inch pellets to create seal from 20 - 0 feet BGS
1450 IM CAL YSI

Location Fort Smith, AR Date 8-5-21

Project / Client Whirlpool

75°F

1450 CAL YSI # 20C 201841
Spec Cond: 1410 µS/cm (CAL VALUE: 1413 µS/cm)
pH4: 3.99
pH7: 6.96
pH10: 10.06
ORP: 233.6 mV (CAL value 240 mV)
DO%: barometer: 762.508 mmHg
96.4%

1525 Tony offsite to review development pump

1528 HP-20 DTW: 23.36 ft bgs

1615 Packing equipment, storm incoming

1630 IM offsite to drop of samples with courier

1645 DM + EWI offsite

1700 Courier picked up samples for lab delivery

Location Ft Smith, AR Date 8-6-21

Project / Client Whirlpool

76°F

0720 J. McQuaid on site at IDW location
- D. Meyer to meet surveyor at SW location

0725 EWI on site
- H+S / Tailgate meeting
- traffic safety, slips/trips/falls

0740 Moving MW-206 IDW soil drums to IDW staging

0800 Mob to MW-205 to develop

0812 Setting up on MW-205
DTW: 14.73 ft btoc
TD: 28.58 ft btoc
1 well vol = 2.25 gal

0826 Beg. pumping MW-205

Vol (gal)	pH	Cond (µS/cm)	turb	DTW
0	6.51	373.6	muddy	15.80
7	6.21	324.3	brown	15.84
12	6.11	315.6	lt. brown	15.86
SURGE WELL				
17	5.82	320.3	muddy	15.75
25	5.70	310.8	brown	15.85
SURGE WELL				
30	5.66	312.1	muddy	15.82

Location Fort Smith AR Date 8-6-21

Project / Client ~~CW~~ Whirlpool

76°F

MW-205 development work

Vol (gal)	pH	Sp. Cond (uS/cm)	turb	DTW
33	5.64	312.6	brown	15.84
SURGE WELL				
37	5.66	307.1	lt brown	15.86
42	5.63	307.5	clear w/tn	15.86
48	5.69	304.2	clear w/tn tint	15.87

0850 Development Complete

post Purge DTW: 14.91

post purge TD: 28.60

- Decon pump & DTW meter

0905 M.S to MW-206 to develop

0912 Setting up in MW-206

DTW: 16.94 ft btoc

TD: 31.65 ft btoc

1 well vol = 2.4 gal

Begin developing

Vol (gal)	pH	Sp Cond (uS/cm)	turb	DTW
0	6.36	655.6	muddy	26.42
SURGE WELL (pump off)				
8	6.17	534.7	muddy	22.30
18	6.11	534.2	brown	25.46
SURGE WELL (pump off)				

Location Fort Smith, AR Date 8-6-21

Project / Client whirlpool

76°F

MW-206 development cont.

Vol (gal)	pH	Sp Cond (uS/cm)	turb	DTW
20	6.17	514.9	muddy	21.50
25	6.09	522.3	brown	below pump
SURGE WELL (pump off)				
30	6.14	516.3	lt brown	28.7
SURGE WELL				
35	6.12	522.8	muddy	24.46
37	6.14	524.9	brown	27.53
SURGE WELL (pump off)				
40	6.09	517.8	brown	23.04
43	6.13	512.2	clear w/tn	below pump
47	6.11	514.7	clear w/tn	below pump

0955 Development complete.

Water cleared significantly

post-purge DTW: 17.85 ft btoc

post-purge TD: 31.66 ft btoc

1000 Packing equipment

1030 D. Meyer and Ian McQuay left site

Drillers left site

DM

Location Fort Smith AR Date 8-16-21

Project / Client Whirlpool

80°F partly cloudy

0930- D Meyer Onsite

0940 - Willowstick team onsite including - Mitchell-Green, Nicolo Costioni

0945 - D Meyer distributed Health and Safety plan and conduct HAS meeting.

1000- Willowstick team left site to obtain water and provisions

1040- W-team back onsite

1045 - Drove around the ~~the~~ on survey areas to scope locations for electrodes

1130 - Begin electrode set up at MW-192

1200- W-team on roof laying wire out for surveys. D. Meyer met construction worker on southwest side of property to access work being done near ITMW-5. Construction of concrete will not interfere with well

1230- D Meyer left site to obtain lunch

1250- D Meyer back onsite
- W-team still on roof.

1350- Willowstick team off the roof

1400 - Jackie Zellner-Renbell onsite

1430 - Begin laying wire for Source Area survey

Location Fort Smith AR Date 8-16-21

Project / Client Whirlpool

80°F partly Cloudy

1530 D. Meyer to open wells MW-198 and MW-28 for source area survey

1600- walk on Mars Petcare Property to run wires

1700- MB to staging area to complete final setup for source area

1800- Setup system near MW-198
- Both electrodes in wells MW-198 and MW-28

1830- System is on and Survey #4 in Source area is in working condition

1845- Begin Survey of Area 4 - the Source Area.

1945- J. Zellner left site

1935- Completed Survey of Source area

1937 - Begin teardown of equipment

2000 - left site Willowstick team and D Meyer

DM

Location Fort Smith, AR Date 8-17-21

Project / Client Whirlpool

75°F cloudy some rain

0630 - D. Meyer and J. Zellner onsite
0640 - Willowstick team onsite
0645 - D. Meyer conducted Health and Safety meeting topic lightning
0700 - Willowstick team creating electrode
0705 - Mitchell left site to obtain materials and rain jackets
0730 - Nicolo - making wire connections
0750 - ~~D. Meyer Onsite~~ Mitchel back onsite
0830 - Mob to NE corner to set wire electrode in MW-184
0900 - Mob to NE corner of property to set up for East Survey
0930 - Begin collecting data for East Survey
1130 - David Meyer left site to get lunch
1145 - David Meyer back onsite
1155 - Jackie Zellner left site
1200 - East Survey complete
1225 - Mob to Source Area to re-Survey the Source Area
1235 - Nicolo Surveying Source Area
1245 - David and Mitchel putting electrodes in well's TTMW-7 and TTMW-9
1345 - Mob back to Survey of Source area to break down equipment

Location Fort Smith, AR Date 8-17-21

Project / Client Whirlpool

75°F cloudy rain

1400 - Mob to SW and South Area to set up Survey wires
1400 - Willowstick team left site for lunch
1430 - Willowstick team back onsite
~~1530~~ Begin running wire for South and Southwest Survey for Northern electrodes
1545 - Begin running wire for Southern electrode for South and Southwest Survey
1745 - running wire behind Harmon property
1900 - finished wire connections - begin setup to test if circuit is complete
1945 - D. Meyer and Willowstick team left site

DM

Location Fort Smith, AR Date 8-18-21

Project / Client Whirlpool

74°F Cloudy light rain

0645 - D. Meyer and Willowstick team on site

0650 D Meyer Conduct Health and Safety meeting.

0700 - Set up at South well - Begin Survey of South Area

0848 - Potential Break in the wire - begin troubleshooting

0920 - Circuit Broken near JTMW-9 - the construction crew accidentally broke the wire.

0930 - Connection in Place and construction crew is aware of the wire

1115 - South Survey complete - Break down the wiring at JTMW-9

1130 - Willowstick team and D. Meyer left Stefoulwch

1145 - D. Meyer Back onsite

1230 - Willowstick team back onsite

1231 - D. Meyer Mob to MW-34R to collect grab sample

1245 - Collected grab sample MW-34R-WG-202108

1300 - collected Trip Blank TB01-20210818

1315 - ~~Back on~~ D. Meyer back at Willowstick Staging Area and Willowstick team to begin Southwest Survey.

1500 - Willowstick team on break

Location Fort Smith, AR Date 8-18-21

Project / Client Whirlpool

75°F Partly cloudy

1500 Back on Survey

1700 - Willowstick team on break due to heavy storm

1800 D. Meyer and Willowstick team left Site

DM

Location Fort Smith AR Date 8-19-21

Project / Client Whirlpool

77°F Cloudy

0730 - D. Meyer and Willowstick team onsite

0735 - D. Meyer conduct Health and Safety meeting
- topics include animal safety and heat stress

0745 - Begin Southwest Survey data collection

1030 - Southwest Survey complete
- Mitchel is processing data for review

1100 - Willowstick team left site to get rental car and process data

1130 - D. Meyer left site for lunch

1230 - D. Meyer back onsite

1415 - Mitchel Green Back onsite begin wire removal

1630 - Most of wire removed. All offsite wire removed.

1700 - D. Meyer and Willowstick team left site.

DM

Location Fort Smith, AR Date 8-20-21

Project / Client Whirlpool

75°F Cloudy

0630 - D. Meyer and Mitchel Green onsite

0635 D. Meyer conduct Health and Safety meeting - topic - Lightning

0645 - Mitchel Begins RAP Survey
- RAP - Rapid Acoustic Profiling
- The first line is north of the Source Area

0730 - Begin East Area Survey

0930 - Begin Southern Surveys

1100 - RAP Survey complete

1130 - D. Meyer and Mitchel Green off Willowstick left site.

DM

Location Fort Smith, AR Date 9-20-21

Project / Client Whirlpool

70°F Sunny

0630 - D. Meyer, Caroline Chavers and Drillers on site with Sean and Tony

0635 - Health & Safety meeting conducted topics include traffic safety

0650 - Mob to Mars Petcare property to scope HP-21

0655 - Caroline left site to print document and get handhat

0705 - GPR unit not working.

0745 - GPR unit fixed

0755 - SSC - Complete for HP-21 in mars petcare area of site

0800 - Begin HP-21 boring log

- 3 inches of Asphalt
- push #1 0 Sfeet recovery of 4ft PID-0.0
- 0-.5 - Asphalt.
- .5 ft to 1.5 ft - Gravel subbase
- 1.5-3.0 - Clayey silt - Brown stiff crumbly dry
- 3.0-5.0 silty clay - yellowish brown with grey and reddish Brown mottling soft medium plasticity - dry

Push #2 5-10 feet silty clay as above recovery 5ft PID-0.0 with increasing black nodules with depth and stiffness increased with depth

Location Fort Smith, AR Date 9-20-21

Project / Client Whirlpool

85°F Sunny

push #3 10-15 feet BGS recovery - 5feet PID 0.0
- ~~redd~~ silty clay - reddish Brown + rice black nodules, trace gravel angular stiff crumbles - dry

push #4 15-17.5 ft BGS recovery of 5feet - PID 0.0
- Silty clay reddish Brown with grey mottling. Stiff with moderate plasticity

push #5 - 17.5-22.5 recovery of 5feet PID 0.0
17.5-21.5 silty clay - reddish Brown trace gravel with grey mottling, Stiff low plasticity, dry
21.5-22.5 - silty clay with sand fine light brown with grey mottling moderate stiffness and plasticity. dry

push #6 - 22.5-25 ft BGS - recovery of 2.5 feet PID 0.0
22.5-24 - Same as above with increasing sand content with depth
24.25 - Sandy clay brown with gravel subrounded sand - fine Cohesive moist

push #7 - 25-27.5 - recovery of 2.5 feet PID 0.0
Same as above. Sandy clay with gravel - Brown - Gravel Sub rounded
- Sand cause - high plasticity soft

Location Fort Smith, AR Date 9-20-21

Project / Client Whirlpool

90°F Sunny

Boring log at HP-21 continued

- push 8 - 27.5 - 32.5 BGS - recovery of 4 feet PID 0.0

27.5-32.5 ~~Clayey~~ Sandy clay - with gravel

Sand fine to coarse, gravel subangular

- crumbles with clay bearing moderate plasticity

push 32.5 - 37.5 ft BGS - recovery of 5 feet PID 0.0

- 32.5 - 34.5 - Same as above

- 34.5 - 37.5 - Sand with gravel

light Brown non-cohesive, wet

gravel content increases with depth

push 37.5 - 38.5 recovery of 1 ft - PID

- Same as above

38.5 ft BGS Shale in shoe - dark grey

hard laminated dry

1000 - Finish with core at HP-21 - Began

pulling rods back to set temp well

- using 10 ft of 0.010 slotted screen.

1017 - 10 feet screen exposed from 38.5 - 28.5 ft BGS

- DTW: 30.99 ft TD: 39.35

1050 - ~~HP-21-092021~~ 1.5 gal purged

HP-21-WG-202109

1110 - East locations cleared

1125 all rods out of ground at HP-21

1154 - ~~All rod~~ pulled PVC and used 3 bags of Bentonite & [illegible]

Location Fort Smith, AR Date 9-20-21

Project / Client Whirlpool

95°F

1200 - Mob to HP-22 on East Investigation

1202 - D. Meyer 1 cft Site for bathroom

1215 - D. Meyer Back onsite at HP-22

1220 - Rig setting set up to begin boring

1230 - Begin collecting core at HP-22

push #1 - 0-5 ft BGS recovery 5 feet PID - 0.0

- 0-2.5 - Fill material light Brown

Clayey sand and gravel - dry

2.5 - 5 Clayey silt, dark brown, soft

slight plasticity, dry

push #2 - 5 - 10 ft BGS - recovery of 5 ft PID - 0.0

- 5-7 ft Clayey silt, reddish brown

with grey mottling, stiff, crumbles, dry

7-10 ft - Silty clay, reddish brown

moderate stiffness, low plasticity, dry

push #3 10 - 12.5 ft BGS - 5 ft recovery - PID 0.0

- Same as above -

push #4 - 12.5 - 15 ft BGS - recovery of 3 ft PID 0.0

- 12.5 - 15 Silty clay, with fine sand (trace)

reddish brown with grey mottling

moderate stiffness, low plasticity, dry

push #5 15 - 17.5 ft BGS - recovery of 4 ft PID - 0.0

15 - 17 - Same as above

17 - 17.5 Sandy clay - fine to coarse sand - reddish brown

moderate stiffness, ~~crumbles~~ sticky slightly moist

Location Fort Smith AR

Project / Client Whirlpool Date 9-20-21

95°F Sunny

- AP-22 - Boring log continue!
- push #6 - 17.5-20 ft BGS - recovery 4 ft PID 0.0
  17.5 - 18.5 - silty sandy clay - reddish brown with grey mottling - stiff low plasticity slightly moist
  ~~19-20~~ - 18.5-19 small ~~sandy~~ clayey sand reddish brown fine slightly moist
- ~~push #7 - 20 - 22.5 ft BGS - recovery 2.5 ft PID 0.0~~
  - 19-20 - silty clay with gravel brown - subangular gravel - stiff non-plastic - sticky slightly moist.

push #7 20-22.5 ft BGS recovery of 2.5 feet - PID 0.0
- silty clay with gravel brown subangular gravel
- stiff non plastic slightly moist

push #8 - 22.5-27 recovery of 5 feet PID
- 22.5-23.5 - same as above
- 23.5-24 - light brown sand - with gravel wet soft crumbles 24 pm
- ~~26.5-27 - shale dark grey hard [illegible]~~
- 24-25 - clayey sand with gravel - dark brown
- ~~[illegible]~~ soft non cohesive wet sub-rounded gravel coarse sand
- 25-26.5 - silty clay - dark brown hard low plasticity, dry
- 26.5-27 - shale - dark grey, hard, dry crumbles

1420 - Boring complete - set temp well from 27-17 feet screened

Location Fort Smith AR Date 9-20-21

Project / Client Whirlpool

95°F Sunny

1520 completed temporary well with sand from 27-15 feet BGS and 1 foot of bentonite from 15-14 BGS
- seal at surface.

1545 - temp well dry TD - 27.27 ft B
- Dry

1550 - Begin Boring log at 1 ft - 23

push #1 - 0-5 ft BGS - recovery of 4 feet PID 0.0
0-2 ft - silty fill, light brown, crumbly, non plastic dry
2-3 ft - silty clay - hard crumbles, non plastic dry
3-5 ft silty clay, brown, low plasticity, stiff dry

push #2 - 5-10 ft BGS - 4.5 ft recovery - PID - 0.0
- 5-7 - silt with minor clay content - dark brown ~~[illegible]~~ soft non-plastic
- smears in hand - slightly moist
7-10 - silty clay - reddish brown with gray mottling, moderate plasticity dry

push #3 - 10-12.5 ft BGS recovery - 5 ft PID 0.0
- silty clay - reddish brown - trace grey mottling, moderate plasticity, trace gravel content up to ¾ inch, dry

push #4 12.5-15 ft BGS recovery - 2 ft PID 0.0

Location Fort Smith, AR Date 9-20-21

Project / Client Whirlpool

95°F

- AP-23 Boring log continued
- push 4 continued

12.5-15 - Silty Clay - reddish Brown, with grey mottling and trace Black nodules moderate plasticity dry

* Push 5 ↓

19-20ft BGS recovery of 5feet - PID 0.0

Push 6 - Same as above

20-25ft - BGS - recovery of 5feet - PID 0.0

- 20-23.5 - Same as above dry
- 23.5-25 Clayey Sand - fine to medium grain sand
  - light Brown non cohesive - non plastic
  - Soft very moist

Push # 7 - 25-27 ft - recovery 25 feet - PID 0.0

25-27 - Silty clay and gravel Brown, with sand Subrounded up to 1" fine to medium grain sand Sticky - Cohesive, wet -

- 27 - Shale dark grey laminated hard (in shoe)

1700 - Boring log complete - Begin Temporary well construction - 5

- Slotted screen (0.010 inch) from - 27-17 ft BGS

Sand from 27-15 ft BGS

- Bentonite seal from 15-0ft

1728 - Temp well construction complete

Location Fort Smith AR Date 9-20-21

Project / Client Whirlpool

95°F

1800 - Moisto MW-2 to refinish surface completion due to construction

1815 - completed well vault refinishing

1820 - David Meyer - Caroline Chevers and drillers left site

OM

Location Fort Smith AR

Project / Client Whirlpool Date 9-21-22

72°F Cloudy

0700 D. Meyer, (Chavers, and Dillon onsite

0705 - P. Meyer Conducted Health and Safety meeting

0718 - Check HP-23 DTW. No reading.
Total depth: 27.35

0721 Check HP-22 for DTW. 23.03
Total depth: 29.20.

0725 - Begin Boring at HP-24 in Fort Investigation Area.

0735 - Begin Boring log

push #1 0-5 ft BGS - recovery 5ft PID-0.0
- 0-0.25 - Asphalt surface
- .25-2.5 - fill material - dark brown soil - silty loam - stick soft - wet
2.5-5ft - Clayey silt - ~~light~~ reddish brown with trace gray mottling moderately stiff, moderate plasticity dry

push #2 - Driller made error and pushed from 5ft to 12.5 feet
- push 5-12.5 ft BGS - recovery of 5 feet PID 0.0
- silty sandy clay tight brown with grey mottling and trace black nodules fine sand - stiff low plasticity, dry

push #3 12.5-15 - recovery of 2.5 feet - PID 0.0
- 12.5-13 - dark black material appears to be chipped asphalt

Location Fort Smith, AR Date 9-21-22

Project / Client Whirlpool

72°F

- HP-24 - Boring log continued
- 13-14.5 - ~~dark~~ clayey silt reddish brown, stiff, crumbles in hand dry
14.5-15 - silty clay - dark brown with gray mottling stiff crumbles in hand, dry

push #4 - 15-17.5 - recovery 3ft - PID 0.0
- silty clay - trace sands - reddish brown with gray mottling, stiff crumbles in hand dry

push #5 - 17.5-20 - recovery 2.5 feet PID 0.0
17.5-18 - same as above
18-18.5 - Sand, tan in color, medium sand, wet
18.5-19.5 Sandy clay, light brown with gray mottling, soft, moderate plasticity moist
19.5-20 - tight silty clay, trace gravel ~~medium~~ Brown, stiff low plasticity moist

push #6 20-24 ft BGS - recovery 3.5 feet - PID
- 20-22 ft - silty clay ~~with~~ and gravel - subrounded up to 3/4" inch stiff, crumbles, slightly moist

Location Fort Smith, AR Date 9-21-22

Project / Client Whirlpool

75°F Cloudy

- HP-24 - Boring log continued -
- 22 - 23.5 silty clay with gravel, reddish brown, gravel subrounded up to 1/4 inch stiff, crumbles, slightly moist.
23.5-24 - Shale dark grey hard laminated dry
0845 screen length: 14-24 ft bgs HP-24
riser length: 14-0 ft
sand: 24-12 feet BGS bentonite: 12-8 ft BGS
0850 - D. Meyer left site to go to bathroom
0900 - Tony left site to obtain tape measure
0910 - David Meyer Back onsite
0925 - Tony back onsite - finish well at HP-24
0930 - Prob to setup at ~~[illegible]~~ HP-25 on East investigation area
0945 - Begin Boring log at HP-25
push #1 - 0-5 ft BGS - recovery of 4 ft PID 0.0
0-4 - Silty fill, Brown to dark brown, soft crumbles dry
4-5 - silty clay Brown soft low plasticity slightly moist.
push #2 5-10 ft BGS - recovery of 5 feet PID 0.0
- 5-10 ft - silty clay Brown, with grey mottling - trace black nodules, stiff low plasticity dry
- continued on next page

Location Fort Smith, AR Date 9-21-22

Project / Client Whirlpool

75°F Cloudy

- HP-25 Boring log continued
push #3 - 10-15 feet BGS - recovery 5 ft PID 0.0
- Same as above
push #4 15-17.5 ft BGS - recovery 4 ft PID 0.0
- 15-16.5 - same as above
- 16.5-17.5 ft - silty sandy clay Brown, sand fine grain cohesive soft, non plastic, very slightly moist
push #5 - 17.5-20 ft - recovery of 2.5 ft PID
- Same as above with ~~[illegible]~~ trace grey mottling
push #6 - 20-25 ft BGS - recovery of 5 ft - PID 0.0
20-21 ft - Same as above
21-21.5 - silty clay and gravel dark 75% gravel brown, gravel up to 1/4 inch sticky cohesive, moist
21.5-25 - silty clay and gravel, Brown gravel subangular up to 1/4 inch - 30% gravel sticky cohesive slightly stiff, moist.
push #7 25-27.5 ft BGS - recovery of 2.5 feet PID 2.3
25-26.5 - Same as above
26.5-27.5 - silty clay and gravel (GC) Brown, with sand gravel subrounded up to 1 inch fine to medium grain sand sticky cohesive wet
~~push #8~~ - Boring log continued on next page

Location Fort Smith, AR Date 9-21-20

Project / Client Whirlpool

75°F Cloudy

- HP-21 - Boring log continued

push #8 27.5 - 31 ft BGS recovery of 3.5 ft PID 0.0

27.5 - 28.5 - Same as above

28.5 - 30 - silty clay, Brown, slightly laminate at bottom, slightly plastic slightly stiff, dry

30 - 31 - Shale dark gray stiff laminated

1050 - Boring log complete

1055 - Caroline to sample HP-22 while David and drillers set temp well at HP-25

1105 - Caroline at HP-22.

DTW: ~~22.03~~ 22.30.

1110 - begin purging. color: none/clear.

1133 - sample taken HP-22-WG-202109

1.5 gallons purged.

DTW: 28.7

1145 - D. Neff left site for lunch. Drillers left site for lunch.

1205 - D. Neff back on site. Drillers back on site

1215 - Begin constructing temp well at ~~HP~~ HP-25

1215 - GPR cleared HP-26 in east area

1235 - HP-25

Screen from 31-21 ft BGS

Sand from 31-18 ft BGS. Bentonite from 18-16

Surface sealed with Bentonite

Location Fort Smith, AR Date 9-21-20

Project / Client Whirlpool

75°F Cloudy

1240 - Begin boring at HP-26 in East Area

push #1 - 0.5 ft BGS - recovery of 5 feet PID 0.0

- 0-2.5 - Silty fill material, light brown slightly stiff, crumbles, dry

2.5-5 - silty clay, Brown with gray mottling - moderate plasticity moderate stiffness, dry

push #2 5-10 ft BGS - recovery of 5 feet PID 0.0

5-6 ft - Same as above

6-10 ft BGS. silty clay, reddish Brown with gray mottling, stiff, low plasticity, dry

push #3 - 10-15 ft BGS recovery 5 ft PID 0.0

- 10-15 ft - silty clay, reddish Brown with gray mottling trace black nodules, stiff, low plasticity, dry

push #4 - 15-17.5 ft BGS - recovery 4 ft PID 0.0

- 15-17.5 - Same as above

push #5 17.5-20 ft BGS recovery of 3 ft - PID 0.0

- 17.5 - 19 ft BGS - Same as above

19-20 - Same as above with trace sands - fine dry

Push #6 20-25 ft BGS - recovery of 2 ft - PID 0.3

- 20-22 - Same as above dry

- 23, 24 Silty clay - Brown trace gravel subangular trace sand fine, slightly moist

Location Fort Smith, AR

Project / Client Whirlpool Date 9-21-2

80°F Cloudy

Boring log HP-26 continued

- 24-25 - silty clay and gravel brown with trace sand, gravel subangular, up to 1/4" inch sand fine grain. Sticky cohesive moist

push #7 - 25-27 ft BGS. recovery 5 feet PID.

- 25-26 - Silty clay reddish brown trace gravel up to 1/2 inch subangular
- stiff slightly laminated, low plasticity, dry
- 26-27 ft dark gray shale laminated hard dry

1445 - Boring complete

1500 - Outer casing stuck in shale - troubleshooting

1525 - pulling out rods now at HP-26

1540 - temp well completion

TD 26.91 ft BGS

Screen from 27-17 ft BGS riser 17-0 ft BGS

Sand 27-15 ft BGS

Bentonite seal from 15-13

1550 - Begin Cleanup

1600 - Mob to staging area for organization and Decon.

1630 - D Meyer, C Clavers, and Driller left site

MM

Location Fort Smith, AR Date 9-22-21

Project / Client Whirlpool

56°F partly cloudy

0700 - D Meyer, Clavers, and Tony - Driller onsite

- Seam on way to pick up signs for work

0705 - D. Meyer conducted Health and Safety meeting topics include traffic safety and heat stress

0706 - Mob to SW investigation area (green road) to clear boring locations.

- Caroline to check temp wells for water

0754 - Mob to HP-25.

DTW: 26.69 TD: 30.90

one well volume: 0.17 gal

803 - begin purging.

824 - Sample HP-25-WG-202109

2 gal purged. Well dry.

838 - Mob to HP-26.

DTW: 15.60 TD: 26.80

one well volume: 0.46 gal

843 - begin purging.

900 - Sample HP-26-WG-202109

2.5 gal purged. Well dry.

930 - Dwd Meyer and driller requested city water line and Att fiber line locate update neither line was marked for no-boring

1030 - Att marked fiber line.

Location Fort Smith AR
Project / Client Whirlpool
Date 9-22-21

1100 - City of Fort Smith marked water distribution main.
1130 - Driller left site for lunch
1200 - Drillers back onsite
1200 - determined that utilities will not allow us to drill in SW investigation area. Could not clear control zone
1215 - Mob to HP-24.
1217 - Begin purging. DTW: 23.21
TD: 24.29 one well volume: 0.04 gal
1219 - Sample HP-24-WG-202109
well dry. >0.25 gal purged.
1224 - Mob HP-23
DTW: 25.78 TD: 26.32
one well volume: 0.02 gal
1236 - Begin purging
1240 - Sample HP-23-WG-202109
well dry. >0.5 gal purged.
1315 - Mob to Green road to confirm utility locks
1330 - truck up to South Area boring location to collect boring from willows tank investigation.
1350 - Begin collecting boring log at HP-27
push #1 - 0-5 feet BGS - recovery of 2.5 ft - PID NA
- 0-3 ft likely fill material - clayey silt Brown loose dry

Location Fort Smith AR
Project / Client Whirlpool
Date 9-22-21

- Boring log at HP-27 continued
- 0-5 push become stuck in outer pipe causing it to be destroyed upon retrieval of inner casing. description was based on material retrieved during destructional inner tube/rod.
- 3-5 likely similar to push from 5-10 ft
push #2 5-10 ft BGS recovery of 3.5 ft PID-0.0
- 5-7 fill material, clayey silt. light gray with brown mottling, stiff non plastic, crumbles, dry
- 7-10 ft - Silty clay reddish Brown with gray mottling, trace sand, fine, medium stiffness, moderate plasticity, dry
push #3 - 10-15 ft - recovery of 5 feet PID - 0.0
- 10-11 - Same as above
- 11-14 - Silty clay - reddish brown - stiff, low plasticity, dry
- 14-15 - Silty clay, reddish brown with trace black nodules, moderate stiffness, non-plastic, crumbles, dry
push #4 - 15-17.5 ft BGS - recovery of 4 feet PID - 0.0
- Same as above with increasing silt content

Location Fort Smith, AR

Project / Client Whirlpool Date 9-22-21

HP-27 - Boring log continued

- push #5 - 17.5 - 22.5 ft BGS - recovery 5ft PID 0.0
  - Same as above with grey mottling
- push #6 - 22.5 - 25 ft BGS - recovery of 4ft PID 0.0
  - 22.5 - 23.5 - Same as above
  - 23.5 - 25 - silty clay, reddish brown with grey mottling, moderate stiffness medium plasticity - dry
- push #7 - 25 - 27.5 ft BGS - recovery 5ft PID 0.0
  - Same as above
- push #8 - 27.5 - 32.5 - recovery - 5ft - PID 0.0
  - Same as above
- push #9 - 32.5 - 35 ft BGS - recovery 5ft PID 0.0
  - 32.5 - 34.5 - sandy clay reddish brown with trace grey mottling, with silty fine sand soft, cohesive, wet
  - 34.5 - 35 - sandy clay ~~with~~ DM reddish brown with gravel up to ¼ inch, sand fine cohesive, slightly stiff moist
- push #10 - 35 - 37.5 ft - recovery 2 feet, PID - 0.8
  - silty clay with gravel - reddish brown with trace sand-fine, gravel up to 1 inch sub rounded, ~~M~~ DM cohesive, stiff nonplastic ~~dry~~ DM - moist

Location Fort Smith AR Date 9-22-21

Project / Client Whirlpool

push #11 - 37.5 - 39 ft BGS recovery of 1.5 feet PID 2.4

37.5 - 38.5 - Gravel - reddish brown, with sand fine to coarse, with silty clay, gravel subrounded up to 1 inch, cohesive, wet

38.5 - 39 - shale dark grey, hard laminated dry

1608 - Set up on HP-27 for sampling.
DTW: 27.0 TD: 39.2
one well volume: 0.5 gal

1619 - begin purging.

1635 - Sample HP-27-WG-202109
color: brown. 2 gal purged.

1645 - finished cleanup near HP-27

1700 - Ranhall and Drillers left site

DM

Location Fort Smith, AR
Project / Client Whirlpool Date 9-23-21

0700 - P. Meyer, C. Chavez, and Eng-Drillers onsite
0705 - P. Meyer Conducted Health & Safety meeting
0720 - Mob to MW-39 and MW-34 for repairs.
0750 - MW-39 found. PVC cut 1 ft bgs. PVC added to bring to surface.
0900 - MW-34 found. PVC added to bring to surface.
0935 - drillers mob for supplies.
- MW-39: 7 gal pumped out of well. color: light brown. slight sulfur odor.
1000 - Begin surface completion at MW-39 & MW-34
1040 - ~~M~~ CAC Caroline mob to HP-23 & HP-24 for sampling. David with drillers.
HP-23 DTW: 25.38
1045 - begin set up at HP-23
1050 - begin purging. take sample
1052 - well dry. HP-23-WG-20210923
1056 - Mob to HP-24
DTW: 21.55. set up at temp well
1100 - begin purging

Location Fort Smith, AR Date 9-23-21
Project / Client Whirlpool

1112 - sample HP-24-WG-20210923
>0.25 gal purged before dry.
1127 - Mob to get ice for samples.
- Return to site.
1230 - P. Meyer left site

DM

TABLE 1
SUMMARY OF GROUNDWATER SAMPLING ANALYTICAL RESULTS
(AUGUST AND SEPTEMBER 2020 SUPPLEMENTAL SAMPLING)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	HP-16D	HP-17D	HP-17S	HP-18D	HP-19	HP-20	HP-21	HP-22	HP-23	HP-23	HP-24
Field Sample ID		HP-16D-WG-20210803	HP-17D-WG-20210803	HP-17S-WG-20210803	HP-18D-WG-20210803	HP-19-WG-20210804	HP-20-WG-20210805	HP-21-WG-202109	HP-22-WG-202109	HP-23-WG-202109	HP-23-WG-20210923	HP-24-WG-202109
Lab Sample ID		60376577001	60376577002	60376577003	60376577004	60376702001	60376934001	60380731001	60380908001	60380985004	60381138001	60380985003
Sample Date		08/03/2021	08/03/2021	08/03/2021	08/03/2021	08/04/2021	08/05/2021	09/20/2021	09/21/2021	09/22/2021	09/23/2021	09/22/2021
Sample Method		HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH
Comments												
Volatile Organic Compounds												
Acetone	12000	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	U (2.5)	7.4 (2.5)	13.3 (2.5)	16.0 (2.5)	5.1 (2.5)
Benzene	5.0	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.14 (0.14)	0.26 (0.14)	0.19 (0.14)	0.29 (0.14)
2-Butanone	4900	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)	U (0.98)	4.9 (0.98)	2.2 (0.98)	2.2 (0.98)	2.1 (0.98)
Chlorobenzene	100	U (0.089)	0.11 J (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloroform	80	U (0.22)	0.24 J (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)
1,1-Dichloroethane	2.4	0.62 J (0.12)	1.0 (0.12)	0.70 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	0.44 (0.12)	0.21 (0.12)	U (0.12)
1,1-Dichloroethene	7.0	1.8 (0.22)	3.4 (0.22)	2.8 (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	U (0.22)	0.53 (0.22)	0.27 (0.22)	U (0.22)
cis-1,2-Dichloroethene	70	13.2 (0.13)	134 (0.13)	120 (0.13)	U (0.13)	0.24 J (0.13)	U (0.13)	U (0.13)	4.6 (0.13)	9.9 (0.13)	5.0 (0.13)	0.21 (0.13)
trans-1,2-Dichloroethene	100	0.17 J (0.10)	0.72 J (0.10)	0.59 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.12 (0.10)	U (0.10)	U (0.10)
Methylene Chloride	5.0	U (0.39)	0.75 J (0.39)	0.69 J (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	5.0	U (0.33)	1.1 (0.33)	0.70 J (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)	U (0.33)
Toluene	1000	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	U (0.25)	0.37 (0.25)	0.27 (0.25)	0.37 (0.25)
1,1,2-Trichloroethane	5.0	U (0.14)	0.42 J (0.14)	0.37 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)
Trichloroethene	5.0	179 (0.21)	398 (2.1)	321 (2.1)	0.33 J (0.21)	0.35 J (0.21)	U (0.21)	U (0.21)	27.4 (0.21)	97.9 (0.21)	45.6 (0.21)	0.90 (0.21)
Vinyl Chloride	2.0	0.29 J (0.17)	0.89 J (0.17)	0.70 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)
Xylenes (total)	10000	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	U (0.28)	0.65 (0.28)	0.47 (0.28)	U (0.28)	U (0.28)

Notes:

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

2 Only compounds with at least one detection are shown.

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

µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
U = Not detected
J = Estimated concentration
( ) = Sample Quantitation Limit
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter

TABLE 1
SUMMARY OF GROUNDWATER SAMPLING ANALYTICAL RESULTS
(AUGUST AND SEPTEMBER 2020 SUPPLEMENTAL SAMPLING)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	HP-24	HP-25	HP-26	HP-27
Field Sample ID		HP-24-WG-20210923	HP-25-WG-202109	HP-26-WG-202109	HP-27-WG-202109
Lab Sample ID		60381138002	60380985001	60380985002	60380985005
Sample Date		09/23/2021	09/22/2021	09/22/2021	09/22/2021
Sample Method		HYDROPUNCH	HYDROPUNCH	HYDROPUNCH	HYDROPUNCH
Comments					
Volatile Organic Compounds					
Acetone	12000	4.1 (2.5)	6.5 (2.5)	5.7 (2.5)	U (2.5)
Benzene	5.0	0.18 (0.14)	U (0.14)	0.19 (0.14)	U (0.14)
2-Butanone	4900	U (0.98)	1.3 (0.98)	1.3 (0.98)	U (0.98)
Chlorobenzene	100	U (0.089)	U (0.089)	U (0.089)	U (0.089)
Chloroform	80	U (0.22)	U (0.22)	U (0.22)	U (0.22)
1,1-Dichloroethane	2.4	U (0.12)	0.34 (0.12)	0.92 (0.12)	0.33 (0.12)
1,1-Dichloroethene	7.0	U (0.22)	0.47 (0.22)	1.3 (0.22)	0.78 (0.22)
cis-1,2-Dichloroethene	70	0.36 (0.13)	11.6 (0.13)	25.4 (0.13)	3.8 (0.13)
trans-1,2-Dichloroethene	100	U (0.10)	U (0.10)	0.28 (0.10)	U (0.10)
Methylene Chloride	5.0	U (0.39)	U (0.39)	U (0.39)	U (0.39)
Tetrachloroethene	5.0	U (0.33)	U (0.33)	0.66 (0.33)	U (0.33)
Toluene	1000	0.30 (0.25)	U (0.25)	U (0.25)	U (0.25)
1,1,2-Trichloroethane	5.0	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Trichloroethene	5.0	1.8 (0.21)	<u>127 (0.21)</u>	<u>321 (2.1)</u>	<u>154 (0.21)</u>
Vinyl Chloride	2.0	U (0.17)	U (0.17)	U (0.17)	0.34 (0.17)
Xylenes (total)	10000	U (0.28)	U (0.28)	U (0.28)	U (0.28)

Notes:

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

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 <u>double underlined</u>.

µg/l = Micrograms per liter
ppb = Parts per billion
bgs = Below ground surface
U = Not detected
J = Estimated concentration
( ) = Sample Quantitation Limit
RAI = Remedial action decision document
ADI = Arkansas Department of Environmental Quality
µg/L = Micrograms per Liter

Attachment F

Willowstick Geophysical Investigation Report

WILLOWSTICK INVESTIGATION

Of

Former Whirlpool Facility

Fort Smith, Arkansas

A geophysical investigation to identify, map and model preferential electric flow paths and patterns that indicated high-probability pathways for contaminants to follow as contaminants migrate away from the source area into the subsurface groundwater regime away from the site.

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WST Project No. 21382

Final Report Date: October 26, 2021

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

This report presents the results of a Willowstick® geophysical investigation completed in August 2021 to identify, map and model preferential electric current flow paths and patterns that indicate high-probability pathways for contaminants to follow as contaminants migrate away from the source area and into the subsurface groundwater regime beneath the Former Whirlpool Facility located in Fort Smith, Arkansas (see Figure 1).

Figure 1 – Location Map

An aerial photograph of the Former Whirlpool Facility and surrounding area is shown in Figure 2.

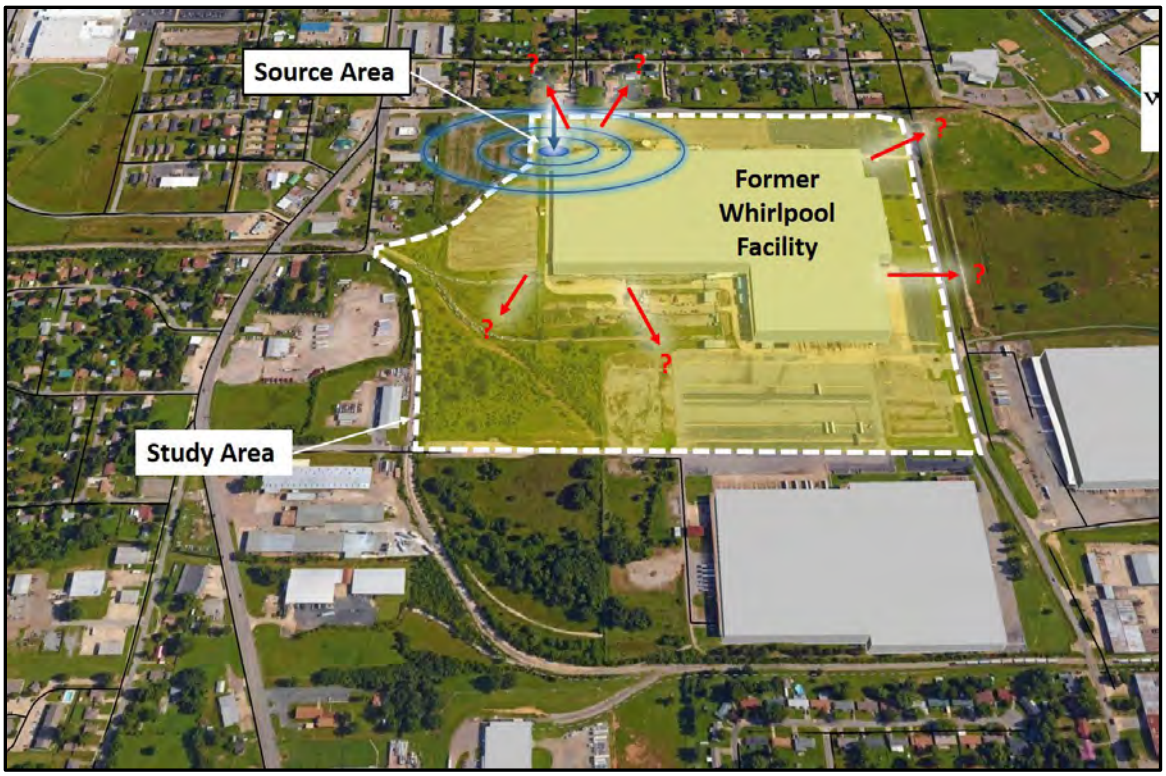


Figure 2 – Former Whirlpool Facility Site and Source Area Location

1.2 Current Conditions

Numerous investigations and studies have been carried out at the Former Whirlpool Facility site, including several drilling campaigns, an ongoing and comprehensive groundwater monitoring program, hydrogeological modeling, etc., to help characterize the migration of constituents away from the source area. To date, various investigations and studies have revealed that Trichloroethene (TCE)—the main constituent of concern—is present in elevated concentrations throughout the site.

1.3 Purpose of Investigation

The purpose of the Willowstick geophysical investigation is to identify and characterize preferential groundwater flow paths and patterns within the transmissive zone, i.e., a sandy/gravely layer sandwiched between a near-surface semi-impermeable clay layer and an underlying semi-impervious bedrock shale formation (see Figure 3).

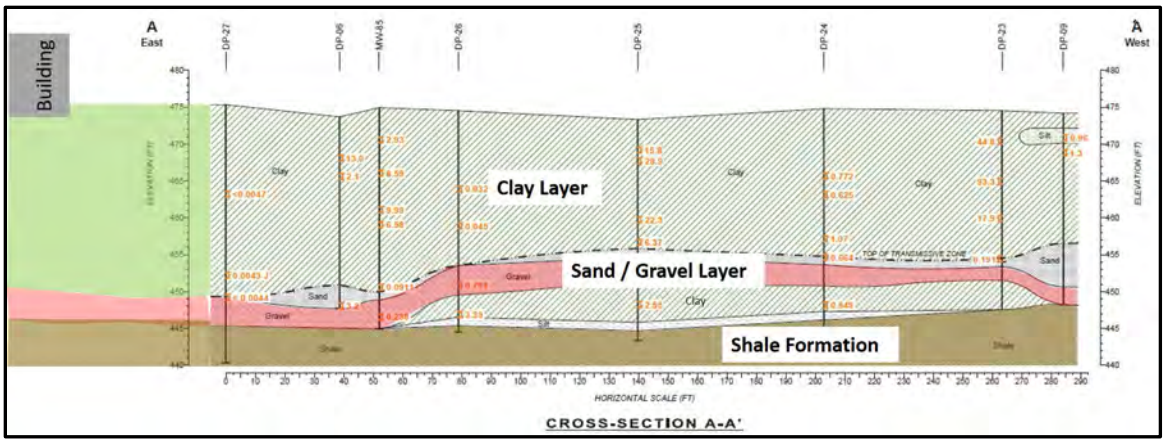


Figure 3 - Example of Lithology beneath Site (courtesy of Ramboll)

The relatively thin transmissive sandy/gravely layer is believed to be the mechanism influencing the transport of TCE away from the site. The objective of the Willowstick investigation is to identify preferential flow paths and patterns within the transmissive zone to target additional monitoring wells and potential recovery wells (if necessary) to better monitor and possibly curb the transport of TCE away from the site.

1.4 Approach to the Work

Willowstick Technologies, LLC (Willowstick) specializes in developing and applying unique geophysical exploratory techniques to help provide insightful information about preferential groundwater flow paths and patterns—two of which were used to identify, map and model groundwater flow paths beneath and away from the Former Whirlpool Facility site. The two methods included the Willowstick Method (an active electrical technique) and Resonance Acoustic Profiling Method or RAP (a passive seismic technique). An overview of these two methods is described below.

Willowstick Method Overview

The application of the Willowstick Method, as applied to the study area, is based on the principle that groundwater increases the conductivity of earthen materials through which it flows. As the injected signature electric current flows between strategically placed electrodes, it concentrates in the more conductive zones (i.e., in areas of highest effective porosity—often referred to as transport porosity) where groundwater preferentially flows beneath the study area. The resulting magnetic field generated from the flow of electric current is then measured and modeled to identify preferential electric current flow paths and patterns. The measured magnetic field data is compared to the predicted magnetic field based on a homogeneous 'simulated' model of the subsurface conductivity environment and the given electrode positions—to identify any variations from the background model and resolve areas of anomalous electric current density. This information is used to interpret where high-probability pathways exist that aid in the transport of contaminants away from the source area through the subsurface groundwater regime.

It should be noted that earthen materials are fundamentally electrical insulators with electrical conductivities ranging between 10^{-12} and 10^{-17} mho/m. Yet, in-situ measurements of electrical conductivities range from 10^{-1} to 10^{-8} mho/m—many orders of magnitude higher. This discrepancy

is due to the conduction of electrical current by way of ions dissolved in the groundwater flow paths. Therefore, as the signature electric current is biased to flow through the subsurface it tends to concentrate along preferential groundwater flow paths.

RAP Method Overview

The RAP system detects structural weaknesses in soil and rock and is apt at locating weak or fractured zones of high permeability through the subsurface. The flexing of the earth's crust due to interplanetary gravitational forces creates continuous micro-seismic activity, which is the source energy for this passive seismic method. Resonance from low-velocity zones, as indicated by the RAP signal, is predominantly interpreted as weak, fractured rock or secondary porosity in permeable soils such as clays, sands and gravels that can facilitate hydraulic conductivity through and beneath the study area.

When the two methodologies identify the same anomalous features and patterns (which use entirely different scientific principles), a great deal of confidence can be gained from the complementary data sets, as will be shown.

1.5 Summary of Results

Four survey areas were approved for the Willowstick investigation (see Figure 4).

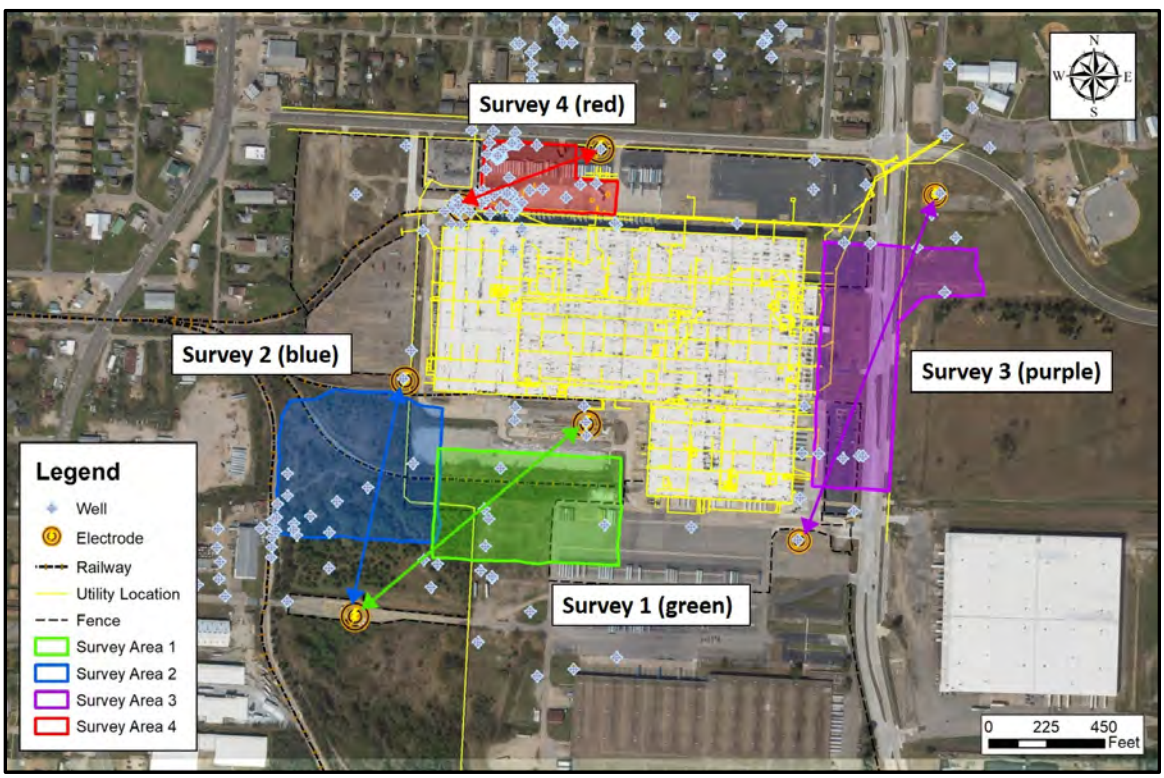


Figure 4 – Willowstick Study and Survey Areas

Survey 1 study area (green outline) and Survey 2 study area (blue outline) were designed to investigate groundwater flow paths and patterns below and away from the southwestern quarter of

the facility. Survey 3's study area (purple outline) investigated the area east of the facility and Survey 4's study area (red outline) investigated the area to the north.

The results of the investigation are presented in Figure 5.

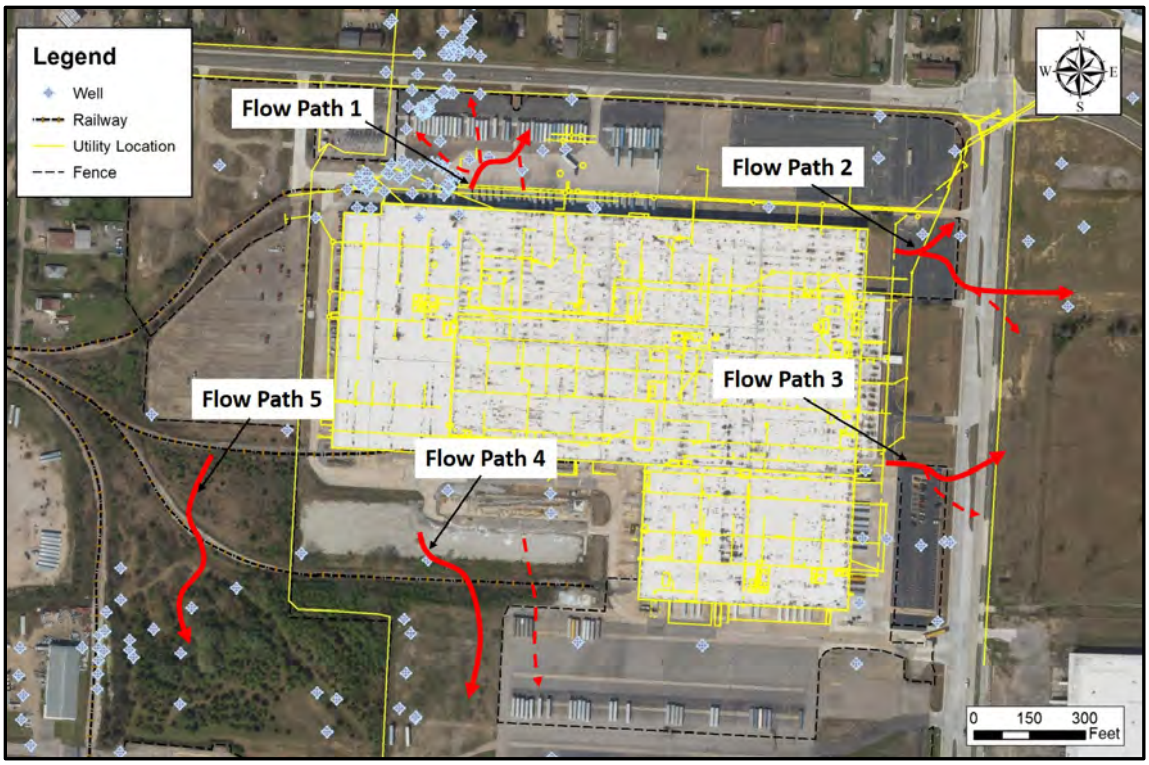


Figure 5 – Summary of Investigation (Plan View)

The solid red arrows highlight primary groundwater flow paths away from the site. The dashed red lines highlight secondary groundwater flow paths. The Willowstick Method identified five primary electrically conductive flow paths beneath and out from the source area within the sandy/gravely transmissive zone. The preferential flow of electric current is interpreted as highly probable pathways for contaminants to follow as contaminants migrate away from the source area. The RAP resonance signal identified porous zones in the clay and sandy/gravely layers as well as fractured zones in the underlying shale formation that possibly facilitate hydraulic conductivity beneath and away from the site. As will be shown in the body of the report when presenting the results, both techniques identified the same anomalous features and patterns (which use entirely different scientific principles). This collaborative evidence provides a great deal of confidence in the results of the investigation.

1.6 Conclusion

In conclusion, the Willowstick investigation has revealed five highly probable and preferential groundwater pathways beneath and away from the site. The information contained in this report can be used by Ramboll in making informed, guided, and cost-effective decisions concerning how to further monitor and/or possibly intercept contaminants (if necessary) from migrating away from the source area through the subsurface groundwater regime.

2.0 OVERVIEW OF INVESTIGATION

2.1 Willowstick Method - Surveys and Survey Coverage Areas

Four survey configurations were approved for the Willowstick investigation (see Figure 6).

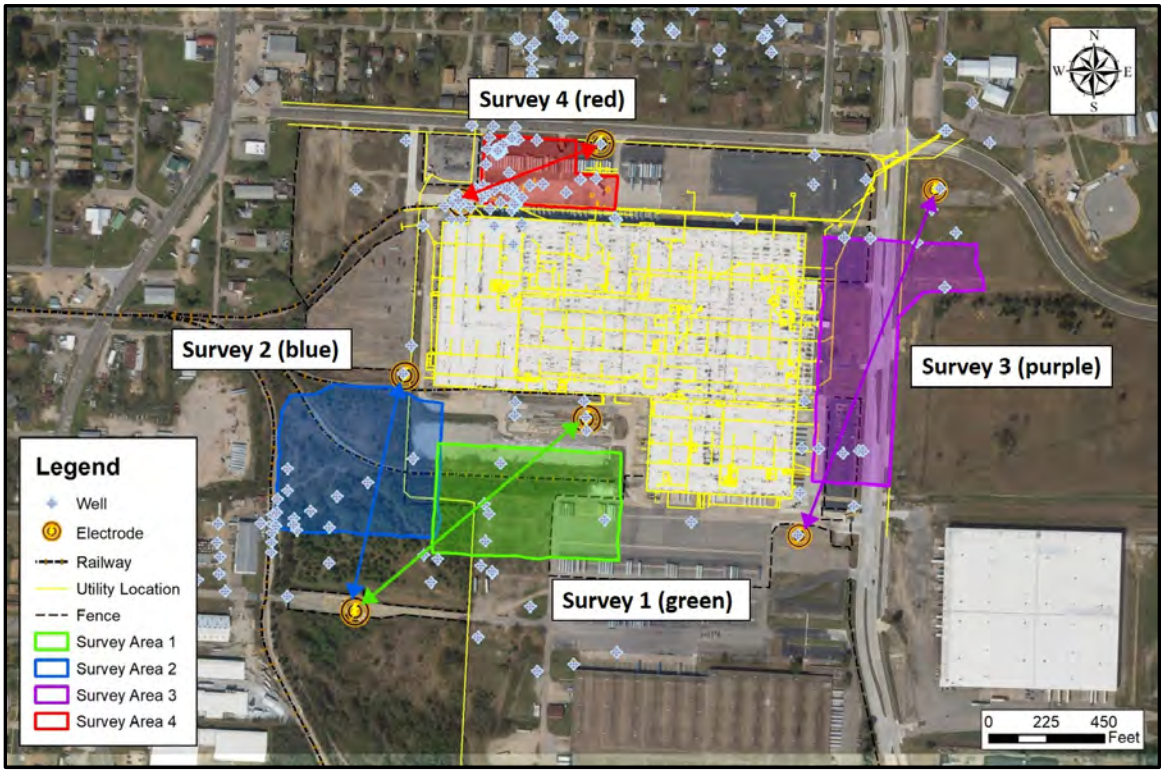


Figure 6 – Willowstick Method
Surveys and Survey Coverage Areas

Survey 1 (green outline) and Survey 2 (blue outline) were designed to investigate groundwater flow below the southwestern quarter of the study area. Survey 1 placed an upgradient electrode in well ITMW-9 paired with a downgradient electrode in a newly drilled well MW-206. Survey 2 used the same downgradient electrode position as Survey 1, but the upgradient electrode was shifted west to well ITMW-7. Survey 3 (purple outline) investigated east of the facility with an upgradient electrode placed in well MW-184 paired with an electrode in well MW-192. Survey 4 (red outline) investigated north of the facility and northwest of the source area. Survey 4 used an electrode in MW-28 paired with an electrode in MW-198.

2.2 RAP Method - Line and Measurement Locations

When Willowstick was first approached by Ramboll to perform a groundwater investigation at the Former Whirlpool Site (fall of 2019), Willowstick was reluctant about the site due in part to potential interference from human-made conductive culture. Conductive culture is any human-

made feature that can conduct the signature electric current away from the target study areas, such as the building's grounding grid, metal fences, overhead power lines, buried power lines, railroad tracks, pipelines, etc. throughout the site. After further evaluation and discussion with Ramboll, and because of the many monitoring wells available to place electrodes at depth (i.e., away from surface culture), survey configurations and study areas were identified, proposed and accepted in the fall of 2020. In the interim, between the time Willowstick was first contacted to when the notice-to-proceed was given to perform the work (summer 2021), Willowstick had completed the research, development and testing of the RAP Method. Results from extensive testing (two-plus years in the making) were so impressive that Willowstick asked Ramboll if the technique could be demonstrated at the Former Whirlpool Facility—free of charge. The offer was accepted and as a result, the RAP Method was employed and applied to six lines with measurements taken along each line at 25 ft. intervals. Figure 6 presents the RAP line and measurement station locations.

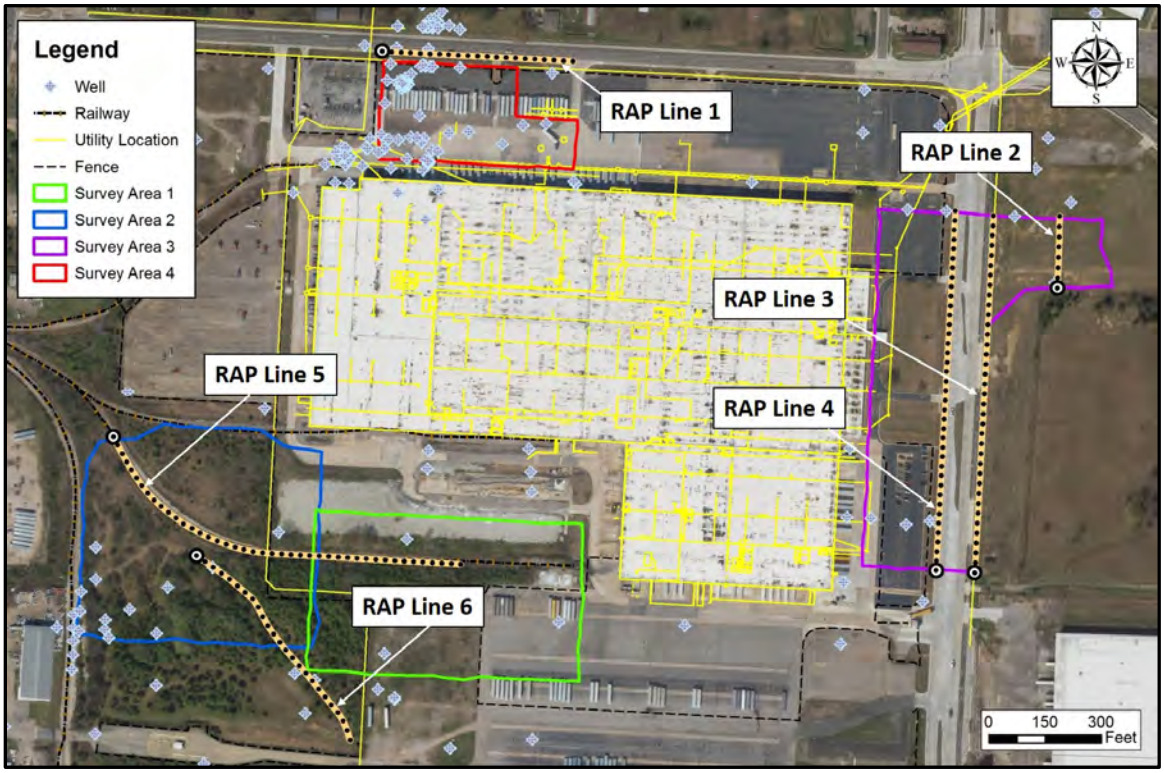


Figure 7 - RAP Method Lines and Measurement Station Locations

The large white dots identify the beginning station of each RAP line. The small black dots identify the location of each measurement along the RAP line. Please know that although the RAP technique has been tested over concrete and asphalt surfaces, the technique works best when measurements are taken directly over natural surfaces (i.e., void of thick vegetation, gravel, concrete and asphalt surfaces, which are prevalent over much of the study areas). As a result, RAP measurements were taken where the surface was easily accessible—i.e., mostly on grass and some on gravel (i.e., along the edge of the railway bed) and some on asphalt and concrete parking lots and sidewalks when no other options were available. As mentioned, Willowstick performed this work voluntarily and due to inaccessible areas or less than ideal surfaces, the RAP data is sparse.

Nevertheless, measurements were taken over all four study areas, which provided helpful and insightful information that collaborates the findings of the Willowstick method, as will be shown.

The results of all four Willowstick surveys, in conjunction with RAP measurements are discussed in detail in the following sections of the report.

3.0 WILLOWTICK METHOD

3.1 Survey Steps or Processes

For the Willowstick Method, we performed seven basic steps or processes to complete and interpret the results of each survey. The steps are discussed in detail for Survey 4. Survey 4 is presented first because Survey 4 is closest to the source area and considered one of the most important areas to investigate. The RAP Method and data collected for Survey 4 will be presented immediately following the presentation of the Willowstick Method and results. This procedure holds true for all of the Willowstick and RAP Surveys. Survey study areas 1, 2 and 3 underwent the same general data collection process, modeling, and interpretation as did Survey 4. Therefore, Surveys 1, 2 and 3 will be presented more briefly to avoid repetitious discussion.

To avoid confusion, keep in mind there are several different types of "models" referred to when discussing these steps, and each one has a different function. First, the *background model* is used to process the data and enhance the detection of preferential flow paths. Then, 3D *inversion modeling* (or *ECD modeling*) is used to calculate 3D volumes of electric current distribution for the area surveyed. Finally, 2D and 3D *site models* are created to better visualize and interpret the ECD modeling and RAP results in conjunction with pertinent site features.

3.2 Step 1 – Survey 4 Design and Layout (Willowstick Method)

Surveys are designed to "energize" a particular target area with an electrical signal at 380 Hz. This electric current is then tracked by measuring the "signature" magnetic field paths and patterns at the surface. Many considerations are taken into account when designing each survey, including measurement station spacing, electrode locations, circuit wire routing, as well as considering all possible sources of interference from human-made conductive culture.

Figure 8 presents a plan view of the survey configuration proposed and accepted for Survey 4 with pertinent site features.

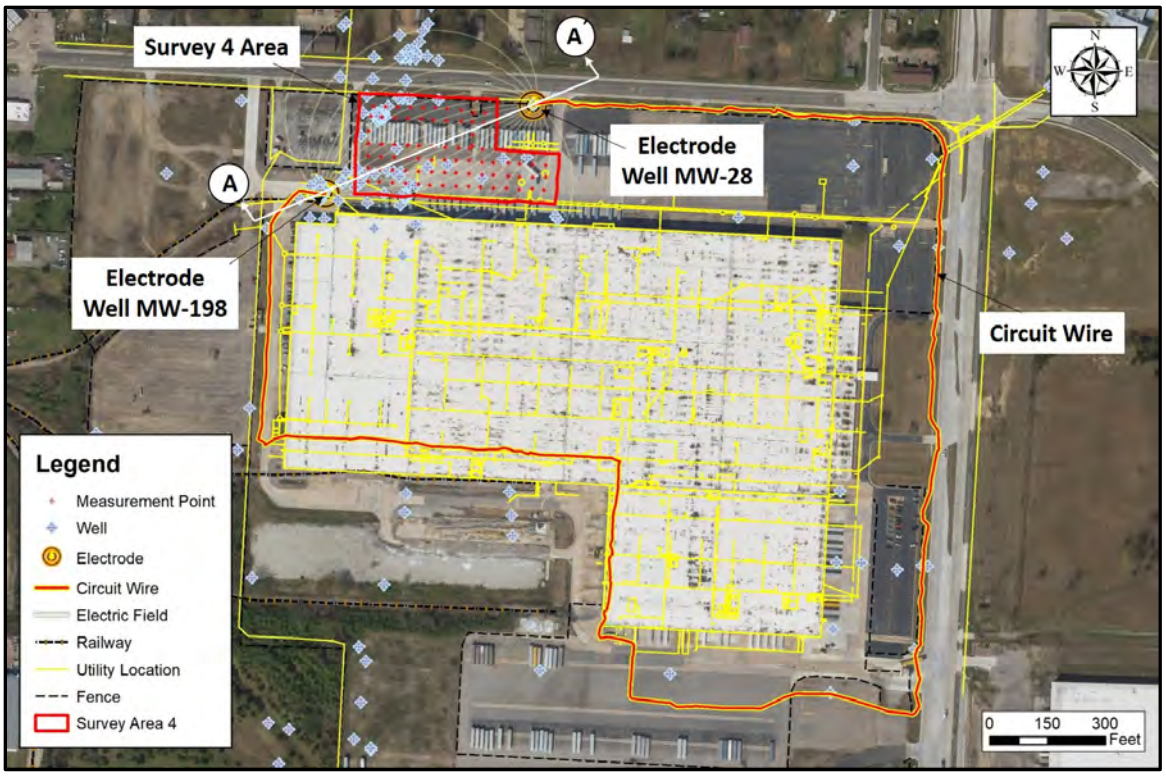


Figure 8 – Survey 4 Layout and Coverage Area

Survey 4 utilized an upstream electrode placed in well MW-28. The downstream electrode was placed in well MW-198. The survey was designed to bias electric current through the subsurface northeast of the source area. The signature electric current is an alternating current (AC) and therefore flows in both directions, but from here on, we will discuss it as flowing away from the site to the north/northeast for interpretation purposes.

Survey measurements were established on roughly a 33-foot (10 meter) grid. Measurements are denoted by small red "+" symbols. As part of the fieldwork, the field crew recorded each measurement station's GPS position and elevation, which is critical to quality control measures, data processing, modeling, and interpretation. The red/orange circuit wire, connecting the strategically placed electrodes, was positioned in a large loop around the targeted study area. Because 100% of the electric current must pass through the circuit wire and electrodes, the magnetic field intensifies near these appurtenances. Therefore, the electrodes and circuit wire are located outside the study area as much as possible due to the strong magnetic field influence around them.

All four surveys utilized a horizontal dipole configuration. A schematic of the horizontal dipole configuration employed for Survey 1 is shown in Figure 9 (i.e., illustrated on an actual cross-section of the study area - courtesy of Ramboll).

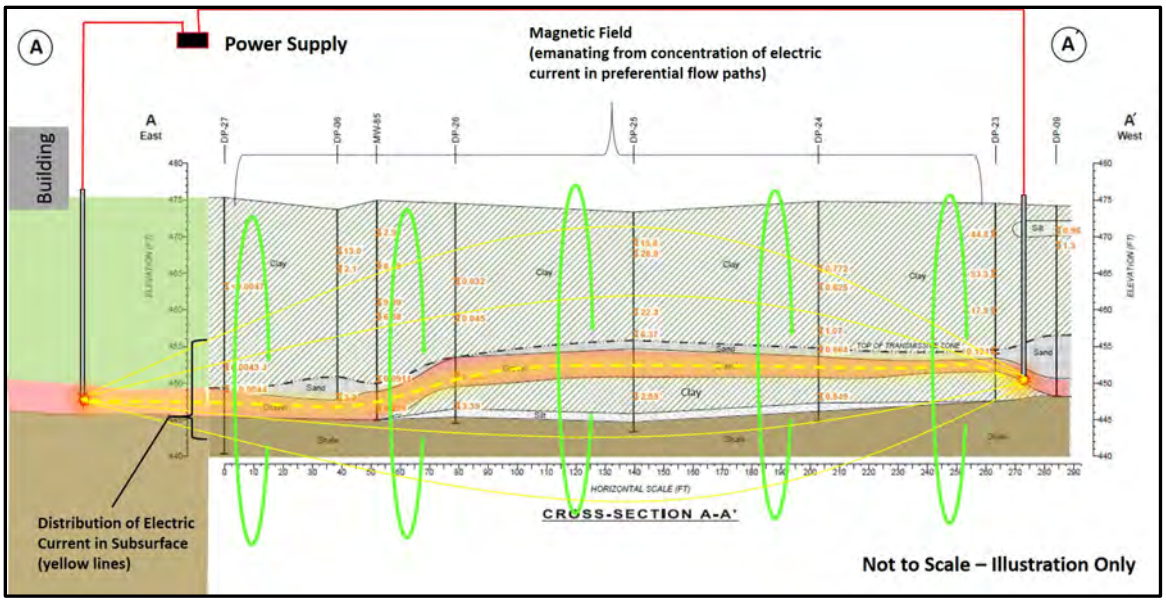


Figure 9 – Horizontal Dipole Configuration

As depicted in Figure 9, the overall approach to the horizontal dipole configuration consists of injecting and biasing electrical current to flow between electrodes located up-gradient and down-gradient of the study area and placed directly in contact with the sandy/gravely layer. Alternating current with a specific signature frequency (380 Hertz) is applied to create a circuit between the paired electrodes. As electric current flows between the strategically placed electrodes, it generates a recognizable magnetic field that is measured on the surface over the study area where accessible. The magnetic field measurements are used to detect patterns of the dominant flow of electric current channeling beneath the study area.

3.3 Step 2 – Survey 4 Predicted "Background" Magnetic Field Response

To identify areas of greater or less conductivity through the subsurface study area, a model was created for Survey 4 to calculate and predict the magnetic field response at each measurement station, given the layout of electrodes, circuit wire, and topography. This prediction is based on a homogenous subsurface conductivity condition, and a relatively uniform-looking magnetic field is the result (see Figure 10).

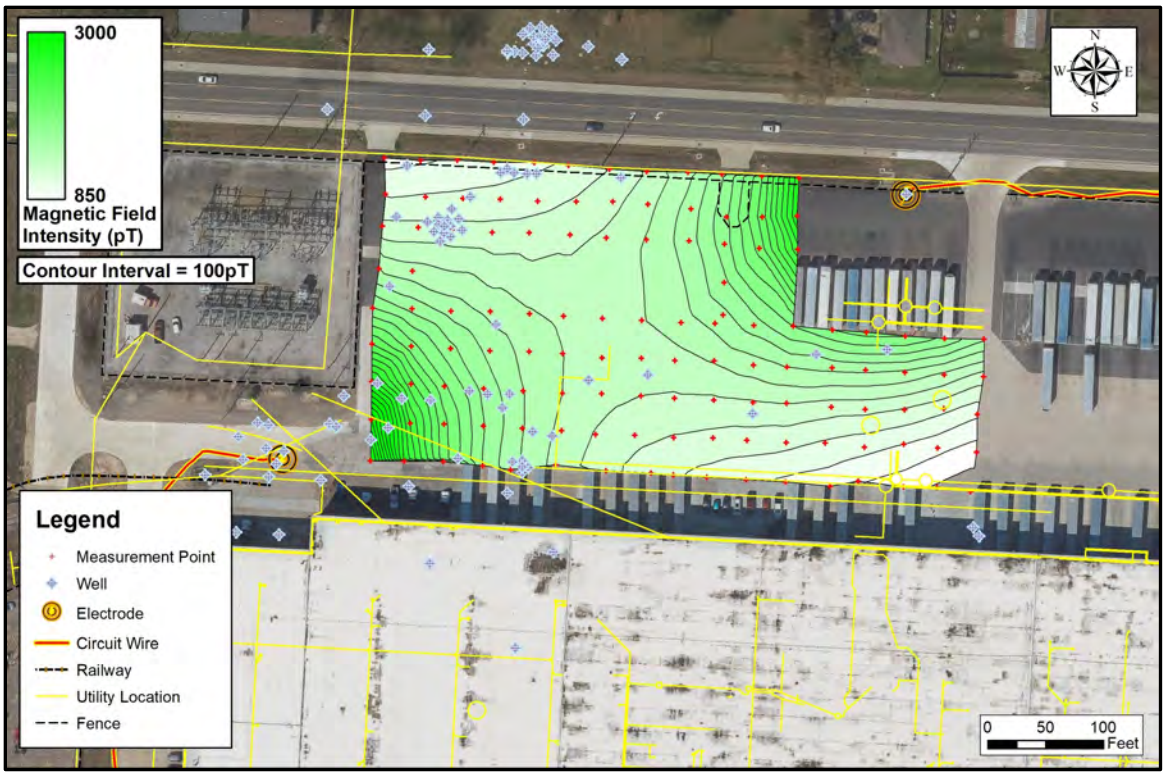


Figure 10 – Survey 4 Predicted Magnetic Field Model

It should be noted that among numerous Willowstick surveys performed worldwide, site conditions *never* match a perfectly homogeneous earth model—*nor are they expected to*—but it is highly useful to compare to the outcome of a homogeneous model.

Given a particular survey setup with specific electrode locations, circuit wire layout, and topography, the Willowstick tool determines the magnetic field intensity occurring at each given location *compared to what it would be if the subsurface were electrically homogeneous*—which can be calculated by proper application of known geophysical principles. Comparing the "measured" to the level that was "expected" from a homogeneous earth is highly useful. For example, the electric current density may be 20% stronger at a particular location than it would be in the "homogeneous-earth" case. The comparison causes true heterogeneity (due to subsurface differences) to stand out and become more visible. Extreme care is taken in all survey configurations so that heterogeneity due to proximity, geometric relationship with electrodes, circuit wire, and topography is prevented from influencing the survey results. Fundamentally, the technology detects the preferred connective and conductive pathways between two selected points. In order to do so, the signal emerging from preferred paths of electric current flow must be distinguishable from the diffuse or "background" flow pattern—which is always present and is often the dominant part of the signal. Fortunately, the background flow pattern can also be predicted with the proper application of the laws of physics, enabling subtler preferential electric current flow paths to be detected than would otherwise be possible.

3.4 Step 3 – Survey 4 Observed (or measured) Magnetic Field

Willowstick data acquisition yields direct tri-axial measurements of the magnetic field with high precision and accuracy, in conjunction with high-accuracy GPS data. Figure 11 presents the magnetic field measured when the survey area was energized with the signature electric current.

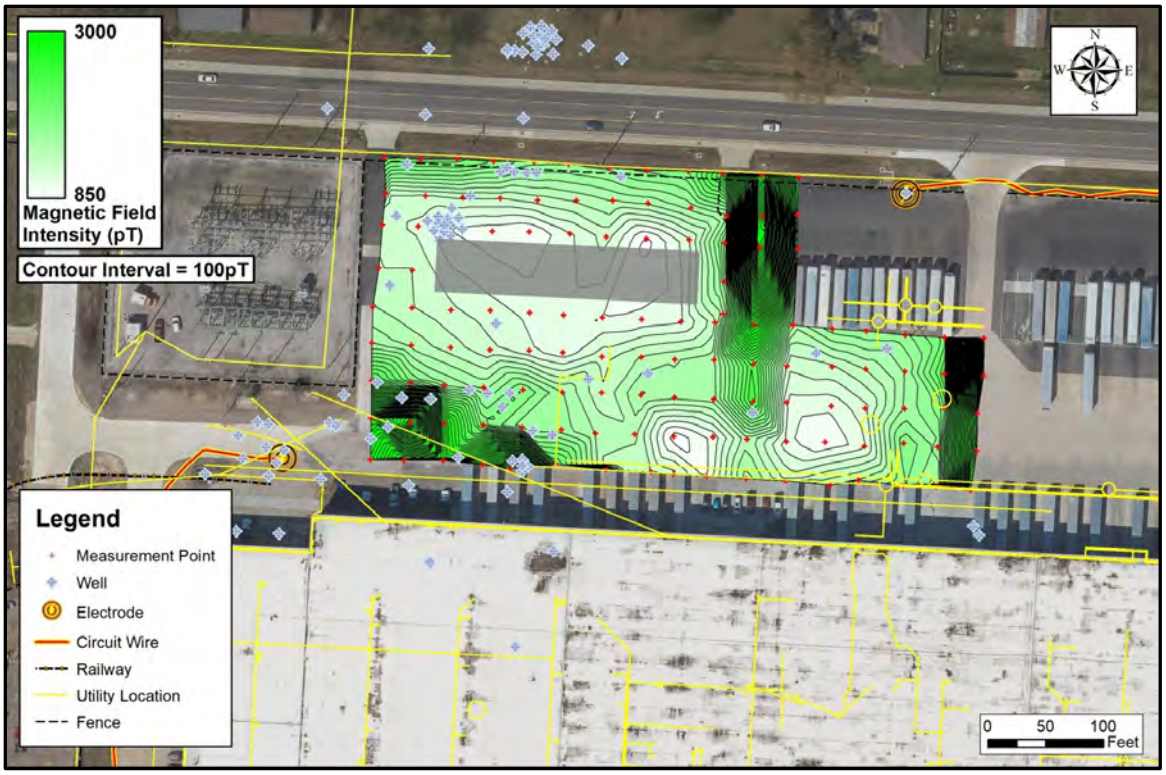


Figure 11 – Survey 4 Observed (or measured) Magnetic Field Map

The gray transparent rectangle in Figure 11 identifies an inaccessible area (i.e., semi-truck trailer parking area). As a consequence, the interpretation of this area was made from extrapolating measurements around this area. The "*observed*" or measured magnetic field data can be challenging to interpret directly without further analysis. As mentioned, the data will be compared to the "homogeneous earth" magnetic field based on uniform flow in an electrically homogeneous earth, which causes the concentration of electric current due to heterogeneity, or changes in conductivity (such as preferential seepage flow paths and patterns), to stand out. Aside from the lack of measurement stations where the semi-truck trailers were parked, another major observation in the raw magnetic field data is that a significant amount of the signature electric current strayed from the targeted subsurface study area onto conductive culture, as evidenced by the high gradient magnetic field contours lines shown in Figure 4 (resulting in the almost black shaded areas). We anticipated that conductive culture would be problematic to some degree; however, we could not determine its full effect until the subsurface was energized and the study area surveyed. To further interpret the raw magnetic field data, the data was compared to the homogeneous earth model.

3.5 Step 4 – Survey 4 Ratio Response Map

By dividing the predicted magnetic field (Figure 10) into the observed magnetic field (Figure 11), a "ratio response map" is created, which removes electric current bias from the data set and shows areas of anomalous electric current flow—i.e., greater or less than predicted. Figure 12 shows a map of this result with some interpretive markings.

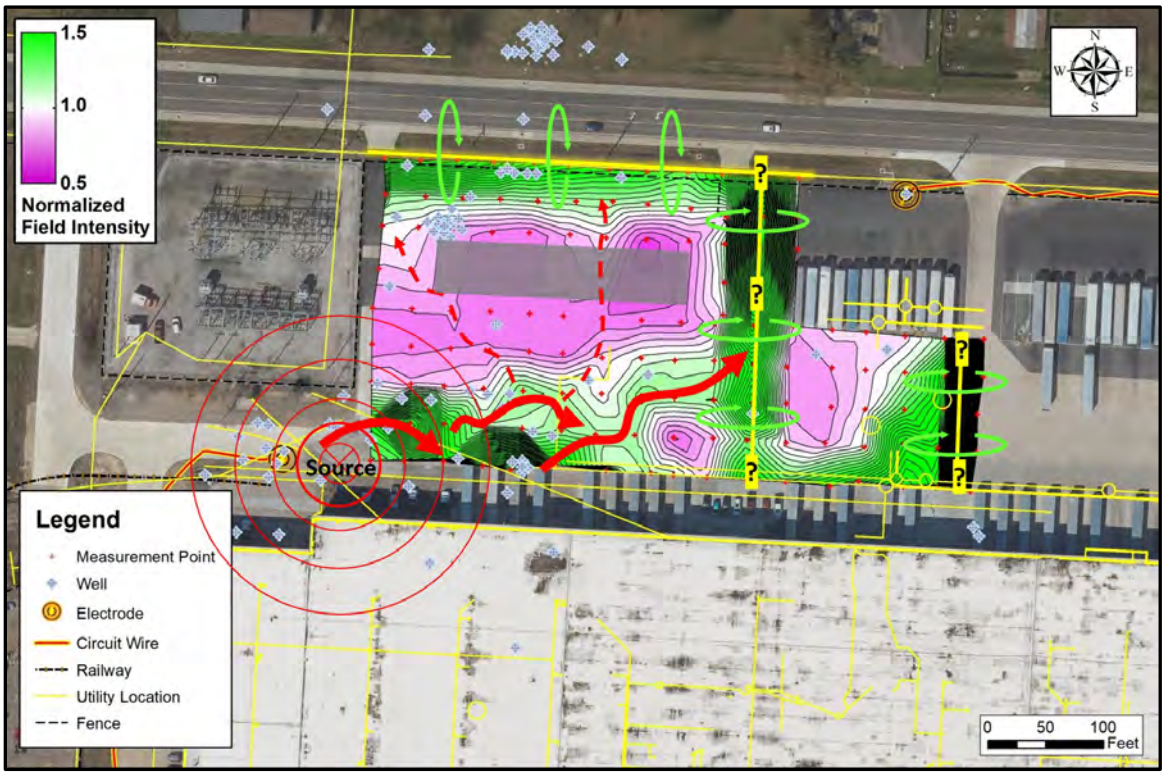


Figure 12 – Survey 4 Ratio Response Map (with Interpretive Markings)

In the Ratio Response Map, the white shaded contours (where the ratio is approximately 1:1) show where the magnetic field intensity is equivalent to that expected by the homogeneous model. Areas shaded purple indicate the magnetic field is less than expected, and areas shaded green indicate the magnetic field is greater than expected. In summary, the ratio response map is simply a "*footprint*" map indicating the relative intensity of the magnetic field, or where electric current flow is stronger (green) or weaker (purple) than expected based on a homogeneous background model. It is important to emphasize that the green and purple shaded areas can provide insightful information; however, the preferential flow of electric current is best revealed from the shape of the magnetic field contours and through inversion modeling. Before moving onto the inversion results, a few things should be pointed out that identify preferential electric current flow paths in the ratio response map from a footprint perspective. The yellow lines surrounded by green circles identify power lines or other conductive features within the study area where a significant amount of the signature electric current concentrates. Due to the strong magnetic field emanating from these features, it is difficult to interpret the flow of electric current beneath these features. The red arrows in Figure 12 highlight preferential electric flow paths out and away from the source area that are unencumbered by conductive culture. As the signature electric current flows out and away

from the source area, it is most concentrated along the path highlighted by the solid red arrows. This path is considered a primary flow path and is likely influencing the migration of contaminants away from the source area to the northeast. In addition, the dashed red arrows identify secondary pathways influencing the migration of contaminants northward away from the source area.

To further interpret Survey 4's ratio response data and better characterize the depth of the preferential flow of electric current away from the source area, especially in 3D terms, the data is subjected to an inversion algorithm designed to predict the distribution of electric current flow in three-dimensional space. The inversion model is referred to as an Electric Current Distribution (ECD) model, which is presented next.

3.6 Step 5 - Survey 4 Electric Current Distribution or ECD Model

The distribution of electric current flow beneath Survey 4's study area—especially the depth—remains unknown until modeling is performed. The magnetic field is only measured from the ground surface (above a preferential flow path) and not below or beside the path, so modeling is required to estimate the position (especially depth) of the preferential flow of electric current. The ratio response data was processed by an inversion algorithm designed to predict the distribution of electric current flow in three-dimensional space within the subsurface study area to estimate depth. The inversion result is referred to as an Electric Current Distribution or ECD model. Figure 13 presents an example view demonstrating different slices and perspectives of the Willowstick ECD Model for Survey 4.

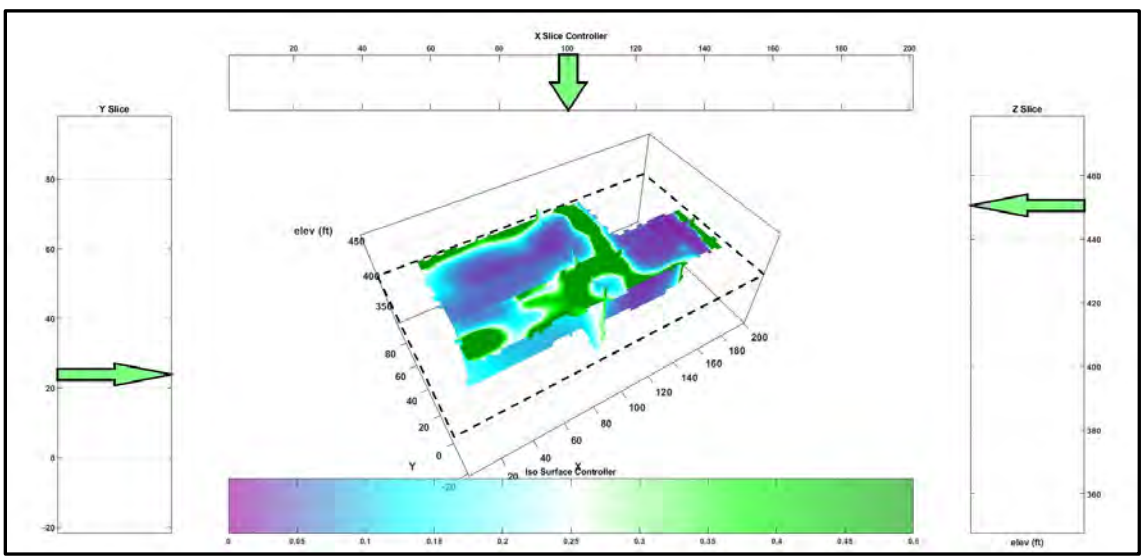


Figure 13 – Survey 4 ECD Model Viewer

As previously stated, green shading identifies the highs where the electric current density is more concentrated than predicted. On the other end of the scale, the dark purple shading identifies the lows—areas where electric current is less concentrated. As demonstrated in the example above, the model viewer can generate slices at various elevations or cross-sectional positions within the volume.

3.7 Step 6 - 2D and 3D Site Models for Presenting ECD Results in Context

To show pertinent site features in relation to ECD model results, 2D and 3D *site models* were created to serve as helpful tools in the interpretation of the results. Figures 14 and 15 present views of the 2D and 3D site models. The 2D and 3D site models include the following features for presentation:

- Aerial photograph of the site
- Monitoring well locations
- Building Footprint
- Source Area
- Known conductive culture (power lines, building power grid, railroad tracks, etc.)
- Areas suspected of preferential groundwater flow paths (i.e., study areas)

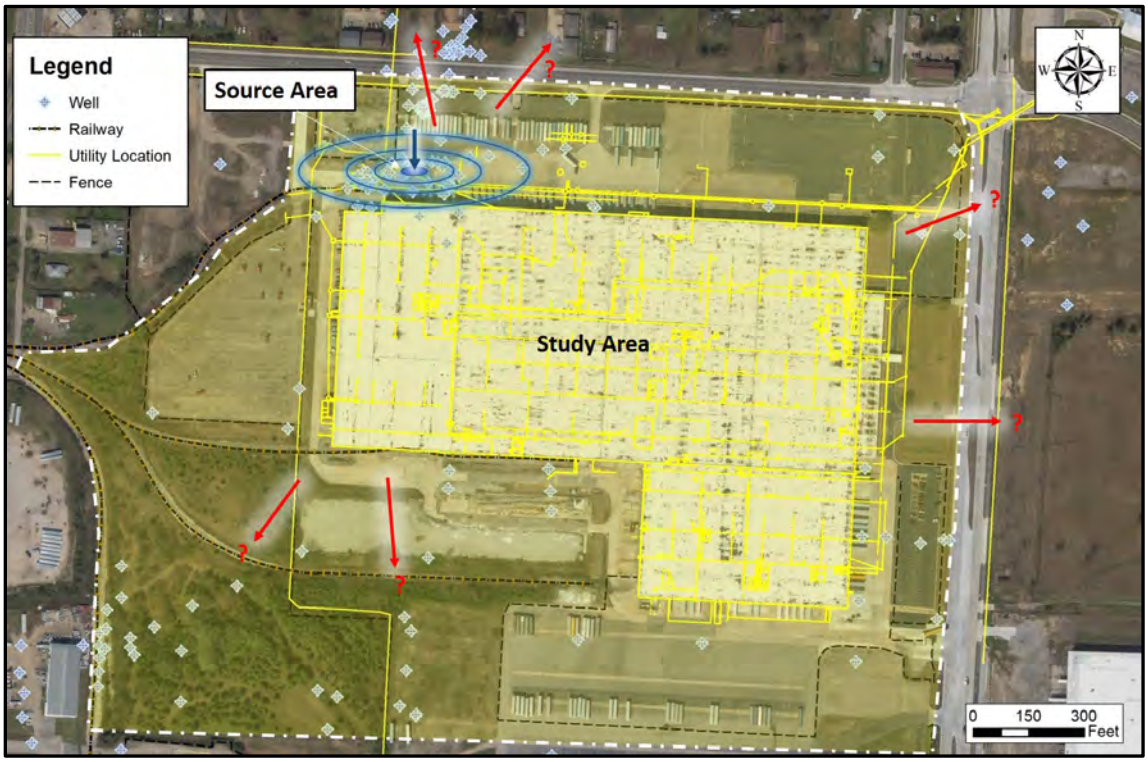


Figure 14 – 2D Site Model

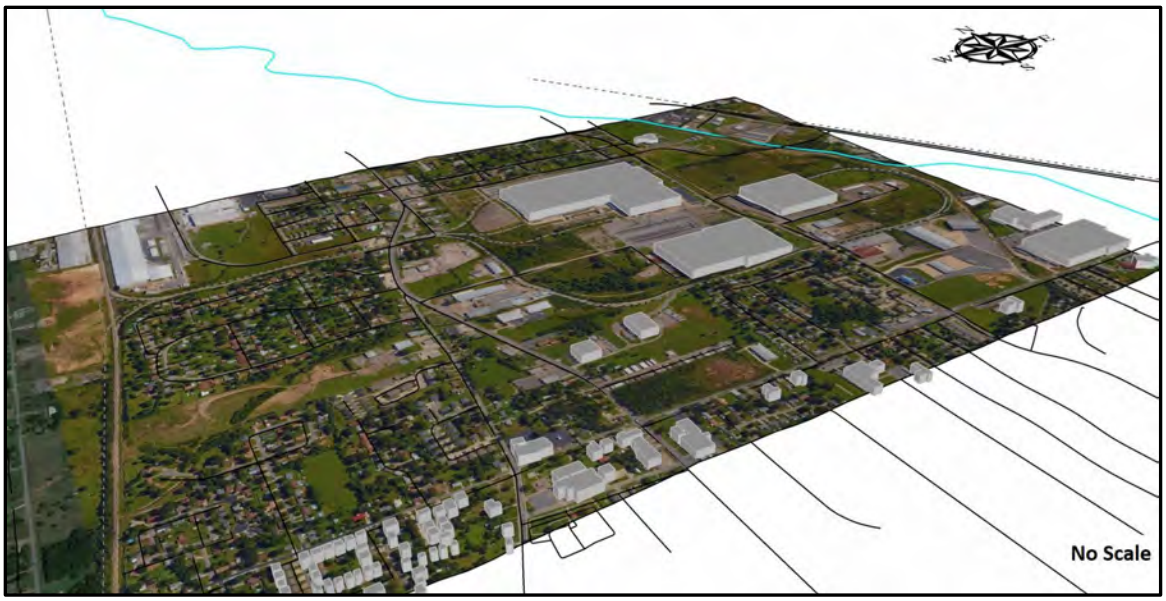


Figure 15 – 3D Site Model

3.8 Step 7 – Survey 4 Interpretation (Willowstick Method)

With the aid of data from the ratio response map, ECD inversion results, and site models for context, an interpretation was made considering all the information together with relevant site features to produce the best interpretation possible.

Similar to the Ratio Response Map, which provides the "footprint" of anomalous features in a 2D sense, the ECD model identifies in a 3D sense where electric current flow is stronger (green) or weaker (purple) than the background model—within the volume of the subsurface directly beneath the survey study area. Results are analyzed and presented by extracting 2D slices and placing them in site context. Figure 16 presents a plan view of an ECD model slice taken at elevation 450 feet which is a good representative slice to begin a discussion about prominent preferential electric current flow beneath Survey 4's study area.

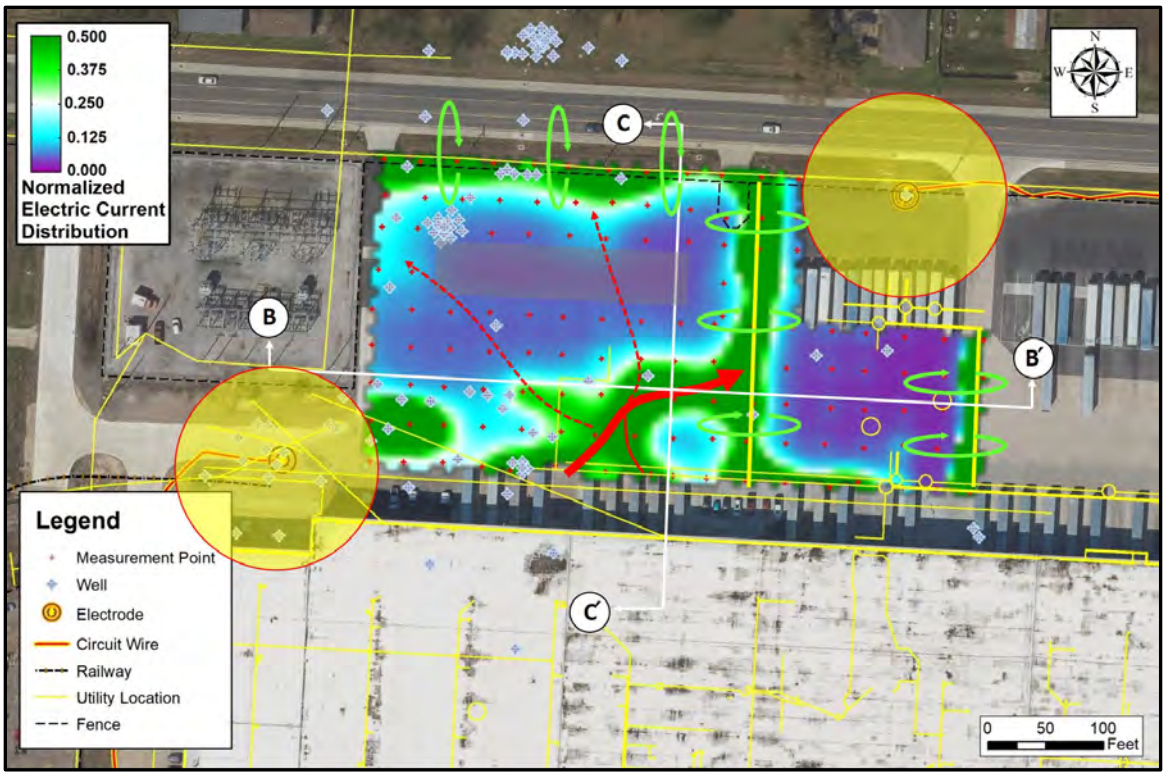


Figure 16 – Survey 4 ECD Model Slice Elevation 450 Feet (with Interpretive Markings)

In Figure 16, the ECD model slice at an elevation of 450 ft. shows evidence of a primary preferential electric current flow path beneath the study area with a northeast orientation as highlighted by the solid red arrow. The large yellow circles identify the area immediately around the electrodes where the flow of electric current is so strong (i.e., in and out of the electrodes) that no reliable information can be obtained in these areas. Please know that the approximate elevation of the sandy/gravely layer beneath Survey 4's study area is roughly elevation 450 feet; thus, the reason for the interest in the elevation slice at 450 ft. As previously mentioned, the yellow lines surrounded by green circles identify power lines or other human-made features within the study area that conduct a significant amount of the signature electric current. Due to the strong magnetic field emanating from conductive culture, it is challenging to interpret the flow of electric current beneath these features. Also, please know that the secondary flow paths (dashed red arrows pointing northward) are not as prominent as the primary groundwater flow path. The difference is due in part to the bias of electric current between electrodes. Please note that the secondary groundwater flow paths are oriented perpendicular to the bias of electric current. As a result, they do not help complete the circuit through the ground between electrodes. Had the electrodes been positioned a little differently to bias electric north/northwestward, these flow paths may have shown up much stronger. The data suggests that a primary flow path exists beneath the site with a northeast orientation and two secondary flow paths with a north/northwest orientation.

To further interpret and describe the distribution of electric current beneath Survey 4's study area, Figure 17 (Section B-B′) presents a longitudinal profile view of Survey 4's ECD model.

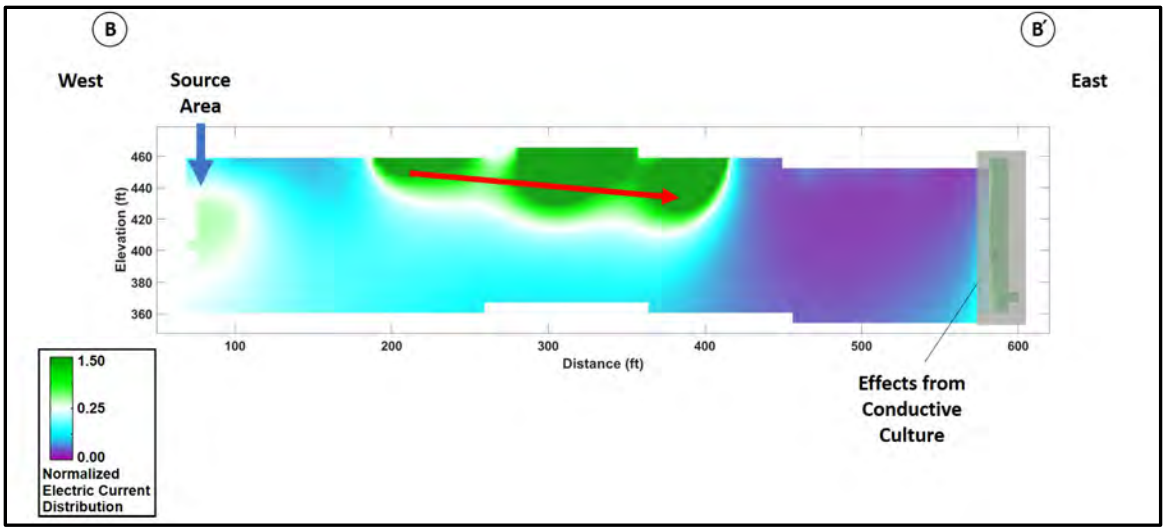


Figure 17 – Survey 04 Section B-B′ (Looking North)

Based on the green shaded anomaly in Figure 19, which represents the concentration of electric current beneath the study area, the preferential flow of electric current dips from the source area downward in a northeast direction as indicated by the red arrow. There appears to be a sharp contrast between green and light blue shading in the ECD model. This contrast possibly represents the shale interface (or thereabout).

Figure 18 presents a second section of Survey 4's ECD model - Section C-C′

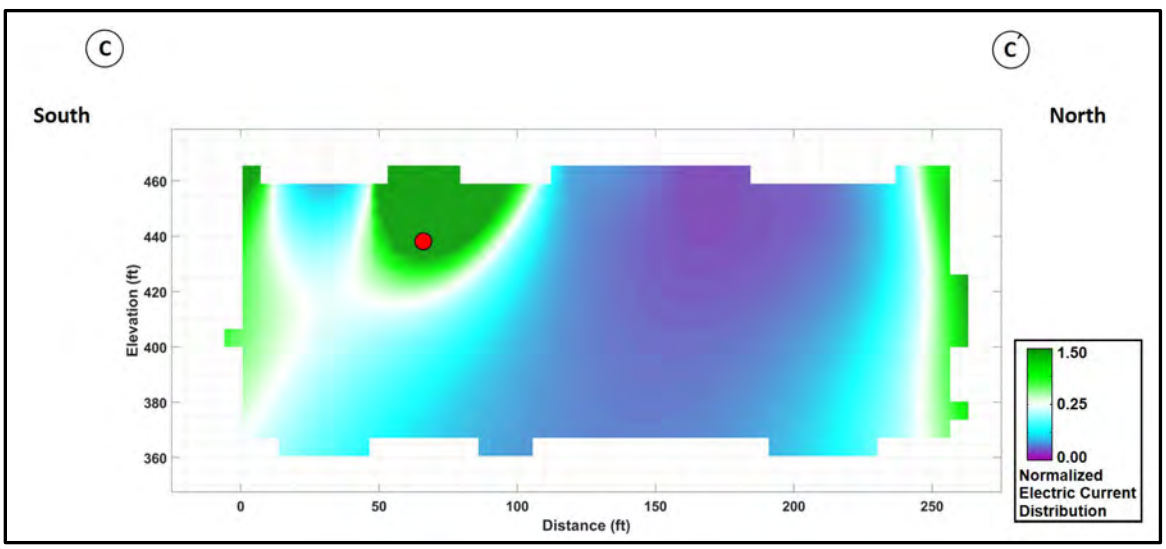


Figure 18 – Survey 4 Section C-C′ (Looking West)

The depth of the dark green shading extends as deep as elevation 440 ft. Please note that the inversion model provides an estimate of depth—the accuracy of which is described later on in the report. The concentration of the signature electric current beneath Survey 4's study area is strong along a specific flow path. There is no conductive culture known to exist in this area. As a result,

we have interpreted this anomalous feature as a primary groundwater flow path influencing the transport of contaminants out and away from the source area to the northeast.

3.9 Step 8 – Survey 4 RAP Results

To further characterize the presence of the primary and secondary flow paths identified by the Willowstick Method, a second geophysical tool specifically designed to detect and characterize high porosity, weak and/or fractured zones was utilized. This tool is called the Rapid Acoustic Profiling Method or RAP. The RAP Method is based on the concept that the earth's crust is constantly flexing due to interplanetary gravitational forces creating continuous micro-seismic activity—a constant energy source for this passive seismic method. As the earth's crust flexes it gives off a resonance signal identifying where weaknesses exist in the soil and rock below (i.e., where the subsurface is compromised). RAP measurements were taken north of Survey 4's study area along the grass parkway (see Figure 19). As mentioned, we prefer not to take RAP measurements on asphalt or cement surfaces, if at all possible, thus the reason for the RAP measurements taken on the grass parkway.

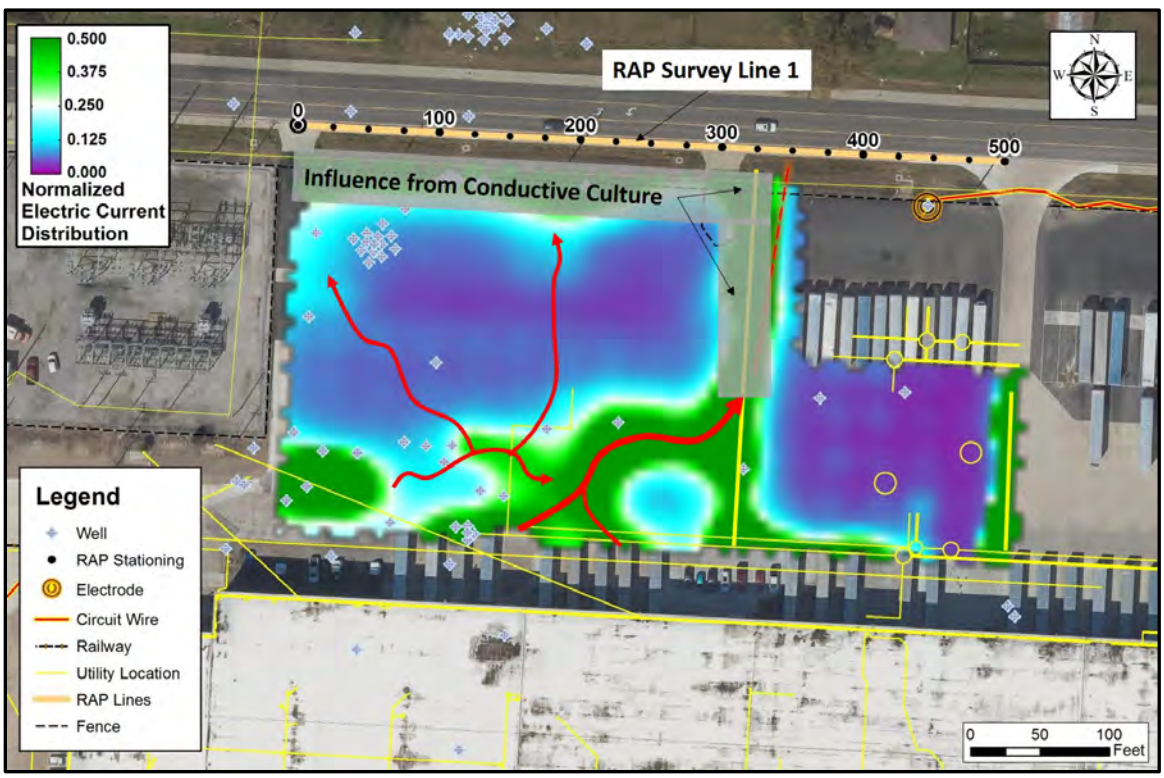


Figure 19 - RAP Survey Line 1 Location and Measurement Stationing in conjunction with ECD Model Slice Elev. 450 feet and Noted Flow Paths

Figure 20 presents a profile view of RAP Survey Line 1.

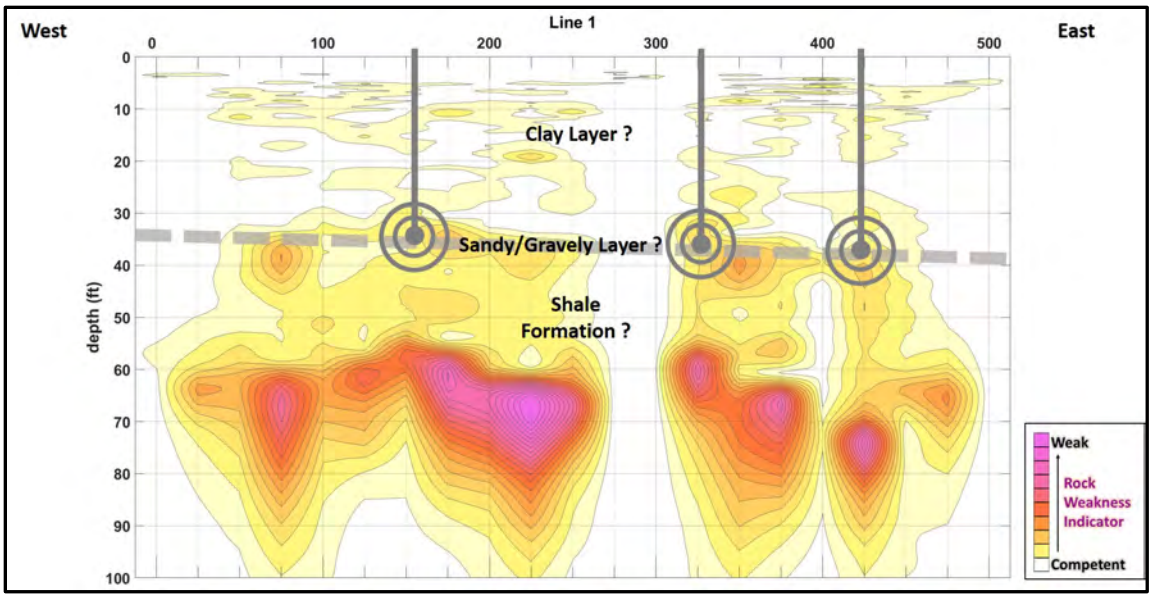


Figure 20 – Survey 1, RAP Line 1 (Longitudinal Profile Looking North)

The white color indicates competent soil and/or rock. The yellow to orange to pink colors, going up the scale, represent higher degrees of soil/rock weakness—strong pink shading representing the weakest or most permeable zones. The thick gray dashed line, which is interpreted as the sandy/gravely layer, divides the subsurface between the clay layer and the underlying shale formation interpreted from the RAP data. The sandy/gravely layer dips to the east/northeast, which correlates with the Willowstick findings. The areas shaded yellow to dark pink above the interpreted shale formation identifies less competent and/or relatively permeable zones within the clay and sandy/gravely layers. The bottom of the vertical dark gray lines (bullseyes) identify the most permeable zones above the shale formation where we believe groundwater is most concentrated. To further illustrate this interpretation, it appears the shale formation is fractured in two general areas below the top of the shale interface (see red dashed lines in Figure 21).

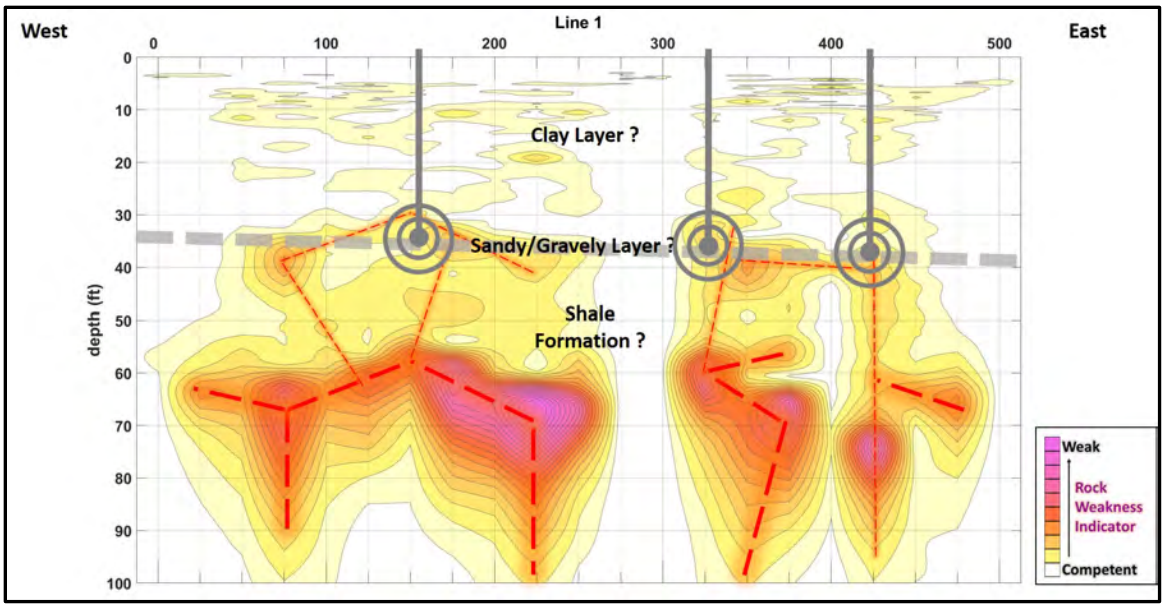


Figure 21 - Fractures in Shale Formation and Reflection of Fracture Zones up and into the Sandy/Gravely and Clay Layers

As the earth's crest flexes from interplanetary gravitational forces, the movement creates weaknesses or micro fractured zones in the shale formation. Movement along these weakened zones reflects up from depth through the sandy/gravely and clay layers where secondary porosity has formed and where groundwater preferentially flows in the clay and is more concentrated in the underlying sandy/gravely layers. As mentioned, the bottom of the vertical dark gray lines (bullseyes) in Figure 21 represents locations where we believe monitoring and/or recovery wells should be placed to intercept and possibly curb contaminants from flowing away from the site.

Figure 22 identifies the locations of the dark gray lines and bullseyes in plan view (see the location of red transparent ovals). We have projected the primary and secondary groundwater flow paths to cross the most anomalous areas identified in the RAP profile. The two data sets appear to collaborate, identifying locations where monitoring and/or recovery wells could be placed to best intercept, monitor and possibly curb the transport of contaminants away from the source area to the north and northeast.

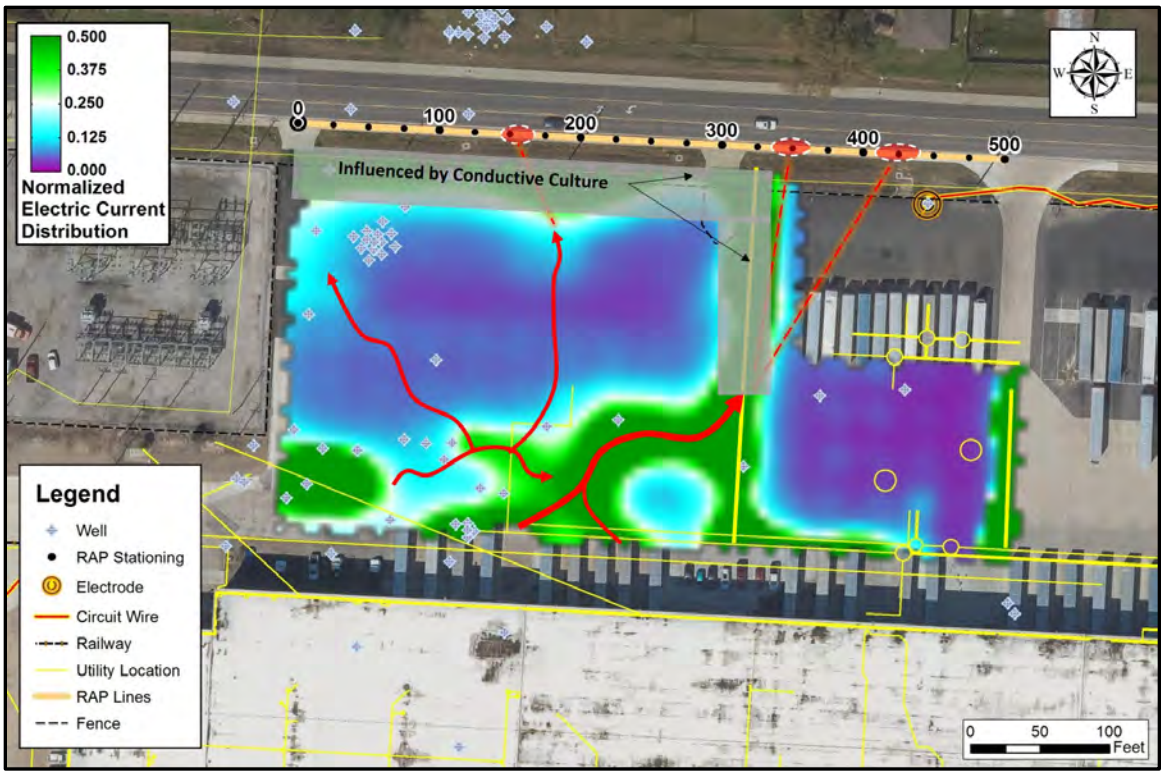


Figure 21 - Survey 4 RAP and Willowstick Data Comparison

No other anomalous features were identified from the Willowstick or RAP methodologies beneath Survey 1's study area that could be interpreted as preferential groundwater flow paths influencing the transport of contaminants out and away from the source area to the north and northeast.

4.0 SURVEYS 3 RESULTS

4.1 Survey 3 Layout

Survey 3 will be presented next proceeding around the site in a clockwise direction. Survey 3's study area encompasses the eastern side of the facility. Survey 3 utilized an electrode placed in well MW-184 paired with an electrode in well MW-192. Figure 22 presents Survey 3's layout.

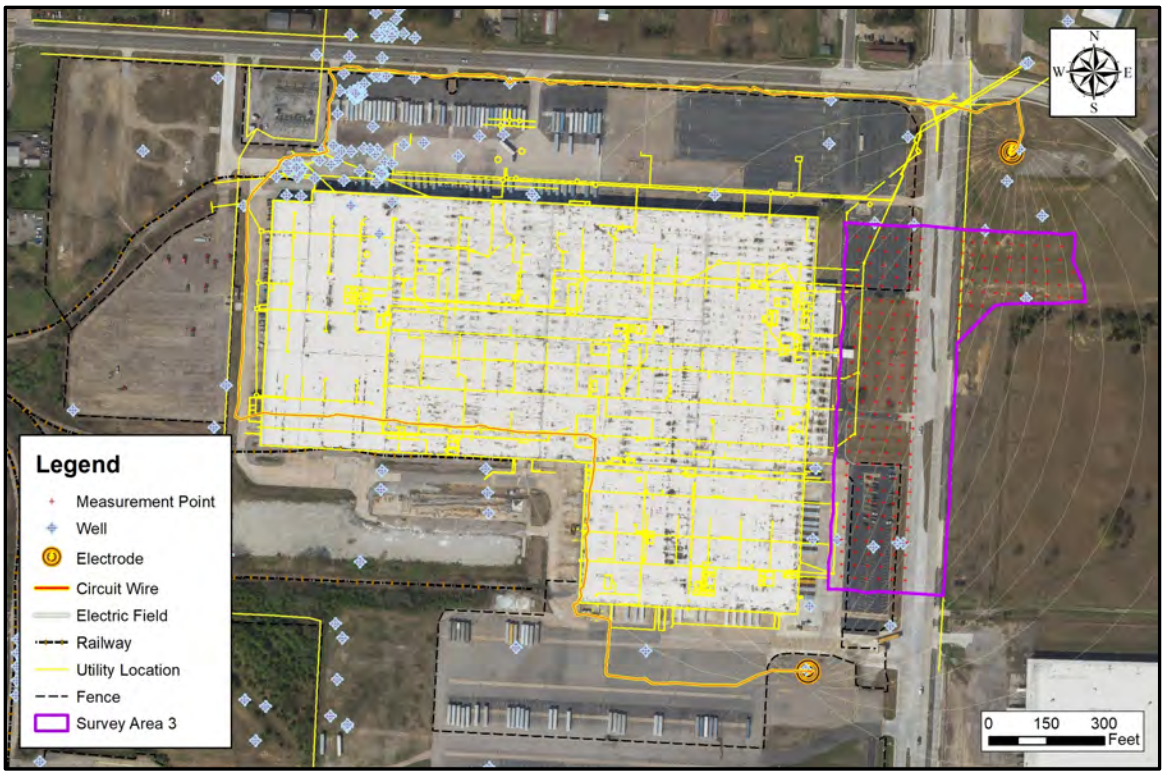


Figure 22 - Survey 3 Layout and Coverage Area

4.2 Survey 3 Ratio Response Map

Survey 3 uses the same data reduction and modeling procedures described for Survey 4; therefore, Survey 3 will be presented in an abbreviated format to avoid repetitious discussion. All other surveys (including Surveys 1 and 2) will be presented in an abbreviated format.

Figure 23 presents Survey 3's Ratio Response Map with interpretive markings.

Figure 23 - Survey 3 Ratio Response Map
(with Interpretive Markings)

As observed when presenting Survey 4's results, a significant amount of the signature electric current strays onto conductive culture that helps complete the circuit between electrodes. Very little of the signature electric current flows eastward beyond the light poles and powerline. Green semi-circles and transparent gray clouding highlight the areas heavily influenced by conductive culture. The red arrows identify two preferential electric current flow paths beneath and through the west half of Survey 3's study area, where the subsurface flow of electric current is unencumbered by conductive culture.

4.3 Survey 3 ECD Modeling Results

To further interpret Survey 3's ratio response map and better characterize the depth of the preferential flow of electric current away from the building, especially in 3D terms, Figure 24 presents a slice of Survey 3's ECD model taken at an elevation of 450 feet—similar to that presented for Survey 4, which is a good representative slice to begin a discussion about preferential electric current flow paths observed beneath Survey 3's study area.

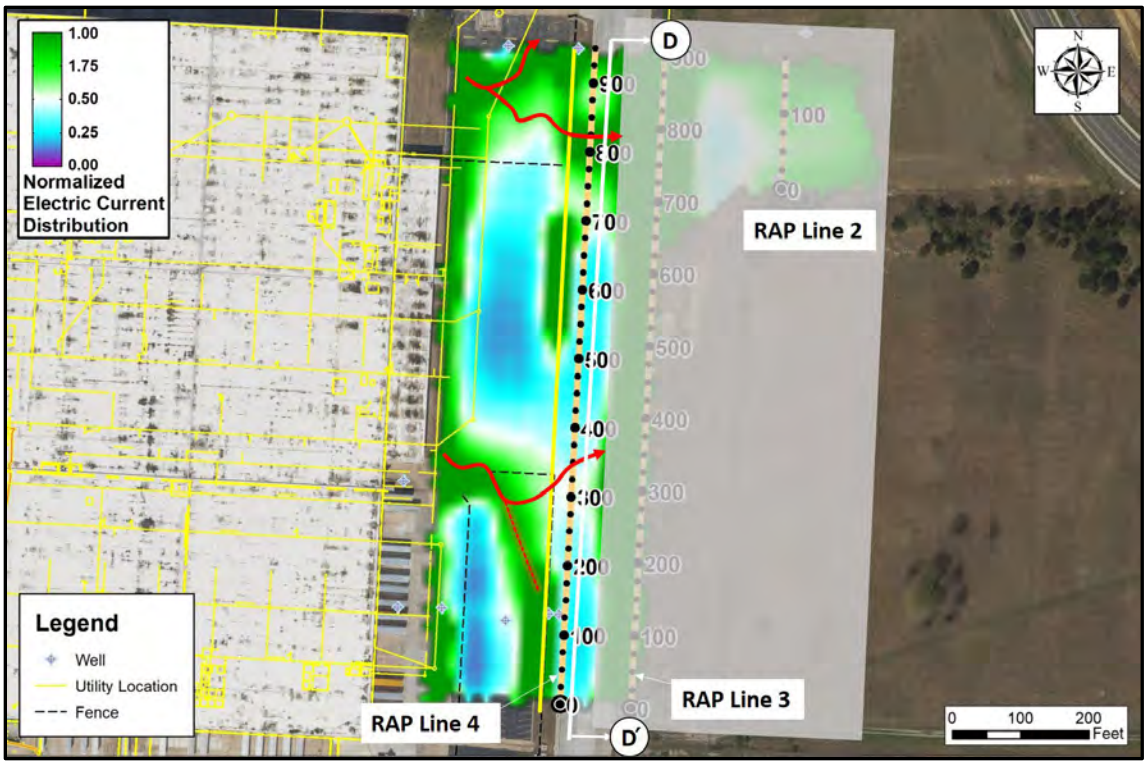


Figure 24 - Survey 3 ECD Model Slice Elevation 450 Feet

The dark green shading extending eastward away from the building, as highlighted by red arrows, identifies two anomalous flow paths. The area directly between the building and light poles is the area least encumbered by conductive culture. To further interpret and describe the distribution of electric current beneath the west half of Survey 3's study area, Figure 25 presents a longitudinal profile view of Survey 3's ECD model (Section D-D′). Section D-D′ is centered between the power poles and the roadway looking east through the subsurface study area.

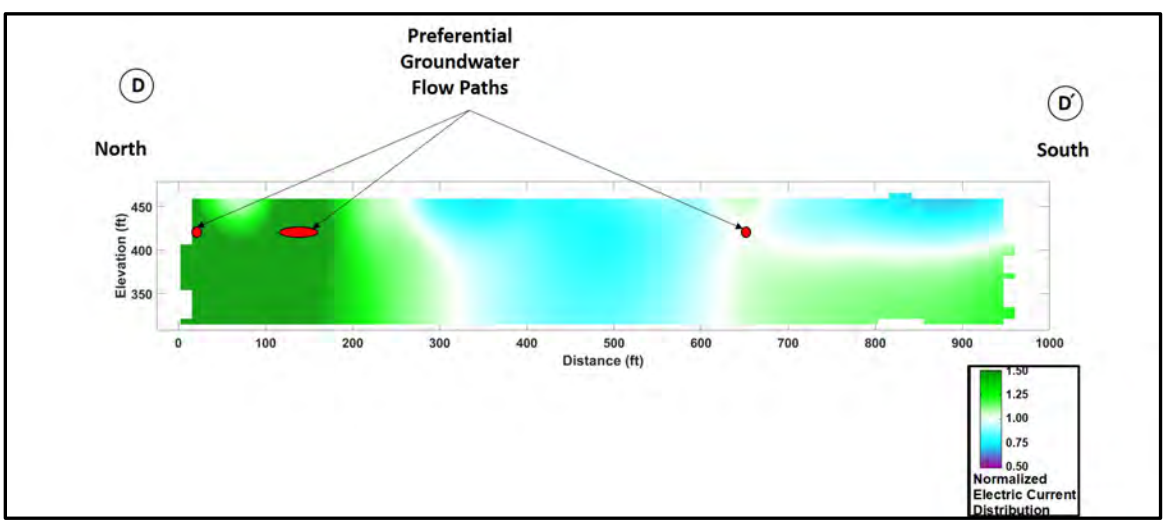


Figure 25 - Survey 3 ECD Model Slice Section D-D′

The preferential flow of electric current at the north end of Survey 3's study area is the most intense flow path. Please note that the northern flow path bifurcates just beyond the building, where some of the signature electric current flows to the northeast while the majority flows eastward. Also, the electric current flow path to the south bifurcates, with some of the electric current flowing to the northeast and some to the southeast toward the light poles. As will be shown when presenting the RAP results, the most southern secondary flow path may be influenced by not only the light poles but also by a preferential groundwater flow path that will be discussed more when presenting the RAP results.

Please note the dark-green shading beneath the red flow paths in Figure 25. This dark green shading is called the "shadow effect". A good analogy for explaining the shadow effect is to think of the survey data as shining a flashlight downward from above (because measurements can only be taken from above). If there is a solid object (a flow path or some conductive pathway), the top will be illuminated, but a shadow will be cast below the object, as shown in the figure. The shadow effect beneath the south end of the survey is mainly influenced by the shadow effect from electric current concentrating on the light poles.

4.4 Survey 3 RAP Results

To further characterize the flow paths identified by the Willowstick Method, the RAP method was also engaged. RAP measurements were taken along three lines within Survey 3's study area as shown and labeled in Figure 24 (i.e., RAP Lines 2, 3 and 4). RAP Line 2 consists of a short line taken at the north end of the study area and east of the roadway. RAP Lines 3 and 4 were taken along the entire length of the study area. RAP Line 3 was taken in the park strip east of the roadway and RAP Line 4 was taken in the park strip west of the roadway. In some cases, RAP measurements were taken on concrete and asphalt surfaces, but the measurements in these locations appear unaffected by the concrete or asphalt.

Figure 26 presents a profile view of RAP Survey Line 4, which is presented first because it is closest to the building.

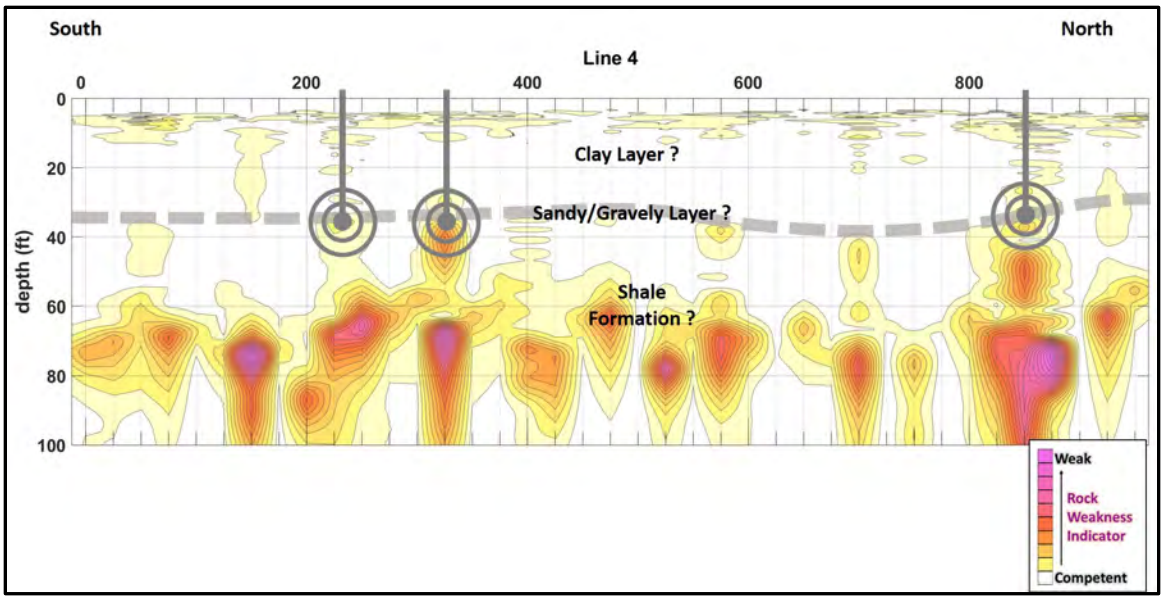


Figure 26 - Survey 3, RAP Line 4 (longitudinal Profile Looking East)

As mentioned previously, when first introducing the RAP Method, the white color indicates competent soil and/or rock. The yellow to orange to pink colors, going up the scale, represent higher degrees of soil/rock weakness—strong pink shading representing the weakest or most permeable zones. The thick horizontal gray dashed line identifies the sandy/gravely layer which divides the subsurface between the overlying clay layer and the underlying shale formation as interpreted from the RAP data. The bottom of the vertical dark gray lines (bullseyes) identify the most permeable zones above the shale formation where we believe groundwater is most concentrated. As previously illustrated when presenting Survey 1's RAP line, it appears the shale formation is most fractured beneath the vertical dark gray lines (bullseyes). As the earth's crest flexes from interplanetary gravitational forces, the movement creates weaknesses or micro fractured zones in the shale formation. This movement along these weakened zones reflects up from depth through the sandy/gravely and clay layers where secondary porosity has formed and where groundwater preferentially flows in the underlying sandy/gravely layers. The bottom of the dark gray lines (bullseyes) in Figure 26 represents locations where we believe monitoring and/or recovery wells should be placed to best intercept and possibly curb contaminants from flowing away from the site. The dark gray lines and bullseyes correlate very closely with where the Willowstick Method identified preferential electric current flow paths. The two methodologies appear to have provided collaborative evidence where highly probable groundwater flow paths exist east of the building.

Figure 27 presents a profile view of RAP Line 3, which is located east of the roadway along the park strip.

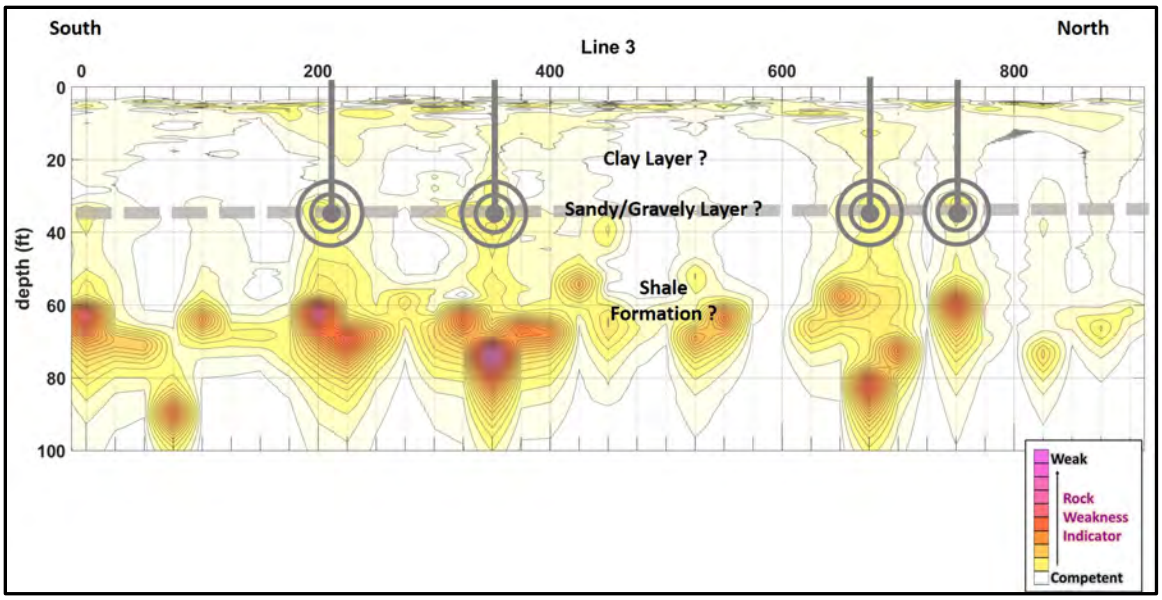


Figure 27 - Survey 3, RAP Line 3 (longitudinal Profile Looking East)

RAP Line 3 identifies the same anomalous areas as did RAP Line 4.

Figure 28 presents a profile view of RAP Line 2, which is a short line located at the north end of Survey 3 and east of the roadway.

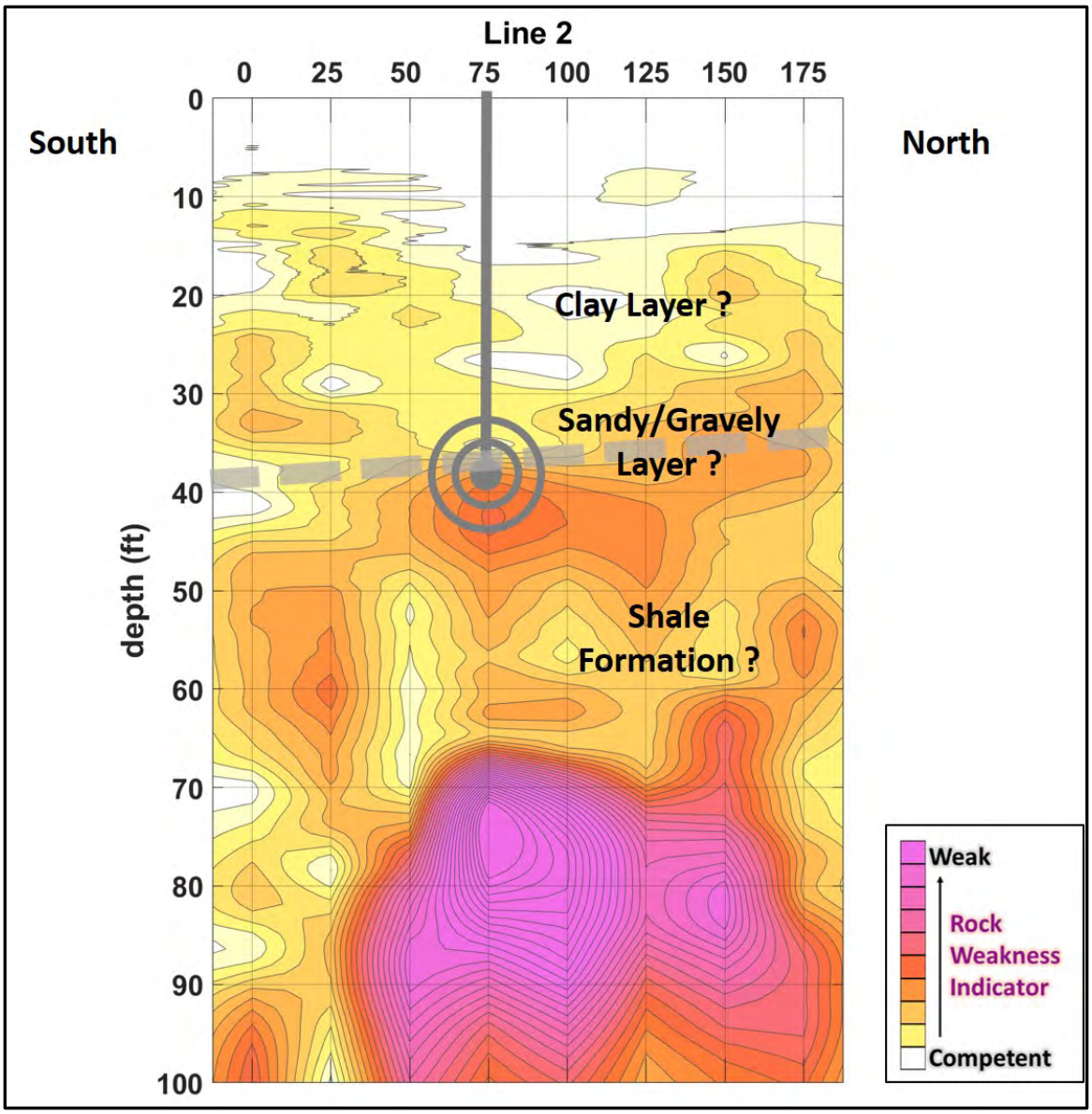


Figure 28 - Survey 3, RAP Line 2 (longitudinal Profile Looking East)

As previously described, the gray dashed line approximates and divides the different geologic units beneath the surface. Also, the subsurface area within the shale formation appears highly fractured. It was reported that a fault zone possibly exists in this area (or thereabout). The dark pink zone may represent the faulted zone. The bottom of the dark gray line (bullseye) in Figure 28 represents the location where we believe a monitoring and/or recovery well should be placed to best intercept and possibly curb contaminants from flowing away from the site. The dark gray lines and bullseye correlate closely with where the Willowstick Method identified a preferential electric current flow path heading eastward.

Figure 29 identifies the locations of all of the vertical dark gray lines (bullseyes) shown in Figures 26, 27 and 28 (see the locations of red transparent ovals). We have projected the preferential

electric current flow paths identified in the Willowstick Method to align with the weak zones identified in the RAP profiles.

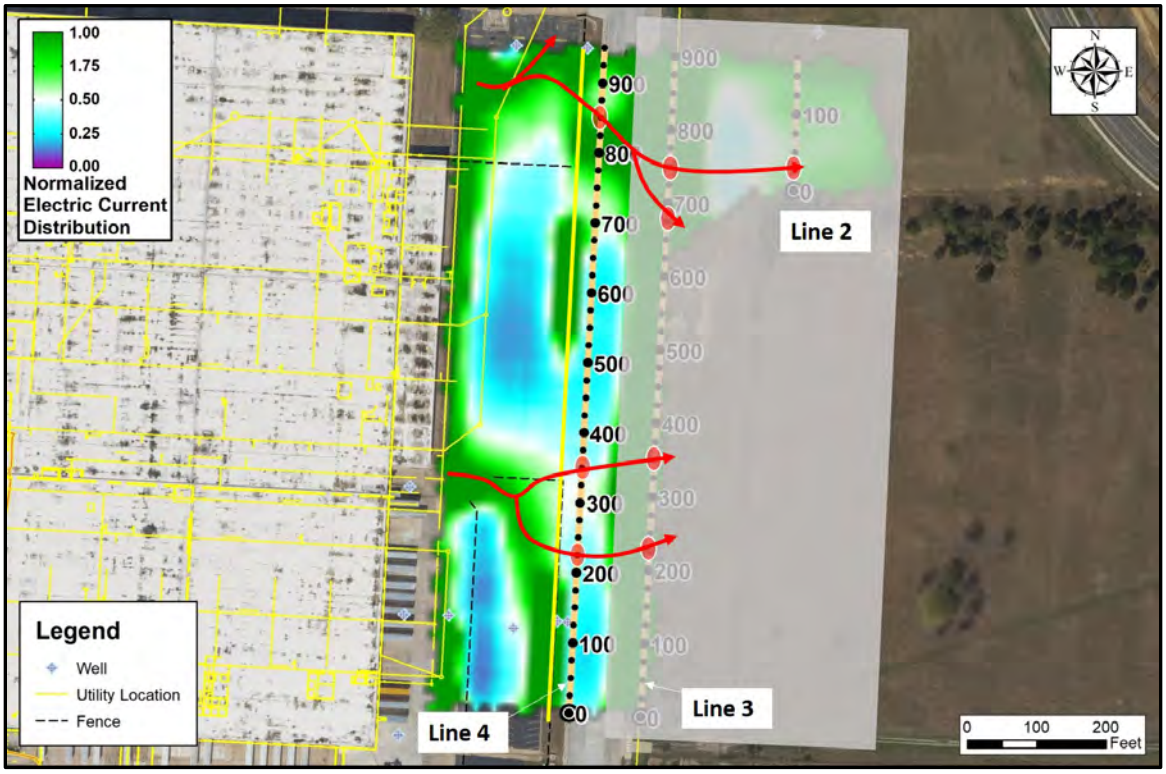


Figure 29 - Survey 3 Study Area RAP and Willowstick Method Comparison

The two data sets appear to collaborate, identifying locations where monitoring or recovery wells could be placed to best intercept, monitor and possibly curb the transport of contaminants away from the source area to the east and northeast. No other anomalous features were identified beneath Survey 3's study area from the Willowstick or RAP methodologies that could be interpreted as preferential groundwater flow paths influencing the transport of contaminants away from the source area to the east and northeast.

5.0 SURVEY 1 RESULTS

5.1 Survey 1 Layout

Survey 1 targeted preferential groundwater flow paths away from the southwest corner of the building. Survey 1 placed an upgradient electrode in well ITMW-9 paired with a downgradient electrode in a newly drilled well MW-206. Figure 30 presents Survey 1's layout.

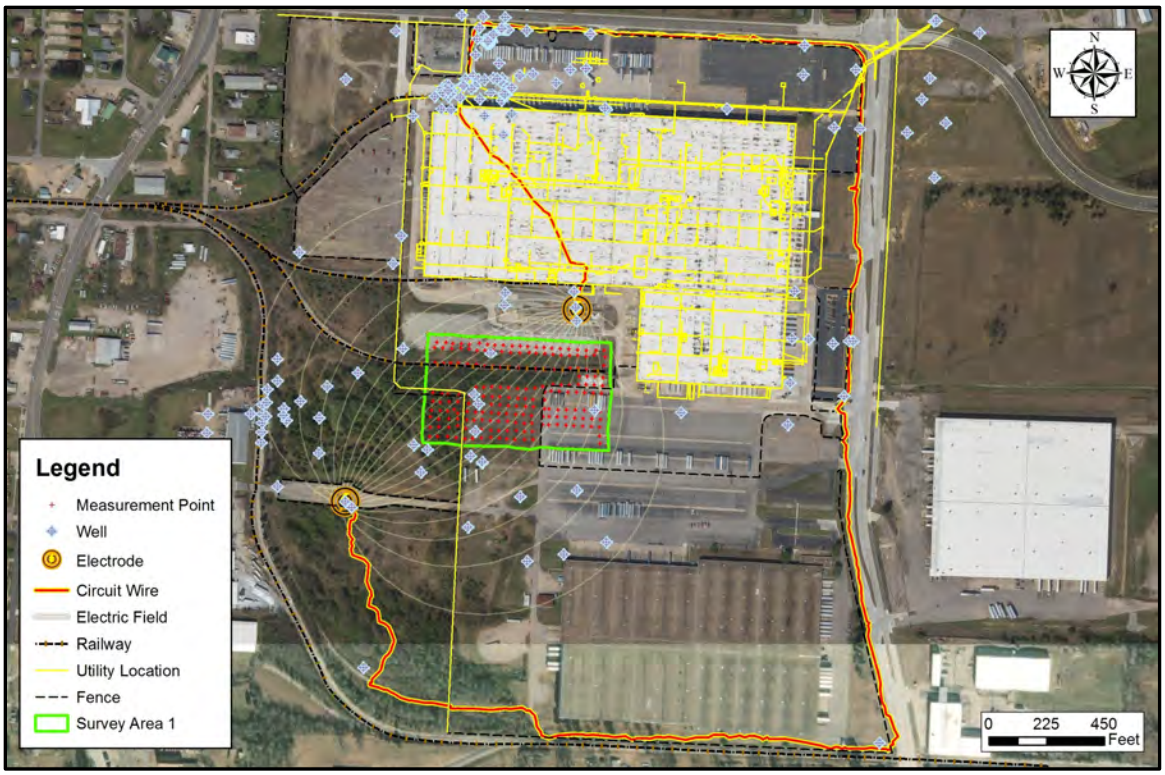


Figure 30 - Survey 1 Layout and Coverage Area

5.2 Survey 1 ECD Modeling Results

Figure 31 presents Survey 1's ECD model taken at an elevation of 450 feet—similar to that presented for the other surveys, which is a good representative slice to begin a discussion about preferential electric current flow paths observed beneath Survey 1's study area.

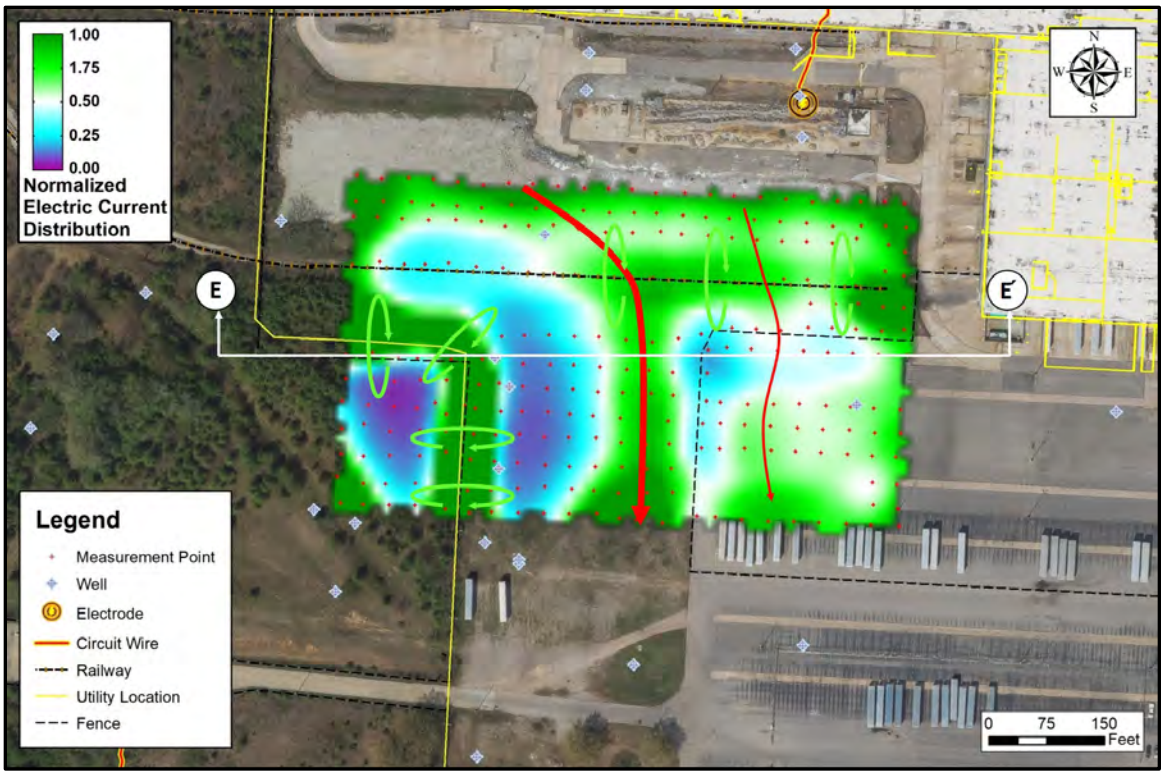


Figure 31 - Survey 1 ECD Model Slice Elevation 450 Feet with Interpretive Markings

The green semi-circles surrounding the overhead powerline that traverses Survey 1's study area conducts some of the signature electric current. This is also true for the railroad track that crosses over Survey 1. Nevertheless, the anomalous area highlighted by a solid red arrow identifies a primary electric current flow path through and away from Survey 1's study area. The red dashed arrow identifies what is interpreted as a secondary flow path.

To further interpret and describe the distribution of electric current beneath Survey 1's study area, Figure 32 presents a longitudinal profile view of Survey 1's ECD model (Section E-E′).

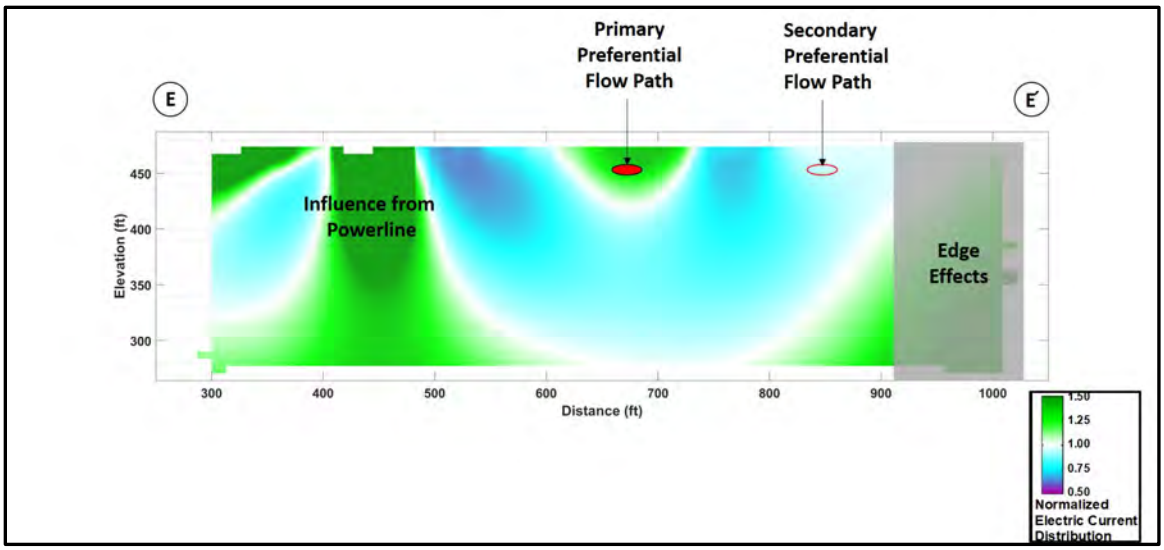


Figure 32 - Survey 1 ECD Model Slice Section E-E´

As can be observed in Survey 1's ECD model, the influence of the overhead power line is significant. Nevertheless, two electric current flow paths cross through Survey 1's study area, which are likely related to the preferential flow of groundwater away from the site to the south. The flow paths are located at roughly at an elevation of 450 ft (near the sandy/gravely layer). The flow path to the west is interpreted as a primary groundwater flow paths due to its strong magnetic field and the flow path to the south as a secondary flow path due to its weak magnetic field.

RAP Lines 5 and 6 crosses through both Surveys 1 and 2; therefore, the results of these RAP lines will be presented after Survey 2's Willowstick Method is first considered.

6.0 SURVEY 2 RESULTS

6.1 Survey 2 Layout

Survey 2, as did Survey 1, targeted preferential groundwater flow paths out and away from the southwest corner of the Former Whirlpool Facility. Survey 2 used the same downgradient electrode position as Survey 1, but the upgradient electrode was shifted west to well ITMW-7. Figure 33 presents Survey 2's layout.

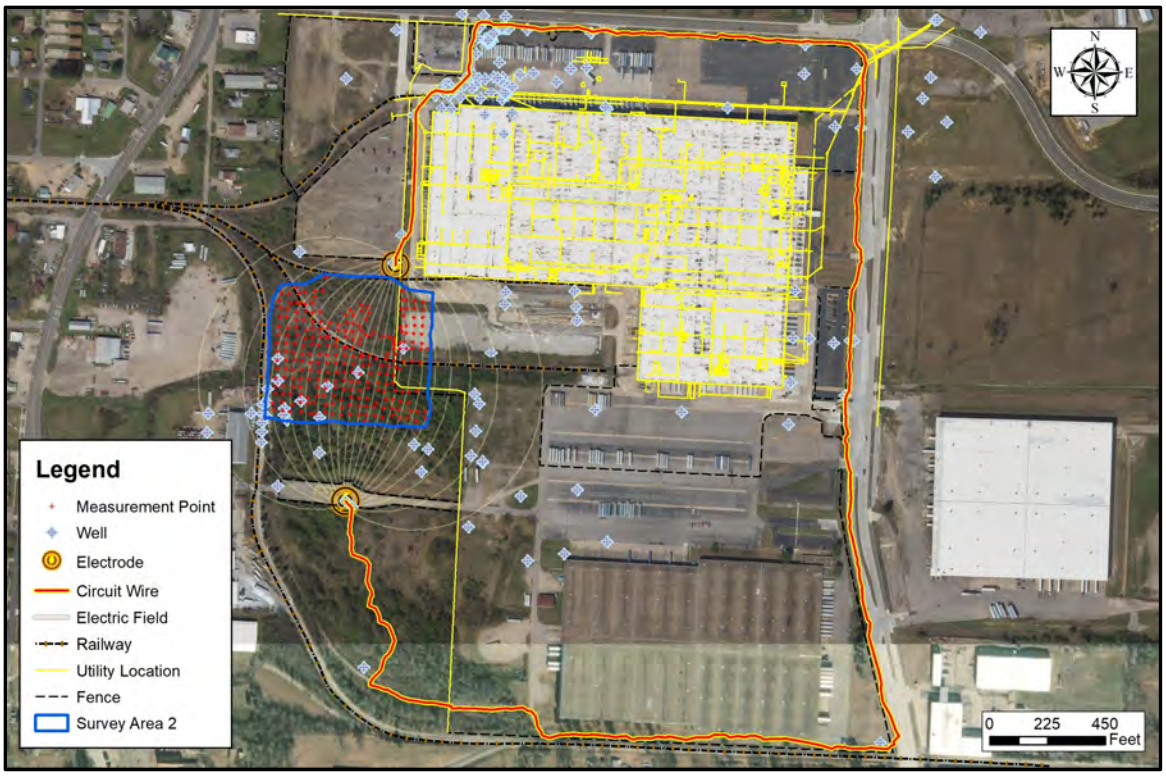


Figure 33 - Survey 2 Layout and Coverage Area

6.2 Survey 2 ECD Modeling Results

Figure 34 presents Survey 2's ECD model taken at an elevation of 450 feet—similar to that presented for all other surveys.

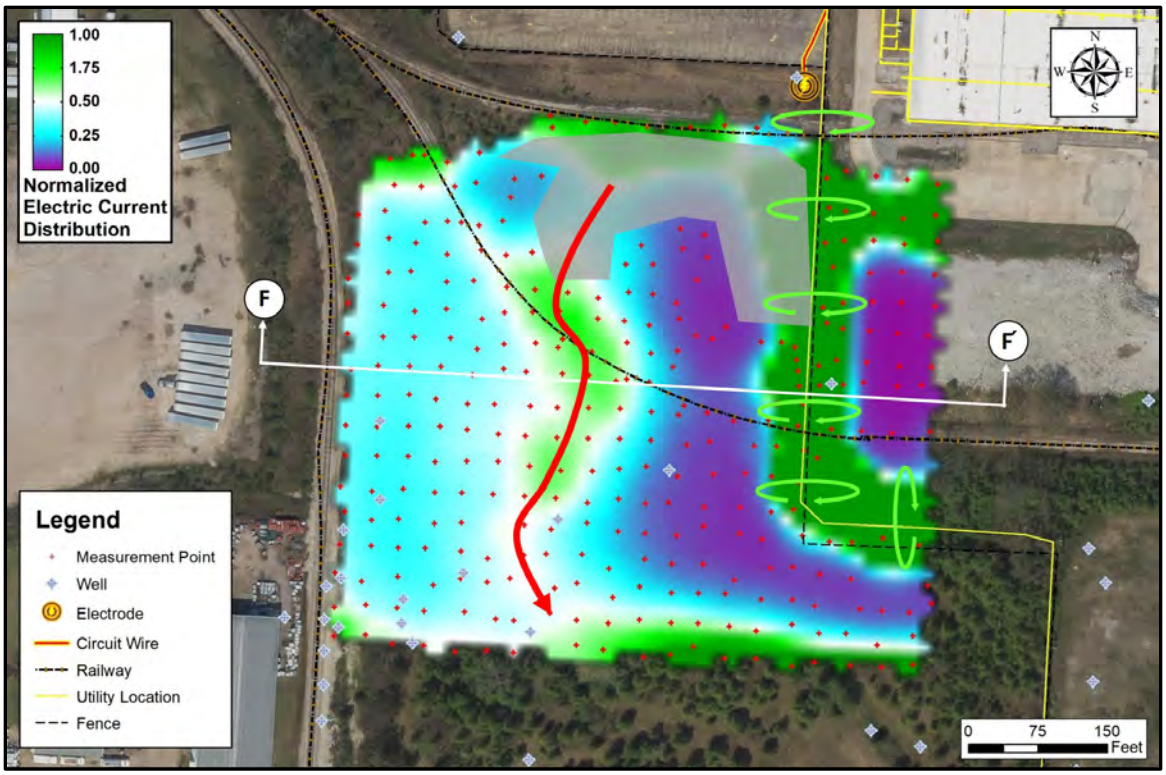


Figure 34 - Survey 2 ECD Model Slice Elevation 450 Feet

The green semi-circles surrounding the overhead powerline that traverses Survey 2's study area conducts some of the signature electric current as observed when presenting Survey 1. Nevertheless, the anomalous area highlighted by the solid red arrow identifies a primary electric current flow path through Survey 2's study area.

To further interpret and describe the distribution of electric current beneath Survey 2's study area, Figure 35 presents a longitudinal profile view of Survey 2's ECD model (Section F-F′).

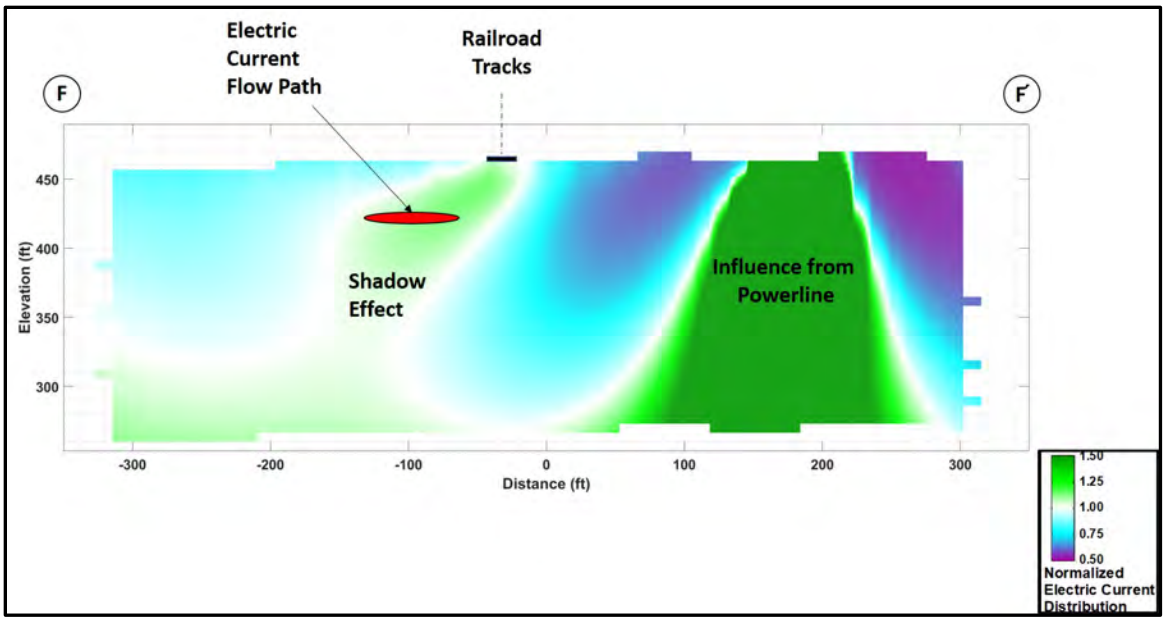


Figure 35 - Survey 2 ECD Model Slice Section F-F′

Section F-F′ is taken in close proximity to the railroad tracks that traverse the study area. A subtle influence from the railroad track can be observed. The overhead powerline also conducts a significant amount of the signature electric current. Both of these conductive features are observed in the data set. Nevertheless, a notable flow path (red oval) can be observed that flows slightly deeper than an elevation of 450 feet in a southernly direction.

6.3 Surveys 1 & 2 RAP Results

Figure 36 identifies the locations of RAP Lines 5 and 6. RAP line 5 crosses over both Survey 1 and 2's study areas. Unfortunately, none of the preferential electric current flow paths cross beneath RAP Line 6.

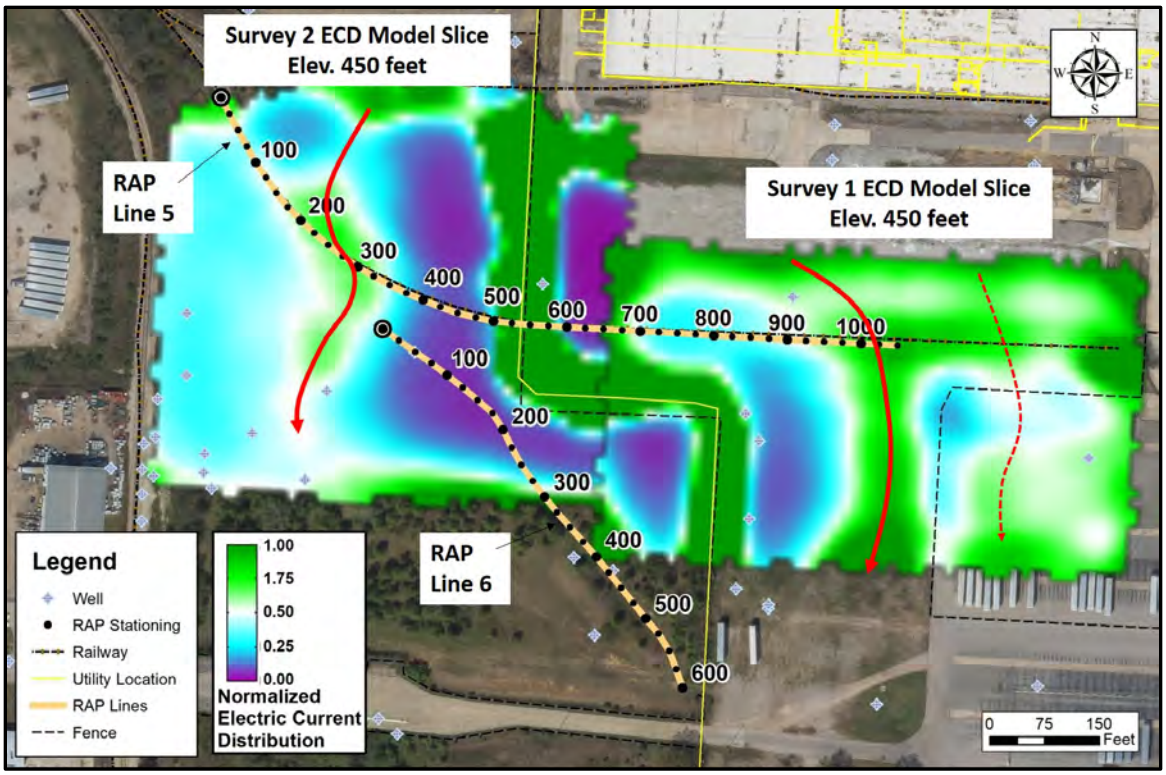


Figure 36 - RAP Lines 5 and 6 Location Map

Figures 37 presents RAP Line 5.

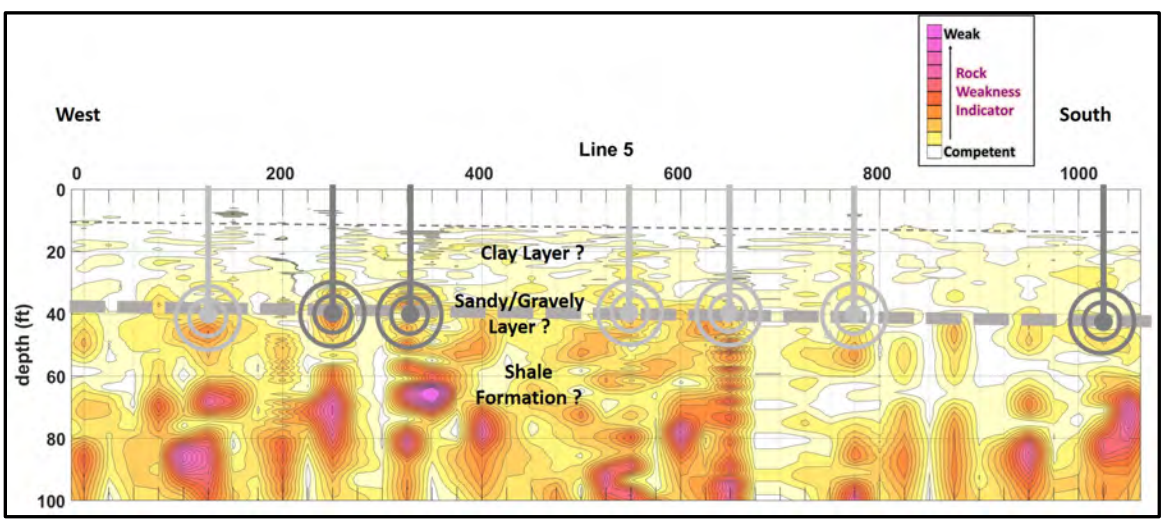


Figure 37 - RAP Line 5 Profile (Looking North through Subsurface Study Area)

RAP Line 5 was taken along the railroad track on top of the gravel bed. The area on either side of the railroad consisted of thick vegetation having a significant amount of poison ivy undergrowth. As a result, we chose to take RAP measurements where access was trouble-free (i.e., along the gravel railroad bed). As a consequence, the data appears a little nosier than the other RAP profiles.

As mentioned, the thick gray dashed line identifies the sandy/gravely layer and divides the subsurface between the overlying clay layer and the underlying shale formation (as interpreted from the RAP data). The vertical dark gray lines and bullseyes highlight locations where the Willowstick Method identified preferential electric current flow paths. The vertical light gray lines and bullseyes highlight other anomalous areas in the profile.

Figure 38 identifies the locations of the dark gray lines and bullseyes shown in Figure 37 (see the locations of red transparent ovals). We have extended or projected the preferential electric current flow paths identified in the Willowstick Method through the anomalous zones identified in the RAP profiles. Although there is some corroborative evidence between the two data sets, there are some complicated areas. We are more inclined to trust the Willowstick data due to the imperfect surface on which RAP measurements were collected in this area.

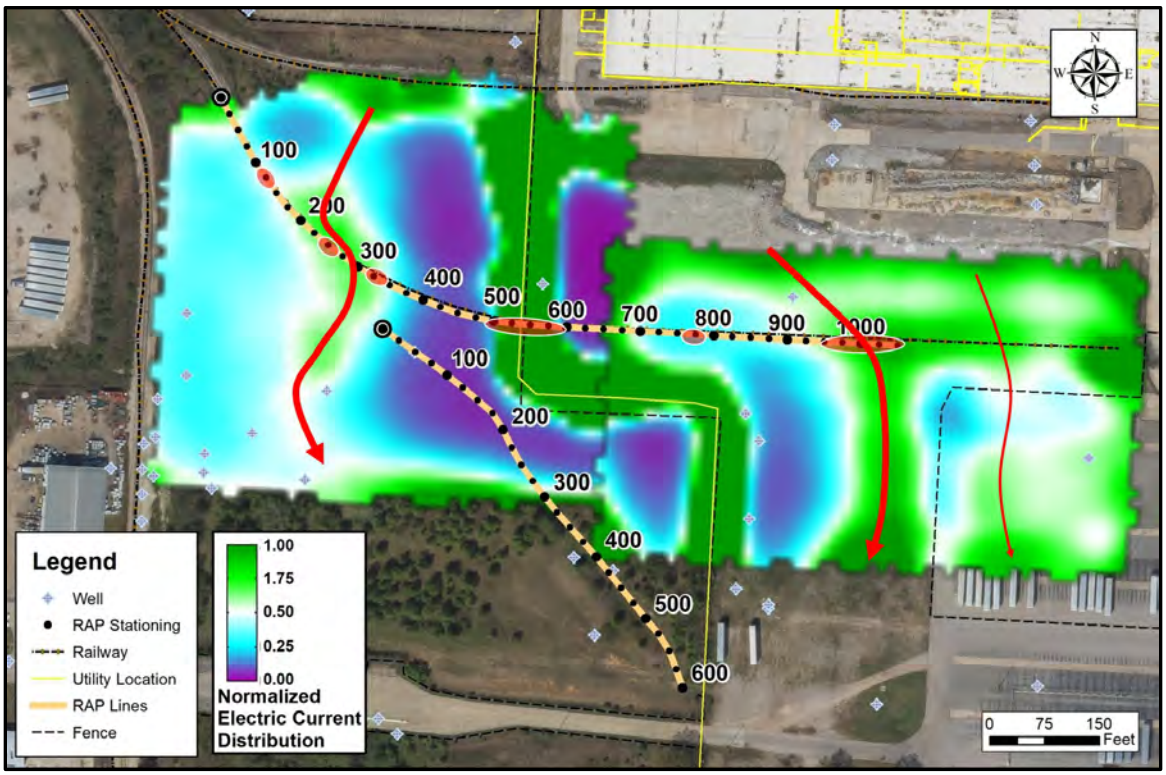


Figure 38 - Survey Study Areas 1 and 2
RAP and Willowstick Method Comparison

Figure 39 presents the results of RAP Line 6.

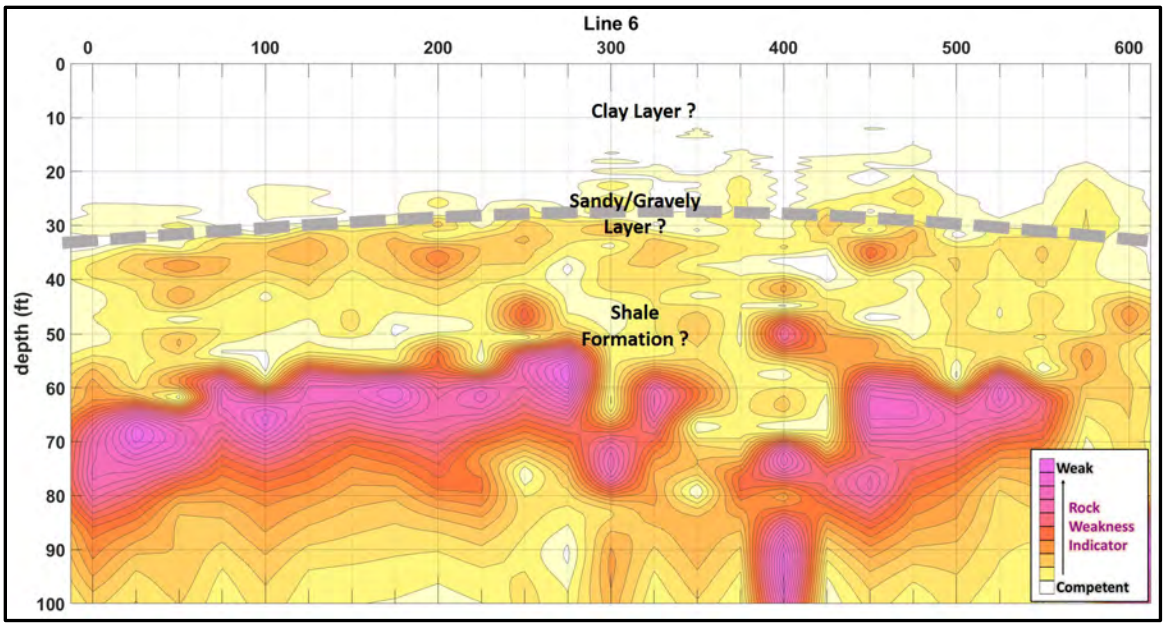


Figure 39 - RAP Line 6 Profile (Looking North through Subsurface Study Area)

The RAP Line 6 profile looks more aligned with RAP Lines 1, 2, 3 and 4, whereas RAP Line 5 appears questionable due to measurements being taken on the gravel railroad bed. No preferential electric current flow paths were observed beneath RAP Line 6. Also, based on the shape of the horizontal gray dashed line in Figure 39, the high point in the arched line possibly represents a water divide. The clay layer directly beneath the high point is mostly void of yellow anomalous shading. We believe groundwater flows away from this area toward the anomalous flow paths positioned on either side of RAP Line 6.

No other anomalous features were identified from the Willowstick or RAP methodologies in Surveys 1 and 2 that could be interpreted as preferential groundwater flow paths influencing the transport of contaminants away from the source area to the south, southwest or southeast.

7.0 GROUNDWATER FLOW PATH TARGET LOCATIONS

7.1 Survey 4 Groundwater Flow Path Target Locations

Based on careful analysis of the ECD model and RAP Line 1, Figure 40 describes locations beneath Survey 4 that we believe are the most effective locations to monitor and/or possibly intercept contaminants (if necessary) from migrating away from the source area through the subsurface groundwater regime. The yellow nodes with numbers correspond to Target locations along the flow paths. Coordinates are provided in Table A in WGS 84 UTM Zone 15 and NAD 1983 State Plane Arkansas North.

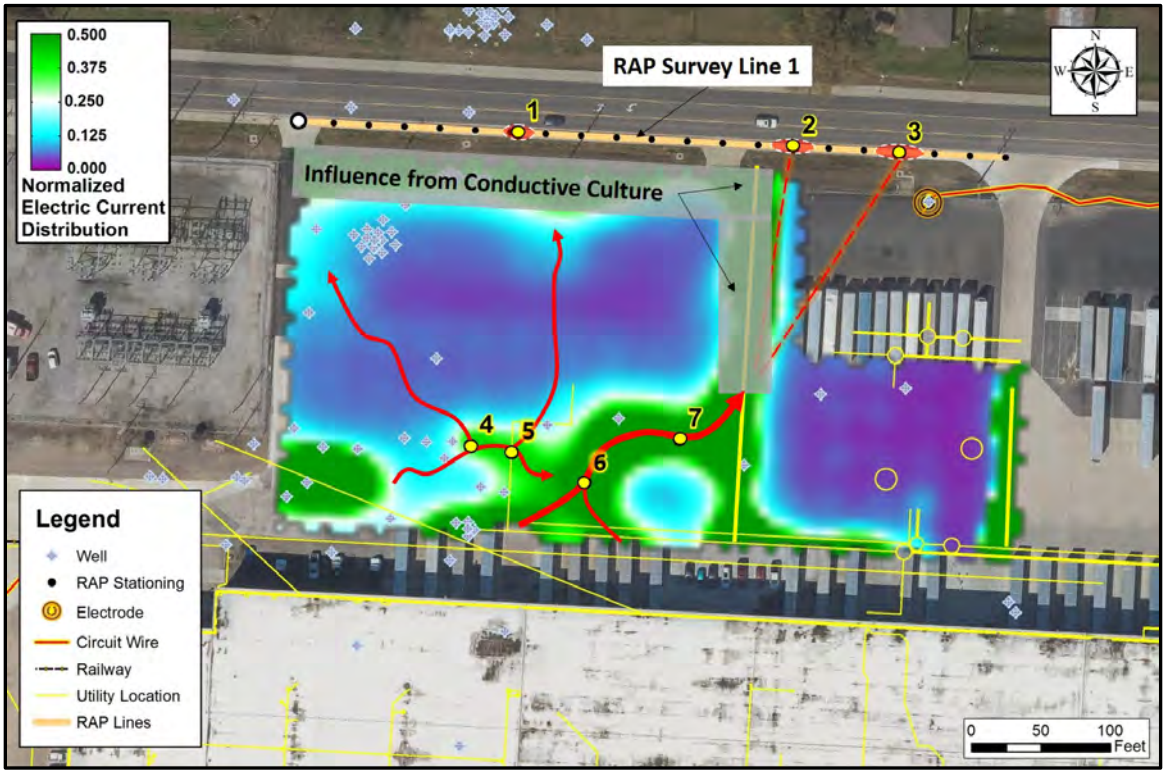


Figure 40 – Survey 4 Groundwater Flow Path Target Locations

Table A – Survey 4 Groundwater Flow Path Target Coordinates

Survey 4 Study Area					
Groundwater Flow Path Target Coordinates					
	WGS 84 UTM Zone 15		NAD 1983 State Plane Arkansas North		Maximum
ID #	Easting (m)	Northing (m)	Easting (ft)	Northing (ft)	Depth (ft)
1	371086	3909843	591028	369263	45
2	371147	3909840	591226	369250	45
3	371170	3909838	591302	369245	45
4	371076	3909774	590992	369037	45
5	371085	3909772	591021	369032	45
6	371101	3909766	591073	369010	45
7	371122	3909775	591142	369040	45

7.2 Survey 3 Groundwater Flow Path Target Locations

Figure 41 describes locations beneath Survey 3 that we believe are the most effective locations to monitor and/or possibly intercept contaminants (if necessary) from migrating away from the source area through the subsurface groundwater regime. The yellow nodes with numbers correspond to Target locations along the flow paths. Coordinates are provided in Table B in WGS 84 UTM Zone 15 and NAD 1983 State Plane Arkansas North.

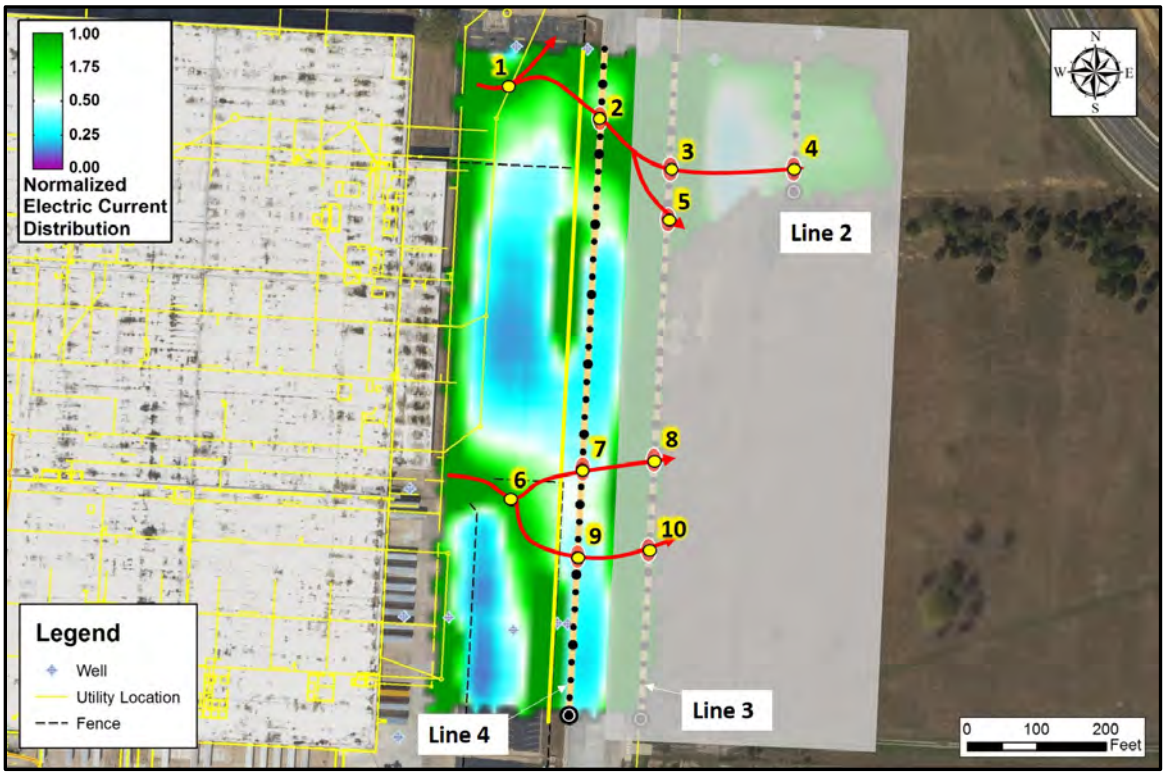


Figure 41 – Survey 3 Groundwater Flow Path Target Locations

Table B – Survey 3 Groundwater Flow Path Target Coordinates

Survey 3 Study Area					
Groundwater Flow Path Target Coordinates					
	WGS 84 UTM Zone 15		NAD 1983 State Plane Arkansas North		Maximum
ID #	Easting (m)	Northing (m)	Easting (ft)	Northing (ft)	Depth (ft)
1	371462	3909699	592257	368778	45
2	371503	3909685	592389	368731	45
3	371533	3909663	592488	368657	45
4	371588	3909661	592669	368651	45
5	371532	3909639	592482	368579	45
6	371464	3909517	592255	368182	45
7	371495	3909531	592357	368226	45
8	371526	3909534	592461	368234	45
9	371493	3909492	592349	368099	45
10	371524	3909494	592454	368103	45

7.3 Survey 1&2 Groundwater Flow Path Target Locations

Figure 42 describes locations beneath Surveys 1 and 2 that we believe are the most effective locations to monitor and/or possibly intercept contaminants (if necessary) from migrating away from the source area through the subsurface groundwater regime. The yellow nodes with numbers correspond to Target locations along the flow paths. Coordinates are provided in Table C in WGS 84 UTM Zone 15 and NAD 1983 State Plane Arkansas North.

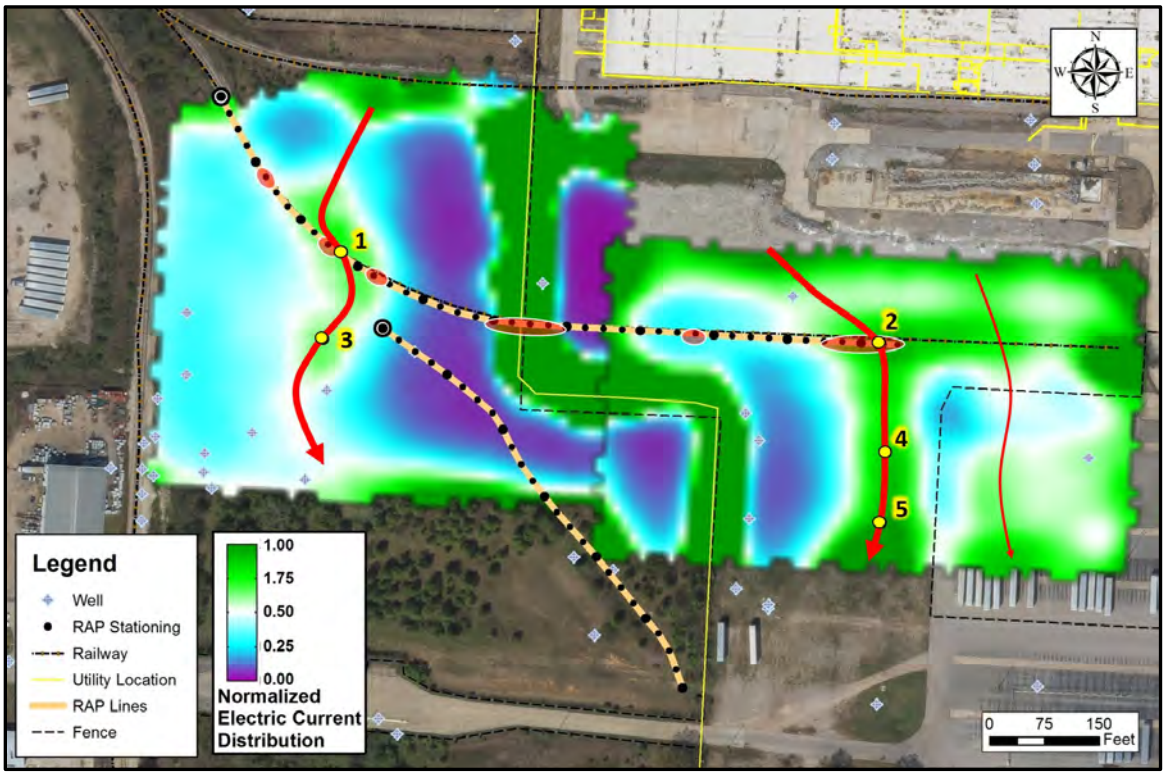


Figure 42 – Survey 1&2 Groundwater Flow Path Target Locations

Table C – Survey 1&2 Groundwater Flow Path Target Coordinates

Survey 1 & 2 Study Areas					
Groundwater Flow Path Target Coordinates					
	WGS 84 UTM Zone 15		NAD 1983 State Plane Arkansas North		Maximum
ID #	Easting (m)	Northing (m)	Easting (ft)	Northing (ft)	Depth (ft)
1	370870	3909467	590369	368002	45
2	371095	3909428	591105	367868	45
3	370862	3909431	590342	367883	45
4	371097	3909383	591111	367720	45
5	371095	3909354	591102	367624	45

7.4 Accuracy of Flow Path Coordinates and Target Locations

To understand the accuracy of the Willowstick Method's ECD models and the preferential flow paths identified by model analysis, a few considerations must be kept in mind. The maximum horizontal error in the position of preferential flow is roughly ½ the spacing between data stations. For this investigation, a 33 ft (10 m) grid spacing was used. Therefore, the horizontal error would be within ≈15 ft maximum. The ECD model provides an estimation of depth, but the accuracy of depth estimation depends on some factors that should be more carefully considered. The ability to estimate depth accurately is primarily dependent upon the degree of channelization or "focusing" of electric current. For example, experience with modeling shows that the depth accuracy can be as good as 5-10% (of the depth in question) where a high degree of channelization of electric current exists along well-defined flow paths. On the other hand, if electric current is distributed or dispersed evenly without any "channeling", then it has no preferential depth. Willowstick groundwater studies always fall somewhere between these two extremes. In this investigation, the noted flow path manifests fairly well. Therefore, the depth accuracy is expected to be fair (~15 to 25% of the estimated depth).

We do not have a lot of experience with the RAP data as of the date of this report to determine horizontal and vertical statistical accuracy. However, over the past year, the sites that have been proven (5 in total) have been impressive with significantly greater groundwater yields than neighboring wells or expectations.

8.0 SUMMARY AND CONCLUSIONS

8.1 Summary

In summary, the Willowstick Method identified five primary electrically conductive flow paths beneath and away from the source area within the sandy/gravely transmissive zone. The preferential flow of electric current is interpreted as highly probable pathways for contaminants to follow as contaminants migrate away from the source area. The RAP Method identified porous zones in the clay and sandy/gravely layers as well as fractured zones in the underlying shale formation that possibly facilitate hydraulic conductivity beneath and away from the site. Both techniques, which use entirely different scientific principles, identified similar anomalous features and patterns. This collaborative evidence provides a great deal of confidence in the results of the investigation.

Figure 43 summarizes the findings of the investigation.

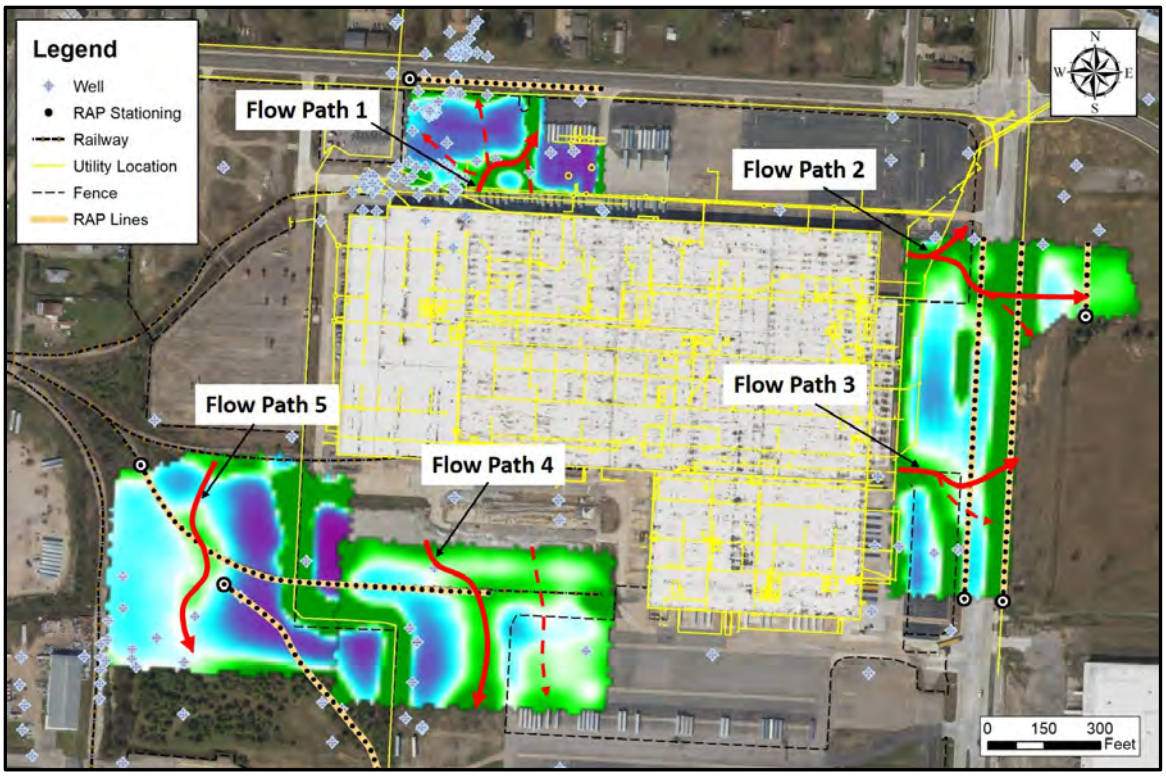


Figure 43 – Summary of Investigation

8.2 Conclusion

The investigation identified five primary electrically conductive flow paths within the study area. The preferential flow of electric current along these flow paths are interpreted as a highly probable pathways for groundwater to follow beneath and away from the facility. The RAP resonance signal measures structural weaknesses in the subsurface where fractured rock or secondary porosity in permeable soils exists that can facilitate hydraulic conductivity beneath and away from the study area. The fact that both methodologies identified the same anomalous areas and patterns (which use entirely different scientific principles) provides a great deal of confidence in the results of the investigation. The information contained in this report can be used by Ramboll in making informed, guided, and cost-effective decisions concerning how to further monitor and/or possibly intercept contaminants (if necessary) from migrating away from the source area through the subsurface groundwater regime.

9.0 DISCLAIMER

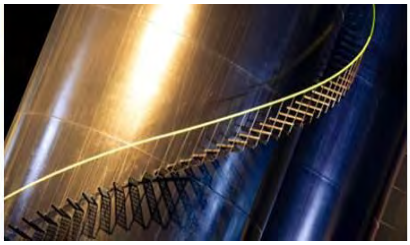
9.1 General

The Willowstick and RAP methodologies are proven and emerging technologies. The data, interpretations, and recommendations obtained from the survey and modeling methodologies are based upon sound applied physics and Willowstick's experience in working with and developing the technologies. By definition, the evaluation of geologic, hydro-geologic, and geophysical conditions is a difficult and an inexact science. While the location of the interpreted groundwater flow path has been estimated, the exact extent of these flow paths should be verified by other field

methods before performing any remediation activities. Willowstick feels strongly that the technologies have yielded information that can greatly help Ramboll make informed, guided, and cost-effective decisions concerning how to further monitor and possibly remediate the Former Whirlpool Facility site.

Attachment G

Plume Flux Meter Investigation Report



ATTACHMENT G

2021 Passive Flux Meter Investigation Report

Whirlpool Facility
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll US Consulting, Inc

Date:
September 2021

RAMBOLL

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Appendix B: PFM Graphs
Appendix C: Well Construction and Soil Boring Logs

1 Introduction

Ramboll US Consulting (Ramboll), on behalf of Whirlpool Corporation (Whirlpool), is submitting this Passive Flux Meter (PFM) Investigation Report for the former Whirlpool site in Fort Smith, Arkansas (the Site). The work was performed in accordance with the PFM Investigation for Remedial Activities Work Plan dated October 19, 2020 (Work Plan). The PFM investigation provides additional information to be used in the design of treatment areas to mitigate future groundwater plume expansion. Each PFM consisted of a flexible, 5 foot long sock positioned within the screened interval of the selected monitoring well. The sock contained granular activated carbon with alcohol tracers that were desorbed from the carbon at rates proportional to groundwater flux. Simultaneously, the carbon adsorbed dissolved organic contaminants in the groundwater flowing through the PFM. The assessment of the desorbed alcohol tracers and analysis of the dissolved organic contaminants adsorbed on the carbon provides an estimate of the dissolved organic contaminant flux within the water bearing zone at the respective wells. This data can then be used to understand the mass of dissolved organic contaminants potentially present within the vertical profile for the respective plumes to facilitate better understanding of plume migration. The PFMs were analyzed for the dissolved organic contaminants trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE).

The PFM sample intervals are segregated by rubberized discs that are designed to isolate the sample intervals and reduce vertical groundwater flow within the well screen. However, this does not prevent vertical flow in the filter pack and the potential for some tracer dissipation and carbon absorption of organic compounds from groundwater circulating in the filter pack. An update to the Underground Injection Control (UIC) Class V Well Inventory Requirements Permit by Rule (dated February 26, 2014) was submitted to the Arkansas Division of Energy and Environment, Department of Environmental Quality (ADEQ) on December 14, 2020, and approved by ADEQ on December 21, 2021.

1.1 Site Geology

The unconsolidated subsurface material at the Site consists of stream deposited Quaternary age alluvium that ranges from approximately 25-35 feet in thickness. Underlying the alluvium is the Pennsylvanian Period McAlester Formation which consists primarily of gently dipping dark gray shales and siltstones with thin coal beds and is likely over 500 feet thick in the Fort Smith area (Hendricks 1949). A review of published geologic literature and data from investigations conducted at the Site indicate the unconsolidated alluvium consists primarily of two units; a shallow fine-grained unit (Upper Fine-Grained Unit) and a coarse textured basal unit [Basal Transmissive Zone (BTZ)]. The Upper Fine-Grained Unit consists primarily of recent age fine grained alluvial sediment. The BTZ may be equivalent to the Pleistocene age Gerty Sand and consists of unconsolidated river terrace sand and gravel. Typically, the lower portion of the Upper Fine-Grained Unit at depths greater than 15 feet below ground surface (bgs) transitions to the sandy BTZ. The BTZ can be generally subdivided into two primary units; the upper unit composed primarily of silty sand to sandy silt and the lower unit composed primarily of clayey

and silty sands and gravels. Each unit is discussed in further detail in the 2015 Two Year Technical Review Report (2015 Tech Report) for the former Whirlpool facility on Jenny Lind Road in Fort Smith, Arkansas, January 2016, Ramboll Environ.

2 PFM Investigation

This report documents the findings from the PFM investigation conducted in March and April 2021. The PFMs were installed on March 16-19, 2021 and were retrieved and sampled on April 5-8, 2021. Ramboll conducted the field work under the safety plan developed for this project.

The PFMs for the investigation were provided by Enviroflux of Tampa, Florida. Each PFM consisted of a flexible, 5 feet sock divided into four 1.25 feet segments that was installed within the screened interval of the selected monitoring well. The sock contained granular activated carbon (GAC) with alcohol tracers (Appendix A provides additional information regarding the design, installation, retrieval, and analysis of the PFMs).

2.1 PFM Installation

The PFMs were installed using rope and/or steel cable attached to the sock assembly. The PFM was lowered into the well and attached to the J-plug wellhead cap of the monitoring well using a carabineer connector. When necessary, Geoprobe rods were used to push the PFMs from the transport tube into the well. Installation details such as date, time, number of PFMs installed and well construction details were recorded in the field notes.

2.1.1 North Plume Area PFM Installation

Figure 1 indicates respective locations where Ramboll deployed 10 PFMs in six North Plume area monitoring wells listed below:

<u>North Plume</u>

- MW-46R: Constructed with a 5 foot screen, one PFM;
- RW-69: Constructed with a 10 foot screen, two PFMs;
- TMW-12: Constructed with a 10 foot screen, two PFMs;
- TMW-23: Constructed with a 5 foot screen, one PFM; and
- TMW-24: Constructed with a 7 foot screen, two PFMs.

<u>Northeast Plume</u>

- MW-87: Constructed with a 10 foot screen, two PFMs.

2.1.2 South Plume Area PFM Installation

Figure 1 indicates respective locations where Ramboll deployed 13 PFMs in six South Plume area monitoring wells listed below:

<u>South Plume</u>

- MW-189: Constructed with a 10 foot screen, two PFMs;

- MW-204: Constructed with a 10 foot screen, two PFMs;
- ITMW-5: Constructed with a 10 foot screen, two PFMs; and
- ITMW-18: Constructed with a 15 foot screen, three PFMs.

Southeast Plume

- MW-185: Constructed with a 10 foot screen, two PFMs.

Southwest Plume

- MW-199 - Constructed with a 10 foot screen, two PFMs (McPherson Oil property).

Two changes from the work plan were made based on field conditions. The Work Plan originally identified monitoring wells ITMW-9 in the south plume and IW-77 in the north plume as wells for PFM deployment. The PFMs were unable to be installed due to fit issues with the PFMs and the inner diameter of the wells. ITMW-18 was selected and used as the alternative to ITMW-9 for a south plume PFM location and RW-69 was used as an alternative north plume PFM location.

Investigation derived waste (IDW) generated from this investigation (e.g., excessive sorbent) were containerized and stored at a secure location on the former Whirlpool property pending proper disposal.

2.2 PFM Retrieval, Sampling and Analysis

Approximately two weeks following installation, the PFMs were retrieved using the rope and/or steel cable attached to the sock assembly to guide the PFM into the transport tube. Retrieval and sampling information such as date, time, depth interval and sample midpoint depth were recorded in the field notes. Once the PFMs were in the transport tubes, they were moved to the onsite sampling workstation. Each segment of the PFMs was then sampled by cutting open the outer sleeve of the sock and pouring the exposed GAC into stainless steel mixing bowls. Each sample was homogenized and placed into 120 milliliter (mL) jars to be transported back to Enviroflux for analysis. The sample coolers were packed with blue ice and shipped under chain of custody. The steel bowls, scissors and stainless-steel mixing spatula were decontaminated between samples using deionized water and Alconox.

From the 23 PFMs deployed, 92 samples were collected and analyzed by Enviroflux laboratories. The samples were analyzed via USEPA Method 8260B modified for TCE and cis-1,2-DCE [the Laboratory Quality Assurance and Quality Control (QA/QC) Protocol Adulatory is included in Appendix A].

3 Results

PFMs measure the ambient groundwater flux and contaminant mass flux at a well.

Flux refers to the mass of water, and/or contaminants, flowing per unit area at a measured point in a well screen averaged over a given period of time. Based upon this general definition, the units associated with mass flux are determined as:

$$\boldsymbol{flux} = \frac{\boldsymbol{mass}}{\boldsymbol{area \cdot time}} = \left[\frac{\boldsymbol{M}}{\boldsymbol{L^2T}}\right]$$

where the terms M, L and T represent the base units of mass, length, and time, respectively. For consistency with common practice, the ambient groundwater flux will be discussed in terms of the specific discharge or Darcy velocity, which is the volumetric water flux (or flowrate) through a specified cross-sectional area. The resulting units are L/T and for this report the Darcy velocity will be represented with the units of cm/day. For this report contaminant flux will be discussed in terms of mass flux [M/(L^2T)] and represented with the units of milligrams per square meters (mg/m^2) per day.[1]

The results of the mass flux measurements and groundwater Darcy velocity (velocity) measurements are provided in Tables 1 and 2 for the North Plume Area and South Plume Area, respectively. Each location was analyzed for cis-1,2-DCE and TCE. The velocity and mass flux values were used to calculate the average groundwater concentration of cis-1,2-DCE and TCE flowing through a well for each PFM segment. Table 3 contains the well average values of mass flux based on the PFMs. This is calculated by averaging the mass flux calculated for each segment of the PFMs in a well. Table 4 contains the mass discharge per unit width for the aquifer of each well. This is calculated by multiplying the total well mass flux value by the total length of PFM installed and is in units of mg/m^2 per day. Table 5 contains the average TCE groundwater concentration in each well. The average TCE groundwater concentrations are generally consistent with the semi-annual groundwater sampling results for April 2021 as depicted on Figure 3A and 3B for the North Plume Area and South Plume Area respectively. Graphs of the groundwater Darcy Velocity, cis-1,2-DCE mass flux values and TCE mass flux values are included in Appendix B. Boring logs are included in Appendix C.

The following sections provide discussion for each of the monitoring wells where PFMs were deployed within each of the respective plume areas (North Plume, South Plume, Southeast and Southwest). Velocity and TCE/cis-1,2-DCE analysis results are discussed in relation to the respective well screened interval and associated lithology (sand, gravel, clay, silt), and moisture observations (moist, saturated, dry) that were documented on the boring/well logs.

The depths referenced for the respective sample intervals for each PFM are based on the total depth of the well measured from the well top of casing the day of deployment [depth below top of well casing (bTOC)]. All of the wells are flush mount installations where the TOC is within

[1] Mass Flux Measurements at an Industrial Site, EnviroFlux, LLC, 2012.

three to four inches of ground surface with the exception of ITMW-5 where the top of casing is approximately 2.5 feet above the ground surface. Discussion regarding the lithology observed and noted in the well logs and screened intervals are based 1 foot bgs as recorded on the well logs.

3.1 North Plume Area

The North Plume Area includes wells MW-46R, RW-69, TMW-12, TMW-23, and TMW-24 (Figure 1).

MW-46R

- MW-46R is screened from approximately 17-22 feet bgs and terminates at the top of the shale bedrock. Based on the observations noted in the well log in Appendix C and referenced descriptions for Site geology (2015 Tech Report), the BTZ extends from approximately 14.8-20 feet bgs where it is underlain by silty sandy clay that transitions into hard clay and the top of shale at 22 feet bgs. One PFM was installed within approximately the same interval as the well screen (i.e., the bottom 3 feet of the BTZ and 2 feet of clayey material).
- Based on the analysis of tracer dissipation and carbon absorption from the PFM, the velocity at MW-46R ranged from 1.9-2.5 centimeters per day (cm/day) and the TCE concentration ranged from 99-1,226 micrograms per liter (µg/L) (Table 1).
- The highest velocity (2.5 cm/day) and TCE mass flux (30.04 mg/m^2 per day) were in the first 1.25 feet interval (17.6-16.4 feet bTOC) and both decreased with depth.
- The higher gravel content in the upper portion of the screened interval correlates with the highest values for velocity, TCE and cis-1,2-DCE concentrations and the resulting mass flux. The bottom 2 feet of the screened interval is mostly clay and the resulting velocity and TCE/cis-1,2-DCE concentrations were lowest.
- The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux decreasing with depth is shown graphically in Appendix B.
- Table 3 presents the average velocity (2.2 cm/day) and mass flux value for TCE/cis-1,2-DCE (12.1 and 0.31 mg/m^2 per day respectively) for the 5 feet section of aquifer sampled.
- The results estimate the mass discharge per unit width of the aquifer (from 17-22 feet bTOC) at MW-46R at 18.5 and 0.48 mg/m^2 per day respectively for TCE and cis-1,2-DCE (Table 4).
- The average contaminant concentration at MW-46R was 513 µg/L for TCE and 13 µg/L for cis-1,2-DCE. The April 2021 sampling results at MW-46R were 466 µg/L for TCE and

16.2 µg/L for cis-1,2-DCE indicating a reasonable correlation of the averaged PFM sample results to the April low flow sampling results.[2]

RW-69

- RW-69 well screened interval is estimated to be approximately 16-26 feet bgs. The BTZ extends from approximately 14-26 feet bgs.[3]
- Two PFMs were installed from approximately 18.2-28.2 feet bTOC.
- The highest velocity (5.5 cm/day) and TCE mass flux (1.97 mg/m^2 per day) were in the second sample interval (19.4-20.7 feet bTOC) in clayey sand and then decreased with depth below this interval.
- The relationship of velocity and TCE/cis-1,2-DCE concentration and resulting mass flux changing with depth is shown graphically in Appendix B. The results for the samples from 25.7-28.2 are potentially from well casing below the screened interval and may not be representative of Site conditions.[4]
- The PFM sample intervals from approximately 18.2-23.2 feet in the clayey sand represent the portion of the saturated material where groundwater velocity and TCE/cis-1,2-DCE concentrations and mass flux are greatest.
- The average contaminant concentration at RW-69 for all sample intervals was 19 µg/L for TCE and 1.0 µg/L for cis-1,2-DCE. The April 2021 sampling results at RW-69 were 52.8 µg/L for TCE and 2.8 µg/L for cis-1,2-DCE. The average concentration for TCE for the four sample intervals from 18.2-23.2 feet bTOC (most representative of the BTZ) is 30.5 µg/L for TCE which is more comparable with the April sampling results.

TMW-12

- TMW-12 is screened from approximately 12-22 feet bgs, the PFM was installed within approximately the same interval. The BTZ extends from approximately 13.5-17 feet bgs, it is underlain by dry clayey silt to 20.5 feet bgs and shale to 22 feet bgs (Appendix C).[5]
- The PFM sample interval where groundwater velocity and TCE/cis-1,2-DCE concentrations and mass flux are highest is from just above the BTZ to just below the

[2] Tables 6A and 7A, Semi-annual Report, Whirlpool Corporation, Ramboll, July 2021.
[3] RW-69 is an older well installed in 2009. The well log footage notations are conflicting, and the total depth listed does not correlate with the total depth measured. The screen interval is based on a gauging depth of 28.2 feet bgs and a 2.5 feet sump at the bottom of the screen.
[4] The results for the PFMs can be affected by dissipation of the alcohol tracers during PFM installation and retrieval (the greater the saturated thickness or water column in the well the greater the potential loss of tracer volume during installation and retrieval) and the carbon readily absorbs organic compounds and some absorption can take place during PFM installation and retrieval (Enviroflux).
[5] TMW-12 was repaired in 2018 resulting in a revised top of casing approximately 2.4 feet higher (464.19) than indicated on the well log.

BTZ from 12.2-17.2 feet bTOC (inclusive of some sample interval overlap above the BTZ into the silty clay and below the BTZ into the top of the clayey silt).

- The velocity in the saturated material in the BTZ ranged from 2.1-4.3 cm/day, the TCE concentration ranged from 230-977 µg/L (Table 1). The velocity and TCE concentrations were highest in the sample interval 13.5-14.7 feet bTOC.
- The boring log indicates a higher gravel content from 15.5-17 feet bgs which correlates with the highest values for velocity, TCE and cis-1,2-DCE concentrations and the resulting mass flux. The bottom 2 feet of the screened interval is mostly clayey silt and shale and the resulting velocity and TCE/cis-1,2-DCE concentrations are much lower.
- The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux change (decreasing) with depth is shown graphically in Appendix B.
- The average contaminant concentration at TMW-12 was 377 µg/L for TCE and 8.0 µg/L for cis-1,2-DCE. The April 2021 sampling results at TMW-12 were 335 µg/L for TCE and 10.0 µg/L for cis-1,2-DCE indicating a reasonable correlation of the averaged PFM sample results to the April low flow sampling results.

TMW-23

- TMW-23 is screened from 14-19 feet bgs and the PFM was installed within approximately the same interval. The BTZ extends from approximately 10-17 feet bgs and terminates in the shale bedrock (Appendix C).
- The portion of the saturated material where groundwater velocity and TCE/cis-1,2-DCE concentrations and mass flux are greatest is in the BTZ from 14.8-17.2 feet bTOC.
- The highest velocity (2 cm/day) and TCE concentration (526 µg/L) were in the sample interval 14.8-16.1 feet bTOC in the lower clayey gravel approximately 1 foot above the dry silt (weathered shale).
- The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux decreasing with depth is shown graphically in Appendix B.
- The average PFM contaminant concentration at TMW-23 was 256 µg/L for TCE and 3 µg/L for cis-1,2-DCE. The April 2021 groundwater monitoring results were 179 µg/L for TCE and 3 µg/L for cis-1,2-DCE. The averaged PFM results for the four sampled intervals are biased higher from the 526 µg/L result for TCE from 14.8-16.1 feet bTOC.

TMW-24

- TMW-24 is screened from 12-19 feet bgs and terminates in the shale bedrock. The BTZ extends from approximately 9-16 feet bgs (Appendix C).

- The PFMs were installed within the screened interval with the exception that the upper 3 feet of one PFM or two sample intervals (9.2-11.7 feet bTOC) were located above the screened interval of the well.
- The water level in the well was several feet above the well screen, (depth to water 1.07 feet bTOC on April 12, 2021) and is reflective of Site semi-confining groundwater conditions.
- The sample intervals where groundwater velocity, TCE/cis-1,2-DCE concentrations and mass flux are higher is in the BTZ clayey gravel from 14.2-16.7 feet bTOC.
- The highest velocity (2.2 cm/day) and TCE concentration (1,090 µg/L) were in the 15.5-16.7 feet bTOC interval in the lower portion of the BTZ including the contact with the clayey silt.
- The bottom 3 feet of the screened interval is clayey silt/shale and the resulting velocity and TCE/cis-1,2-DCE concentrations are reflective (lower) of the less permeable material.
- The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux changing with depth is shown graphically in Appendix B.
- The results above the screened interval suggest groundwater movement or circulation in the well bore filter pack and within the casing above the screen and are considered questionable in relation to the evaluation for mass flux. There may also be circulation in the filter pack and well screen below the BTZ affecting the results in the silt and shale.
- The average PFM contaminant concentration at TMW-24 was 434 µg/L for TCE and 8.0 µg/L for cis-1,2-DCE. The April 2021 monitoring results were 484 µg/L for TCE and 12.5 µg/L for cis-1,2-DCE. The averaged PFM results provide a reasonable correlation with the groundwater monitoring results.

Northeast Plume

MW-87

- MW-87 is screened from 17-27 feet bgs and terminates in the shale bedrock; within the screened interval, the silty clay and gravel BTZ extends from approximately 20-23.3 feet bgs (Appendix C). The PFM was installed within approximately the screened interval.
- The sample interval where the highest groundwater velocity (5.3 cm/day), TCE/cis-1,2-DCE concentrations (782 µg/L and 55 µg/L respectively) and resulting TCE/cis-1,2-DCE mass flux (41.8 and 2.9 mg/m^2 per day respectfully) is in the BTZ silty clay and gravel from 21.9-23.1 feet bTOC.
- There is little variation in sample results for the remaining deeper interval from 23.1-24.4 feet bTOC and shallow intervals from 16.9-21.9 feet even in lesser permeable silty clay

material above and below the BTZ (velocity ranged from 4.4-4.7 cm/day and the TCE concentration ranged from 340-499 µg/L.

- There is very little mass flux in the bottom two sample intervals in the shale. The results may be representative of some tracer dissipation during installation and mixing in the well borehole. The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux changing with depth is shown graphically in Appendix B.
- The average PFM contaminant concentration at MW-87 was 375 µg/L for TCE and 29 µg/L for cis-1,2-DCE. The April 2021 monitoring results were 233 µg/L for TCE and 18 µg/L for cis-1,2-DCE. The averaged PFM results provide a reasonable correlation with the groundwater monitoring results considering the PFM sample results ranged from 30 to 782 µg/L.

3.2 South Plume Area

The South Plume Area includes wells MW-189, MW-204, ITMW-5, ITMW-18, Southeast Plume well MW-185 and Southwest Plume well MW-199 (Figure 1).

South Plume Area

MW-189

- The BTZ at MW-189 extends from approximately 17-40 feet bgs. The upper BTZ fine grained unit clayey sand extends from approximately 17-29.5 feet bgs and the lower portion of the BTZ gravel, sand and silty clay extends from approximately 29.5-40 feet bgs.
- The well screened interval included the lower 9 feet of the BTZ and upper 1 foot of silt and shale from approximately 31-41 feet bgs. Ten feet of PFM was deployed in the same interval.
- The highest velocity (3.1 cm/day), TCE/ cis-1,2-DCE concentrations (292 µg/L and 7.4 µg/L respectively) and mass flux values (9.16 and 0.23 mg/m^2 per day respectively) were in the sample interval from 34.7-35.9 feet bTOC (located in just above the midpoint of the screened interval in the gravel).
- Velocity and concentrations are higher from 33.4-37.2 feet bTOC. There were no observations unique to this vertical portion of the BTZ in comparison to the lower several feet. The well log indicates 3 feet of sample recovery from a 5 feet sample interval.
- The bottom foot of the screened interval is clayey silt/shale and the resulting velocity and TCE/cis-1,2-DCE concentrations are much lower. The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux changing with depth is shown graphically in Appendix B.

- The average PFM contaminant concentration at MW-189 was 134 µg/L for TCE and 3 µg/L for cis-1,2-DCE. The April 2021 monitoring results were 66.8 µg/L for TCE and 1.7 µg/L for cis-1,2-DCE. The averaged PFM results are biased higher with the sample intervals from the middle portion of the lower BTZ as discussed above.

MW-204

- MW-204 is screened from 27-37 feet bgs. The BTZ extends from approximately 27-36 feet bgs. The well screened interval is from approximately 27-37 feet bgs with approximately 1 foot of screen extending into the shale bedrock (Appendix C). The PFM was installed within approximately the same interval as the well screen.
- The highest velocity (3.9 cm/day), TCE concentration (3.9 µg/L) and mass flux value (0.15 mg/m^2 per day) were in the sample interval from 28-29.2 feet bTOC (located in fine sand in the upper portion of the fine grained zone of the BTZ).
- The boring log indicates a light brown and grey sand in the upper 4.5 feet of the screened interval which correlates with the highest velocity, TCE concentration and TCE mass flux. Below the sand layer is a sandy gravel which correlates with a slight increase in the TCE concentration at the top of the shale unit. The relationship of velocity and TCE concentrations and resulting mass flux changing with depth is shown graphically in Appendix B.

ITMW-5

- ITMW-5 monitoring well is screened from approximately 20-30 feet bgs terminating at the contact with clayey silt which is underlain by laminated silt (weathered shale?) (Appendix C).
- The upper fine grained BTZ is not present as logged, the lower portion of the BTZ consisting of gravel, sand, and clay extends from approximately 26-32 feet bgs (the lower 6 feet of the screened interval).
- The total depth of the well was measured at 32.3 feet bTOC at the time of PFM installation. The well is completed approximately 2.3 feet above grade. The well screened interval is approximately 22.3-32.3 feet bTOC. Two PFMs were deployed within the 10 feet screened interval.
- The greatest values for velocity (4.1 cm/day), TCE (5,664 µg/L), cis-1,2-DCE (67.4 µg/L) and mass flux (TCE 230.8 mg/m^2 per day, cis-1,2-DCE 67.4 mg/m^2 per day) were in the deepest sampled interval (31.1-32.3 feet bTOC).
- Concentrations for TCE/cis-1,2-DCE increased with depth to the lower 6 feet of the screened interval resulting in the highest values for velocity, TCE and cis-1,2-DCE concentrations, and the resulting mass flux.

- The highest average mass flux (Table 3), mass discharge per unit width (Table 4) and flux average concentration values (Table 5) are present at ITMW-5.

ITMW-18

- ITMW-18 is screened from 15-30 feet bgs. Approximately 1 foot of the bottom of the screen extends into the shale bedrock (Appendix C). The upper fine grained BTZ (silty sand) extends from approximately 16-22.5 feet bgs and the lower BTZ (fine to medium sand) from 22.5-29 feet bgs.
- Three PFMs were installed in the same interval as the well screen.
- The highest velocity (4.5 cm/day), TCE/ cis-1,2-DCE concentrations (4,105 and 298 µg/L respectively) and mass flux (TCE 170.84 mg/m^2 per day, cis-1,2-DCE 12.72 mg/m^2 per day) were in two sample intervals from (23.3-25.8 feet bTOC).
- The velocity, TCE and cis-1,2-DCE concentrations, and the resulting mass flux values begin increasing in the lower portion of the upper fine grained BTZ and increase with depth to the bottom of the sand underlain by a sandy clay in the lower BTZ.
- The lowest sandy clay approximately 2 feet thick, over which the sands produced the most elevated concentrations, is underlain by a few inches of saturated sand in which the sample results are lowest for this location.
- The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux changing with depth is shown graphically in Appendix B. The average mass flux (Table 3), mass discharge per unit width (Table 4) and flux average concentration values (Table 5) are more elevated at ITMW-18 in the source area than most other PFMs deployed across the Site, except for ITMW-5.

Southeast Plume

MW-185

- MW-185 is screened from 20-30 feet bgs with the lower approximately 1 foot extending into clayey silt and terminating in the shale bedrock (Appendix C).
- The upper fine grained BTZ (clayey sand) extends from approximately 19-23 feet bgs and the lower BTZ (gravel with sand and silty clay) from 23-29 feet bgs.
- Two PFMs were installed in the screened interval.
- The highest velocity (8.1 cm/day), TCE/ cis-1,2-DCE concentrations (340 and 21.6 µg/L respectively) and mass flux (TCE 25.3 mg/m^2 per day, cis-1,2-DCE 1.7 mg/m^2 per day) were in two intervals from (24.1-26.6 feet bTOC).

- The velocity and TCE/cis-1,2-DCE concentrations were highest in the gravel in the lower BTZ. The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux increasing with depth is shown graphically in Appendix B.
- The peak (8.1 cm/day) and average (6.0 cm/day) groundwater velocity values are highest in this location compared to the other wells where average velocity values range from 1.5 to 4.8 cm/day. The next highest value for average velocity is also on the east side of the facility to the north at MW-87.

Southwest Plume

MW-199

- MW-199 is screened from 12-22 feet bgs and terminates at the top of the shale bedrock (Appendix C).
- The BTZ extends from approximately 13-21 feet bgs. The upper BTZ more permeable material (sand with clay 13-13.5 feet bgs) is limited to approximately 6 inches thickness underlain by several feet of silty clay.
- The lower BTZ permeable material (gravel with silty clay and sand) extends from 19-21 feet bgs.
- Two PFMs were installed within approximately the same interval from 11.6-21.6 feet bTOC.
- The highest velocity (2.3 cm/day), TCE/ cis-1,2-DCE concentrations (19 and 2.9 µg/L respectively) and mass flux (TCE 0.4 mg/m^2 per day, cis-1,2-DCE 0.1 mg/m^2 per day) were in the upper interval at the top of the BTZ in the sand with clay.
- The relationship of velocity and TCE/cis-1,2-DCE concentrations and resulting mass flux changing with depth is shown graphically in Appendix B. Compared to the other locations the PFM data do not vary with as much with depth in relation to lithology
- The average velocity is 2 cm/day compared with a peak value of 2.3 cm/day indicating little variation in velocity.
- The velocity and mass flux values at MW-199 are lower than most other PFM locations with the exception of MW-204.

4 Summary and Conclusions

This report summarizes the results of the PFM investigation conducted in March 2021 and April 2021. The PFM study included the installation of 23 PFMs in 12 wells generating a total of 92 samples. Each PFM segment provides Darcy velocity, TCE and cis-1,2-DCE concentrations, and mass flux values. The highest velocities generally correlate with geologic units with higher sand and/or gravel content and lower silt/clay content. The TCE and cis-1,2-DCE mass flux values show stratification of contaminant transport and also provide calculated average TCE concentrations for each well which generally correspond to concentrations detected during the 2021 semi-annual monitoring event.

In the North Plume Area (offsite), the higher velocities, TCE and cis-1,2-DCE concentrations, and the resulting mass flux values were generally in the coarser grained portion of the BTZ which is somewhat variable in depth and thinner compared to areas onsite and offsite south and east. The exception was RW-69 where the velocity and flux were higher in clayey sand over gravelly clay. The highest flux values generally correlated with the units with the highest velocities. The more elevated North Plume mass discharge values (per unit width of aquifer) occurred at MW-46R, TMW-12 and TMW-24 which also correlated with the North Plume semi-annual sampling results where TCE concentrations were more elevated.

In the Northeast Plume Area, the higher velocities, TCE and cis-1,2-DCE concentrations, and the resulting mass flux values correlated with the lower portion of the BTZ just above and to the contact with the underlying silty clay over the shale.

In the South and Southeast Plume Areas, the higher velocities, TCE and cis-1,2-DCE concentrations, mass flux and mass discharge values occurred in the lower portion of the BTZ in sand and/or gravel with variable silt and clay. The more elevated mass discharge values occurred at source area well ITMW-18 and at down-gradient well ITMW-5 located at the south edge of the Building. The highest Darcy velocity occurred in the southeast at MW-185.

In the Southwest Plume Area, the velocities, TCE and cis-1,2-DCE concentrations, and the resulting mass flux values were more elevated in two discrete sand – gravel zones, one in the upper portion of the BTZ and the other in the lower portion of the BTZ, both of the sand-gravel zones overly low permeability silty clay.

The results of this PFM investigation provide additional information regarding the stratification of the TCE impacts within the saturated zone sediments and range of mass flux values to be used in the design of treatment areas to mitigate future groundwater plume expansion.

Tables

Table 1
Summary of Results - North Plume Area
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	cis-1,2-DCE flux ($mg/m^2/day$)	TCE flux ($mg/m^2/day$)	cis-1,2-DCE (µg/L)	TCE (µg/L)
North Plume							
MW-46R	MW-46R-17.62-16.37	16.37-17.62	2.5	0.76	30.04	31	1226
	MW-46R-18.87-17.62	17.62-18.87	2.4	0.28	11.11	12	473
	MW-46R-20.12-18.87	18.87-20.12	2.2	0.13	5.48	6	253
	MW-46R-21.37-20.12	20.12-21.37	1.9	0.07	1.86	4	99
RW-69	RW-69-19.40-18.15	18.15-19.4	4.3	0.07	1.21	2	28
	RW-69-20.65-19.40	19.4-20.65	5.5	0.13	1.97	2	36
	RW-69-21.90-20.65	20.65-21.9	4.7	0.09	1.46	2	31
	RW-69-23.15-21.90	21.9-23.15	4.5	0.06	1.24	1	27
	RW-69-24.40-23.15	23.15-24.4	3.8	0.00	0.22	0	6
	RW-69-25.65-24.40	24.4-25.65	4.1	0.00	0.48	0	12
	RW-69-26.90-25.65	25.65-26.9	3.8	0.00	0.21	0	6
	RW-69-28.15-26.90	26.9-28.15	3.9	0.00	0.20	0	5
TMW-12	TMW-12-13.47-12.22	12.22-13.47	2.1	0.33	13.07	16	636
	TMW-12-14.72-13.47	13.47-14.72	4.3	0.95	41.56	22	977
	TMW-12-15.97-14.72	14.72-15.97	4.2	0.70	31.25	17	748
	TMW-12-17.22-15.97	15.97-17.22	2.1	0.12	4.92	6	230
	TMW-12-18.47-17.22	17.22-18.47	1.8	0.10	3.45	5	188
	TMW-12-19.72-18.47	18.47-19.72	1.4	0.00	0.91	0	64
	TMW-12-20.97-19.72	19.72-20.97	1.5	0.00	0.98	0	65
	TMW-12-22.22-20.97	20.97-22.22	1.5	0.00	1.55	0	106
TMW-23	TMW-23-16.06-14.81	14.81-16.06	2.0	0.14	10.67	7	526
	TMW-23-17.31-16.06	16.06-17.31	1.7	0.05	2.96	3	172
	TMW-23-18.56-17.31	17.31-18.56	1.7	0.05	2.79	3	169
	TMW-23-19.81-18.56	18.56-19.81	0.4	0.00	0.66	0	156
TMW-24	TMW-24-10.48-9.23	9.23-10.48	1.8	0.18	9.08	10	498
	TMW-24-11.73-10.48	10.48-11.73	1.6	0.10	5.26	6	327
	TMW-24-12.98-11.73	11.73-12.98	1.5	0.05	2.15	3	143
	TMW-24-14.23-12.98	12.98-14.23	1.7	0.07	3.64	4	218
	TMW-24-15.48-14.23	14.23-15.48	1.9	0.28	14.88	15	799
	TMW-24-16.73-15.48	15.48-16.73	2.2	0.47	23.83	21	1090
	TMW-24-17.98-16.73	16.73-17.98	1.8	0.09	4.65	5	257
	TMW-24-19.23-17.98	17.98-19.23	1.3	0.02	1.74	2	136
Northeast Plume							
MW-87	MW-87-18.10-16.85	16.85-18.1	4.9	1.91	24.46	39	499
	MW-87-19.35-18.10	18.1-19.35	4.9	1.69	21.44	34	436
	MW-87-20.60-19.35	19.35-20.6	4.4	1.24	14.88	28	340
	MW-87-21.85-20.60	20.6-21.85	4.8	1.45	19.29	30	398
	MW-87-23.10-21.85	21.85-23.1	5.3	2.92	41.82	55	782
	MW-87-24.35-23.10	23.1-24.35	4.7	1.95	22.38	41	474
	MW-87-25.60-24.35	24.35-25.6	5.1	0.11	1.55	2	30
	MW-87-26.85-25.60	25.6-26.85	4.1	0.08	1.59	2	39

Note: The tabulated data is presented with zero values for plotting. The zero values represent non-detect (ND). The PFM tracer dissipation and carbon absorption results directly measure both the mass fluxes and darcy velocity. The flux average concentration values (µg/L) are calculated based on the measured contaminant and darcy fluxes (mass flux/darcy velocity). Therefore, the method reporting limit (MRL) varies from sample to sample, because every sampling point has different darcy velocities. The MRL values can be found in Appendix A.

Table 2
Summary of Results - South Plume Area
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	cis-1,2-DCE flux ($mg/m^2/day$)	TCE flux ($mg/m^2/day$)	cis-1,2-DCE (µg/L)	TCE (µg/L)
South Plume							
MW-189	MW-189-32.18-30.93	30.93-32.18	1.8	0.00	0.93	0.0	52
	MW-189-33.43-32.18	32.18-33.43	2.1	0.05	2.18	2.3	106
	MW-189-34.68-33.43	33.43-34.68	2.2	0.09	4.26	4.2	191
	MW-189-35.93-34.68	34.68-35.93	3.1	0.23	9.16	7.4	292
	MW-189-37.18-35.93	35.93-37.18	1.6	0.07	2.06	4.4	130
	MW-189-38.43-37.18	37.18-38.43	1.5	0.04	1.85	2.9	124
	MW-189-39.68-38.43	38.43-39.68	1.5	0.02	1.53	1.3	100
	MW-189-40.93-39.68	39.68-40.93	1.6	0.02	1.22	1.0	78
MW-204	MW-204-27.99-26.74	26.74-27.99	2.4	0.00	0.08	0.0	3.2
	MW-204-29.24-27.99	27.99-29.24	3.9	0.00	0.15	0.0	3.9
	MW-204-30.49-29.24	29.24-30.49	2.3	0.00	0.07	0.0	3.3
	MW-204-31.74-30.49	30.49-31.74	2.4	0.00	0.07	0.0	3.0
	MW-204-32.99-31.74	31.74-32.99	2.2	0.00	0.05	0.0	2.3
	MW-204-34.24-32.99	32.99-34.24	2.1	0.00	0.03	0.0	1.6
	MW-204-35.49-34.24	34.24-35.49	2.0	0.00	0.03	0.0	1.7
	MW-204-36.74-35.49	35.49-36.74	1.9	0.00	0.06	0.0	3.3
ITMW-5	ITMW-5-23.54-22.29	22.29-23.54	3.1	0.1	22.4	4.8	713
	ITMW-5-24.79-23.54	23.54-24.79	3.4	0.3	30.3	8.1	884
	ITMW-5-26.04-24.79	24.79-26.04	3.5	0.4	33.0	12.1	948
	ITMW-5-27.29-26.04	26.04-27.29	3.6	0.5	39.7	15.0	1100
	ITMW-5-28.54-27.29	27.29-28.54	3.4	0.8	64.1	23.6	1886
	ITMW-5-29.79-28.54	28.54-29.79	3.7	1.1	108.9	29.1	2911
	ITMW-5-31.04-29.79	29.79-31.04	3.9	1.5	132.8	39.5	3449
	ITMW-5-32.29-31.04	31.04-32.29	4.1	2.7	230.8	67.4	5664
ITMW-18	ITMW-18-15.84-14.59	14.59-15.84	2.3	1.07	17.26	46	741
	ITMW-18-17.09-15.84	15.84-17.09	2.4	1.54	22.46	63	919
	ITMW-18-18.34-17.09	17.09-18.34	2.5	1.61	23.89	63	937
	ITMW-18-19.59-18.34	18.34-19.59	2.3	1.65	26.51	71	1139
	ITMW-18-20.84-19.59	19.59-20.84	2.9	0.88	11.28	30	387
	ITMW-18-22.09-20.84	20.84-22.09	2.5	0.64	9.18	25	364
	ITMW-18-23.34-22.09	22.09-23.34	3.8	9.15	122.32	243	3244
	ITMW-18-24.59-23.34	23.34-24.59	4.0	11.83	162.87	298	4105
	ITMW-18-25.84-24.59	24.59-25.84	4.5	12.72	170.84	286	3837
	ITMW-18-27.09-25.84	25.84-27.09	3.9	2.85	44.31	73	1129
	ITMW-18-28.34-27.09	27.09-28.34	3.2	0.99	14.49	31	449
	ITMW-18-29.59-28.34	28.34-29.59	3.4	0.87	12.12	25	351
Southeast Plume							
MW-185	MW-185-20.34-19.09	19.09-20.34	6.7	0.9	13.6	13.5	203
	MW-185-21.59-20.34	20.34-21.59	6.0	0.5	8.6	9.0	144
	MW-185-22.84-21.59	21.59-22.84	6.1	0.6	8.8	9.1	145
	MW-185-24.09-22.84	22.84-24.09	6.4	0.4	7.4	7.0	116
	MW-185-25.34-24.09	24.09-25.34	8.1	1.7	24.9	21.1	308
	MW-185-26.59-25.34	25.34-26.59	7.5	1.6	25.3	21.6	340
	MW-185-27.84-26.59	26.59-27.84	5.6	0.9	14.2	16.1	255
	MW-185-29.09-27.84	27.84-29.09	1.6	0.0	1.0	2.6	59
Southwest Plume							
MW-199	MW-199-12.82-11.57	11.57-12.82	2.3	0.1	0.4	2.9	19.0
	MW-199-14.07-12.82	12.82-14.07	1.8	0.0	0.1	0.0	7.1
	MW-199-15.32-14.07	14.07-15.32	1.8	0.0	0.1	0.0	7.7
	MW-199-16.57-15.32	15.32-16.57	1.9	0.0	0.2	0.0	10.1
	MW-199-17.82-16.57	16.57-17.82	2.0	0.0	0.1	0.0	7.0
	MW-199-19.07-17.82	17.82-19.07	2.0	0.0	0.1	0.0	6.2
	MW-199-20.32-19.07	19.07-20.32	2.1	0.0	0.1	0.6	7.2
	MW-199-21.57-20.32	20.32-21.57	2.2	0.0	0.2	1.2	9.1

Note: The tabulated data is presented with zero values for plotting. The zero values represent non-detect (ND). The PFM tracer dissipation and carbon absorption results directly measure both the mass fluxes and darcy velocity. The flux average concentration values (µg/L) are calculated based on the measured contaminant and darcy fluxes (mass flux/darcy velocity). Therefore, the method reporting limit (MRL) varies from sample to sample, because every sampling point has different darcy velocities. The MRL values can be found in Appendix A.

Table 3. Well average values of mass flux based on PFMs

Well	Darcy Velocity (cm/day)	cis-1,2-DCE flux ($mg/m^2/day$)	TCE flux ($mg/m^2/day$)
MW-46R	2.2	0.31	12.1
RW-69	4.3	0.04	0.87
TMW-12	2.4	0.28	12.2
TMW-23	1.5	0.06	4.3
TMW-24	1.7	0.16	8.2
MW-87	4.8	1.4	18.4
MW-189	1.9	0.07	2.9
MW-204	2.4	0.00	0.07
ITMW-5	3.6	0.94	82.8
ITMW-18	3.2	3.8	53.1
MW-185	6.0	0.84	13.0
MW-199	2.0	0.01	0.19

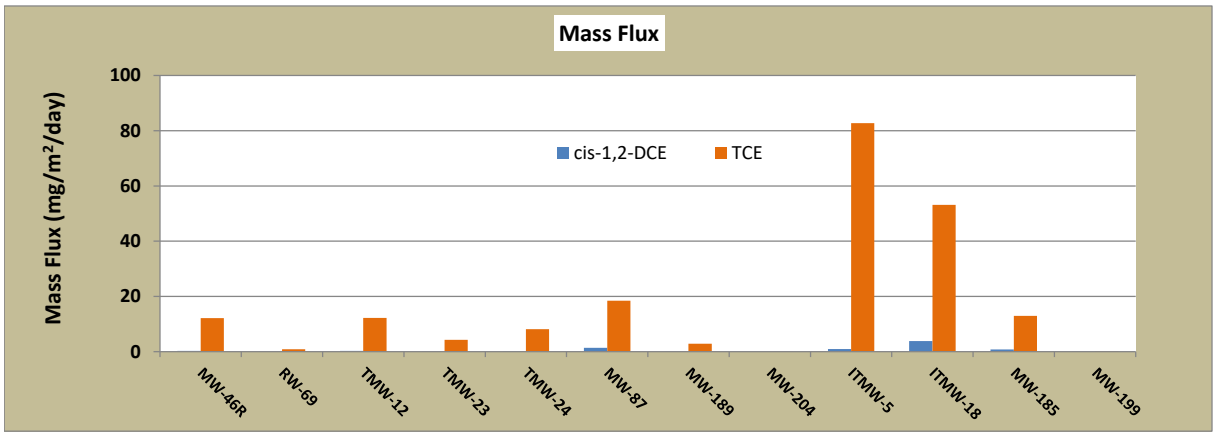


Table 4. Mass discharge per unit width for aquifer of each well

Well	Darcy Velocity (cm/day)	cis-1,2-DCE Discharge (mg/m/day)	TCE Discharge (mg/m/day)
MW-46R	2.2	0.48	18.5
RW-69	4.3	0.13	2.7
TMW-12	2.4	0.84	37.2
TMW-23	1.5	0.09	6.5
TMW-24	1.7	0.48	24.9
MW-87	4.8	4.3	56.2
MW-189	1.9	0.20	8.8
MW-204	2.4	0.00	0.21
ITMW-5	3.6	2.9	252.2
ITMW-18	3.2	17.4	242.9
MW-185	6.0	2.6	39.5
MW-199	2.0	0.04	0.58

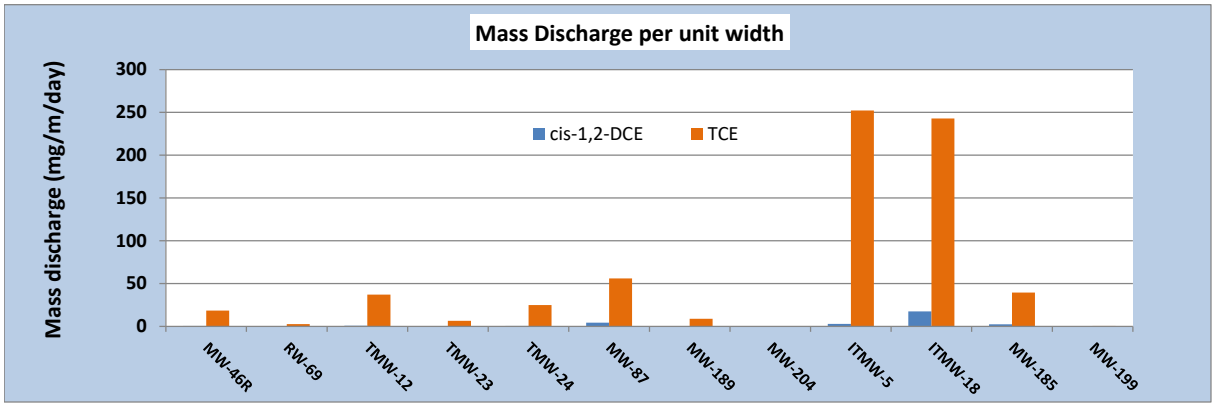
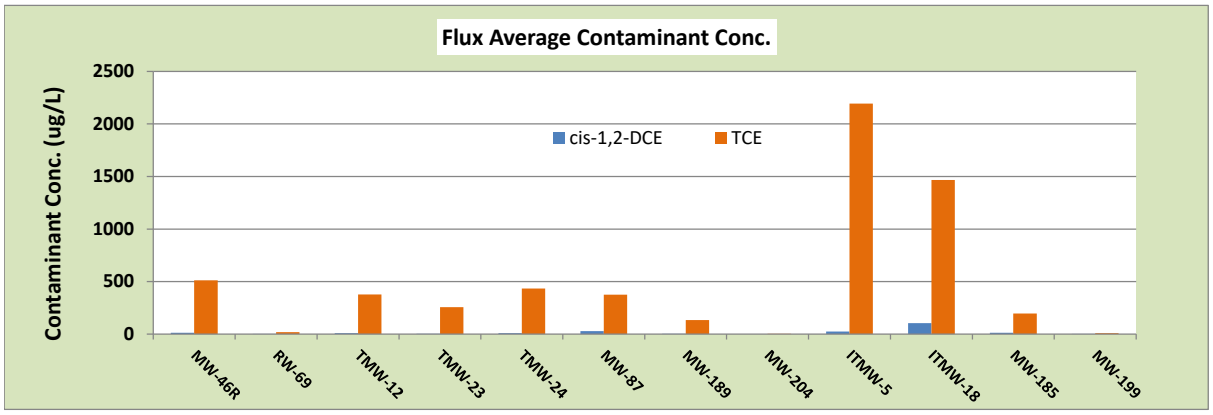
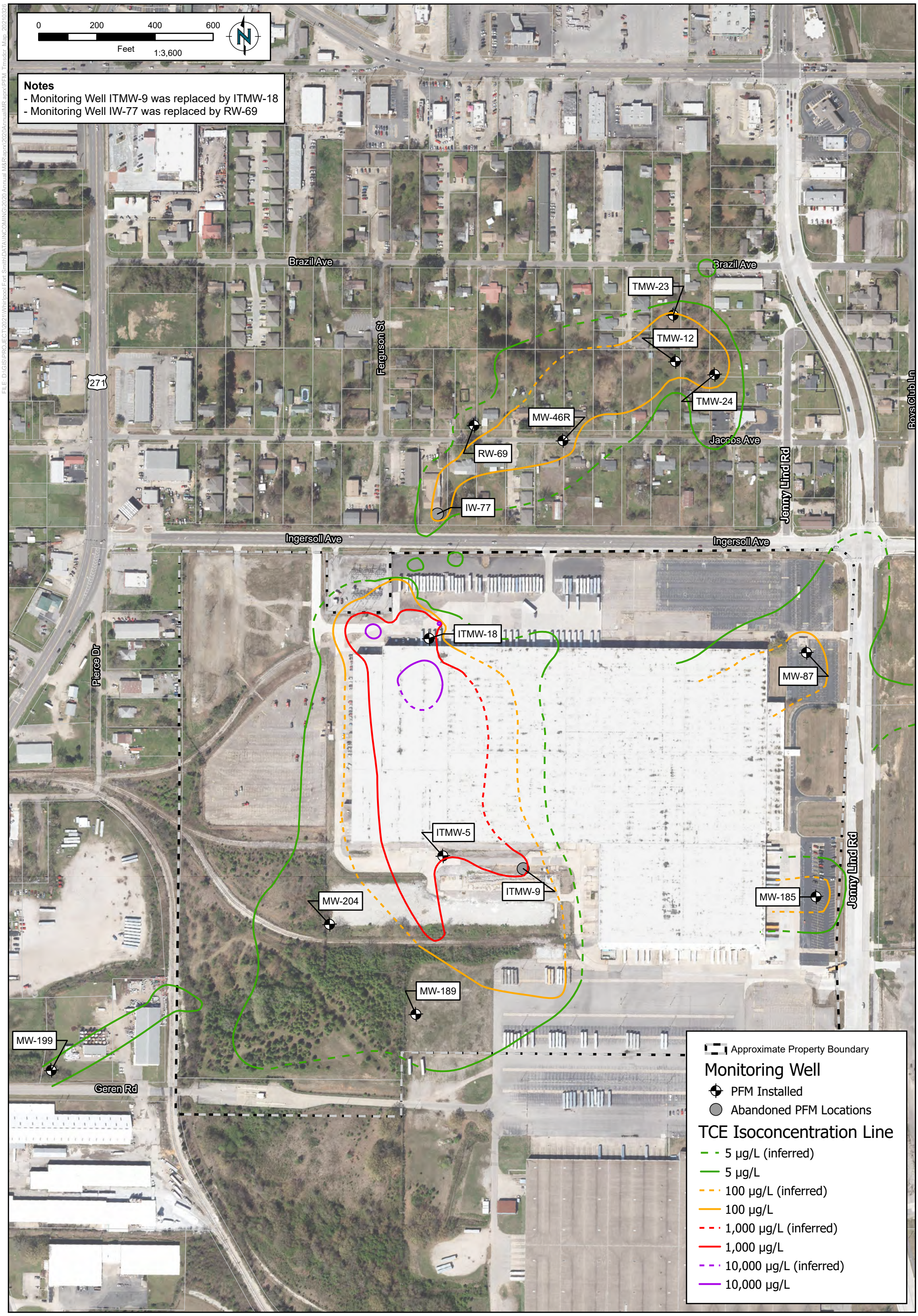


Table 5. Flux average contaminant concentration on PFMs

Well	Darcy Velocity (cm/day)	cis-1,2-DCE (µg/L)	TCE (µg/L)
MW-46R	2.2	13	513
RW-69	4.3	1	19
TMW-12	2.4	8	377
TMW-23	1.5	3	256
TMW-24	1.7	8	434
MW-87	4.8	29	375
MW-189	1.9	3	134
MW-204	2.4	0	3
ITMW-5	3.6	25	2195
ITMW-18	3.2	104	1467
MW-185	6.0	13	196
MW-199	2.0	1	9



Figures



RAMBOLL

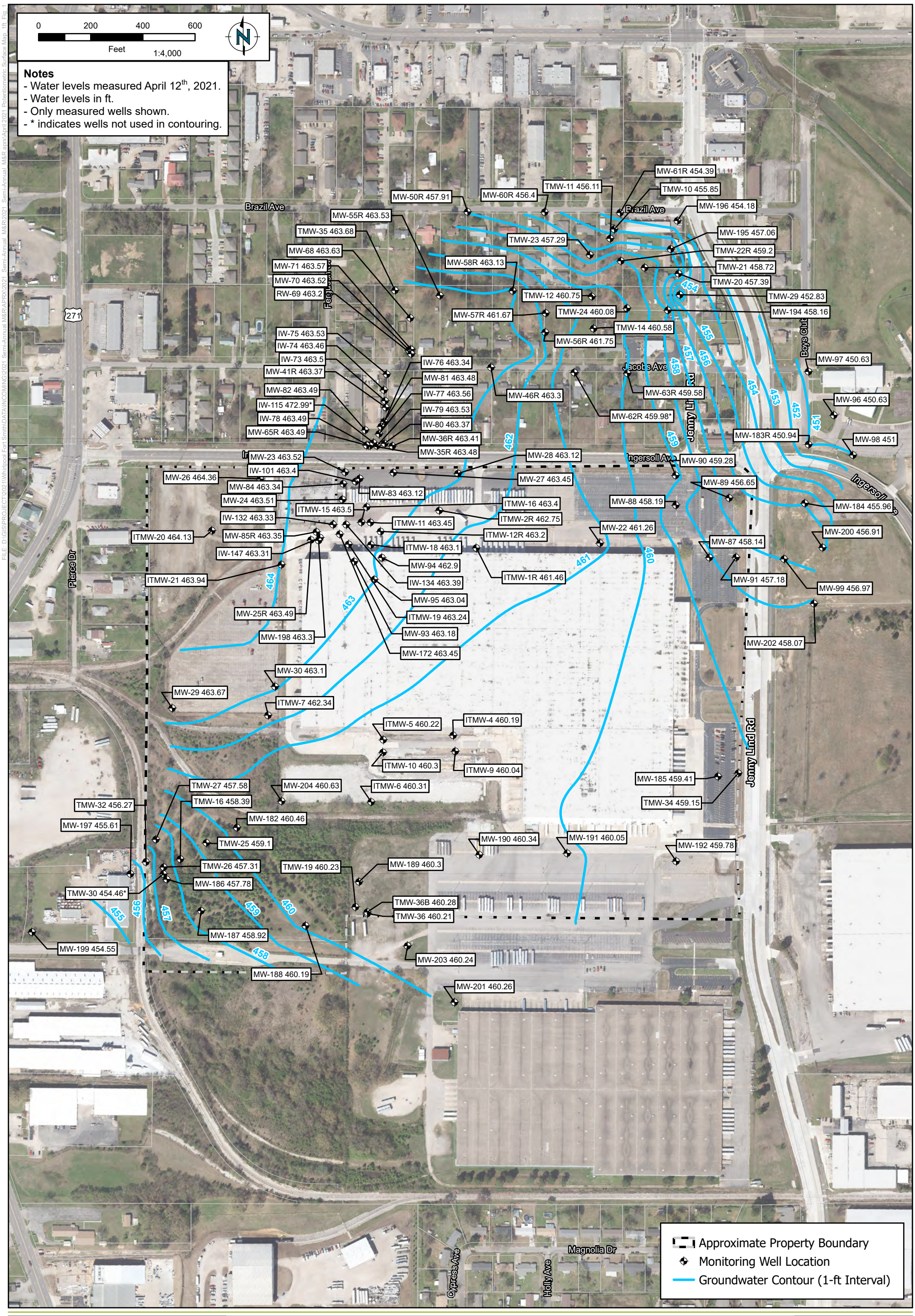
DRAFTED BY: DM | DATE: 07/02/2021

PLUME FLUX METER LOCATIONS

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

PROJECT: 1690017901



RAMBOLL

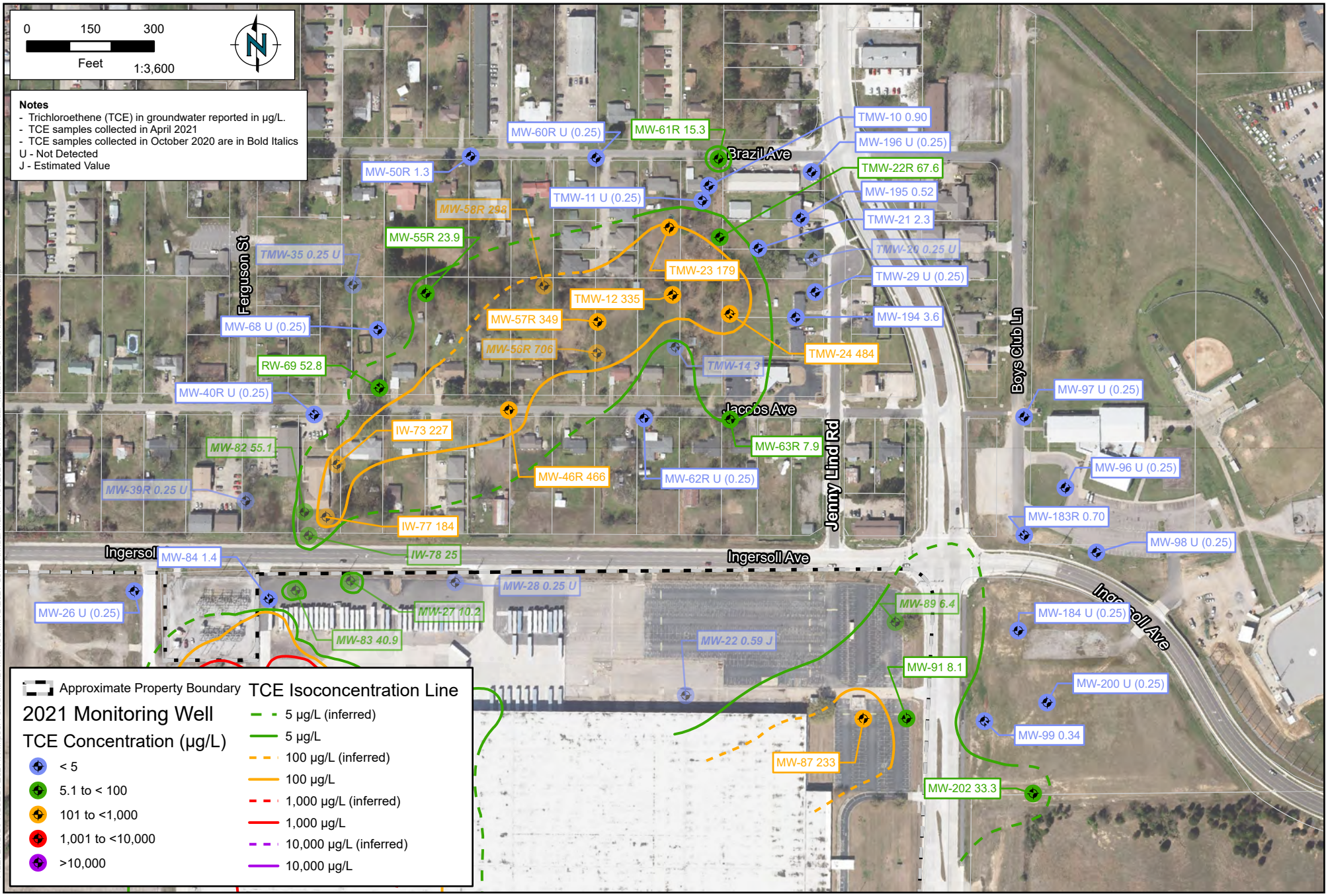
2021 SEMI-ANNUAL SAMPLING POTENTIOMETRIC SURFACE

Whirlpool Facility - Fort Smith, Arkansas

Figure 2

DRAFTED BY: DFM | DATE: 07/08/2021 | PROJECT: 1690016820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Semi-Annual M&R\APRX\2021 Semi-Annual M&R\2021 Semi-Annual M&R aprx\April 2021 Potentiometric Surface Map 1ft Fig 1



RAMBOLL

DRAFTED BY: DFM | DATE: 06/15/2021

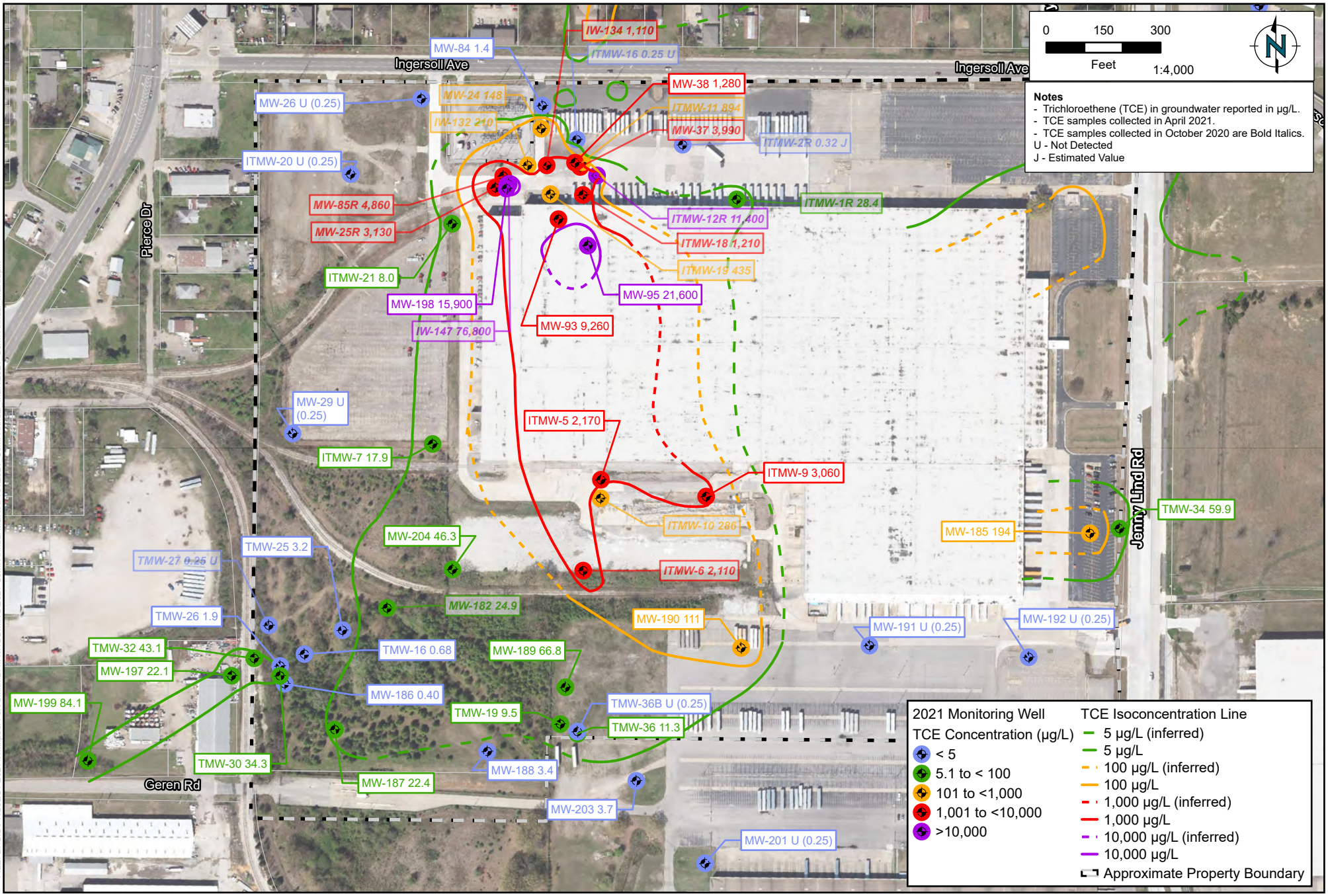
2021 SEMI-ANNUAL TCE ISOCONCENTRATION MAP NORTH AND NORTHEAST PLUMES

Whirlpool Facility - Fort Smith, Arkansas

Figure 3A

PROJECT: 1690012820

FILE: D:\GIS\PROJECT\2021\Whirlpool Fort Smith\DATA\INCOMING\2021 Semi-Annual M&R\APRX\2021_Semi-Annual_M&R\2021_Semi-Annual_M&R.aprx



RAMBOLL

DRAFTED BY: DFM | DATE: 06/16/2021

2021 SEMI-ANNUAL TCE ISOCONCENTRATION MAP SOUTHERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 3B

PROJECT: 1690012820

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Appendix A

Enviroflux PFM Information, Safety and Technical Data Sheets, Laboratory QA/QC Protocol Manual, PFM Results and QA Data

Solution Brief

EnviroFlux Passive Flux Meter

Groundwater sampling that provides the whole picture

Key Benefits

- Green Technology — No electrical power or pumping required.
- Simultaneous evaluation of both water and contaminant fluxes under natural gradient conditions.
- Cumulative measurement of contaminant flux, making the results less sensitive to daily fluctuations in groundwater flow or contaminant concentrations.
- Only two site visits required.
- Measurement of vertical variations in horizontal fluxes.
- Precise prior knowledge about local aquifer hydraulic conductivities not required.
- Wide range of contaminant analysis.
- USEPA approved technology.

The Challenge

While groundwater samples will provide localized contaminant concentration data, they provide no insight into whether (or how fast) the contaminants are migrating to other areas of the groundwater system.

The Solution

EnviroFlux Passive Flux Meters reveal the complexities of contaminant plume behavior, providing both contaminant mass flux and groundwater flow data.

The EnviroFlux Passive Flux Meter® (PFM) is a nylon mesh tube filled with a sorbent/tracer mixture. The PFMs are inserted into groundwater monitoring wells where they passively intercept groundwater flow.

After a specified period of exposure to groundwater flow (usually two to three weeks), the PFM is removed from the well or boring. The sorbent is then extracted to quantify (a) the mass of all contaminants intercepted by the PFM and (b) the residual masses of all resident tracers.

The contaminant masses are used to calculate time-averaged contaminant fluxes, while residual resident tracer masses are used to calculate cumulative groundwater flux. Depth variations of both water and contaminant mass fluxes are measured by a single PFM by vertically segmenting the exposed sorbent mixture and analyzing for resident tracers and contaminants. Thus, the PFM provides a vertical profile of horizontal fluxes.

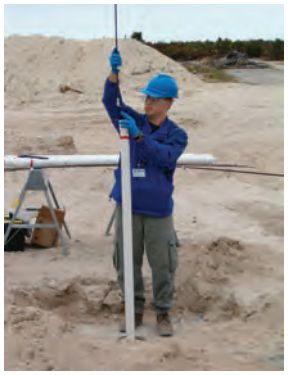

Figure 1) Installing a PFM

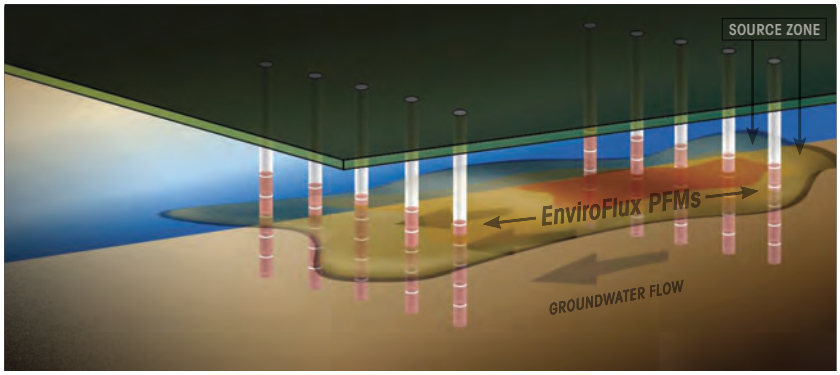

Figure 2) EnviroFlux PFMs are commonly used for site characterization

Applications

Mass Flux Based Approach to Site Management:

Performance Assessment
Alternative measure of remedial objectives. Reduce mass flux to meet conditions acceptable for site management. Evaluate and compare the pre- and post-remediation mass flux values.

Flux-based Natural Attenuation Assessment (mass balance)
Mass flux is useful in assessing the effectiveness of the natural attenuation process. Contaminant mass reduction can be calculated using the differences in total contaminant mass flux across two cross-sections of the contaminant plume.

Remedial Design Optimization (target high mass flux zones)
In situ measurements of contaminant flux generate critical data which can be used to optimize the design and assess the performance of proposed remedial systems.

Risk Assessment
The concept of risk-based decision making involves using more realistic exposure scenarios and factors to evaluate the relative risks of contaminants to human health and the environment. Depending on these risks, appropriate action may include site closure, monitoring and data collection, active or passive remediation, or institutional controls. Mass flux measurements can be used on the front end to quantify this risk.

Site Characterization
Incorporate mass flux measurements into initial site characterization efforts to improve decision making when developing the overall site strategy.

Services

EnviroFlux offers our clients a turnkey mass flux analysis service. A typical PFM project includes the following steps:

Site characterization consultation

- Decide on the number of PFMs based on the monitoring well configuration and screen lengths (PFMs are typically 5 feet long).
- Determine the desired vertical resolution (for example one foot resolution).
- Provide EnviroFlux with well diameters, well construction material (i.e. PVC or stainless steel), and depth to the target well screens.
- Provide EnviroFlux a list of contaminants of interest.

Installation, retrieval, and sampling of PFMs
The PFMs are installed, retrieved, and sampled by the client. The PFMs are usually left in the monitoring wells from two to three weeks. In most cases the installation and retrieval/sampling of the PFMs each require only one-day site visits.

Lab analysis
The samples are sent to EnviroFlux and analyzed to determine the concentration of contaminants absorbed into the PFM and the amount of tracers leached from the PFM.

Report
EnviroFlux provides a detailed data report indicating the mass flux results for all of the zones in which the PFMs were deployed.

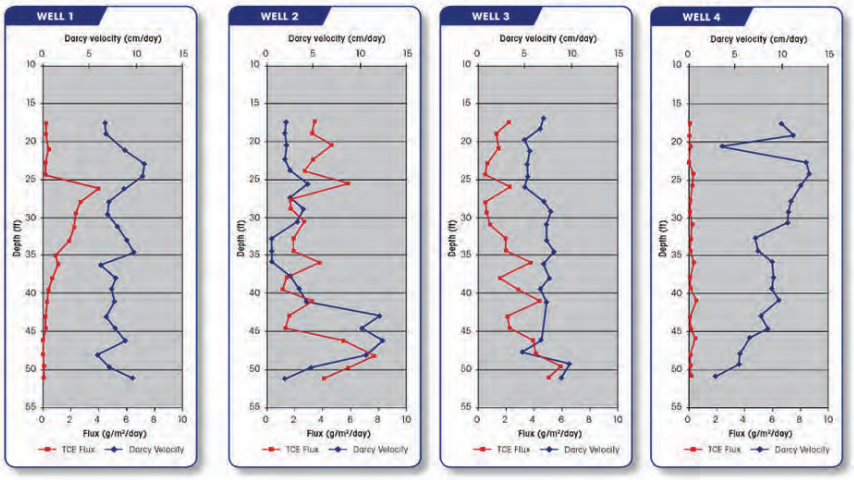

Figure 3) PFM Contaminant Mass Flux Results

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SAFETY DATA SHEET

Version 4.3
Revision Date 07/01/2014
Print Date 11/09/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	2,4-Dimethyl-3-pentanol
Product Number	:	150045
Brand	:	Aldrich
CAS-No.	:	600-36-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052

1.4 Emergency telephone number

Emergency Phone #	:	+1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 3), H226
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	Diisopropylcarbinol
Formula	:	$C_7H_{16}O$
Molecular Weight	:	116.20 g/mol
CAS-No.	:	600-36-2
EC-No.	:	209-993-7

Hazardous components

Component	Classification	Concentration
2,4-Dimethylpentan-3-ol		
	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H226, H302, H315, H318, H335	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: clear, liquid Colour: colourless
b)	Odour	no data available
c)	Odour Threshold	no data available
d)	pH	no data available
e)	Melting point/freezing point	no data available
f)	Initial boiling point and boiling range	139 - 140 °C (282 - 284 °F) - lit.
g)	Flash point	37 °C (99 °F) - closed cup
h)	Evapouration rate	no data available
i)	Flammability (solid, gas)	no data available
j)	Upper/lower flammability or explosive limits	no data available
k)	Vapour pressure	no data available
l)	Vapour density	no data available
m)	Relative density	0.829 g/cm3 at 25 °C (77 °F)
n)	Water solubility	no data available
o)	Partition coefficient: n-octanol/water	no data available
p)	Auto-ignition temperature	no data available

q)	Decomposition temperature	no data available
r)	Viscosity	no data available
s)	Explosive properties	no data available
t)	Oxidizing properties	no data available

9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agentsStrong acids, Strong oxidizing agents, Strong reducing agents, Acid chlorides, Acid anhydrides, Phosphorus halides

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
no data available

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitisation
Germ cell mutagenicity
no data available

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

no data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1987 Class: 3 Packing group: III
Proper shipping name: Alcohols, n.o.s.
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1987 Class: 3 Packing group: III EMS-No: F-E, S-D
Proper shipping name: ALCOHOLS, N.O.S. (2,4-Dimethylpentan-3-ol)
Marine pollutant: No

IATA
UN number: 1987 Class: 3 Packing group: III

Proper shipping name: Alcohols, n.o.s. (2,4-Dimethylpentan-3-ol)

15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
2,4-Dimethylpentan-3-ol	600-36-2	

New Jersey Right To Know Components

	CAS-No.	Revision Date
2,4-Dimethylpentan-3-ol	600-36-2	

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	
Flammability:	3
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	3
Reactivity Hazard:	0

Further information
Copyright 2014 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.3 Revision Date: 07/01/2014 Print Date: 11/09/2018

Material Safety Data Sheet

CALGON

CALGON CARBON CORPORATION

Date: 05/07/2007
Product: 74792510 - 989 12X30
Customer: UNIVERSITY OF FLORIDA
Delivery No.: 80314979

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA 15230-0717
Emergency Phone Number: (412) 787-6700
Date Prepared: 6/24/2002
Prepared By: S. Liller

Chemical Name and Synonyms: Carbon
Formula: C

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

Nonhazardous components are listed at 3% or greater; acute hazards are listed when present at 1% or greater and chronic hazards are listed when present at 0.01% or greater. This is not intended to be a complete compositional disclosure.

INGREDIENT	% (BY WEIGHT)	CAS#
CARBON	100	7440-44-0

SECTION III - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Black particulate solid, pellet or powder. Contact may cause eye irritation. Dust may be slightly irritating to eyes and respiratory tract.
CAUTION!! Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels and enclosed or confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken to ensure ample oxygen availability, observing all local, state and federal regulations.
POTENTIAL HEALTH EFFECTS:
Effects and Hazards of Eye Contact: The physical nature of the product may produce eye irritation.
Effects and Hazards of Skin Contact: The product is not a primary skin irritant. The primary skin irritation index (Rabbit) is 0.
Effects and Hazards of Inhalation (Breathing): The product is practically non-toxic through inhalation. The acute inhalation LC_{50} (Rat) is >64.4 mg/l (nominal concentration) for activated carbon.
Effects and Hazards of Ingestion (Swallowing): The product is non-toxic through ingestion. The acute oral LD_{50} (RAT) is >10g/kg.
Primary Routes of Entry: Inhalation, ingestion, skin contact, eye contact.
Chronic Effects: The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.
CARCINOGENICITY: NTP: N/A IARC: N/A OSHA REGULATED: NO

SECTION IV - FIRST AID MEASURES

Treatment for Eye Contact: Flush with plenty of water for at least 15 minutes.
Treatment for Skin Contact: Wash with soap and water.
Treatment for Inhalation (Breathing): N/A
Treatment for Ingestion (Swallowing): N/A

SECTION V - FIRE FIGHTING MEASURES

Flash Point: N/A
Limits Lel: N/A
Uel: N/A
Extinguishing Media: FLOOD WITH PLENTY OF WATER.
Special Firefighting Procedures: NONE
Unusual Fire and Explosion Hazards: Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc., may result in fire.
NFPA RATING: HEALTH = 0 REACTIVITY = 0 FLAMMABILITY = 1

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material is Released or Spilled: Sweep up unused carbon and discard in refuse container or repackage.
Waste Disposal Method: Dispose of unused carbon in refuse container. Dispose of in accordance with local, state, and federal regulations.

SECTION VII - HANDLING AND STORAGE

Precautions for Handling and Storage: CAUTION!! Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels and enclosed or confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken to ensure ample oxygen availability, observing all local, state, and federal or national regulations.
Other Precautions: Wash thoroughly after handling. Exercise caution in the storage and handling of all chemical substances.

SECTION VIII - EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Guidelines:
OSHA PEL* 5 mg/M^3 (Respirable)
ACGIH TLV* 10 mg/M^3 (Total)
*PELs and TLVs are 8-hour TWAs unless otherwise noted.

Respiratory Protection: A NIOSH approved particulate filter respirator is recommended if excessive dust is generated.
Ventilation: Local Exhaust Ventilation: Recommended
Mechanical Ventilation: Recommended
Protective Gloves: Recommended
Eye Protection: Safety Glasses or Goggles Recommended
Other Protective Equipment: Not Required

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A
Specific Gravity: 2.3 g/cc real density
Vapor Pressure: N/A
Melting Point: N/A
Vapor Density: N/A
Evaporation Rate: N/A
Solubility in Water: NEGLIGIBLE
Packing Density: 0.4 to 0.7 g/cc
Appearance and Odor: Black particulate solid, pellet, or powder

SECTION X - STABILITY AND REACTIVITY

Stability: STABLE
Conditions to avoid: NONE
Incompatibility (Materials to avoid): Strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc.
Hazardous Decomposition Products: Carbon monoxide may be generated in the event of a fire.
Polymerizing Conditions to Avoid: NONE

SECTION XI - TOXICOLOGICAL INFORMATION

See HEALTH EFFECTS SECTION III

SECTION XII - ECOLOGICAL INFORMATION

Not determined

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of unused carbon in refuse container. Dispose of in accordance with local, state, and federal or national regulations.

SECTION XIV - TRANSPORT INFORMATION

Proper Shipping Name: NOT REGULATED
Hazard Class: N/A
Identification Number: N/A
Packing Group: N/A
This product has been tested according to the United Nations Transport of Dangerous Goods test protocol for spontaneously combustible materials. It has been specifically determined that this product does not meet the definition of a self heating substance or any hazard class, and therefore is not a hazardous material and not regulated.

SECTION XV - REGULATORY INFORMATION

SARA TITLE III: N/A
TSCA: The ingredients of this product are on the TSCA Inventory List.
OSHA: Nonhazardous according to definitions of health hazard and physical hazard provided in the Hazard Communication Standard (29 CFR 1910.1200)
CANADA
WHMIS CLASSIFICATION: Not Classified
DSL#: 6798
EEC Council Directives relating to the classification, packaging and labeling of dangerous substances and preparations.
Risk (R) and Safety (S) phrases: May be irritating to eyes (R36).

SECTION XVI - OTHER INFORMATION

Intended Use: Generally used for treatment of liquids and gases.
While this information and recommendations set forth herein are believed to be accurate as of the date hereof, CALGON CARBON CORPORATION MAKES NO WARRANTY WITH RESPECT AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

*** END OF MATERIAL SAFETY DATA SHEET ***

PERSONAL PROTECTION

Personnel working with estrogens must wear suitable protective clothing, well closed to the neck, ankles and wrists and head covers that completely cover the hair. Personnel must wear rubber gloves closely fitting to the wrists and the gloves must be rinsed with acetone before removing. Personnel must wear a NIOSH-approved respirator covering the nose and mouth and the filter must be changed daily. Rooms used for processing estrogens must be provided with a system where the exhaust-air is not allowed to re-enter the room, even after purification. Air-conditioning systems must be regulated so that the air flow does not create dust. If the above measures are not practiced, estrogens in dry form must be handled under a hood as much as possible. Production areas and equipment used for estrogens must be cleaned once a week with T-pol of a 40-60% ethanol solution. Hot water may also be used to clean equipment. Spatulas, scoops and other small equipment must be cleaned with acetone or other suitable solvent after use. Male personnel handling estrogens should be medically examined regularly, with the first examination carried out before the employee starts working with the material.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White microcrystalline powder; odorless.
Vapor Pressure: No data available
Solubility (Water): Insoluble
Percent Volatile: No data available
Chemical formula: C18-H24-O3

Boiling Point: No data available
Vapor Density: No data available
Specific Gravity: No data available
Evaporation Rate: No data available
Melting Point: 284-285°C

STABILITY AND REACTIVITY

Product is stable. Protect from light and moisture. Hazardous decomposition products include oxides of carbon. Incompatible with strong oxidizing agents. Hazardous polymerization will not occur.

TOXICOLOGICAL INFORMATION

EFFECTS OF OVEREXPOSURE:
EYES: Contact may cause irritation and slight corneal injury.
SKIN: May be harmful if absorbed through the skin. Contact may cause irritation and/or allergic reaction.
INHALATION: May be harmful if inhaled. May cause irritation to mucous membranes and upper respiratory tract.
INGESTION: Harmful if swallowed. Chronic ingestion or excessive dosage may cause allergic reaction, anorexia nausea, vomiting, abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, development of male mammary glands, uterine bleeding, amenorrhea, loss of libido in males, painful urination and congestive heart failure. If ingested during pregnancy, abnormalities may develop.
SIDE EFFECTS: Undesirable uterine growth and proliferation and withdrawal bleeding, sodium and water retention, tenderness and enlargement of the breasts, headache and dizziness. Low doses may stimulate tumor growth in case of mammacarcinoma; high doses suppress growth in mammacarcinoma.
ADDITIONAL INFORMATION:
Target organ(s): Female and male reproductive systems.
May cause reproductive disorders. May cause congenital malformation in the fetus. Estrogens can enter the body by inhalation of small particles and by skin penetration. Uncontrolled intake of estrogens can be a health hazard and may cause feminization and impotence in men and menstrual disorders in women. May cause mammary carcinoma in males and may cause or contribute to mammary or genital carcinoma in females.
Reproductive effects, tumorigenic, mutation and toxicity data listed in RTECS under KG8225000.
Only select RTECS information is provided here. Please see actual RTECS entry for complete information.
Oral Rat LD50 = >2 gm/kg (Tokyo, Japan - 1990). Details of toxic effects not reported other than lethal dose value.
Tumorigenic: neoplastic by RTECS criteria (1975).
equivocal tumorigenic agent by RTECS criteria (1945).
Reproductive: Specific developmental abnormalities - urogenital system (1975).
Fertility - litter size (e.g. number of fetuses per litter; measured before birth) and abortion (1956).
Maternal effects: ovaries, fallopian tubes, uterus, cervix, and vagina (1965).
Paternal effects: testes, epididymis, sperm duct, prostrate, seminal vesicle, Cowper's gland and accessory glands (1965).
Carcinogenicity data: IARC Cancer Review: Animal - Animal Sufficient Evidence (1999).
Definitions: IARC = International Agency for Research on Cancer.
RTECS = Registry of Toxic Effects of Chemical Substances.

ECOLOGICAL INFORMATION

No information available

DISPOSAL CONSIDERATIONS

Dispose of material in accordance with applicable local, state, and federal regulations.

TRANSPORTATION INFORMATION

US DOT / IATA: No applicable information.

REGULATORY INFORMATION

RCRA - No applicable information.
SARA 302 - No applicable information.
SARA 313 - No applicable information.
EPA TSCA Section 8(b) - No applicable information.
Exposure Limits - Not established.
California Proposition 65 - No applicable information.

SAFETY DATA SHEET

Version 4.13
Revision Date 06/20/2018
Print Date 11/10/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	Ethyl alcohol, Pure
Product Number	:	459844
Brand	:	Sigma-Aldrich
Index-No.	:	603-002-00-5
CAS-No.	:	64-17-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052

1.4 Emergency telephone number

Emergency Phone #	:	+1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225
Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.

	Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	Absolute alcohol
Formula	:	C_2H_6O
Molecular weight	:	46.07 g/mol
CAS-No.	:	64-17-5
EC-No.	:	200-578-6
Index-No.	:	603-002-00-5
Registration number	:	01-2119457610-43-XXXX

Hazardous components

Component	Classification	Concentration
Ethanol		
	Flam. Liq. 2; Eye Irrit. 2A; H225, H319	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hygroscopic.
Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1,000 ppm 1,900 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Remarks	The value in mg/m3 is approximate.		
		STEL	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans		

		TWA	1,000 ppm 1,900 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	1,000 ppm 1,900 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 480 min
Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.2 mm
Break through time: 38 min
Material tested:Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid, clear Colour: colourless
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: -114 °C (-173 °F) - lit.

f)	Initial boiling point and boiling range	78.3 °C (172.9 °F)
g)	Flash point	14.0 °C (57.2 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 19 %(V) Lower explosion limit: 3.3 %(V)
k)	Vapour pressure	59.5 hPa (44.6 mmHg) at 20.0 °C (68.0 °F)
l)	Vapour density	No data available
m)	Relative density	0.789 g/mL at 20 °C (68 °F)0.789 g/mL at 25 °C (77 °F)
n)	Water solubility	completely soluble
o)	Partition coefficient: n-octanol/water	log Pow: -0.349 at 24 °C (75 °F)
p)	Auto-ignition temperature	363.0 °C (685.4 °F)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Alkali metals, Oxidizing agents, Peroxides

10.6 Hazardous decomposition products
Other decomposition products - No data available
Hazardous decomposition products formed under fire conditions. - Carbon oxides
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male and female - 10,470 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 124.7 mg/l
(OECD Test Guideline 403)

LC50 Inhalation - Rat - 4 h - 30,000 mg/l

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye irritation.
(OECD Test Guideline 405)

Respiratory or skin sensitisation
Sensitisation test:
Result: negative
Remarks: (IUCLID)

Germ cell mutagenicity
Ames test
Salmonella typhimurium
Result: negative

In vitro mammalian cell gene mutation test
Mouse lymphoma test
Result: negative

OECD Test Guideline 478
Mouse - male

Carcinogenicity

Carcinogenicity - Mouse - Oral
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Liver:Tumors. Blood:Lymphomas including Hodgkin's disease.

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

Reproductive toxicity - Human - female - Oral
Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects. Effects on Newborn: Drug dependence.

Specific target organ toxicity - single exposure

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

Additional Information
RTECS: KQ6300000

irritant effects, respiratory paralysis, Dizziness, narcosis, inebriation, euphoria, Nausea, Vomiting

Heart - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 15.3 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates	LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h
	NOEC - Daphnia magna (Water flea) - 9.6 mg/l - 9 d
Toxicity to algae	EC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 15 d Result: 95 % - Readily biodegradable. (OECD Test Guideline 301E)

12.3 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1170 Class: 3 Packing group: II
Proper shipping name: Ethanol
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG

UN number: 1170 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: ETHANOL

IATA

UN number: 1170 Class: 3 Packing group: II
Proper shipping name: Ethanol

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Ethanol	64-17-5	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Ethanol	64-17-5	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Ethanol	64-17-5	1993-04-24

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

Further information
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.13 Revision Date: 06/20/2018 Print Date: 11/10/2018

Fisher Scientific
Part of Thermo Fisher Scientific

Material Safety Data Sheet

Isopropanol

ACC# 95533

Section 1 - Chemical Product and Company Identification

MSDS Name: Isopropanol
Product Grade: SQ, ExcelaR, HPLC, EL
Catalog Numbers: 26895, 26896, 26897,2689C, 2689H, 2689W, 13825, 13827, 1382C 1382H, 1382HSCS, 43566, 43567, 41807
Synonyms: iso-Propyl Alcohol (Propan-2-OL)
Company Identification:

Fisher Scientific
Part of Thermo Fisher Scientific
Thermo Fisher Scientific India Pvt. Ltd
403-404, B-wing, Delphi,
Hiranandani Business Park,
Powai (E), Mumbai 400076, INDIA.

For information, call: 022 – 6680 3001/2, **Call India Toll Free** – 1800 209 7001
Emergency Number: 022-66803004/14
For CHEMTREC assistance, call: 800-424-9300 [International]
For International CHEMTREC assistance, call: 703-527-3887 [International]

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
67-63-0	2-Propanol	>= 99.5	200-661-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid. Flash Point: 53 deg F.
Warning! Flammable liquid and vapor. Causes respiratory tract irritation. Breathing vapors may cause drowsiness and dizziness. Causes eye irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Prolonged or repeated contact causes defatting of the skin with irritation, dryness, and cracking. This material has been reported to be susceptible to autoxidation and therefore should be classified as peroxidizable. May cause central nervous system depression. May form explosive peroxides. Hygroscopic (absorbs moisture from the air).
Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause transient corneal injury. In the eyes of a rabbit, 0.1 ml of 70% isopropyl alcohol caused conjunctivitis, iritis, and corneal opacity.
Skin: May cause irritation with pain and stinging, especially if the skin is abraded. Isopropanol has a low potential to cause allergic skin reactions; however, rare cases of allergic contact dermatitis have been reported. May be absorbed through intact skin. Dermal absorption has been considered toxicologically insignificant. The cases of deep coma associated with skin contact are thought to be a consequence of gross isopropanol vapor inhalation in rooms with inadequate ventilation, rather than being attributable to percutaneous absorption of isopropanol per se.
Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. The probable oral lethal dose in humans is 240 ml (2696 mg/kg), but ingestion of only 20 ml (224 mg/kg) has caused poisoning.
Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Causes upper respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.
Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.
Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.
Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication. Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. May form explosive peroxides. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.
Extinguishing Media: Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: 53e deg F (11.67 deg C)
Autoignition Temperature: > 350 deg C (> 662.00 deg F)
Explosion Limits, Lower:2.0 vol %
Upper: 12.7 @ 93°C
NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Use water spray to dilute spill to a non-flammable mixture. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist. Do not allow to evaporate to near dryness.
Storage: Keep away from heat, sparks, and flame. Do not store in direct sunlight. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in

a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2-Propanol	200 ppm TWA; 400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH	400 ppm TWA; 980 mg/m3 TWA

OSHA Vacated PELs: 2-Propanol: 400 ppm TWA; 980 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear appropriate gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: colorless
Odor: alcohol-like
pH: Not available.
Vapor Pressure: 33 mm Hg @ 20 deg C
Vapor Density: 2.1 (Air=1)
Evaporation Rate:1.7 (n-butyl acetate=1)
Viscosity: 2.27 mPas @ 20C
Boiling Point: 82 deg C @ 760 mmHg
Freezing/Melting Point:-88 deg C
Decomposition Temperature: Not available.
Solubility: Miscible.

Specific Gravity/Density:0.7850 (water=1)
Molecular Formula:C3H8O
Molecular Weight:60.1

Section 10 - Stability and Reactivity

Chemical Stability: Under normal storage conditions, peroxidizable compounds can form and accumulate peroxides which may explode when subjected to heat or shock. This material is most hazardous when peroxide levels are concentrated by distillation or evaporation. Isopropanol is susceptible to autoxidation and therefore should be classified as peroxidizable.
Conditions to Avoid: Light, ignition sources, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, strong bases, amines, ammonia, ethylene oxide, isocyanates, acetaldehyde, chlorine, phosgene, Attacks some forms of plastics, rubbers, and coatings., aluminum at high temperatures.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 67-63-0: NT8050000
LD50/LC50:
CAS# 67-63-0:
Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 10 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg Mild;
Inhalation, mouse: LC50 = 53000 mg/m3;
Inhalation, rat: LC50 = 16000 ppm/8H;
Inhalation, rat: LC50 = 72600 mg/m3;
Oral, mouse: LD50 = 3600 mg/kg;
Oral, mouse: LD50 = 3600 mg/kg;
Oral, rabbit: LD50 = 6410 mg/kg;
Oral, rat: LD50 = 5045 mg/kg;
Oral, rat: LD50 = 5000 mg/kg;
Skin, rabbit: LD50 = 12800
Carcinogenicity:
CAS# 67-63-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: A rat & rabbit developmental toxicity study showed no teratogenic effects at doses that were clearly maternally toxic. In a separate rat study, no evidence of

developmental neurotoxicity was associated with gestational exposures to IPA up to 1200 mg/kg/d.
Reproductive Effects: See actual entry in RTECS for complete information.
Mutagenicity: See actual entry in RTECS for complete information.
Neurotoxicity: In rats exposed to isopropanol by inhalation, acute neurotoxicity was noted at 1 and 6 hours at 5000 ppm, but only minimal effects were seen at 1500 ppm and the animals recovered within 5 hours. No toxicity was noted at 500 ppm.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: >1000 ppm; 96h; LC50Daphnia: >1000 ppm; 96h; LC50Fish: Gold orfe: 8970-9280 ppm; 48h; LC50 IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge.
Environmental: No information available.
Physical: THOD: 2.40 g oxygen/gCOD: 2.23 g oxygen/gBOD-5: 1.19-1.72 g oxygen/g
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ISOPROPANOL	ISOPROPANOL
Hazard Class:	3	3
UN Number:	UN1219	UN1219
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 67-63-0 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 67-63-0: Effective 12/15/86, Sunset 12/15/96
Chemical Test Rules
CAS# 67-63-0: 40 CFR 799.2325
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 67-63-0: immediate, delayed, fire.
Section 313
This material contains 2-Propanol (CAS# 67-63-0, >= 99.5%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 67-63-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols:

XI F

Risk Phrases:

R 11 Highly flammable.
R 36 Irritating to eyes.
R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.
S 24/25 Avoid contact with skin and eyes.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 67-63-0: 1

Canada - DSL/NDSL

CAS# 67-63-0 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: October 2013
Revision Date: October 2018

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

Fisher Scientific
Part of Thermo Fisher Scientific

Material Safety Data Sheet

Methanol

ACC# 14280

Section 1 - Chemical Product and Company Identification

MSDS Name: Methanol
Product Grade: SQ, ExcelaR, HPLC, HPLC Gradient, For Spectroscopy, EL, Specially dried for K.F.
Catalog Numbers: 34455, 34456, 34457, 32405, 32406, 32407, 43606, 43607, 43636, 43637, 33054, 41757, 33065, 33066, 33067
Synonyms: Methanol
Company Identification:

Fisher Scientific
Part of Thermo Fisher Scientific
Thermo Fisher Scientific India Pvt. Ltd
403-404, B-wing, Delphi,
Hiranandani Business Park,
Powai (E), Mumbai 400076, INDIA.

For information, call: 022 – 6680 3001/2, **Call India Toll Free** – 1800 209 7001
Emergency Number: 022-66803004/14
For CHEMTREC assistance, call: 800-424-9300 [International]
For International CHEMTREC assistance, call: 703-527-3887 [International]

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
67-56-1	Methanol	> 99	200-659-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 10 max clear liquid. Flash Point: 12 deg C.
Danger! Poison! May be fatal or cause blindness if swallowed. Vapor harmful.
Flammable liquid and vapor. Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. May cause central nervous system depression. Cannot be made non-poisonous.
Target Organs: Eyes, nervous system, optic nerve.

Potential Health Effects

Eye: May cause painful sensitization to light. Methanol is a mild to moderate eye irritant. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness.
Skin: Causes moderate skin irritation. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances.
Ingestion: May be fatal or cause blindness if swallowed. Aspiration hazard. Cannot be made non-poisonous. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause cardiopulmonary system effects.
Inhalation: Methanol is toxic and can very readily form extremely high vapor concentrations at room temperature. Inhalation is the most common route of occupational exposure. At first, methanol causes CNS depression with nausea, headache, vomiting, dizziness and incoordination. A time period with no obvious symptoms follows (typically 8-24 hrs). This latent period is followed by metabolic acidosis and severe visual effects which may include reduced reactivity and/or increased sensitivity to light, blurred, doubl and/or snowy vision, and blindness. Depending on the severity of exposure and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic exposure may cause effects similar to those of acute exposure. Methanol is only very slowly eliminated from the body. Because of this slow elimination, methanol should be regarded as a cumulative poison. Though a single exposure may cause no effect, daily exposures may result in the accumulation of a harmful amount. Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Effects may be delayed.
Antidote: Ethanol may inhibit methanol metabolism.

Section 5 - Fire Fighting Measures

General Information: Ethanol may inhibit methanol metabolism. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water.
Flash Point: 12 deg C (53.60 deg F)
Autoignition Temperature: 455 deg C (851.00 deg F)
Explosion Limits, Lower:6.0 vol %
Upper: 31.00 vol %
NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Use water spray to disperse the gas/vapor. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid use in confined spaces.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Methanol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous r oute	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA

OSHA Vacated PELs: Methanol: 200 ppm TWA; 260 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear butyl rubber gloves, apron, and/or clothing.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Appearance: clear, colorless - APHA: 10 max
Odor: alcohol-like - weak odor
pH: Not available.
Vapor Pressure: 128 mm Hg @ 20 deg C
Vapor Density: 1.11 (Air=1)
Evaporation Rate:5.2 (Ether=1)
Viscosity: 0.55 cP 20 deg C
Boiling Point: 64.7 deg C @ 760 mmHg
Freezing/Melting Point:-98 deg C

Decomposition Temperature: Not available.
Solubility: miscible
Specific Gravity/Density:.7910 g/cm3 @ 20°C
Molecular Formula:CH4O
Molecular Weight:32.04

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: High temperatures, ignition sources, confined spaces.
Incompatibilities with Other Materials: Oxidizing agents, reducing agents, acids, alkali metals, potassium, sodium, metals as powders (e.g. hafnium, raney nickel), acid anhydrides, acid chlorides, powdered aluminum, powdered magnesium.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, formaldehyde.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 67-56-1: PC1400000
LD50/LC50:
CAS# 67-56-1:
Draize test, rabbit, eye: 40 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, rabbit: LC50 = 81000 mg/m3/14H;
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 14200 mg/kg;
Oral, rat: LD50 = 5600 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;
.
Human LDLo Oral: 143 mg/kg; Human LDLo Oral: 428 mg/kg; Human TCLo Inhalation; 300 ppm caused visual field changes & headache; Monkey LDLo Skin: 393 mg/kg.
Methanol is significantly less toxic to most experimental animals than humans, because most animal species metabolize methanol differently. Non-primate species do not ordinarily show symptoms of metabolic acidosis or the visual effects which have been observed in primates and humans.
Carcinogenicity:
CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: There is no human information available. Methanol is considered to be a potential developmental hazard based on animal data. In animal experiments, methanol has caused fetotoxic or teratogenic effects without maternal toxicity.
Reproductive Effects: See actual entry in RTECS for complete information.
Mutagenicity: See actual entry in RTECS for complete information.
Neurotoxicity: ACGIH cites neuropathy, vision and CNS under TLV basis.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: 29.4 g/L; 96 Hr; LC50 (unspecified)Fish: Goldfish: 250 ppm; 11 Hr; resulted in deathFish: Rainbow trout: 8000 mg/L; 48 Hr; LC50 (unspecified)Fish: Rainbow trout: LC50 = 13-68 mg/L; 96 Hr.; 12 degrees CFish: Fathead Minnow: LC50 = 29400 mg/L; 96 Hr.; 25 degrees C, pH 7.63Fish: Rainbow trout: LC50 = 8000 mg/L; 48 Hr.; UnspecifiedBacteria: Phytobacterium phosphoreum: EC50 = 51,000-320,000 mg/L; 30 minutes; Microtox test No data available.
Environmental: Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLm 96>1000 ppm. May be dangerous if it enters water intakes. Methyl alcohol is expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hyroxyl radicals with an estimated half-life of 17.8 days. Bioconcentration factor for fish (golden ide) < 10. Based on a log Kow of -0.77, the BCF value for methanol can be estimated to be 0.2.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series:
CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	METHANOL	METHANOL
Hazard Class:	3	3
UN Number:	UN1230	UN1230
Packing Group:	II	II
Additional Info:		FLASHPOINT 12 C

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 67-56-1 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 67-56-1: immediate, fire.
Section 313
This material contains Methanol (CAS# 67-56-1, > 99%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T F

Risk Phrases:

R 11 Highly flammable.
R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R 39/23/24/25 Toxic : danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.
S 36/37 Wear suitable protective clothing and gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 67-56-1: 1

Canada - DSL/NDSL

CAS# 67-56-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D1B, D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: October 2013
Revision Date: October 2018

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

SAFETY DATA SHEET

Version 5.7
Revision Date 02/13/2018
Print Date 11/10/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	*tert*-Butanol
Product Number	:	360538
Brand	:	Sigma-Aldrich
Index-No.	:	603-005-00-1
CAS-No.	:	75-65-0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+1 800-325-5832
Fax	:	+1 800-325-5052

1.4 Emergency telephone number

Emergency Phone #	:	+1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225
Acute toxicity, Inhalation (Category 4), H332
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, Central nervous system, H335, H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting equipment.

P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	2-Methyl-2-propanol Trimethyl carbinol tert-Butyl alcohol
Formula	:	$C_4H_{10}O$
Molecular weight	:	74.12 g/mol
CAS-No.	:	75-65-0
EC-No.	:	200-889-7
Index-No.	:	603-005-00-1
Registration number	:	01-2119444321-51-XXXX

Hazardous components

Component	Classification	Concentration
tert-Butyl alcohol		
	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; STOT SE 3; H225, H319, H332, H335, H336	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Dry powder Dry sand

Unsuitable extinguishing media
Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture
Flash back possible over considerable distance.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
tert-Butyl alcohol	75-65-0	TWA	100.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Not classifiable as a human carcinogen		
		TWA	100.000000 ppm 300.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	150.000000 ppm 450.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	100.000000 ppm 300.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value in mg/m3 is approximate.		
		PEL	100 ppm 300 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	150 ppm 450 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 480 min
Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.2 mm
Break through time: 30 min
Material tested:Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an

industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	at 20 °C (68 °F)neutral
e)	Melting point/freezing point	Melting point/range: 23 - 26 °C (73 - 79 °F)
f)	Initial boiling point and boiling range	83 °C (181 °F)
g)	Flash point	11 °C (52 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 8 %(V) Lower explosion limit: 2.4 %(V)
k)	Vapour pressure	41 hPa (31 mmHg) at 20 °C (68 °F) 59 hPa (44 mmHg) at 26 °C (79 °F)
l)	Vapour density	2.56 - (Air = 1.0)
m)	Relative density	0.775 g/mL at 25 °C (77 °F)
n)	Water solubility	completely miscible
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

Relative vapour density	2.56 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents, Copper, Alkali metals, Aluminum

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 2,743 mg/kg
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Respiratory disorder Gastrointestinal:Other changes.

LC50 Inhalation - Rat - 4 h - > 10000 ppm
Remarks: Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea. Lungs, Thorax, or Respiration:Pulmonary emboli.

LD50 Dermal - Rabbit - > 2,000 mg/kg
(OPPTS 870.1200)
Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis. Behavioral:Ataxia.

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
(Draize Test)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irritating to eyes. - 24 h

Respiratory or skin sensitisation
Maximisation Test - Guinea pig
Result: Did not cause sensitisation on laboratory animals.
(OECD Test Guideline 406)

Germ cell mutagenicity
No data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.
Inhalation - May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: EO1925000

drying, cracking of the skin, Skin irritation
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence
Liver - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 6,140 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 933 mg/l - 48 h

12.2 Persistence and degradability

Biodegradability	Zahn-Wellens Test - Exposure time 19 d Result: > 99.9 % - Readily biodegradable.

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1120 Class: 3 Packing group: II
Proper shipping name: Butanols

Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG
UN number: 1120 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: BUTANOLS

IATA
UN number: 1120 Class: 3 Packing group: II
Proper shipping name: Butanols

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
tert-Butyl alcohol	75-65-0	2007-07-01

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
tert-Butyl alcohol	75-65-0	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
tert-Butyl alcohol	75-65-0	2007-07-01

	CAS-No.	Revision Date
tert-Butyl alcohol	75-65-0	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
tert-Butyl alcohol	75-65-0	2007-07-01

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
STOT SE	Specific target organ toxicity - single exposure

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	3
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	3
Reactivity Hazard:	0

Further information

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Quality Assurance Manual

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1.0 SAMPLE CUSTODY

1.1 SAMPLE COLLECTION CONTROLS

Special consideration must be given to the procurement, storage, and transportation of samples to be analyzed. Procedures will ensure that any analyte originally present in the sample matrix has not undergone degradation or concentration, and that contaminants which might interfere with the analysis have not been added. All on site sample handling procedures will be supervised by the Field Site Manager and reviewed by the Project Manager.

Documentation of sample procurement, storage, and transportation for samples sent off site is recorded on sample labels, Chain-of-Custody forms, and a bound field notebook. Copies of the Chain-of-Custody forms, shipping labels, and field notebook records are given to the Project Manager by the Field Site Manager for inclusion into the project notebook. Information on the sample labels, Chain-of-Custody forms, and field notebooks are recorded in waterproof ink and errors are denoted with a single line through the error. Corrections are initialed and dated by the person making the correction. All field documentation and logs are signed by field personnel.

1.2 SAMPLE LABELS

The sampling team uses sample labels or tags for initiating the Chain-of-Custody record on environmental samples. Date, time, sampling location, and the sampler's signature are recorded on the tag or label. A unique sample description (Field ID) is assigned to samples collected from individual sample locations. Sample descriptions are generated on a project specific basis and are recorded on the sample label, Chain-of-Custody form and the bound field notebook. If required by a specific project, station numbers will be assigned to sample stations. The tag or label is secured to each respective sample container at the completion of sample collection.

Laboratory samples will be labeled on each vial and stored in trays grouped with each experiment. Sample trays will be clearly labeled for each experiment and stored for later analysis by the same research conducting the laboratory experiment.

1.3 CHAIN-OF-CUSTODY FORM

The Chain-of-Custody record for samples sent off site begins when sample containers or kits are given to Field Team Member(s). The Sample Kit Tracking forms are signed by the person, usually laboratory personnel, relinquishing the sample containers. Samples are then collected by the Field Team Member(s) and appropriately labeled with a sample label. The samples remain in the actual possession or in view of the Field Team Member(s) until the samples have been placed in a designated secure area. Any unused sample containers are discarded.

Chain-of-Custody forms and custody tags are filled out and signed by the Field Team Member(s) who collected the sample whenever custody is transferred to another Field Team Member or a shipping company. The individual receiving the sample signs and dates the form. In the case of a custody transfer to a shipping company, the original of the two-part form accompanies the sample in lieu of a recipient's

signature, and the copy is retained by the Field Site Manager and maintained with the project records. Information recorded on the Chain-of-Custody form includes the following information:

- X Site name and address (noted in remarks column).
- X Date and time of sample collection.
- X Name of person collecting sample.
- X Sample description (Field ID).
- X Number of samples.
- X Specific comments about sample or sample conditions, noted in remarks column.
- X Dates and signatures, for both receipt and delivery, of all parties that handled the samples.
- X Identification of common carrier.

1.4 FIELD NOTEBOOKS

The information included on the sample tags and Chain-of-Custody forms are also documented in a bound field notebook. Pertinent information about the field sampling activities is also included in the bound field notebook. Information recorded in the field notebook includes the following information:

- X Names of all field personnel and visitors to project site.
- X Date and time of sample collection.
- X Ambient field conditions (weather, site conditions).
- X Specific description of PFM sample location (site name, address, sample depth location).
- X Sample description (Field ID) for each sample, and parameters to be analyzed.
- X Field measurement data for each sample station (pH, temperature, etc.).
- X Sample collection sequence (order in which samples were collected).
- X Field decontamination activities, if performed.
- X QC samples collected; types, location, date, and time.
- X Signature of sampling personnel.

Additional documentation is recorded in the bound field notebook for monitoring wells and soils.

1.5 SAMPLE RECEIPT

All samples shipped for analysis are delivered to the laboratory's central sample receiving area and are received by the Laboratory Manager. The Laboratory Manager compares the samples received against the chain-of-custody record.

The Laboratory Manager opens the shipping container, removes the enclosed sample documents, and records:

- X Presence/absence of the chain-of-custody record(s) and traffic reports,
- X Presence/absence of analytical request forms, purchase orders, etc., and
- X Presence/absence of airbills and/or bills of lading documenting the shipment of the samples.

The Laboratory Manager removes all samples from the shipping container, examines and records on the sample chain-of-custody sheets all pertinent information about:

- X Conditions of samples (intact, broken, leaking, etc.),
- X Presence/absence of sample tags, and
- X Document control numbers if sample tags are present.

The Laboratory Manager compares sample labels with chain-of-custody record(s). If tag numbers are listed, the Laboratory Manager determines if they match the sample tag number received and documents whether or not these tags and numbers agree.

The Laboratory Manager checks for correct preservation of samples. For samples that require cooling, the Laboratory Manager checks the temperature of cooler upon opening, and documents the presence or absence of ice. The temperature is documented on the chain-of-custody form.

All information noted about samples is recorded on the chain-of-custody.

Any discrepancies or excursions from the SOP noted during sample receipt are further documented on a corrective action form, signed by the Laboratory Manager and verified by the Field Site Manager. A copy is filed with the Field Site Manager, and the original is maintained with the case file.

1.6 DOCUMENT VERIFICATION

The Laboratory Manager examines the following documents to verify correctness and agreement of information contained in the documents:

- X Chain-of-custody forms
- X Sample Tags
- X Sample Labels
- X Air Bills or Bills of Lading
- X Traffic Reports

The Laboratory Manager documents both agreements and discrepancies among the forms. If discrepancies are found, the Field Site Manager and the Project Manager are notified, and appropriate corrective action or investigation will be initiated.

All resolutions are documented and copies included in the case file. In many cases, this information is also included in the final case narrative.

1.7 CHAIN-OF-CUSTODY RECEIPT ACKNOWLEDGEMENT

If all samples recorded on the chain-of-custody record were received by the laboratory and there are no problems observed with the sample shipment, the Laboratory Manager signs the chain-of-custody record in the "received for laboratory by:" box on the document.

If problems or discrepancies are found, they are documented on the chain-of-custody form before the document is signed. The Project Manager is notified immediately by telephone, and necessary laboratory actions are discussed and agreed upon.

A letter is sent to the Project Manager acknowledging receipt of samples and noting what problems, if any, were found. A copy of this letter is filed with the original chain-of-custody form with the case file.

SECTION 2.0 TESTING AND MEASURMENT PROTOCOLS

2.1 ANALYTICAL PROCEDURES

The project will employ laboratory prescribed and published methods from USEPA, APHA, ASTM, and NIOSH for chemical analyses as appropriate. New procedures for special analysis are validated according to an established protocol before implementation. Analytes that are probable include volatile organic compounds: trichloroethene (TCE), 1,2-dichloroethene (DCE), tetrachloroethylene (PCE), and vinyl chloride. Tracers of interest include methanol, ethanol, IPA, TBA and 2,4-diemthyl-3-pentanol.

2.2 ANALYTICAL METHOD REFERENCES

The methods routinely used for analysis are selected from the following publications:

1. Annual Book of ASTM Standards. Part 26-Gaseous Fuels; Coal and Coke; Atmospheric Analysis. ASTM, 1981. American Society for Testing and Materials. Philadelphia, PA 19103.
2. Annual Book of ASTM Standards Part 31-Water ASTM, 1981. American Society for Testing and Materials. Philadelphia, PA 19103.
3. Chemical Characterization of Marine Samples, API Publication No. 4307, 1978. American Petroleum Institute, Washington, DC.
4. Collection and Analysis of Purgeable Organics Emitted from Wastewater Treatment Plants. U.S. EPA, Cincinnati, Ohio, 1980. Publication No. EPA-600/2-80-017.
5. Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; U.S. EPA, 1984, Federal Register, 40 CFR Part 136.
6. Handbook for Analytical Quality Control in Water and Wastewater Laboratories, U.S. EPA, 1977. Publication No. EPA-600/4-79-019.
7. Handbook for Sampling and Sample Preservation of Water and Wastewater, U.S. EPA, Cincinnati, Ohio, 1982. Publication No. EPA-600/4-82-029.
8. Laboratory Protocols for Evaluating the Fate of Organic Chemicals in Air and Water, U.S. EPA, Athens, GA, 1982, Publication No. EPA-600/3-82-022.

9. Manual of Analytical Methods for the Analysis of Pesticides in Humans and Environmental Samples, U.S. EPA, Research Triangle Park, N.C., 1980, Publication No. EPA-600/8-80-038.
10. Manual of Analytical Quality Control for Pesticides and Related Compounds, U.S. EPA, Research Triangle Park, N.C., 1979, Publication No. EPA-600/1-79-008.
11. Manual of Chemical Methods for Pesticides and Devices, U.S. EPA, Office of Pesticide Programs, Beltsville, Maryland, 1982.
12. Methods of Analysis of the Association of Official Analytical Chemists, Thirteenth edition, 1980.
13. Methods for Chemical Analysis of Water and Wastes, U.S. EPA, Cincinnati, Ohio, 1979, Publication No. EPA-600/4-79-020.
14. Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. U.S. EPA, Cincinnati, Ohio, 1982. Publication No. EPA-600/4-82-057.
15. NIOSH Manuals of Analytical Methods, Vols. 1-7, National Institute for Occupational Safety and Health, Cincinnati, Ohio, 1981.
16. Oil Spill Identification System, U.S. Coast Guard, Office of Research and Development, Washington, DC, 1977. Report No. CG-D-52-77.
17. Procedures for Handling and Chemical Analysis of Sediment and Water Samples, U.S. EPA, 1981, Technical Report EPA/CE-81-1.
18. Standard Methods for the Examination of Water and Wastewater, Water Pollution Control Federation, 16th Edition, 1985.
19. Test Methods for Evaluating Solid Waste-Physical/Chemical Methods. Office of Solid Waste, U.S. EPA, Washington, DC, SW-846, Third Edition, 1986.
20. The Analysis of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils, U.S. EPA/EMSL, Cincinnati, Ohio.
21. Standard Operating Procedure for Analysis of Alcohols Used as Partitioning Tracers (November 15, 1995)
22. Standard Operating Procedure for Analysis of Target Analytes in Groundwater Samples (February 20, 1996)

2.3 REAGENT STORAGE

Solvents are stored in the original containers in a separate cabinet designated for solvent storage. This solvent cabinet is in an air conditioned area of the laboratory.

Other dry reagents are stored in the chemical storage area of the laboratory, in closed cabinets. Organic and inorganic reagents are stored in separate cabinets. These cabinets are located in an air conditioned area of the laboratory.

2.4 WASTE DISPOSAL

Chemicals are not allowed to be disposed of down drains, in the trash or by evaporation. All chemical waste is required to be held in the generating location for subsequent disposal by a commercial hazardous waste service. All hazardous waste containers must be labeled correctly. The waste label is placed on the container before any waste is put into the container.

Incompatible solvents (e.g., Flammable Liquids, Halogenated organic compounds, Oils, etc) are collected in separate containers. The separated solvents are disposed of by a commercial hazardous waste service.

Sample extracts are collected, bulked in 1-gallon cans with vermiculite, and disposed of by a commercial hazardous waste service.

Contaminated soils or hazardous samples are disposed of by a commercial hazardous waste service or are returned to the client for disposal.

SECTION 3.0, QA/QC CHECKS

3.1 LABORATORY EQUIPMENT

The laboratory is equipped with a GC system capable of quantifying target organic compounds identified for the study site.

3.2 STANDARD RECEIPT AND TRACEABILITY

3.2.1 Supplies and Quality Control Materials

All supplies (i.e., glassware, chemicals, reagents) used will be of the best possible quality to ensure proper instrument calibration and avoid contamination. All reagents used are prepared from Analytical Reagent Grade (AR) chemicals or higher purity grades, unless such purity is not available. The preparation of all reagents will be documented, including source, mass, and dilutions. Each reagent is clearly labeled with the composition, concentration, date prepared, initials of preparer, expiration date, and special storage requirements, if any.

3.2.2 Reagents

Reagent solutions are stored in appropriate glass, plastic, or metal containers. Reagents are stored under conditions designed to maintain their integrity (refrigerated, dark, etc.). Shelf life is listed on the label and the reagent is discarded after it has expired. Water used in the laboratory is deionized, and periodically checked for purity. In addition, water used in the organics area is carbon-filtered or purchased as HPLC grade. All organic solvents used are reagent grade. Solvents and reagent solutions are checked for contamination by employing reagent blanks, before use in any analysis.

3.2.3 Samples

Samples are logged within one working days of receipt of the samples. Samples are stored appropriately after receipt. Separate storage is maintained to segregate sample types where cross-contamination is a possibility.

Flammable samples are stored in an explosion-safe refrigerator. The laboratory refrigerator is constructed with its controls mounted outside the storage compartment. The refrigerator should be clearly labeled to indicate whether or not it is suitable for storage of flammable liquids.

3.2.4 Quality Control Reference Materials

All Quality Control Reference Materials are acquired only from authorized vendors or sources commonly used by U.S. EPA Regional Laboratories.

3.2.5 Standards Traceability

When standard reference materials arrive at the site laboratory, they are registered in a bound log book, "Standards Notebook for Neat Materials and Primary Solutions." An example of a logging sequence is used to illustrate this process.

(1-S-XXX-12-4) (label and log sequence)

Where:

1	=	Notebook log number
S	=	Standard Notebook--"Neat and Primary Standards"
XXX	=	Receiving analyst's initials
12	=	Notebook page
4	=	Entry number on notebook page

All working standards prepared at the site lab are logged in the "Standards Notebook for Intermediate and Working Standards." A similar labeling convention has been adopted for classifying these working standard materials. An example is given below.

1-W-XXX-6-5 (label and log)

Where:

1	=	Number of notebook
W	=	Standards notebook - "Intermediate and Working" Standard
XXX	=	Analyst's initial
6	=	Page Number
5	=	Page entry number in sequence

3.3 INSTRUMENT CALIBRATION

Every instrument used to analyze samples must pass the calibration criteria established in the appropriate SOP. Initial calibration criteria for instrument linearity, sensitivity, resolution, and deactivation must be met before samples can be analyzed. Sustained performance is monitored periodically during sample analyses by the use of continuing calibration check standards.

3.3.1. GC Section

3.3.1.1 Initial Calibration

The linear calibration range of the instrument must be determined before the analysis of any samples. Gas chromatographic conditions used for sample analyses are used during calibration.

The calibration is performed in accordance with the SOP derived from the methods used. For most GC analyses, a 5-level calibration is run. The concentrations of the standards must bracket the linear range of the instrument. Calibration using fewer than 5-levels is done only when specifically allowed by the method.

3.3.1.2 Relative Retention Times and Relative Response Factors

Instrument calibration and sample analysis must be performed using appropriate internal standards to establish relative retention times (RRT) and relative response factors (RRF) where required. Internal standards appearing in a chromatogram will establish primary search windows for those target compounds nearby in the chromatogram. RRT are calculated using this equation:

$$RRT = \frac{RT^{target}}{RT^{is}}$$

The RRF may be calculated as follows:

$$\text{Absolute Response Factor} = RF = \frac{\text{Area}}{\text{Amount}}$$

Note: Amount in this equation refers to the mass (e.g. ug) of compound mixed into the solution injected.

Each calibration standard is analyzed and the RRF is calculated for each analyte according to the following equation:

$$RRF = \frac{A_s \, x \, C_{is}}{A_{is} \, x \, C_s}$$

A_s	=	Area of analyte
A_{is}	=	Area of internal standard
C_{is}	=	Concentration of internal standard
C_s	=	Concentration of analyte

Note: Certain data processors may calculate the RRF differently.

The standard deviation (SD) and the % coefficient of variation (CV) of RRFs for the compounds are calculated using the following equations:

$$S = \sum_{i=1}^{N} \left[\frac{(RRF_i - RRF_m)^2}{N - 1} \right]^{-\%o}$$

Where:

RRF_i	=	Individual RRF
RRF_m	=	Mean RRF
N	=	Number of RRFs

and

$$\%CV = \frac{S \times 100}{RRF_m}$$

3.3.1.3 Coefficient of Variation

The %CV of each compound must be less than 30 percent. This criterion must be achieved for the calibration to be valid.

If the %CV is less than 20 percent, the RRF of the compound can be assumed to be invariant, and the average RRF can be used for calculations.

If the %CV is between 20 percent and 30 percent, calculations must be made from the calibration curve. Both the slope and the intercept of the curve must be used to perform calculations.

3.3.1.4 Initial Calibration Verification

The calibration curve must be validated further by analyzing a QC check sample. The QC check sample must be obtained from EPA, another vendor, or it must be from another lot number. The QC check sample verifies the validity of the concentrations of the standards used to obtain the initial calibration.

All analytes in the QC check standard must be recovered within 80 to 120 percent. If any analyte exceeds this criterion, then a new calibration curve must be established. All sample results for a target analyte can be reported only from valid initial calibrations.

3.3.1.5 Continuing Calibration

The working calibration curve or RRF for each analyte must be verified daily by the analysis of a continuing calibration standard. The ongoing daily continuing calibration must be compared to the initial calibration curve to verify that the operation of the measurement system is in control.

The continuing calibration check must be performed during each day of analysis to verify the continuing calibration of the instrument. A day is defined as 24 hours from the start run time of the last valid continuing calibration. Generally, a continuing calibration check sample is injected every 10 or 20 samples.

Verification of continuing calibration is performed by the analysis of a midpoint standard containing all of the analytes of interest. Verification of continuing calibration of the measurement system is done by calculating the percent difference (%D) of the continuing calibration RRF from the mean RRF from the initial calibration curve using the following equation:

$$\%D = \frac{(RRF_m - RRF) \times 100}{RRF_m}$$

Where:

RRF_m	=	The mean relative response factor from the initial calibration curve
RRF	=	The relative response factor from the continuing calibration standard

The %D must meet the acceptance criteria established in the appropriate SOP. If these criteria are exceeded, a new calibration curve must be established.

4.0 PRECISION AND ACCURACY, AND CALCULATION OF METHOD DETECTION LIMITS

4.1 CONTROL SAMPLES

The laboratory will employ control samples to assess the validity of the analytical results of the field samples. Determination of the validity of field sample results is based on the acceptance criteria being met by the control sample. The acceptance criteria for each type of control sample are delineated in the appropriate SOP. These acceptance criteria are based on the laboratory's statistical process capabilities determined from historical data, and meet the EPA CLP acceptance criteria as a minimum. Often, in-house criteria are more stringent than required by CLP. The control samples are analyzed in the same manner as the field samples. They are interspersed with the field samples at frequencies that are specified by the appropriate SOP.

4.1.1 Method Blank Analyses

A method blank is a "clean" sample (i.e., containing no analyte of concern), most often deionized water, to which all reagents are added and analytical procedures are performed. Method blanks are analyzed at a rate of one per sample lot or at least every 20 samples. The blank is analyzed in order to assess possible contamination from the laboratory or the procedure. If the analyte of interest is found in the blank at above reporting levels, analysis is suspended until the source of contamination is found and corrective action is taken. The Laboratory Manager is notified when blank results are unacceptably high, and may assist in the investigation.

4.1.2 Surrogate Spike Analyses

For certain analyses such as those performed by GC/MS, each sample and blank is spiked with one or more surrogate compounds before preparatory operations such as purging or extraction. These surrogate

standards are chosen for properties similar to sample analytes of interest, but are usually absent from the natural sample.

Surrogate spikes evaluate the efficiency of the analytical procedure in recovering the true amount of a known compound.

The results of surrogate standard determinations are compared with the true values spiked into the sample matrix prior to extraction and analysis, and the percent recoveries of the surrogate standards are determined. Recoveries should meet the upper and lower control limits as specified for each compound. If control limits are exceeded for surrogate standards, the following sequence of actions is taken:

a. The sample is re-injected.
b. Raw data and calculations are checked for errors.
c. Internal standards and surrogate spiking solutions are checked for degradation, contamination, or solvent evaporation.
d. Instrument performance is checked.
e. If a, b, and c fail to reveal the cause of the noncompliance surrogate recoveries, the sample is re-purged or re-extracted.
f. If all the measures listed above fail to correct the problem for laboratory blank surrogate analyses, the analytical system is considered out of control, and the instrument must be recalibrated and examined for mechanical faults.
g. If all the measures listed above fail to correct the problem for field sample surrogate analyses, the deficiency probably is due to sample interferences, and not due to any procedural or mechanical problems in the laboratory. The surrogate spike recovery data and the sample data from both extractions are reported and are flagged. The Laboratory Manager is notified with an exceptions report and the corrective actions taken.

4.1.3 Matrix Spike/Matrix Spike Duplicate Analyses

To evaluate the effect of the sample matrix on the analytical methodology, two separate aliquot samples may be spiked with a standard mix of compounds appropriate to a given analysis. When appropriate, the matrix spike and the matrix spike duplicate (MS/MSD) are analyzed at a frequency of one per lot or one per 20 samples, whichever is more frequent. The percent recovery for each of the spiking compounds is calculated. The relative percent difference (RPD) between the MS/MSD is also calculated.

The observed percent recoveries (%R) and relative percent differences (RPD) between the MS/MSD are used to determine the accuracy and the precision of the analytical method for the sample matrix. If the percent recovery and RPD results exceed the control limits as specified for each spiking compound, the sample is not reanalyzed. Poor recovery in matrix spiked samples does not necessarily represent an analytical system out of control. It is possible that unavoidable interferences and matrix effects from the sample itself preclude efficient recoveries. The poor recovery is documented for the Project Manager.

4.1.4 Internal Standards Analysis

Once an instrument has been calibrated, it is necessary to confirm periodically that the analytical system remains in calibration. The continuing calibration and precision of the organics analytical system are checked for each sample analysis by monitoring the instrument response to internal standards. When internal standard addition is not appropriate to a particular method, other means of accuracy checks, such as standard addition, are used. Results from internal standard analyses are compared to the mean calibrated value. Deviation from this mean beyond a predetermined magnitude, depending on the type of analysis, defines an out-of-control condition. The system must then be brought back into control by:

- X Checking the quality of the internal standards and reanalyzing the sample
- X Recalibrating the system
- X Correcting the malfunctions causing the instrument to fall out of calibration

4.1.5 Duplicate Sample Analyses

Duplicate analyses are performed for analytes of interest and upon special request for selected other parameters to evaluate the reproducibility of the method. Results of the duplicate analyses are used to determine the RPD between replicate samples. For each parameter analyzed, at least one duplicate sample is run per group of 20 samples.

The precision value, RPD, is reviewed by the section supervisor and the division manager. If the precision value exceeds the control limit (20%) or the established protocol criteria for the given parameter, the sample set is reanalyzed for the parameter in question unless it is determined that heterogeneity of the sample has caused the high RPD.

4.1.6 QC Check Standard Analyses

Analysis of QC check standards is used to verify the preparation process or the standard curve, and is performed with each group of samples. Results of these data are summarized, evaluated, and presented to the section supervisor and the division manager for review.

The results of the QC check standard analysis are compared with the true values, and the percent recovery of the check standard is calculated. If correction of a procedure or instrument repair is done, the check standard is reanalyzed to demonstrate that the corrective action has been successful.

At least twice a year, a QC check standard for each parameter group is analyzed as a double-blind sample. Samples are prepared, submitted, and evaluated by the Laboratory Manager.

4.1.7 Other Quality Control Samples

Under some sampling analysis, additional quality control samples may be required. These may include:

a. **Blank/Spike--**Analyte of interest or surrogate is spiked into blank water rather than into a sample. The blank/spike goes through the entire analytical procedure, and percent recovery is calculated with no likelihood of matrix effect. For many contracts, an externally provided LCS sample (EPA) serves as a blank/spike sample.

b. **Trip Blank--**A sample bottle filled with laboratory blank water travels with the sample kit to the sampling site, and is sent back to the laboratory packed in the same container as any volatile samples collected. Trip blank analyses check for possible volatile contamination during shipping or sampling.

c. **Field Blank--**A field blank can be a sample container filled with laboratory blank water and sent to the sampling site, or it may be filled at the site with purchased distilled water or decontamination water. The field blank analysis checks for possible contamination by the sampling team.

d. **Equipment Rinsates--**After equipment has been cleaned in the field, many contracts require that the equipment be rinsed and the rinsate analyzed for the same parameters requested on the samples. The rinsate analysis proves the equipment has been cleaned properly and will not contaminate the next samples taken.

4.2 ACCURACY, PRECISION, AND COMPLETENESS

4.2.1 Accuracy

Accuracy is defined as the closeness of the results to the true value.

The percent recoveries of surrogates, QC check standards, and matrix spiked analytes are used to evaluate the accuracy of an analysis. The percent recovery represented by X can be calculated using the following equations:

For surrogates and QC check standards:

$$X = \frac{SSR}{SA} x\, 100$$

For matrix spikes:

$$X = \frac{SSR - SS}{SA} \times 100$$

where:

SSR = Spiked sample result
SS = Sample result
SA = Spike added from spiking mix

The mean percent recovery (X) is defined by:

$$\overline{X} = \frac{\sum_{i=1}^{N} X_i}{N}$$

where:

X_i = The percent recovery value of a spike replicate

N = Number of spikes

4.2.2 Precision

Precision is a measure of the mutual agreement among individual measurements of the same parameters under prescribed similar conditions.

The analytical precision is determined using results from duplicate or replicate analyses of samples and from matrix spike results for a given matrix. The Relative Percent Difference (RPD) is used to evaluate the precision of duplicate analyses. Relative Percent Difference is defined in the following equation:

$$\%RPD = \frac{2(X1 - X2)}{\bar{x}} \, x\, 100$$

X1 = First duplicate value

X2 = Second duplicate value

When replicate analyses are performed, precision is measured in terms of the Standard Deviation (SD) which is defined in the following equation:

$$S = \sum_{i=1}^{N} \left[\frac{(X_i - \bar{X})^2}{N - 1} \right]^{‰}$$

where:

X_i = The recovery value of a spike replicate

$\bar{X}$ = Arithmetic average of the replicate values

N = Number of spikes

4.2.3 Completeness

Completeness is defined as the percent of parameters falling within acceptance criteria and the results subsequently reported. A goal of 95 percent completeness has been set for all samples.

4.3 INSTRUMENT DETECTION LIMITS, METHOD DETECTION LIMITS, AND REPORTING LIMITS

4.3.1 Instrument Detection Limits (IDL)

Instrument Detection Limit (IDL) studies are performed for organic and inorganic parameters when an instrument is installed, when major maintenance or repair work has been done, and routinely once per calendar quarter.

To determine IDL, seven consecutive measurements per day are made on a prepared standard solution (in reagent water) of an analyte at a concentration 3 to 5 times the instrument manufacturer's suggested IDL. Each measurement is performed as though it were a separate analytical sample. This procedure is repeated on three nonconsecutive days. The standard deviation is calculated for each set of seven replicates and the average of the standard deviations is obtained. This average is multiplied by 3 to give the instrument detection limit (IDL).

4.3.2 Method Detection Limits (MDL)

The Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the value is above zero. The sample must be carried through the entire method under ideal conditions. MDL is determined according to the method outlined in 40 CFR 136, Appendix B. MDLs are determined at least annually for all parameters. MDL studies are also conducted for new methods introduced in the lab, after major maintenance or modification to an instrument, and as part of the training of new analysts.

To determine MDL, seven replicate analyses are made of analytes spiked into blank water at 1 to 5 times the estimated method detection limit. The spiked samples must be carried through the entire analytical procedure, including any extraction, digestion, or distillation process, for MDL calculation. The SD of these replicates is calculated. Where: t = The student t value for a 99% confidence interval

$$MDL = t \ x \ S$$

S = Standard deviation of the replicate analyses

4.3.3 Reporting Limits

In most cases, final report forms list reporting limits rather than either IDL or MDL. Reporting limits are taken from EPA SW846 published limits or from historical data. Matrixes or analyte concentrations which require dilution will change the detection limits for that sample.

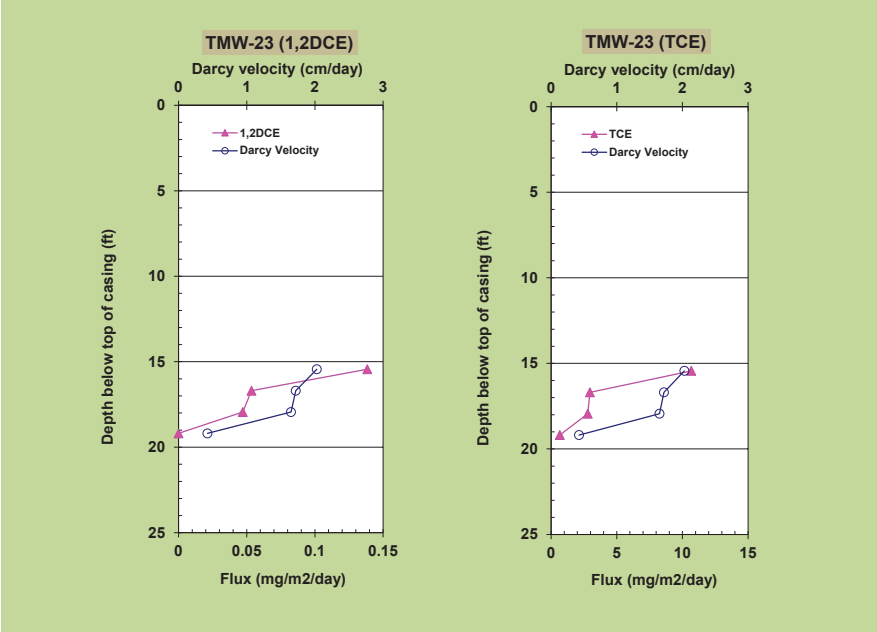
Ramboll	
Project name:	Whirlpool, Fort Smith, AR
Project Manager	Michael Wilson
Installation Date	3/17-3/19/2021
Sampling Date	4/6-4/7/2021
Reporting Date	4/29/2021

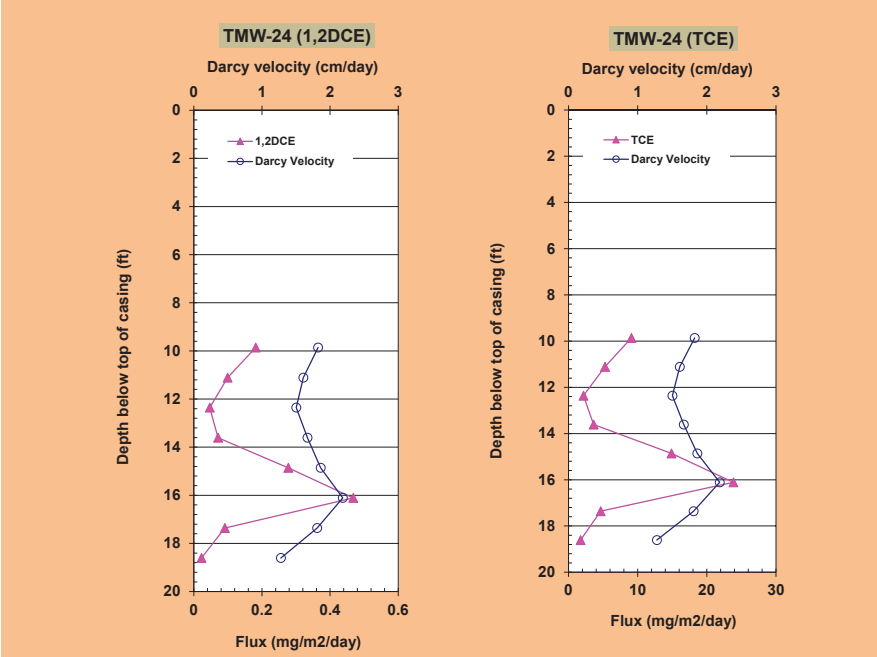
Table1. Summary of flux values for each well

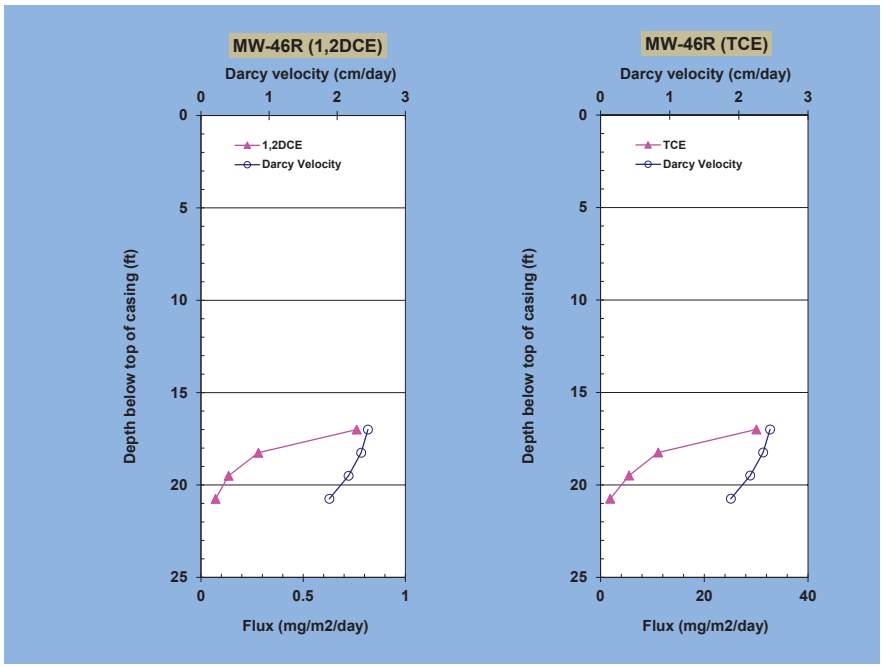
Well_ID	Sample_ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	1,2DCE flux (mg/m^2/day)	TCE flux (mg/m^2/day)
TMW-23	TMW-23-16.06-14.81	15.4	2.0	0.14	10.67
	TMW-23-17.31-16.06	16.7	1.7	0.05	2.96
	TMW-23-18.56-17.31	17.9	1.7	0.05	2.79
	TMW-23-19.81-18.56	19.2	0.4	ND	0.66
TMW-24	TMW-24-10.48-9.23	9.9	1.8	0.18	9.08
	TMW-24-11.73-10.48	11.1	1.6	0.10	5.26
	TMW-24-12.98-11.73	12.4	1.5	0.05	2.15
	TMW-24-14.23-12.98	13.6	1.7	0.07	3.64
	TMW-24-15.48-14.23	14.9	1.9	0.28	14.88
	TMW-24-16.73-15.48	16.1	2.2	0.47	23.83
	TMW-24-17.98-16.73	17.4	1.8	0.09	4.65
	TMW-24-19.23-17.98	18.6	1.3	0.02	1.74
MW-46R	MW-46R-17.62-16.37	17.0	2.5	0.76	30.04
	MW-46R-18.87-17.62	18.3	2.4	0.28	11.11
	MW-46R-20.12-18.87	19.5	2.2	0.13	5.48
	MW-46R-21.37-20.12	20.8	1.9	0.07	1.86
TMW-12	TMW-12-13.47-12.22	12.9	2.1	0.33	13.07
	TMW-12-14.72-13.47	14.1	4.3	0.95	41.56
	TMW-12-15.97-14.72	15.4	4.2	0.70	31.25
	TMW-12-17.22-15.97	16.6	2.1	0.12	4.92
	TMW-12-18.47-17.22	17.9	1.8	0.10	3.45
	TMW-12-19.72-18.47	19.1	1.4	ND	0.91
	TMW-12-20.97-19.72	20.4	1.5	ND	0.98
	TMW-12-22.22-20.97	21.6	1.5	ND	1.55
MW-189	MW-189-32.18-30.93	31.6	1.8	ND	0.93
	MW-189-33.43-32.18	32.8	2.1	0.05	2.18
	MW-189-34.68-33.43	34.1	2.2	0.09	4.26
	MW-189-35.93-34.68	35.3	3.1	0.23	9.16
	MW-189-37.18-35.93	36.6	1.6	0.07	2.06
	MW-189-38.43-37.18	37.8	1.5	0.04	1.85
	MW-189-39.68-38.43	39.1	1.5	0.02	1.53
	MW-189-40.93-39.68	40.3	1.6	0.02	1.22
MW-199	MW-199-12.82-11.57	12.2	2.3	0.07	0.44
	MW-199-14.07-12.82	13.5	1.8	ND	0.13
	MW-199-15.32-14.07	14.7	1.8	ND	0.14
	MW-199-16.57-15.32	16.0	1.9	ND	0.20
	MW-199-17.82-16.57	17.2	2.0	ND	0.14
	MW-199-19.07-17.82	18.5	2.0	ND	0.12
	MW-199-20.32-19.07	19.7	2.1	0.01	0.15
	MW-199-21.57-20.32	21.0	2.2	0.03	0.20
MW-204	MW-204-27.99-26.74	27.4	2.4	ND	0.08
	MW-204-29.24-27.99	28.6	3.9	ND	0.15
	MW-204-30.49-29.24	29.9	2.3	ND	0.07
	MW-204-31.74-30.49	31.1	2.4	ND	0.07
	MW-204-32.99-31.74	32.4	2.2	ND	0.05
	MW-204-34.24-32.99	33.6	2.1	ND	0.03
	MW-204-35.49-34.24	34.9	2.0	ND	0.03
	MW-204-36.74-35.49	36.1	1.9	ND	0.06
MW-87	MW-87-18.10-16.85	17.5	4.9	1.91	24.46
	MW-87-19.35-18.10	18.7	4.9	1.69	21.44
	MW-87-20.60-19.35	20.0	4.4	1.24	14.88
	MW-87-21.85-20.60	21.2	4.8	1.45	19.29
	MW-87-23.10-21.85	22.5	5.3	2.92	41.82
	MW-87-24.35-23.10	23.7	4.7	1.95	22.38
	MW-87-25.60-24.35	25.0	5.1	0.11	1.55
	MW-87-26.85-25.60	26.2	4.1	0.08	1.59
MW-185	MW-185-20.34-19.09	19.7	6.7	0.91	13.56
	MW-185-21.59-20.34	21.0	6.0	0.54	8.63
	MW-185-22.84-21.59	22.2	6.1	0.56	8.82
	MW-185-24.09-22.84	23.5	6.4	0.45	7.44
	MW-185-25.34-24.09	24.7	8.1	1.70	24.86
	MW-185-26.59-25.34	26.0	7.5	1.61	25.35
	MW-185-27.84-26.59	27.2	5.6	0.90	14.18
	MW-185-29.09-27.84	28.5	1.6	0.04	0.95
RW-69	RW-69-19.40-18.15	18.8	4.3	0.07	1.21
	RW-69-20.65-19.40	20.0	5.5	0.13	1.97
	RW-69-21.90-20.65	21.3	4.7	0.09	1.46
	RW-69-23.15-21.90	22.5	4.5	0.06	1.24
	RW-69-24.40-23.15	23.8	3.8	ND	0.22
	RW-69-25.65-24.40	25.0	4.1	ND	0.48
	RW-69-26.90-25.65	26.3	3.8	ND	0.21
	RW-69-28.15-26.90	27.5	3.9	ND	0.20
ITMW-5	ITMW-5-23.54-22.29	22.9	3.1	0.15	22.39
	ITMW-5-24.79-23.54	24.2	3.4	0.28	30.27
	ITMW-5-26.04-24.79	25.4	3.5	0.42	33.01
	ITMW-5-27.29-26.04	26.7	3.6	0.54	39.73
	ITMW-5-28.54-27.29	27.9	3.4	0.80	64.08
	ITMW-5-29.79-28.54	29.2	3.7	1.09	108.92
	ITMW-5-31.04-29.79	30.4	3.9	1.52	132.81
	ITMW-5-32.29-31.04	31.7	4.1	2.75	230.82
ITMW-18	ITMW-18-15.84-14.59	15.2	2.3	1.07	17.26
	ITMW-18-17.09-15.84	16.5	2.4	1.54	22.46
	ITMW-18-18.34-17.09	17.7	2.5	1.61	23.89
	ITMW-18-19.59-18.34	19.0	2.3	1.65	26.51
	ITMW-18-20.84-19.59	20.2	2.9	0.88	11.28
	ITMW-18-22.09-20.84	21.5	2.5	0.64	9.18
	ITMW-18-23.34-22.09	22.7	3.8	9.15	122.32
	ITMW-18-24.59-23.34	24.0	4.0	11.83	162.87
	ITMW-18-25.84-24.59	25.2	4.5	12.72	170.84
	ITMW-18-27.09-25.84	26.5	3.9	2.85	44.31
	ITMW-18-28.34-27.09	27.7	3.2	0.99	14.49
	ITMW-18-29.59-28.34	29.0	3.4	0.87	12.12

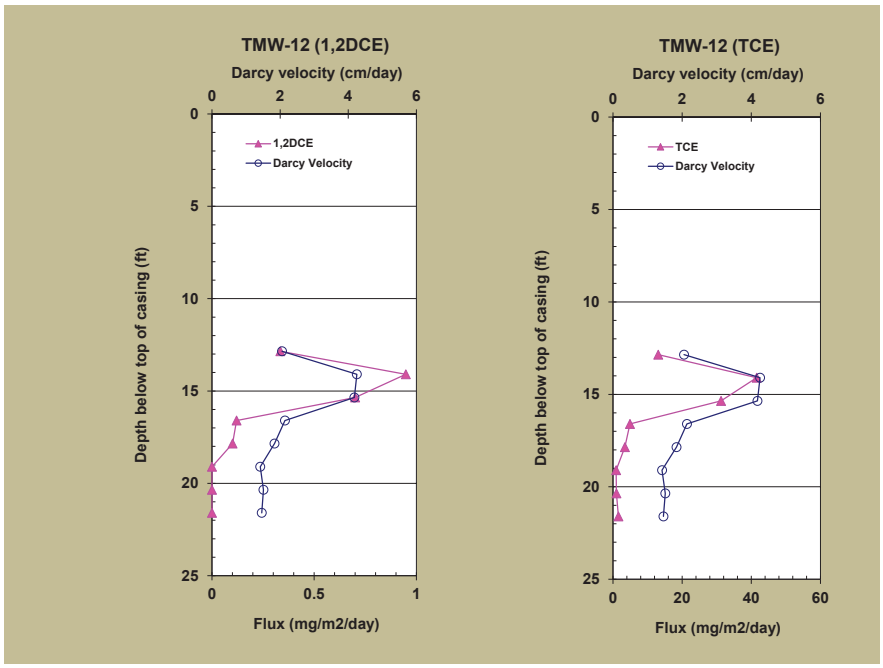
Table2. Summary of flux average contaminant concentration

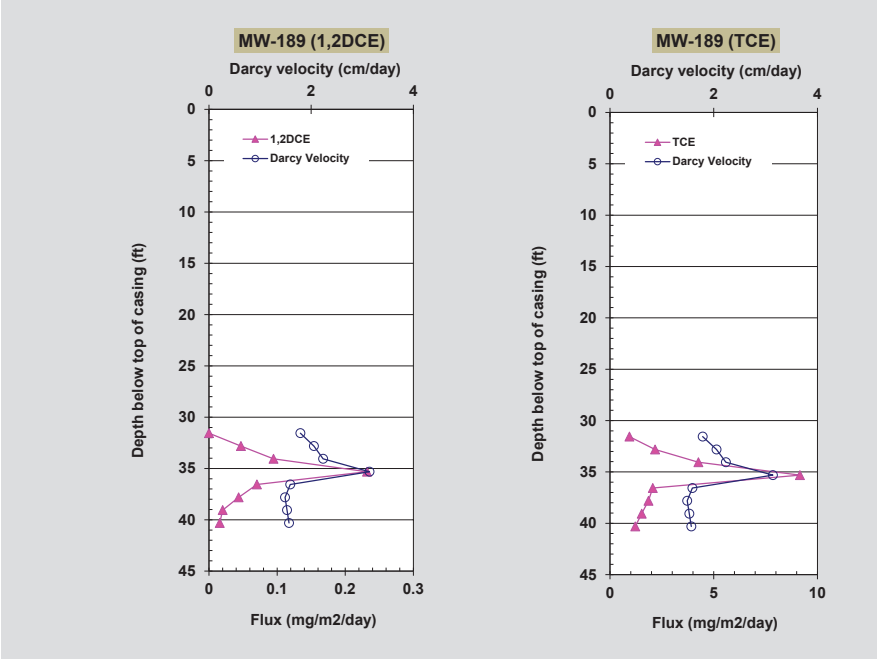
Well_ID	Sample_ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	1,2DCE (ug/L)	TCE (ug/L)
TMW-23	TMW-23-16.06-14.81	15.4	2.0	7	526
	TMW-23-17.31-16.06	16.7	1.7	3	172
	TMW-23-18.56-17.31	17.9	1.7	3	169
	TMW-23-19.81-18.56	19.2	0.4	ND (< 4)	156
TMW-24	TMW-24-10.48-9.23	9.9	1.8	10	498
	TMW-24-11.73-10.48	11.1	1.6	6	327
	TMW-24-12.98-11.73	12.4	1.5	3	143
	TMW-24-14.23-12.98	13.6	1.7	4	218
	TMW-24-15.48-14.23	14.9	1.9	15	799
	TMW-24-16.73-15.48	16.1	2.2	21	1090
	TMW-24-17.98-16.73	17.4	1.8	5	257
	TMW-24-19.23-17.98	18.6	1.3	2	136
MW-46R	MW-46R-17.62-16.37	17.0	2.5	31	1226
	MW-46R-18.87-17.62	18.3	2.4	12	473
	MW-46R-20.12-18.87	19.5	2.2	6	253
	MW-46R-21.37-20.12	20.8	1.9	4	99
TMW-12	TMW-12-13.47-12.22	12.9	2.1	16	636
	TMW-12-14.72-13.47	14.1	4.3	22	977
	TMW-12-15.97-14.72	15.4	4.2	17	748
	TMW-12-17.22-15.97	16.6	2.1	6	230
	TMW-12-18.47-17.22	17.9	1.8	5	188
	TMW-12-19.72-18.47	19.1	1.4	ND (< 1.1)	64
	TMW-12-20.97-19.72	20.4	1.5	ND (< 1.0)	65
	TMW-12-22.22-20.97	21.6	1.5	ND (< 1.2)	106
MW-189	MW-189-32.18-30.93	31.6	1.8	ND (< 0.9)	52
	MW-189-33.43-32.18	32.8	2.1	2	106
	MW-189-34.68-33.43	34.1	2.2	4	191
	MW-189-35.93-34.68	35.3	3.1	7	292
	MW-189-37.18-35.93	36.6	1.6	4	130
	MW-189-38.43-37.18	37.8	1.5	3	124
	MW-189-39.68-38.43	39.1	1.5	1	100
	MW-189-40.93-39.68	40.3	1.6	1	78
MW-199	MW-199-12.82-11.57	12.2	2.3	3	19
	MW-199-14.07-12.82	13.5	1.8	ND (< 0.9)	7
	MW-199-15.32-14.07	14.7	1.8	ND (< 1.0)	8
	MW-199-16.57-15.32	16.0	1.9	ND (< 0.8)	10
	MW-199-17.82-16.57	17.2	2.0	ND (< 0.8)	7
	MW-199-19.07-17.82	18.5	2.0	ND (< 0.8)	6
	MW-199-20.32-19.07	19.7	2.1	1	7
	MW-199-21.57-20.32	21.0	2.2	1	9
MW-204	MW-204-27.99-26.74	27.4	2.4	ND (< 0.7)	3
	MW-204-29.24-27.99	28.6	3.9	ND (< 0.4)	4
	MW-204-30.49-29.24	29.9	2.3	ND (< 0.7)	3
	MW-204-31.74-30.49	31.1	2.4	ND (< 0.7)	3
	MW-204-32.99-31.74	32.4	2.2	ND (< 0.7)	2
	MW-204-34.24-32.99	33.6	2.1	ND (< 0.8)	2
	MW-204-35.49-34.24	34.9	2.0	ND (< 0.8)	2
	MW-204-36.74-35.49	36.1	1.9	ND (< 0.8)	3
MW-87	MW-87-18.10-16.85	17.5	4.9	39	499
	MW-87-19.35-18.10	18.7	4.9	34	436
	MW-87-20.60-19.35	20.0	4.4	28	340
	MW-87-21.85-20.60	21.2	4.8	30	398
	MW-87-23.10-21.85	22.5	5.3	55	782
	MW-87-24.35-23.10	23.7	4.7	41	474
	MW-87-25.60-24.35	25.0	5.1	2	30
	MW-87-26.85-25.60	26.2	4.1	2	39
MW-185	MW-185-20.34-19.09	19.7	6.7	14	203
	MW-185-21.59-20.34	21.0	6.0	9	144
	MW-185-22.84-21.59	22.2	6.1	9	145
	MW-185-24.09-22.84	23.5	6.4	7	116
	MW-185-25.34-24.09	24.7	8.1	21	308
	MW-185-26.59-25.34	26.0	7.5	22	340
	MW-185-27.84-26.59	27.2	5.6	16	255
	MW-185-29.09-27.84	28.5	1.6	3	59
RW-69	RW-69-19.40-18.15	18.8	4.3	2	28
	RW-69-20.65-19.40	20.0	5.5	2	36
	RW-69-21.90-20.65	21.3	4.7	2	31
	RW-69-23.15-21.90	22.5	4.5	1	27
	RW-69-24.40-23.15	23.8	3.8	ND (< 0.8)	6
	RW-69-25.65-24.40	25.0	4.1	ND (< 0.7)	12
	RW-69-26.90-25.65	26.3	3.8	ND (< 0.8)	6
	RW-69-28.15-26.90	27.5	3.9	ND (< 0.8)	5
ITMW-5	ITMW-5-23.54-22.29	22.9	3.1	5	713
	ITMW-5-24.79-23.54	24.2	3.4	8	884
	ITMW-5-26.04-24.79	25.4	3.5	12	948
	ITMW-5-27.29-26.04	26.7	3.6	15	1100
	ITMW-5-28.54-27.29	27.9	3.4	24	1886
	ITMW-5-29.79-28.54	29.2	3.7	29	2911
	ITMW-5-31.04-29.79	30.4	3.9	40	3449
	ITMW-5-32.29-31.04	31.7	4.1	67	5664
ITMW-18	ITMW-18-15.84-14.59	15.2	2.3	46	741
	ITMW-18-17.09-15.84	16.5	2.4	63	919
	ITMW-18-18.34-17.09	17.7	2.5	63	937
	ITMW-18-19.59-18.34	19.0	2.3	71	1139
	ITMW-18-20.84-19.59	20.2	2.9	30	387
	ITMW-18-22.09-20.84	21.5	2.5	25	364
	ITMW-18-23.34-22.09	22.7	3.8	243	3244
	ITMW-18-24.59-23.34	24.0	4.0	298	4105
	ITMW-18-25.84-24.59	25.2	4.5	286	3837
	ITMW-18-27.09-25.84	26.5	3.9	73	1129
	ITMW-18-28.34-27.09	27.7	3.2	31	449
	ITMW-18-29.59-28.34	29.0	3.4	25	351

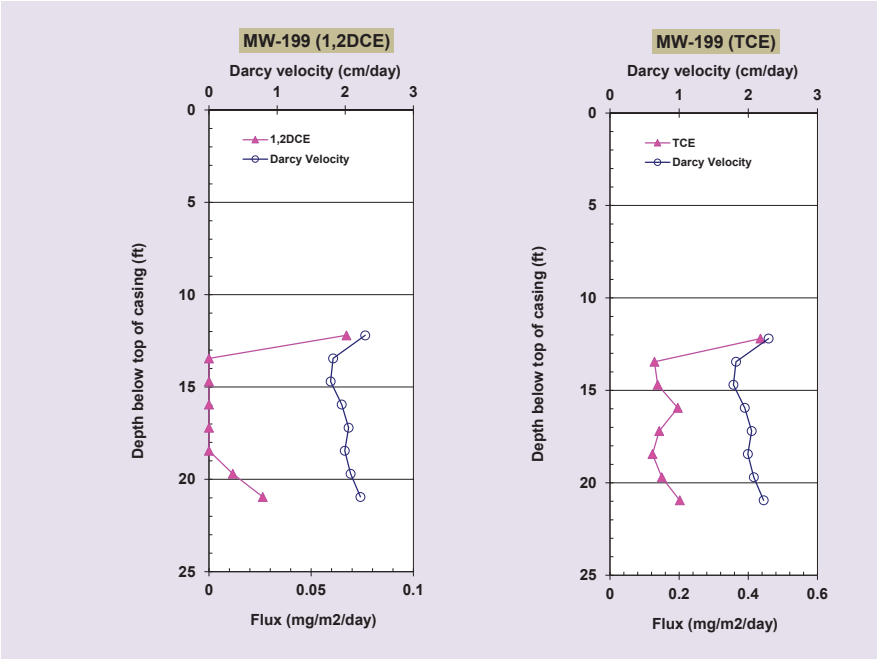

TMW-23 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
TMW-23 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)

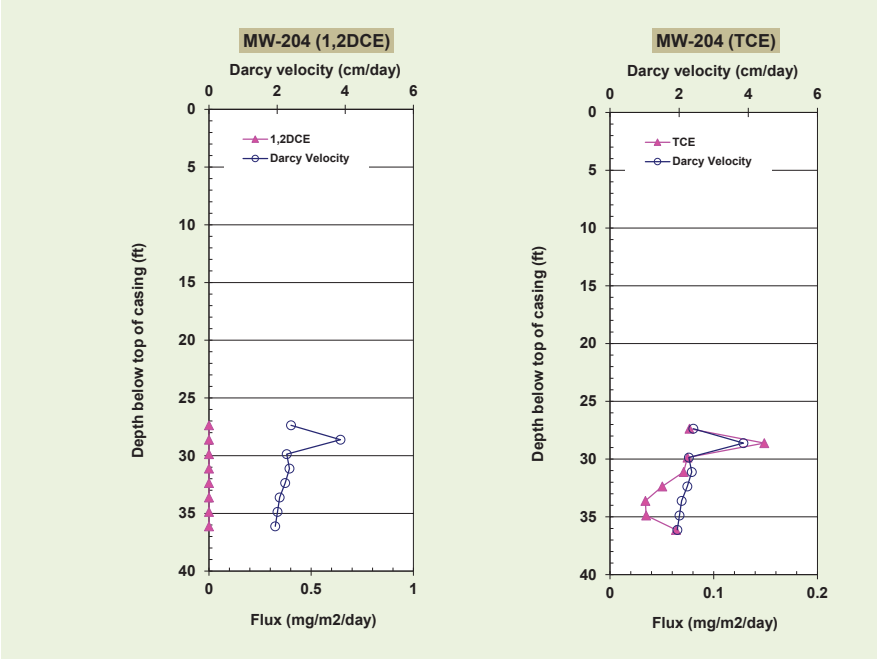

TMW-24 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
TMW-24 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)

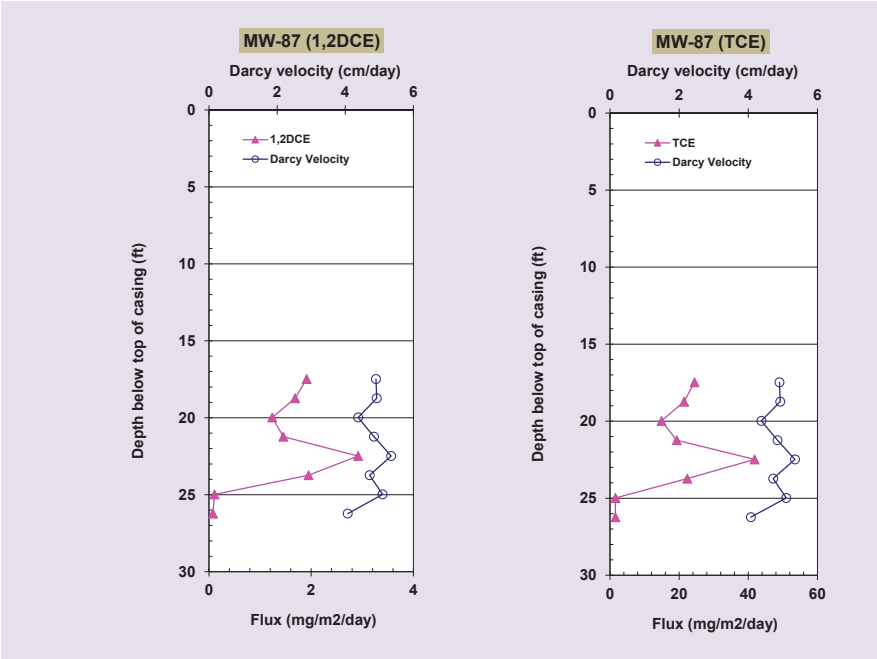

MW-46R (1,2DCE)
Darcy velocity (cm/day)
0
1
2
3
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
0
0.5
1
Flux (mg/m2/day)
MW-46R (TCE)
Darcy velocity (cm/day)
0
1
2
3
TCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
0
20
40
Flux (mg/m2/day)

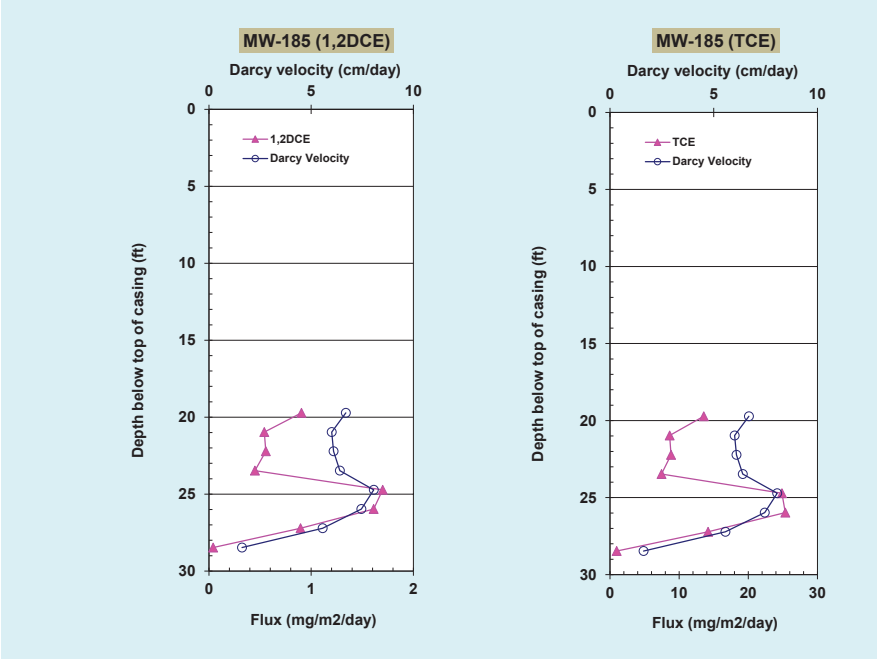

TMW-12 (1,2DCE)
Darcy velocity (cm/day)
0
2
4
6
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
0
0.5
1
Flux (mg/m2/day)
TMW-12 (TCE)
Darcy velocity (cm/day)
0
2
4
6
TCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
0
20
40
60
Flux (mg/m2/day)

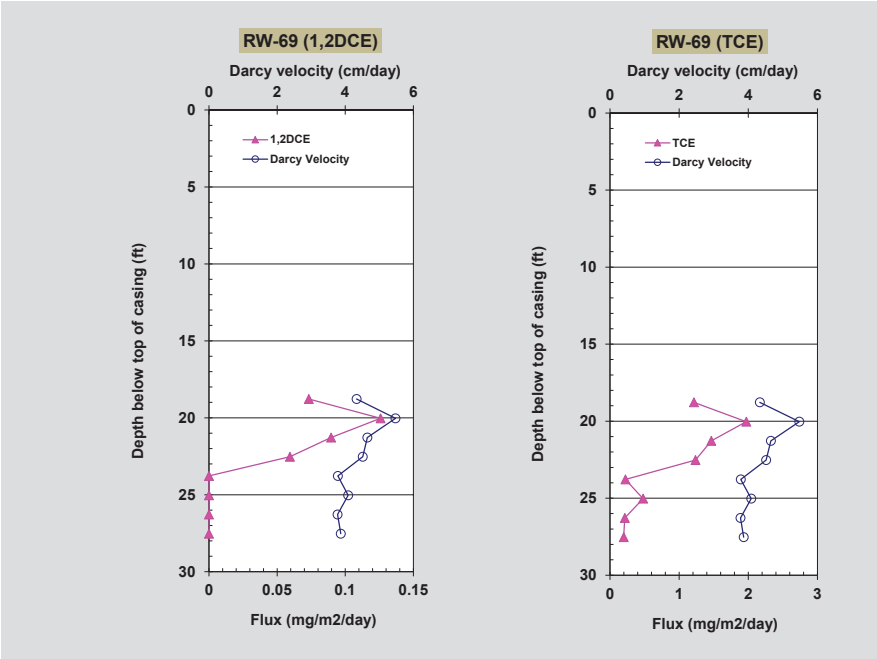

MW-189 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
MW-189 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)

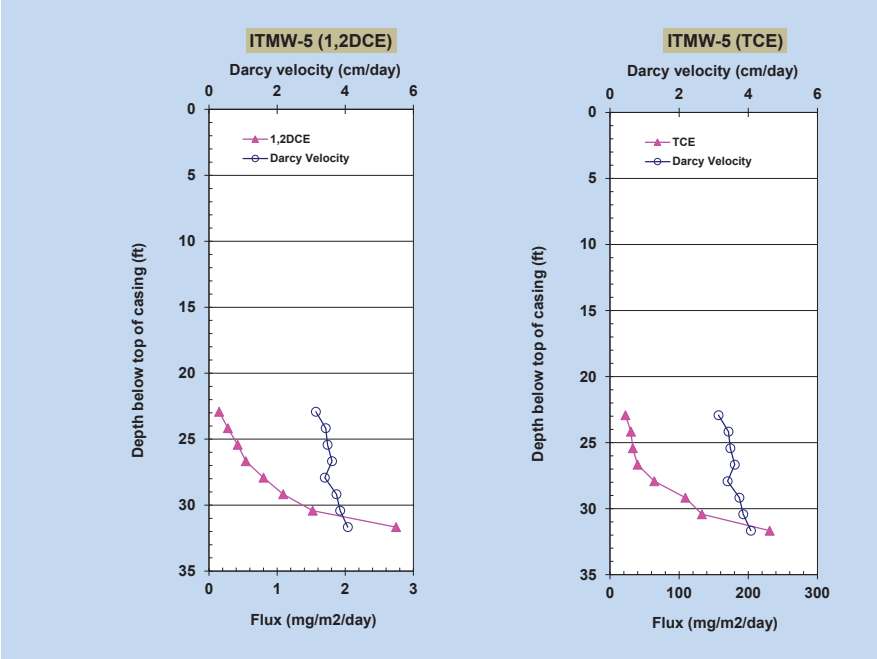

MW-199 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
MW-199 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)


MW-204 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
MW-204 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)


MW-87 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
MW-87 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)


MW-185 (1,2DCE)
Darcy velocity (cm/day)
0
5
10
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
30
0
1
2
Flux (mg/m2/day)
MW-185 (TCE)
Darcy velocity (cm/day)
0
5
10
TCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
30
0
10
20
30
Flux (mg/m2/day)


RW-69 (1,2DCE)
Darcy velocity (cm/day)
0
2
4
6
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
30
0
0.05
0.1
0.15
Flux (mg/m2/day)
RW-69 (TCE)
Darcy velocity (cm/day)
0
2
4
6
TCE
Darcy Velocity
Depth below top of casing (ft)
0
5
10
15
20
25
30
0
1
2
3
Flux (mg/m2/day)


ITMW-5 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
ITMW-5 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)

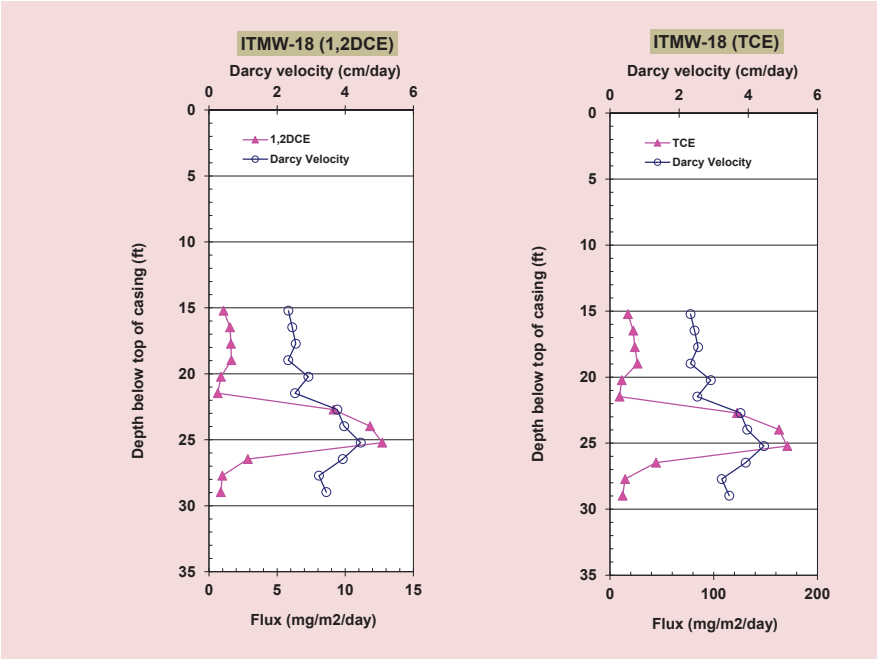

ITMW-18 (1,2DCE)
Darcy velocity (cm/day)
1,2DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)
ITMW-18 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m2/day)

Table 3. Mass discharge per unit width for aquifer of each well

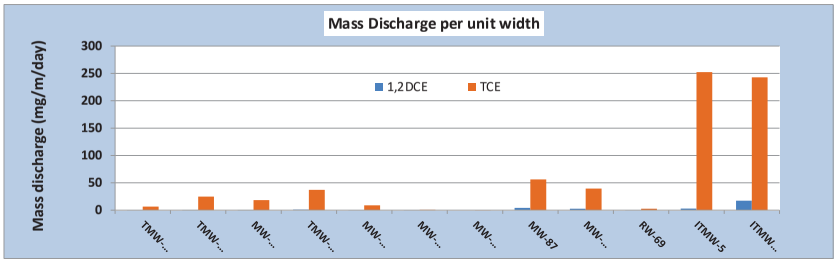
Well	Darcy Velocity (cm/day)	1,2DCE Discharge (mg/m/day)	TCE Discharge (mg/m/day)
TMW-23	1.5	0.09	6.5
TMW-24	1.7	0.48	24.9
MW-46R	2.2	0.48	18.5
TMW-12	2.4	0.84	37.2
MW-189	1.9	0.20	8.8
MW-199	2.0	0.04	0.58
MW-204	2.4	0.00	0.21
MW-87	4.8	4.3	56.2
MW-185	6.0	2.6	39.5
RW-69	4.3	0.13	2.7
ITMW-5	3.6	2.9	252.2
ITMW-18	3.2	17.4	242.9

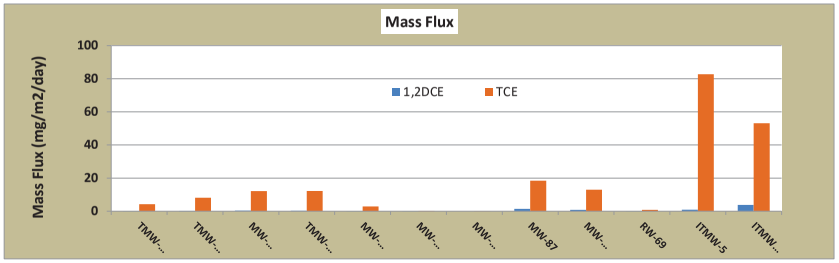
Table 4. Well average values of mass flux based on PFMs

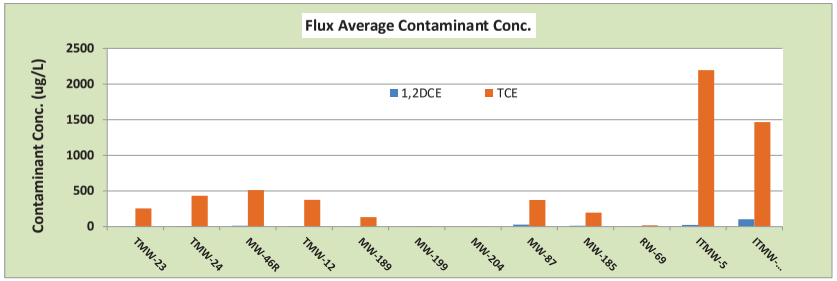
Well	Darcy Velocity (cm/day)	1,2DCE flux (mg/m^2/day)	TCE flux (mg/m^2/day)
TMW-23	1.5	0.06	4.3
TMW-24	1.7	0.16	8.2
MW-46R	2.2	0.31	12.1
TMW-12	2.4	0.28	12.2
MW-189	1.9	0.07	2.9
MW-199	2.0	0.01	0.19
MW-204	2.4	0.00	0.07
MW-87	4.8	1.4	18.4
MW-185	6.0	0.84	13.0
RW-69	4.3	0.04	0.87
ITMW-5	3.6	0.94	82.8
ITMW-18	3.2	3.8	53.1

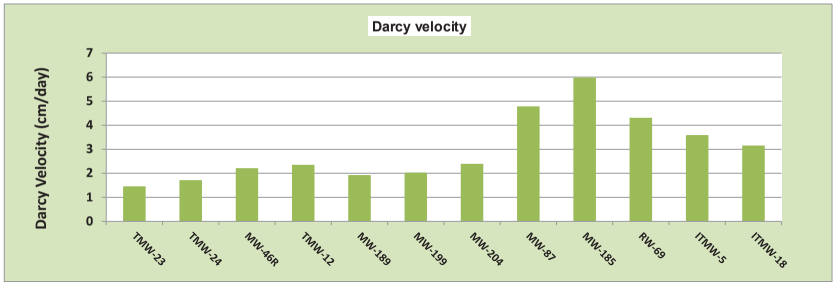
Table 5. Flux average contaminant concentration on PFMs

Well	Darcy Velocity (cm/day)	1,2DCE (ug/L)	TCE (ug/L)
TMW-23	1.5	3	256
TMW-24	1.7	8	434
MW-46R	2.2	13	513
TMW-12	2.4	8	377
MW-189	1.9	3	134
MW-199	2.0	1	9
MW-204	2.4	0	3
MW-87	4.8	29	375
MW-185	6.0	13	196
RW-69	4.3	1	19
ITMW-5	3.6	25	2195
ITMW-18	3.2	104	1467



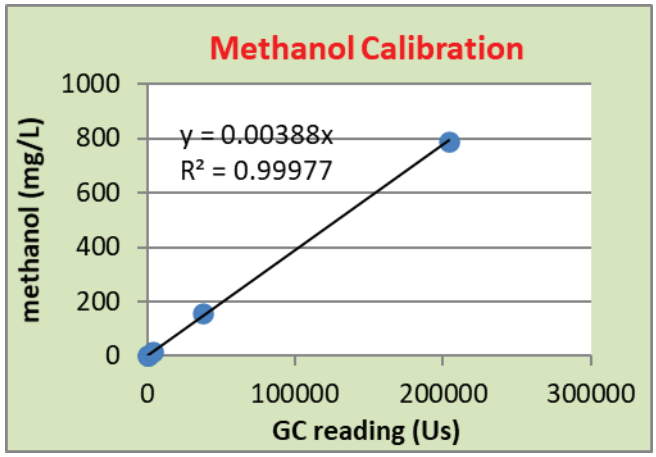


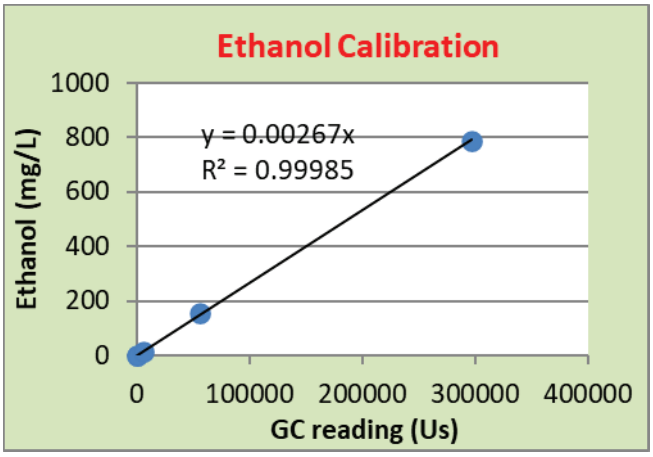


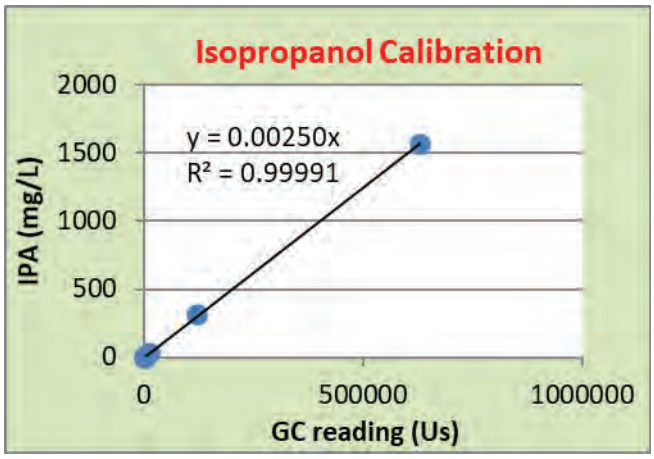


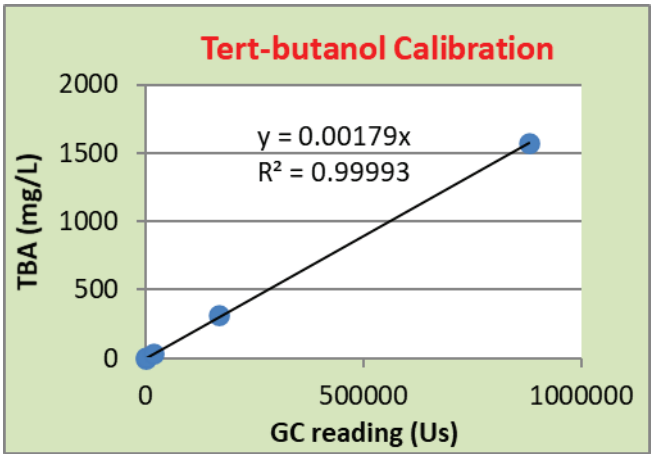
QA/QC Report

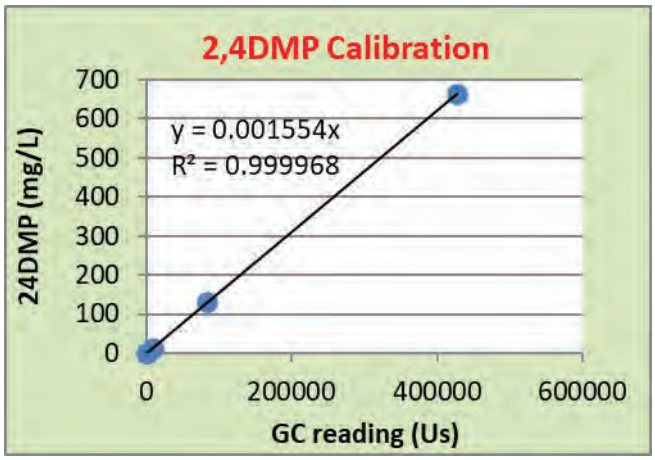
Tracers Calibration with GC FID



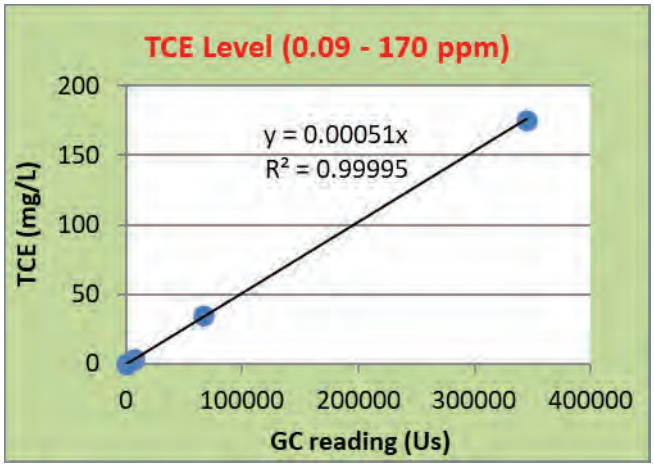


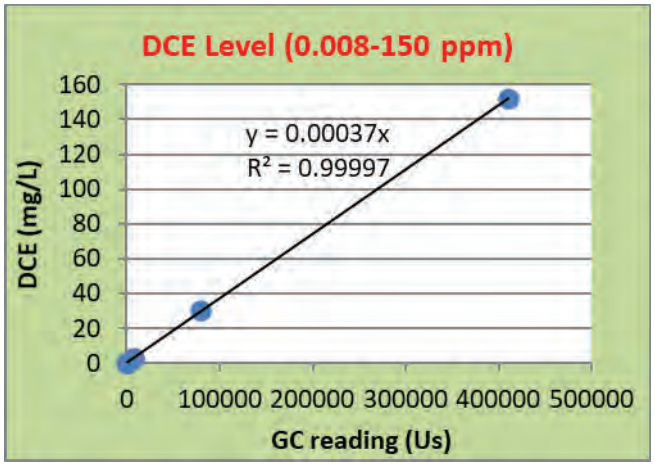




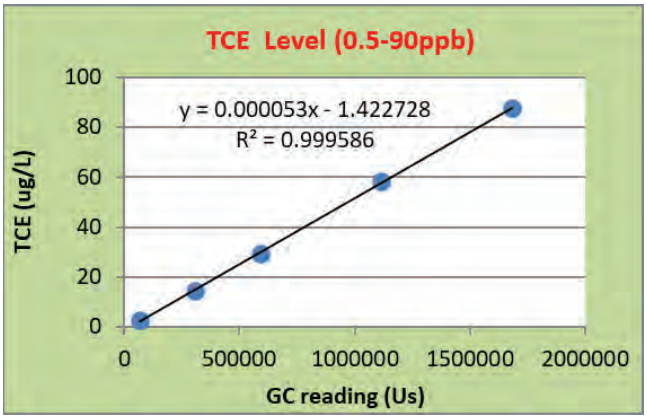


TCE and DCE Calibration (high levels) with GC-FID





TCE Calibration (Low levels) with GC-ECD



Matrix Blank and Method Blank (Tracers)

GC-FID

	MeOH (mg/L)	EtOH mg/L	IPA mg/L	TBA mg/L	24DMP mg/L
Matrix Blank-prepared by the addition of 20mL of extraction solvent into 15g of clean sorbent (GAC)					
Matrix Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Matrix Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Matrix Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Matrix Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Matrix Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Matrix Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Method/System Blank- solvent used for sample extraction					
Method Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Method Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Method Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Method Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)
Method Blank	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)	ND (<1 mg/L)

Matrix Blank and Method Blank (Contaminants)

GC-FID

	TCE mg/L	1,2DCE mg/L	VC mg/L
Matrix Blank-prepared by the addition of 20mL of extraction solvent into 15g of clean sorbent (GAC)			
Matrix Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Matrix Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Matrix Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Matrix Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Matrix Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Matrix Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Method/System Blank- solvent used for sample extraction			
Method Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Method Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Method Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Method Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)
Method Blank	ND(<0.02mg/L)	ND(<0.01mg/L)	ND(<0.05mg/L)

Matrix Blank and Method Blank (Contaminants)

GC-ECD

	TCE mg/L
Matrix Blank-prepared by the addition of 20mL of extraction solvent into 15g of clean sorbent (GAC)	
Matrix Blank	ND(<0.001mg/L)
Matrix Blank	ND(<0.001mg/L)
Method/System Blank- solvent used for sample extraction	
Method Blank	ND(<0.001mg/L)
Method Blank	ND(<0.001mg/L)

Duplicate samples analyzed after every 20 samples (Tracers)-GC FID

	MeOH (mg/L)	EtOH mg/L	IPA mg/L	TBA mg/L	24DMP mg/L
TMW-12-15.97-14.72	0.78	61	875	1476	833
TMW-12-15.97-14.72(DUP)	0.68	60.56	869.27	1469.45	831.38
RPD (%)	-25.9%	-2.7%	-1.3%	-0.9%	-0.4%
MW-199-20.32-19.07	30.0	115	1198	1824	885
MW-199-20.32-19.07(DUP)	29.4	114.9	1181.6	1799.7	870
RPD (%)	-3.5%	-0.7%	-2.7%	-2.7%	-3.4%
MW-185-22.84-21.59	0	72	776	1577	899
MW-185-22.84-21.59(DUP)	0	72	781	1588	906
RPD (%)		1.9%	1.3%	1.4%	1.7%
ITMW-5-31.04-29.79	3	125	1015	1717	920
ITMW-5-31.04-29.79(DUP)	3	123	1005	1703	912
RPD (%)	5.2%	-3.3%	-1.9%	-1.7%	-1.8%
ITMW-18-28.34-27.09	8.2	157	1100	1756	891
ITMW-18-28.34-27.09(DUP)	8.2	156	1089	1738	875
RPD (%)	-0.2%	-1.7%	-2.0%	-2.1%	-3.6%

Duplicate samples analyzed after every 20 samples (Contaminants)-GC FID

	DCE (mg/L)	TCE (mg/L)
TMW-12-17.22-15.97	0.08	3.22
TMW-12-17.22-15.97(DUP)	0.08	3.33
RPD (%)	11.4%	6.5%
MW-199-21.57-20.32	0.02	
MW-199-21.57-20.32(DUP)	0.02	
RPD (%)	5.8%	
MW-185-24.09-22.84	0.28	4.64
MW-185-24.09-22.84(DUP)	0.29	4.84
RPD (%)	6.5%	-8.3%
ITMW-5-32.29-31.04	0.88	74.34
ITMW-5-32.29-31.04(DUP)	0.88	76.95
RPD (%)	-0.7%	-6.9%
ITMW-18-29.59-28.34	0.280	3.89
ITMW-18-29.59-28.34(DUP)	0.293	4.25
RPD (%)	9.4%	17.4%

Duplicate samples analyzed after every 20 samples (Contaminants)-GC ECD

	TCE (mg/L)
MW-199-21.57-20.32	0.1089
MW-199-21.57-20.32(DUP)	0.1054
RPD (%)	-6.6%
RW-69-25.65-24.40	0.1380
RW-69-25.65-24.40(DUP)	0.1415
RPD (%)	5.0%

Field duplicate samples per every 20 samples (Darcy and Mass Flux)

	Darcy (cm/day)	DCE Flux (mg/m^2/day)	TCE Flux (mg/m^2/day)
TMW-12-17.22-15.97		0.12	4.92
TMW-12-17.22-15.97(DUP)		0.13	5.08
TMW-12-15.97-14.72	4.18		
TMW-12-15.97-14.72(DUP)	4.22		
RPD (%)	1.9%	11.4%	6.5%
MW-199-21.57-20.32		0.03	0.20
MW-199-21.57-20.32(DUP)		0.03	0.19
MW-199-20.32-19.07	2.08		
MW-199-20.32-19.07(DUP)	2.06		
RPD (%)	-1.9%	-5.8%	-7.3%
MW-185-24.09-22.84		0.45	7.44
MW-185-24.09-22.84(DUP)		0.46	7.76
MW-185-22.84-21.59	6.09		
MW-185-22.84-21.59(DUP)	6.11		
RPD (%)	0.7%	6.5%	8.3%
ITMW-5-32.29-31.04		2.75	230.82
ITMW-5-32.29-31.04(DUP)		2.74	238.92
ITMW-5-31.04-29.79	3.85		
ITMW-5-31.04-29.79(DUP)	3.87		
RPD (%)	1.0%	-0.7%	6.9%
ITMW-18-28.34-27.09		0.87	12.12
ITMW-18-28.34-27.09(DUP)		0.91	13.22
ITMW-18-28.34-27.09	3.23		
ITMW-18-28.34-27.09(DUP)	3.20		
RPD (%)	-1.9%	9.4%	17.4%

Blank Spike (tracers)-GC FID

	Methanol (mg/L)	Ethanol (mg/L)	Isopropanol (mg/L)	Tert-butanol (mg/L)	24DMP (mg/L)
Spike1	9.5	9.5	21.0	21.0	9.0
Recovery	9.3	9.2	19.5	20.8	8.5
Recovery %	97.6	97.2	92.9	99.1	94.7
Spike2	9.5	9.5	21.0	21.0	9.0
Recovery	9.3	9.6	20.6	21.6	9.2
Recovery %	98.3	100.8	98.0	103.0	101.8
Spike3	9.5	9.5	21.0	21.0	9.0
Recovery	8.6	9.4	20.0	21.2	9.0
Recovery %	90.5	98.6	95.5	101.1	99.7
Spike3	9.5	9.5	21.0	21.0	9.0
Recovery	9.3	9.9	20.8	22.0	9.4
Recovery %	97.7	104.0	99.1	104.6	104.7
Spike4	9.5	9.5	21.0	21.0	9.0
Recovery	9.6	9.8	20.6	21.3	8.7
Recovery %	101.3	103.1	97.9	101.2	97.1

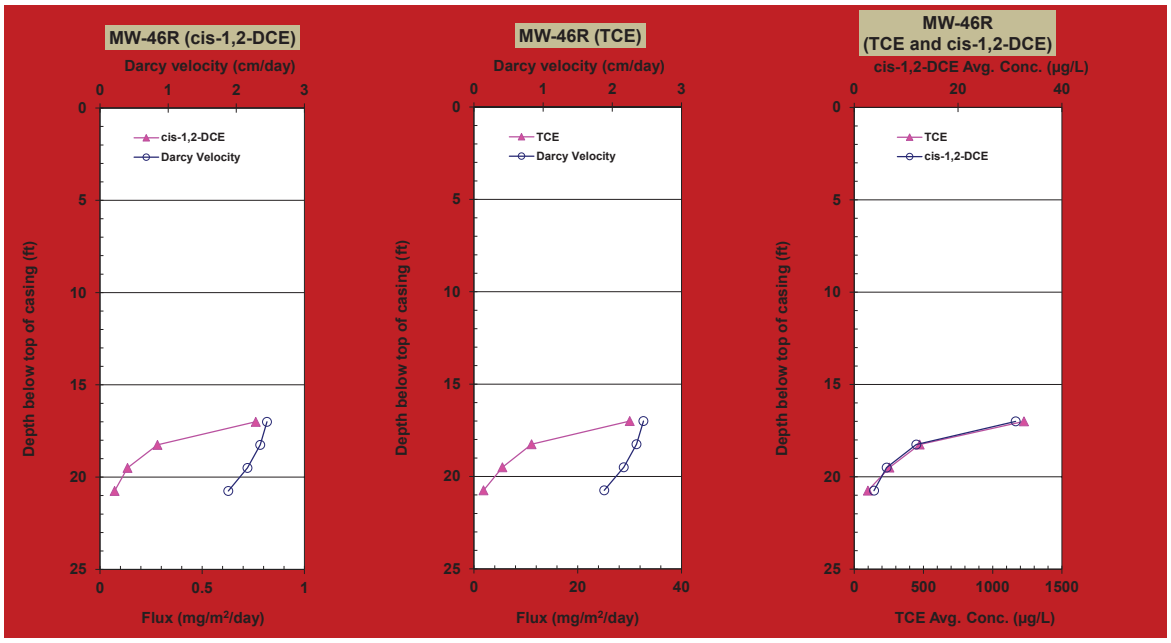
Blank Spike (contaminants)-GC FID

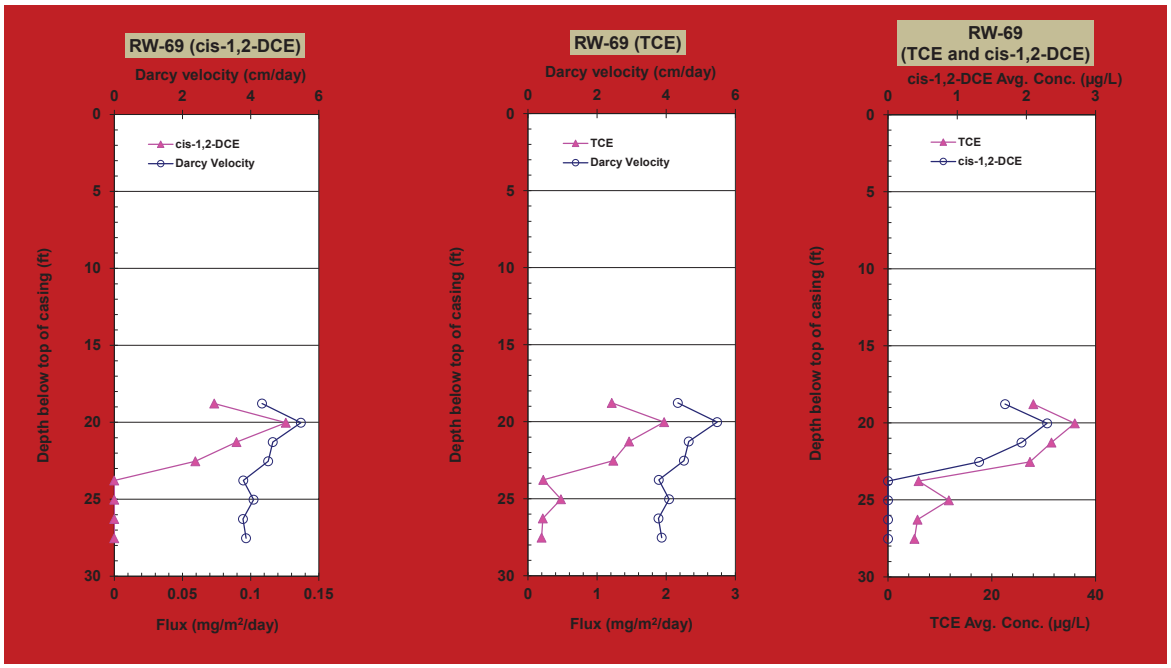
	TCE mg/L	1,2DCE mg/L
Spike1	3.0	2.0
Recovery	3.0	2.1
Recovery %	100.6	103.3
Spike2	3.0	2.0
Recovery	3.10	2.14
Recovery %	103.5	107.1
Spike3	3.0	2.0
Recovery	2.92	1.99
Recovery %	97.4	99.5
Spike3	3.0	2.0
Recovery	3.0	2.1
Recovery %	101.0	105.2
Spike4	3.0	2.0
Recovery	3.1	2.1
Recovery %	103.3	106.4

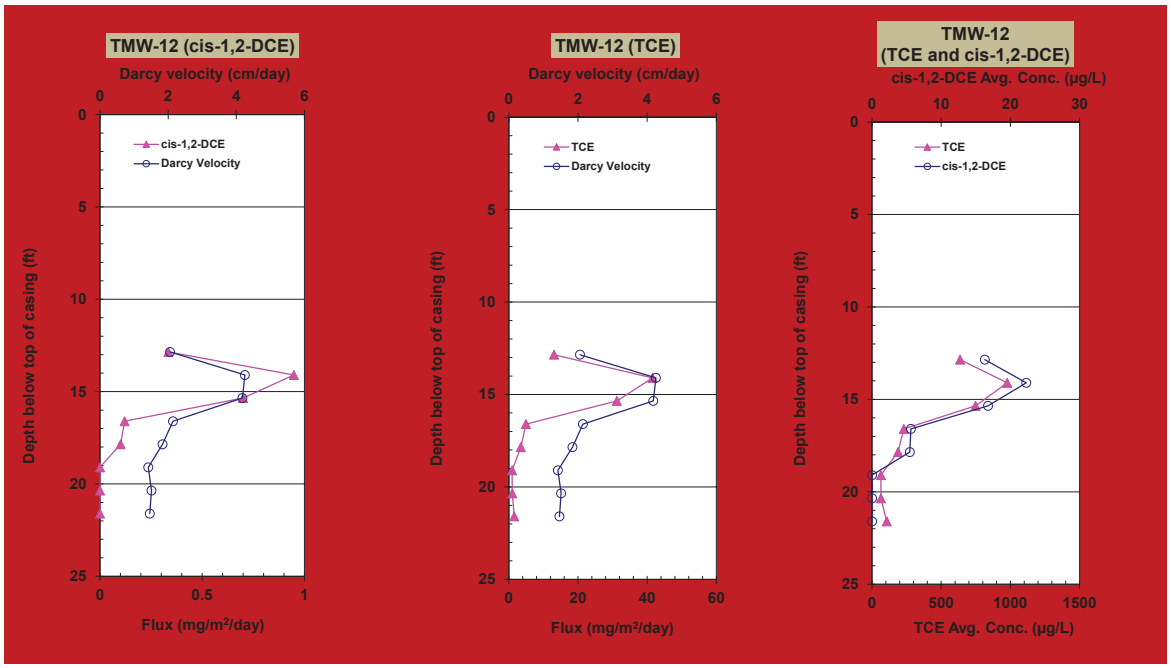
Blank Spike (contaminants)-GC ECD

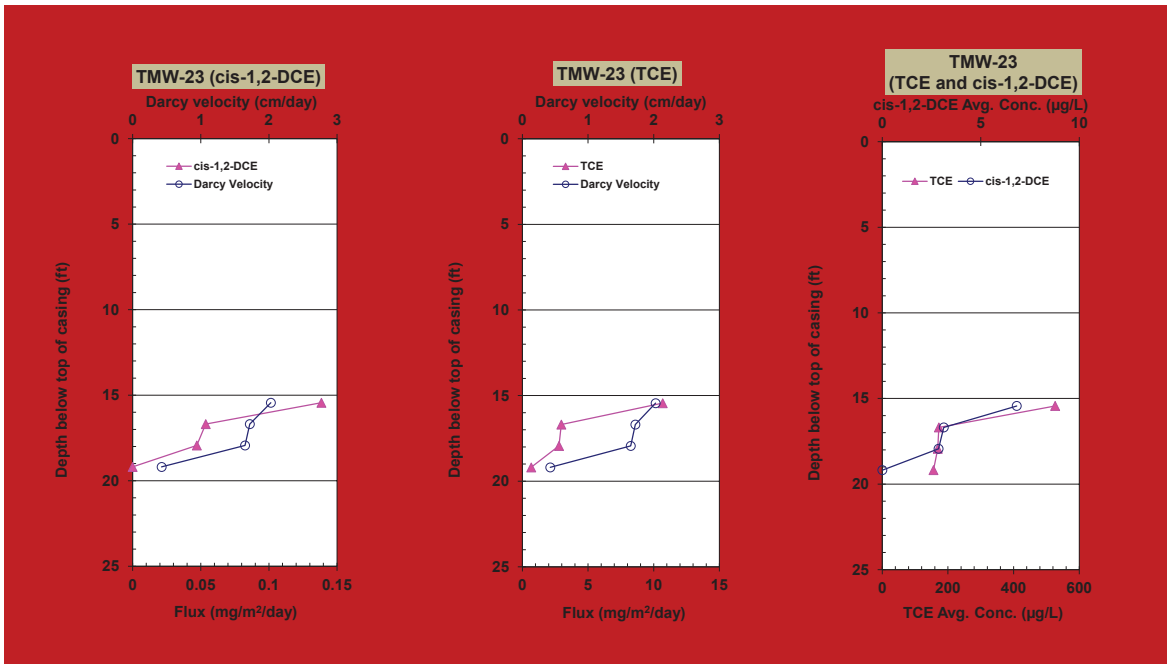
	TCE mg/L
Spike1	0.070
Recovery	0.075
Recovery %	106.7
Spike2	0.070
Recovery	0.069
Recovery %	99.2

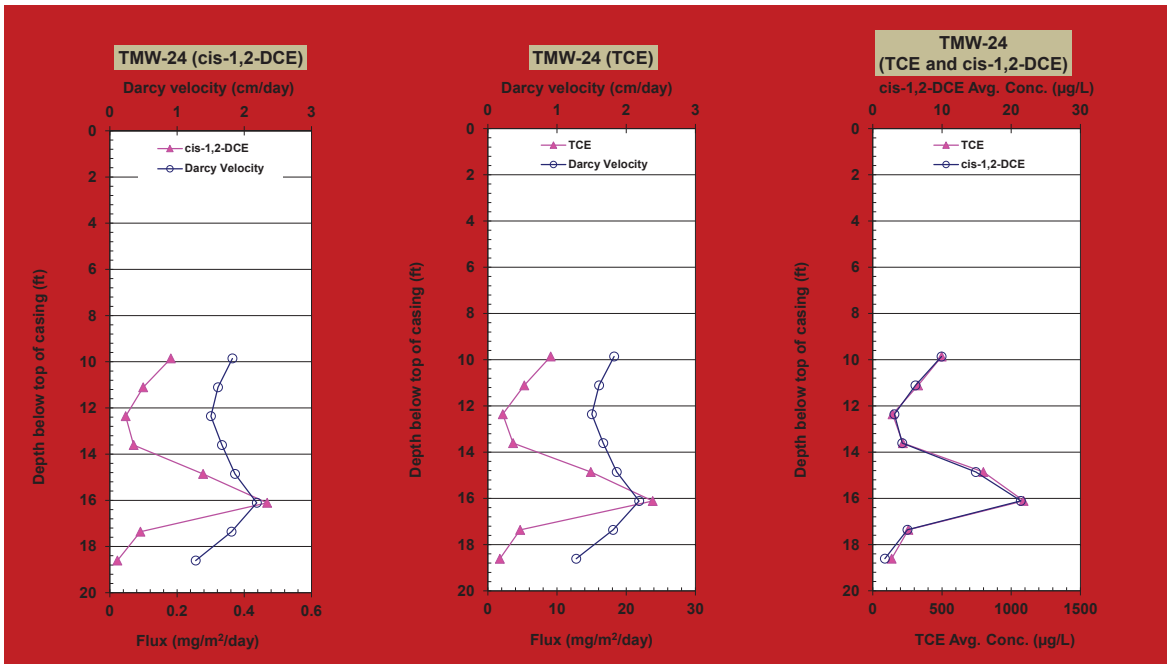
Appendix B
PFM Graphs

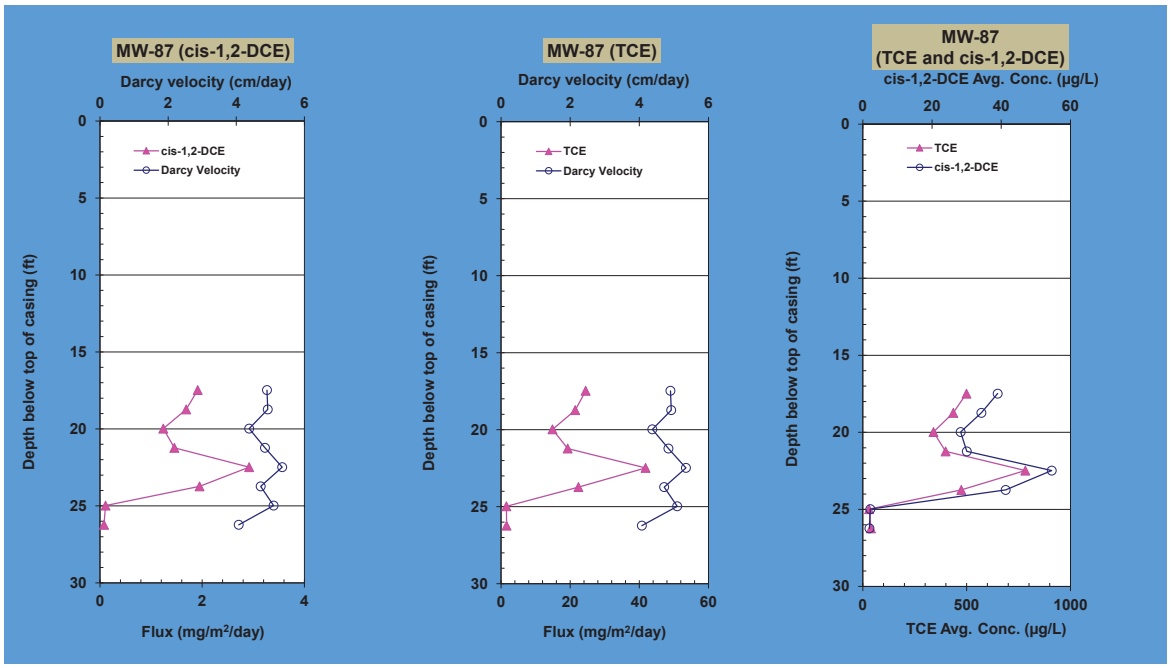

MW-46R (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-46R (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-46R
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

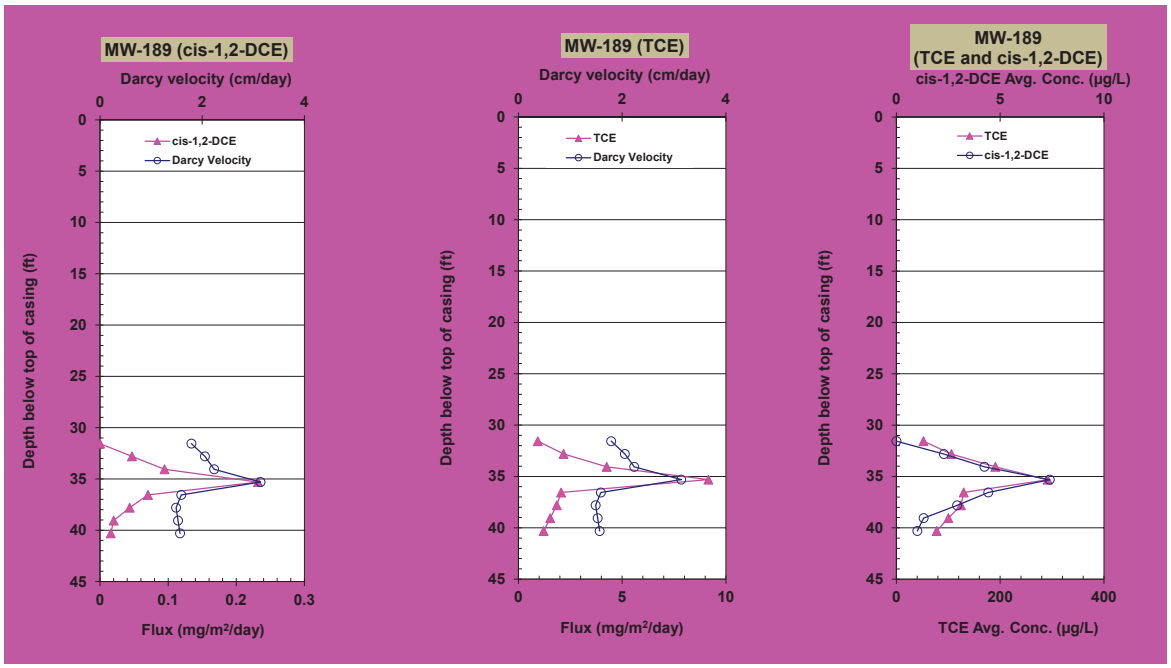

RW-69 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
RW-69 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
RW-69
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

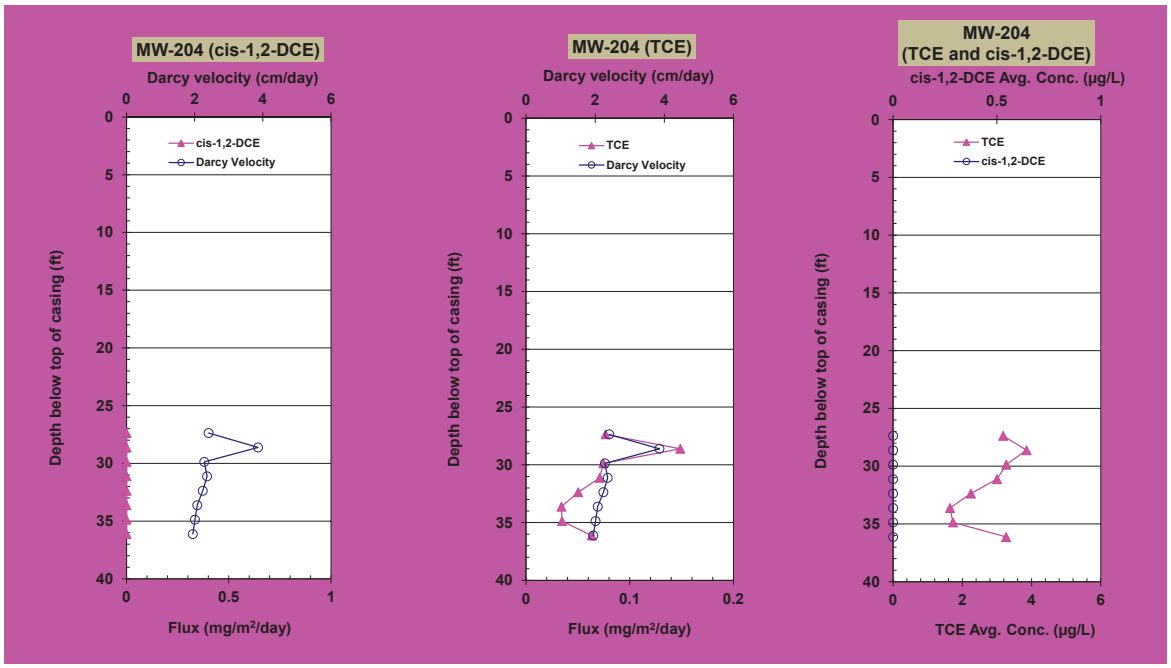

TMW-12 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-12 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-12
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

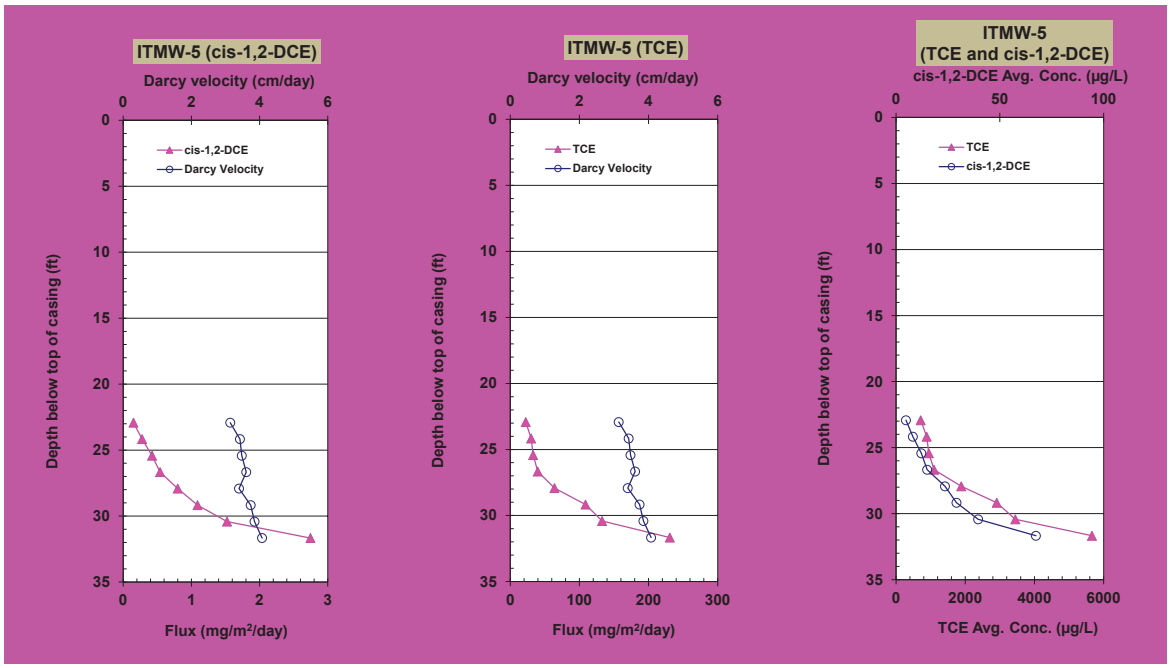

TMW-23 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-23 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-23
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

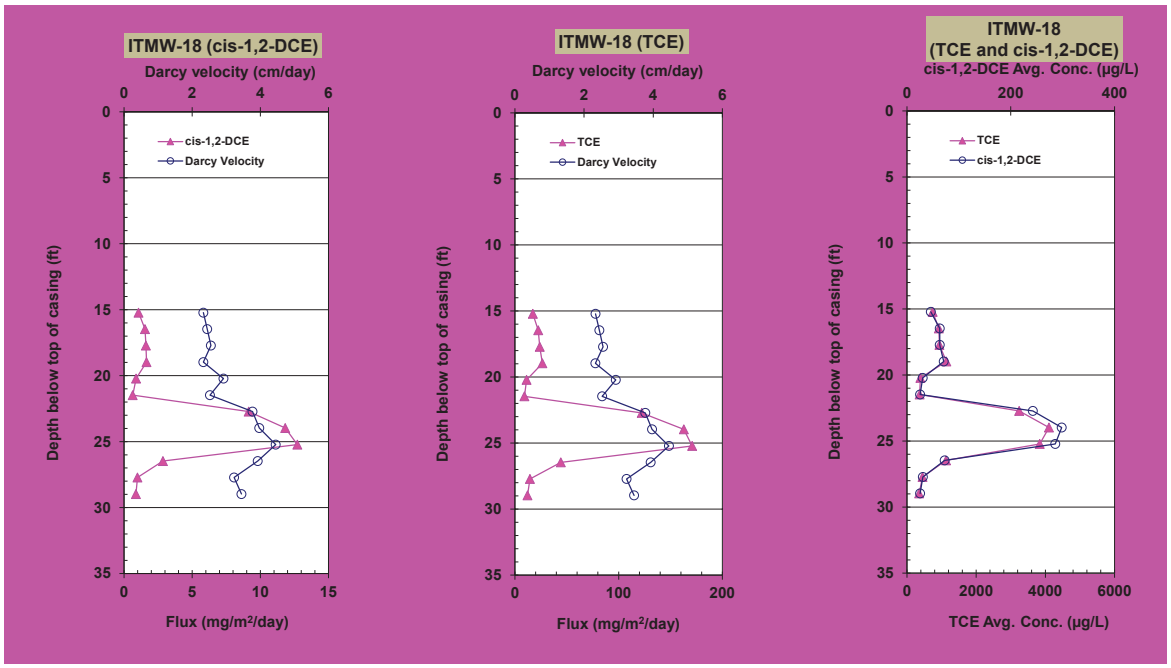

TMW-24 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-24 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-24
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

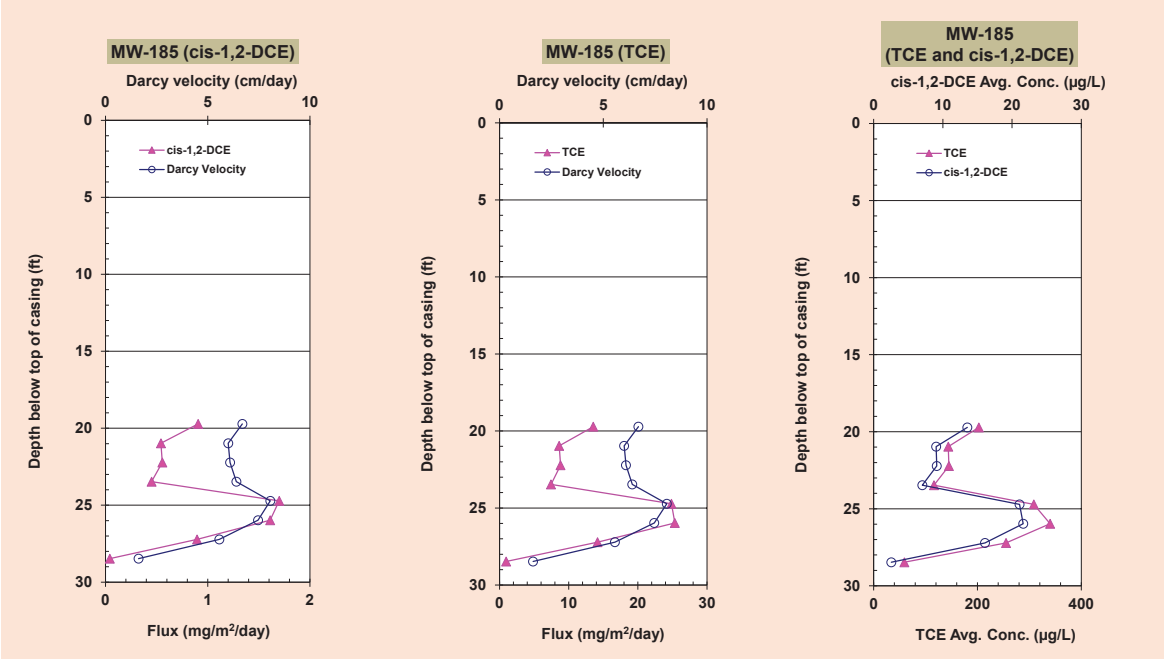

MW-87 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-87 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-87
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

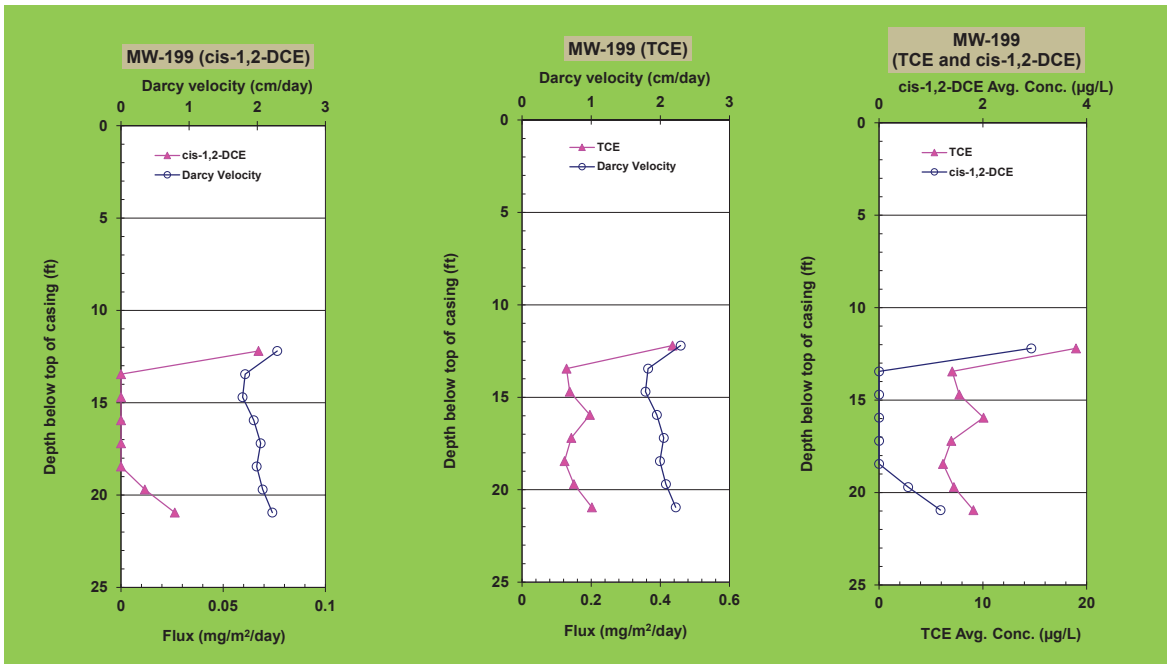

MW-189 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-189 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-189
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


MW-204 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-204 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-204
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

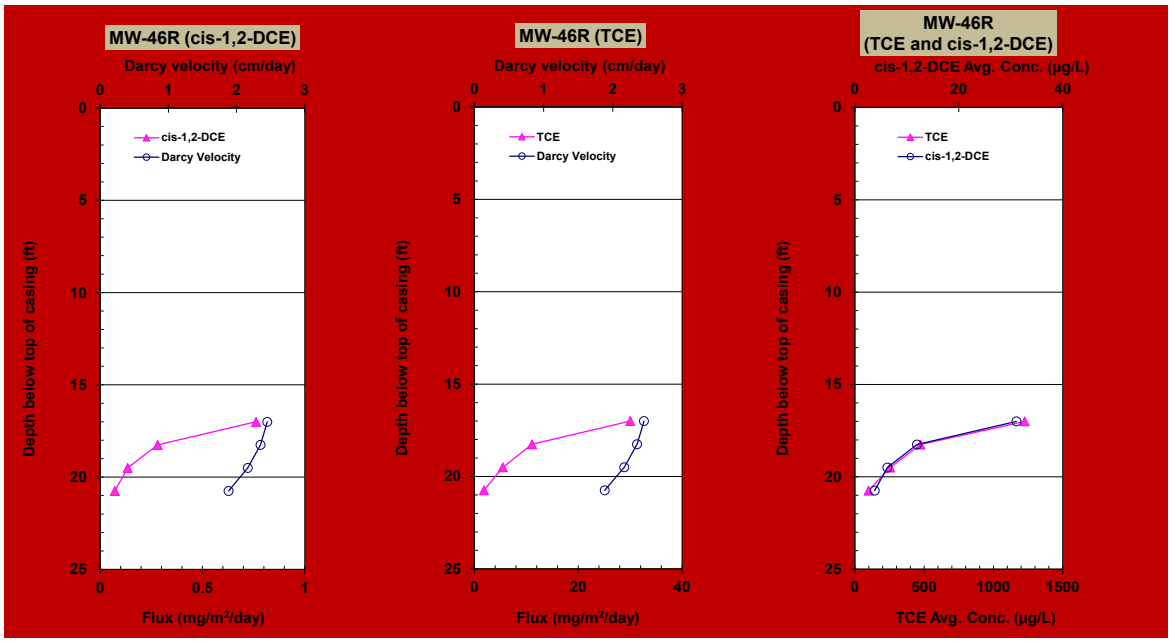

ITMW-5 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-5 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-5
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

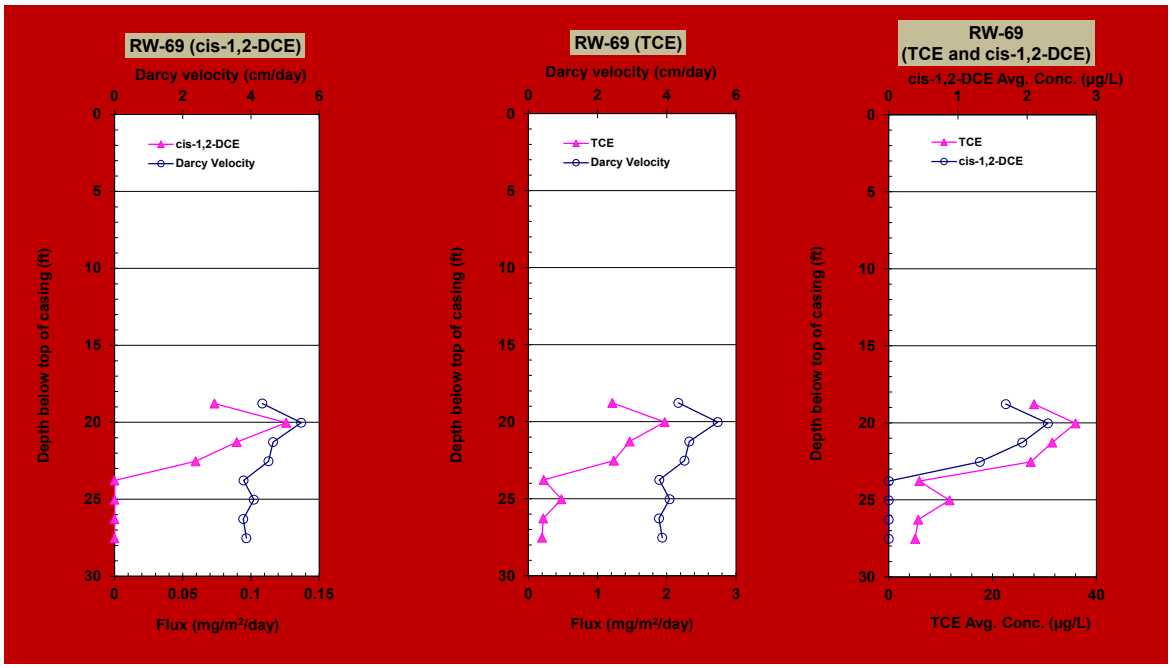

ITMW-18 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-18 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-18
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

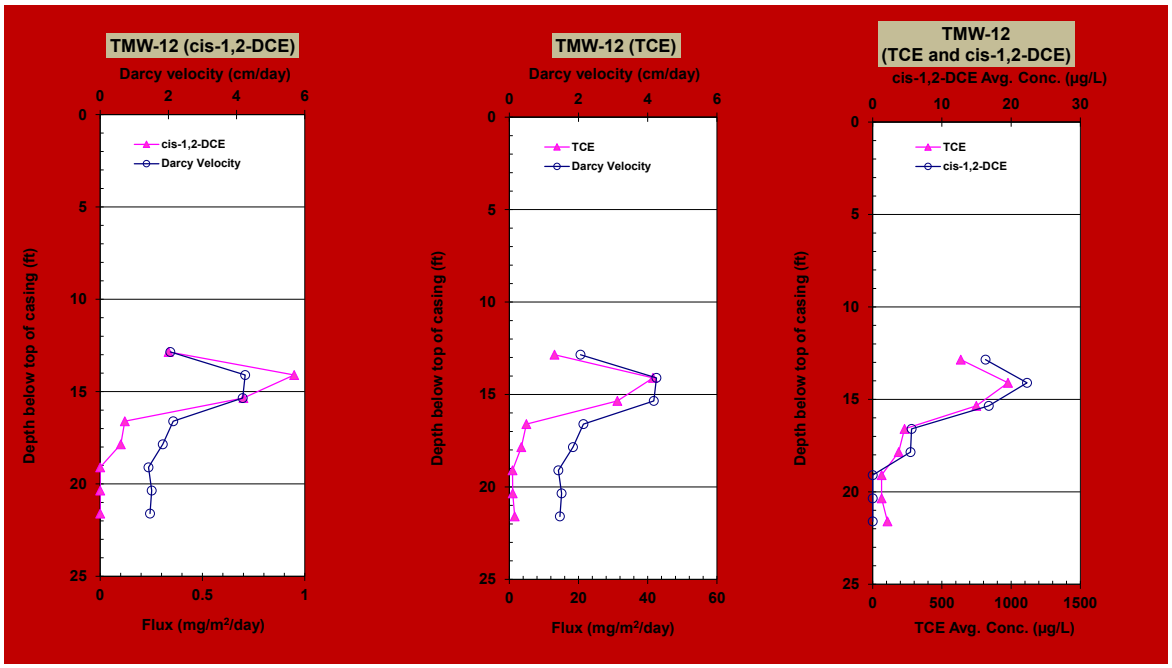

MW-185 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-185 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-185
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

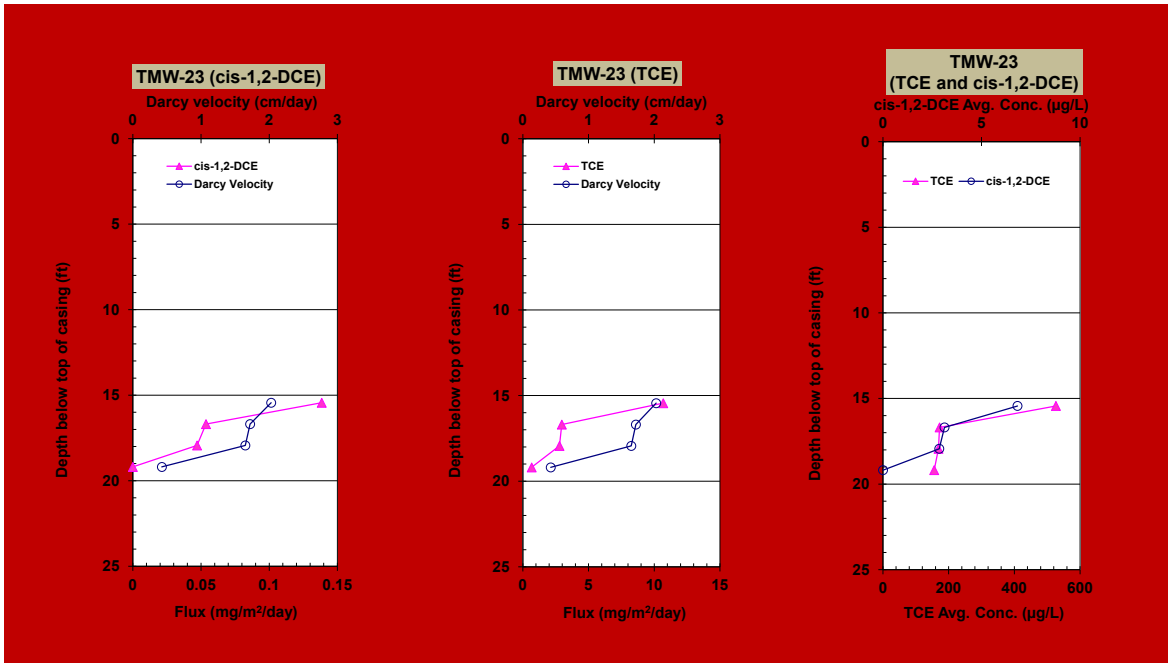

MW-199 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-199 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-199
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

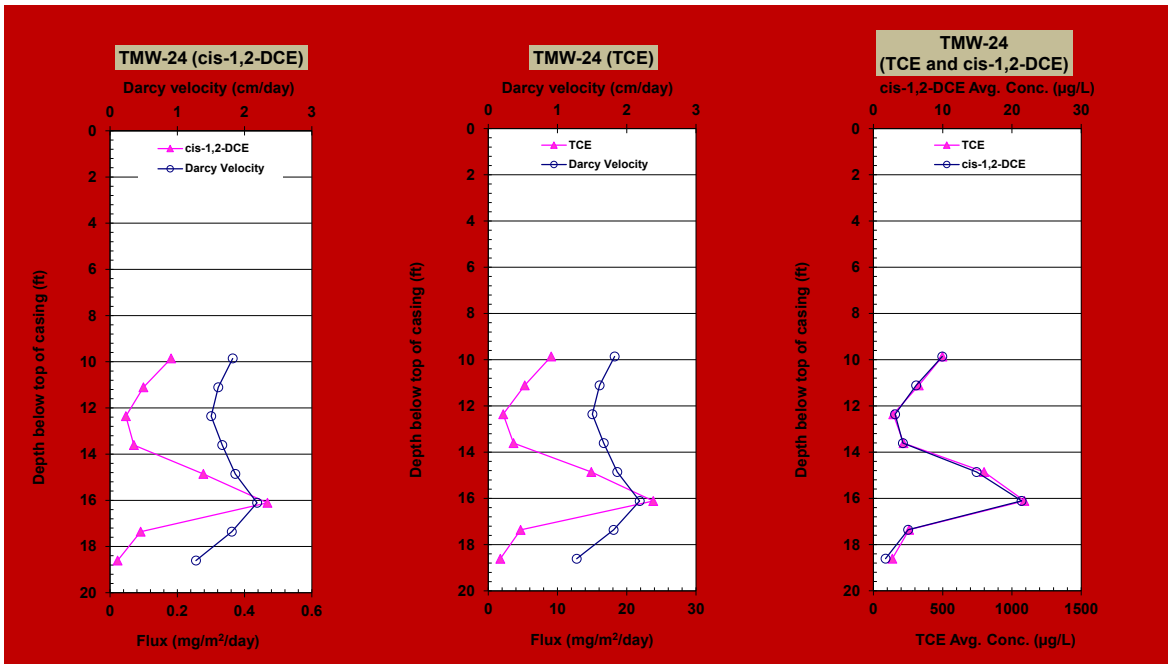
Appendix B
PFM Graphs


MW-46R (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-46R (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-46R
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


RW-69 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
RW-69 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
RW-69
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


TMW-12 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-12 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-12
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


TMW-23 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-23 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-23
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)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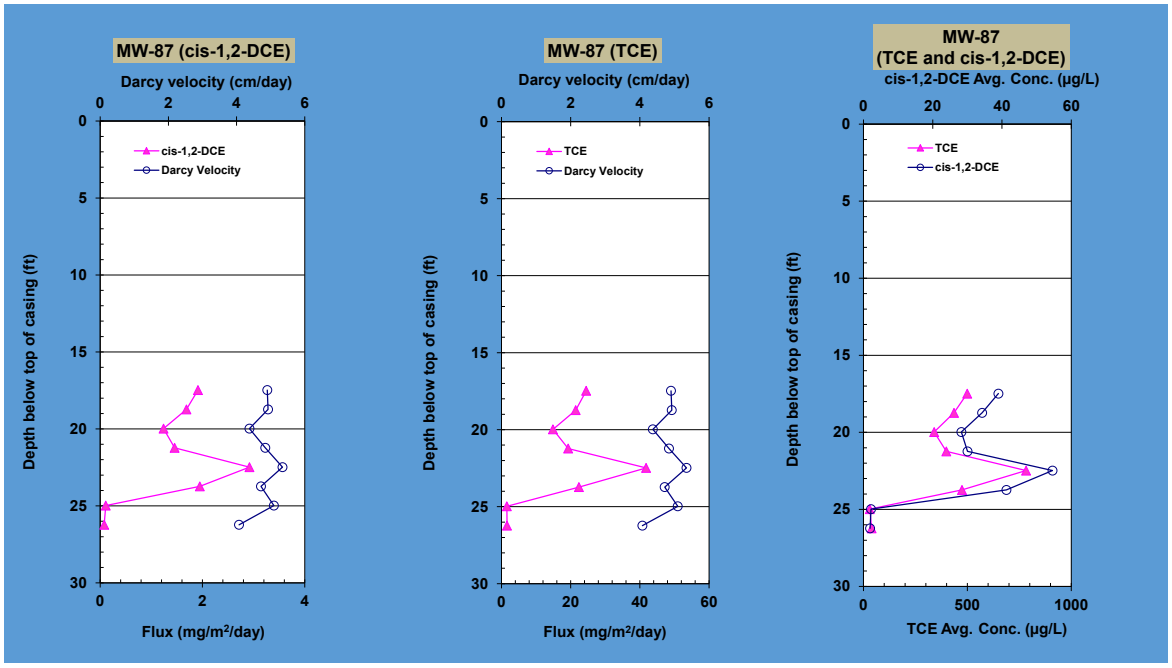
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-24 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
TMW-24
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)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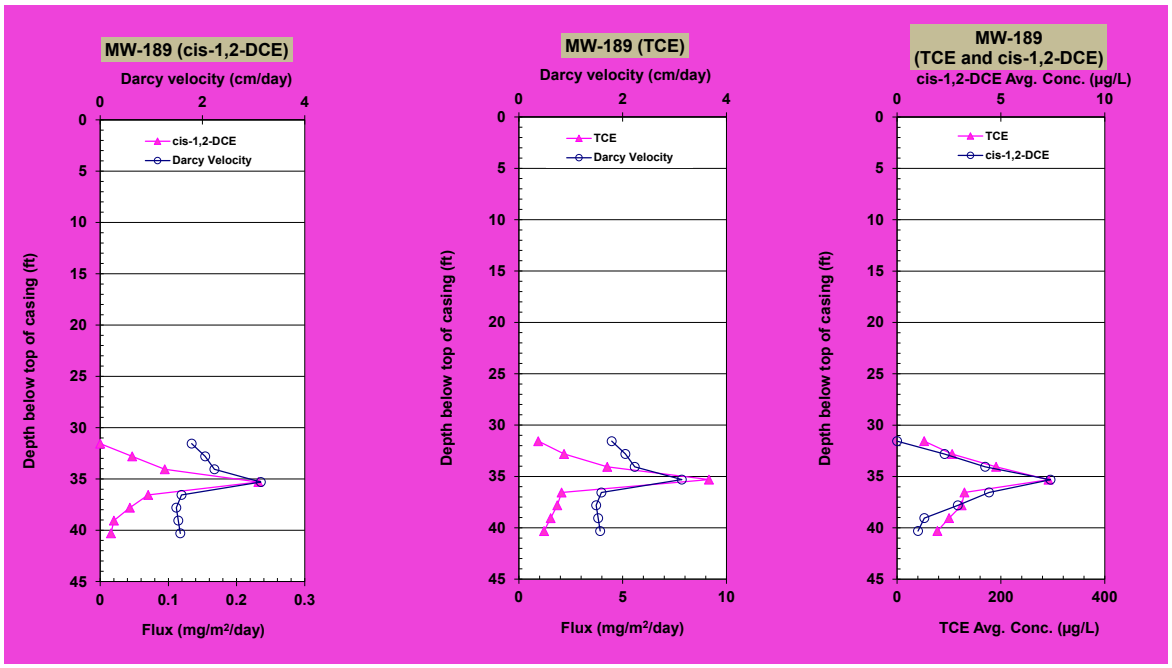
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-87 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-87
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)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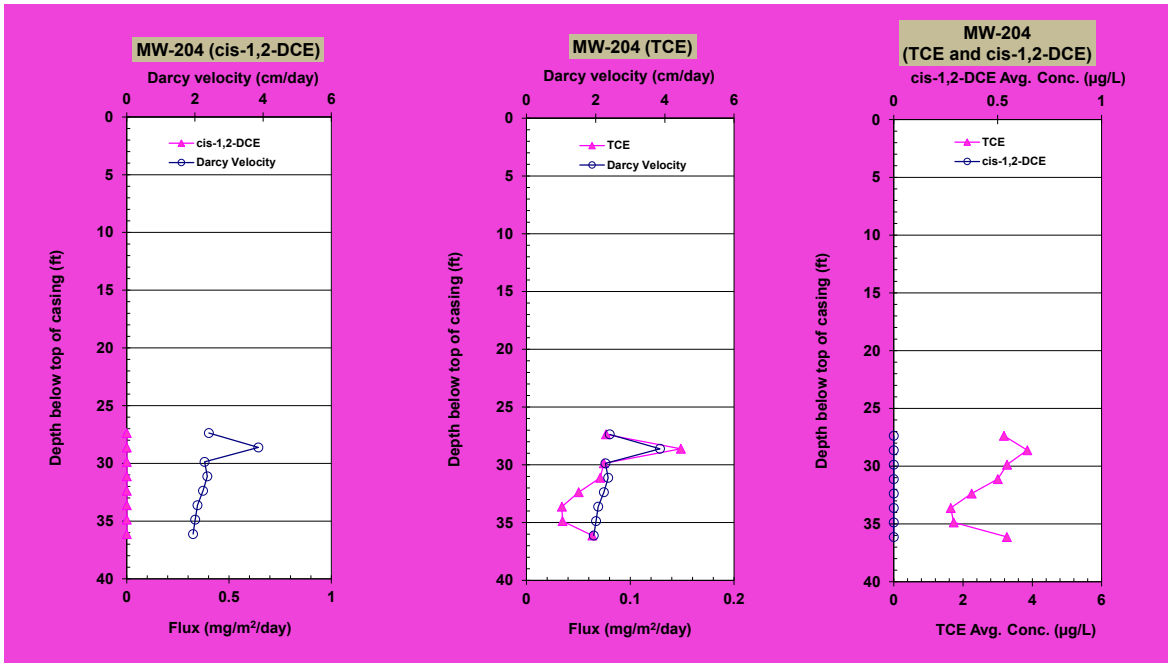
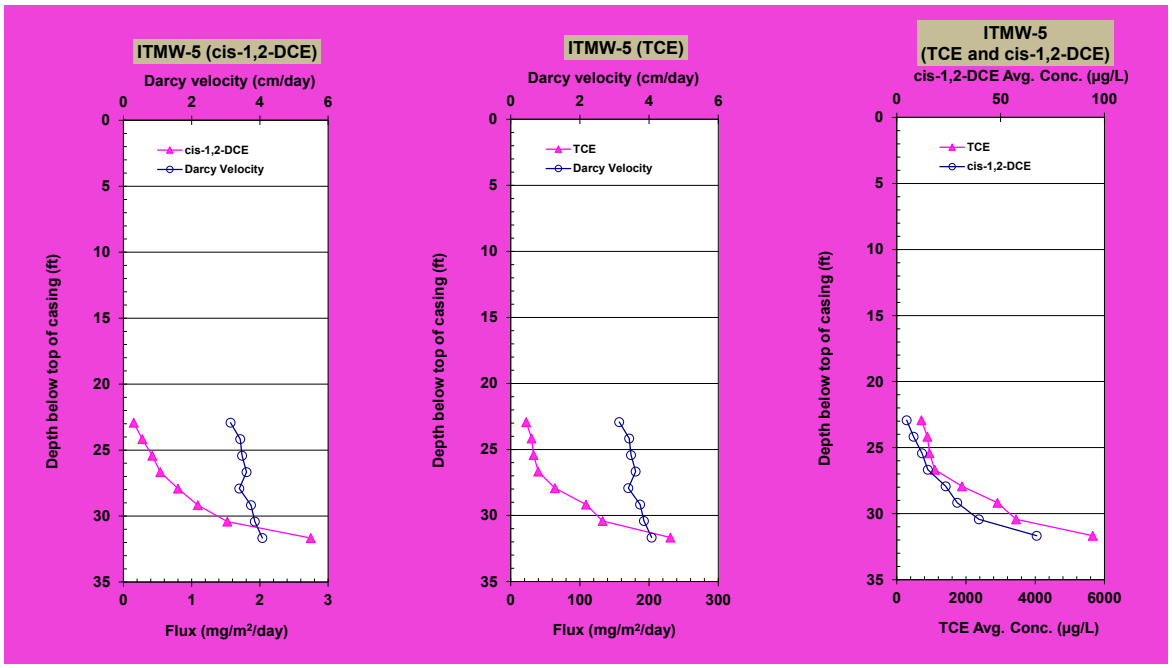
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-189 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-189
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


MW-204 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-204 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-204
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)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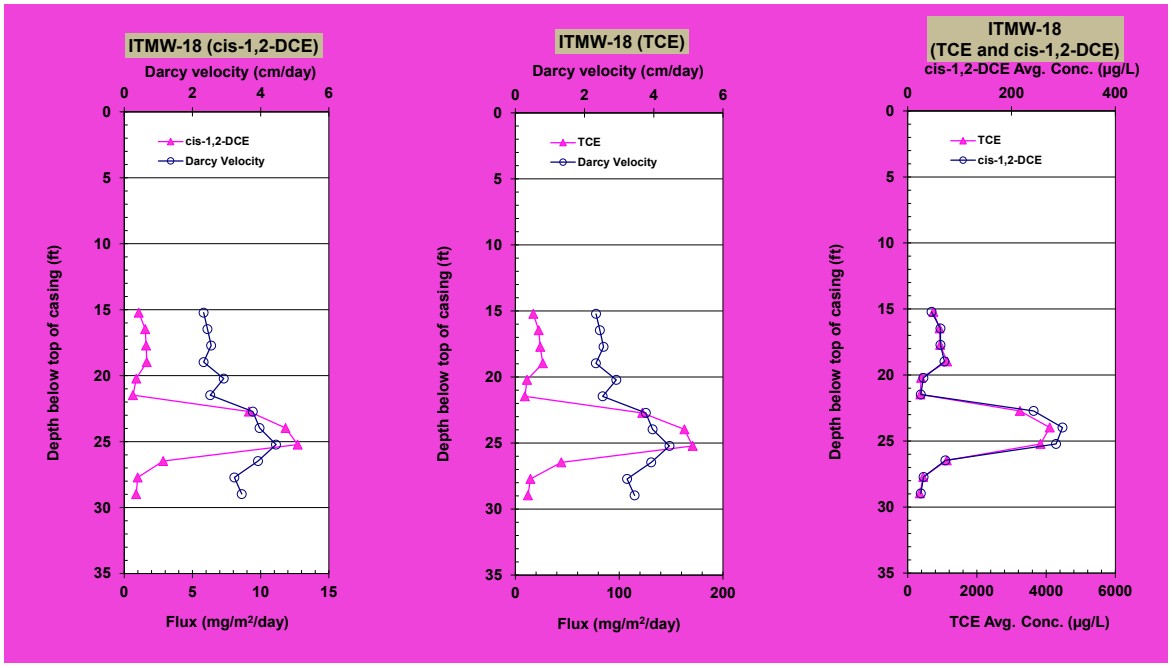
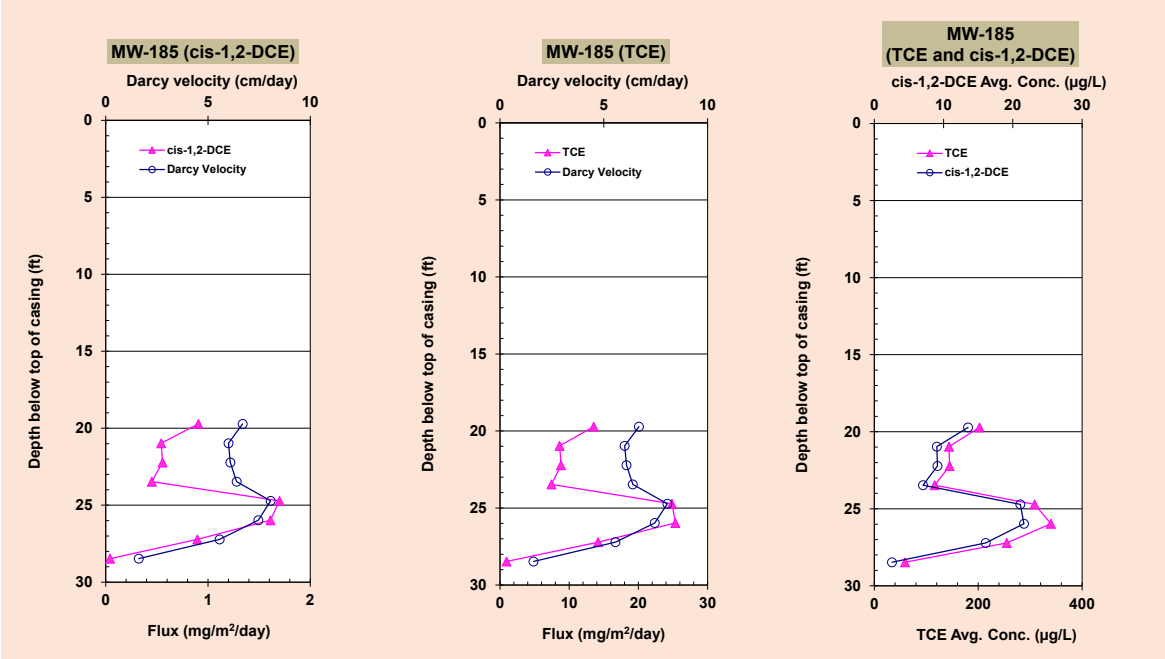
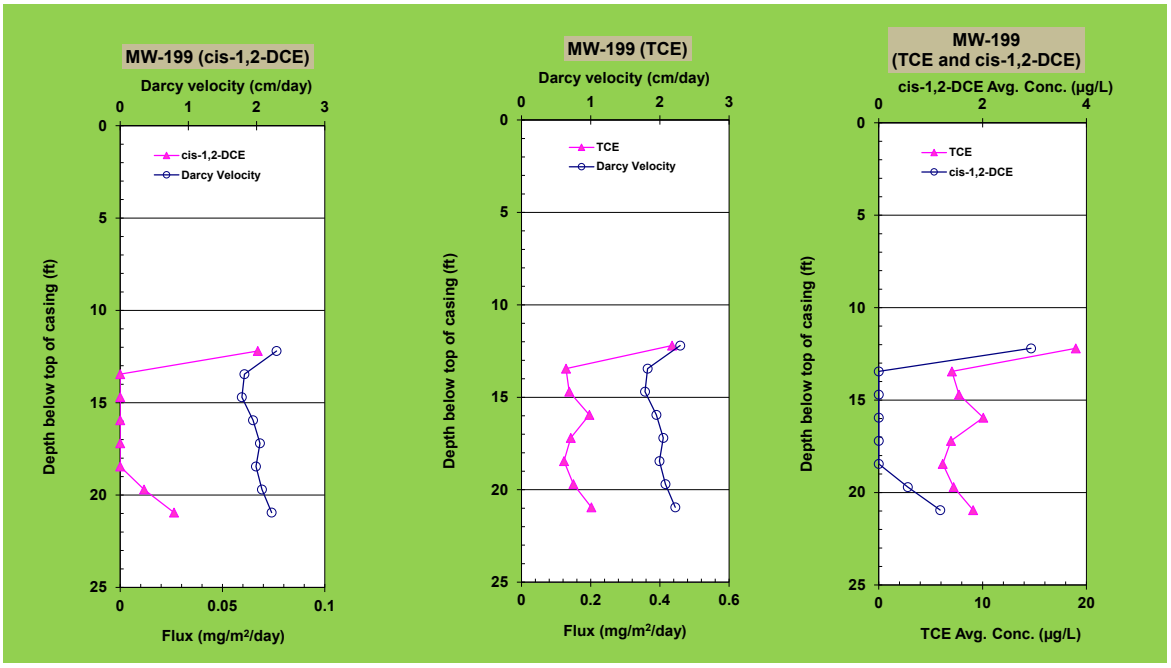
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-5 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-5
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


ITMW-18 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-18 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
ITMW-18
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


MW-185 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-185 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-185
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)


MW-199 (cis-1,2-DCE)
Darcy velocity (cm/day)
cis-1,2-DCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-199 (TCE)
Darcy velocity (cm/day)
TCE
Darcy Velocity
Depth below top of casing (ft)
Flux (mg/m²/day)
MW-199
(TCE and cis-1,2-DCE)
cis-1,2-DCE Avg. Conc. (µg/L)
TCE
cis-1,2-DCE
Depth below top of casing (ft)
TCE Avg. Conc. (µg/L)

Appendix C
Well Construction and Soil Boring Logs

ERM.

MW-46 DRILLING LOG

W.O. NO. 581-013 Boring/Well ID MW-46 Date Drilled 11/13/2003

Project Off-Site Delineation Owner Whirlpool Corporation

Location Fort Smith, AR Boring T.D. 22' Boring Diam. 3"

N. Coord. _____ E. Coord. _____ Surface Elevation 0' Ft. MSL Datum

Screen: Type 65 Mesh stainless steel Diam. 0.75" Length 5' Slot Size 0.01"

Casing: Type Schedule 40 PVC Diam. 0.75" Length 21' Sump Length 0'

Top of Casing Elevation 0' Stickup 0'

Depth to Water: 1. Ft. 0 (_____) 2. Ft. 0 (_____)

Drilling Company TWF Drilling Driller Ed Wilson

Drilling Method Geoprobe/Hollow Stem Auger Log By Karin Shultz

SKETCH MAP

NOTES

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	OVM Headspace (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
0	0					0-2	0-4	SILTY CLAY: Gray and dark gray mottled, moist, nonplastic, soft, with some iron nodules (1/8"-diameter). From 0.8'-1.1' with some black hard clay nodules (1/8"-diameter). From 1.1'-1.10' slightly plastic, with pockets of sandy silty clay, brown.At 0.7'-1.1' firm, plastic. From 1.10'-2' brownish-gray, plastic to slightly plastic, with seam of clayey sand, reddish-yellow, medium dense, very fine-grained. From 2'-2.3' gray and dark gray with trace of brown mottled, moist, soft, slightly plastic.
					0.0			At 2.2' pocket of black silty clay, plastic.
-2	2					2-4		From 2.3'-2.11' brown with gray mottled, damp to dry, stiff, plastic. From 2.11'-3.4' moist, soft,slightly plastic. From 3.4'-3.7' red, yellowish-brown, gray, and light gray mottled, moist, very stiff, plastic.
					0.0			From 3.7'-4' Gray with some yellowish-red mottled, damp, plastic, very stiff to stiff, with iron concretions mottled (1/8"-diameter).
-4	4					4-8	4-4.11	CLAYEY SILT: Gray, damp, nonplastic, loose to medium dense, very fine-grained.
							4.11-5.9	SILTY CLAY: Brownish-gray with trace of pale yellow mottled, damp, plastic, soft. From 5.4'-5.5' pocket of sandy clayey silt mottling, brownish-gray with some dark gray, loose to medium dense, nonplastic. From 5.6'-5.7' pocket of reddish-yellow clayey sand, loose to medium dense, very fine-grained.
-6	6				0.0		5.9-6.5	SANDY SILTY CLAY: Brown with some yellowish-red mottled, dry to damp, slightly plastic, stiff, very fine-grained.
							6.5-8	SILTY SANDY CLAY: Pale brown and medium brown mottled, dry to damp, nonplastic, soft. At 6.8' pocket of very fine silty clay, gray, plastic, very soft. From 7.6'-8' gray and pale brown with some yellowish-red and black mottling, nonplastic, firm.
-8	8					8-12	8-8.7	SILTY CLAY: Gray and medium brown mottled, moist, plastic, soft to firm, becomes softer towards base. At 8.5' pocket of clay, gray, with trace of silt, stiff, plastic.
							8.7-10.11	SILTY CLAY: Gray, damp to dry, firm to stiff, slightly plastic. From 8.10'-8.11' red burrowing, rootlets, seam of sandy silty clay, yellowish-red, nonplastic, firm. From 10'-10.1' and 10.4' pocket of red and black iron resude and concretions, clayey silt, loose. At 10.6'-10.8' caliche.
-10	10							

ERM.

MW-46 DRILLING LOG

W.O. NO. 581-013 Boring/Well ID MW-46 Date Drilled 11/13/2003

Project Off-Site Delineation Owner Whirlpool Corporation

Location Fort Smith, AR Boring T.D. 22' Boring Diam. 3"

N. Coord. _____ E. Coord. _____ Surface Elevation 0' Ft. MSL Datum

Screen: Type 65 Mesh stainless steel Diam. 0.75" Length 5' Slot Size 0.01"

Casing: Type Schedule 40 PVC Diam. 0.75" Length 21' Sump Length 0'

Top of Casing Elevation 0' Stickup 0'

Depth to Water: 1. Ft. 0 (_____) 2. Ft. 0 (_____)

Drilling Company TWF Drilling Driller Ed Wilson

Drilling Method Geoprobe/Hollow Stem Auger Log By Karin Shultz

SKETCH MAP

NOTES

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	OVM Headspace (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
-10	10				0.0		10.11-12	SANDY CLAY: Yellowish-red, damp to dry, hard, slightly plastic. From 10.11'-11' trace of black burrowing, rootlets. From 11.5'-12' seam of clay, gray, plastic, hard.
-12	12					12-14	12-12.11 12.11-13.8	SILTY CLAY: Gray and light gray, damp to dry, slightly plastic, very stiff, high clay content, with some black burrowing throughout, with sandy silty clay parting, yellowish-red, slightly plastic, stiff. From 12.8'-12.11' increase in black clayey silt.
					0.0			CLAYEY SILTY SAND: Yellowish-red, damp, loose, very fine-grained, with black mottling. From 13.5'-13.8, black iron-stained concretions abundant.
-14	14					14-16	13.8-14.8	SILTY CLAYEY SAND: Yellowish-red, dense, abundant black nodules, silty clay pocket, gray, trace of gravel towards base.
					0.0		14.8-15 15-15.8	GRAVELLY SAND: CLAYEY GRAVELLY SAND, brown and yellowish-red mottled, wet to moist, nonplastic, dense, medium sorted, rounded grains, abundant gravel (up to 1/8"-diameter) increase towards base.
-16	16					16-18	15.8-16 16-20	CLAYEY SILTY SAND: Yellowish-red with trace of brown and pale brown mottled, moist, medium dense, fine-grained, pocket of clayey silty sand, gray, loose at 15.3'.
					0.0			CLAYEY SAND: GRAVELLY CLAYEY SAND, yellowish-red, dry, dense, abundant gravel towards base (up to 1/16"-diameter), semi-rounded, fine-grained, with trace of black concretions towards base.
-18	18					18-20		CLAYEY SILTY SAND: CLAYEY SILTY GRAVELLY SAND, yellowish-red, water-saturated, loose, with abundant gravel (up to 3/4"-diameter), poorly sorted, angular grains, medium to fine-grained clayey silty sand matrix with gravels that are well graded. At 18' changes to clayey gravelly silty sand, medium to coarse grained matrix silty sandy material.
					0.0			
-20	20							

ERM

MW-46
DRILLING LOG

W.O. NO. 581-013 Boring/Well ID MW-46 Date Drilled 11/13/2003

Project Off-Site Delineation Owner Whirlpool Corporation

Location Fort Smith, AR Boring T.D. 22' Boring Diam. 3"

N. Coord. _____ E. Coord. _____ Surface Elevation 0' Ft. MSL Datum

Screen: Type 65 Mesh stainless steel Diam. 0.75" Length 5' Slot Size 0.01"

Casing: Type Schedule 40 PVC Diam. 0.75" Length 21' Sump Length 0'

Top of Casing Elevation 0' Stickup 0'

Depth to Water: 1. Ft. 0 (_____) 2. Ft. 0 (_____)

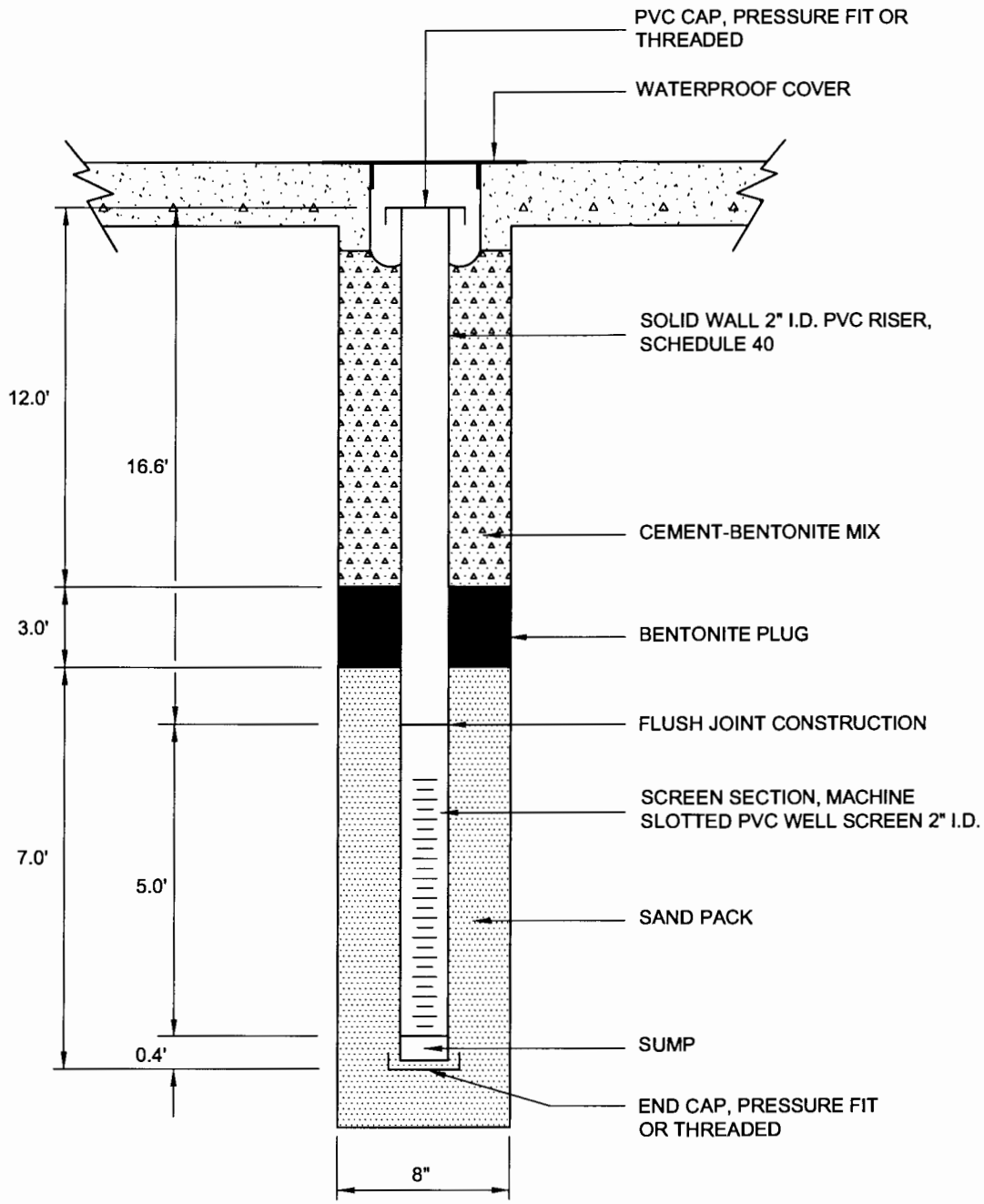
Drilling Company TWF Drilling Driller Ed Wilson

Drilling Method Geoprobe/Hollow Stem Auger Log By Karin Shultz

SKETCH MAP

NOTES

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	OVM Headspace (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
-20	20					20-22	20-20.7	SILTY SANDY CLAY: Yellowish-red, very wet, slightly plastic, firm.
					0.0		20.7-21.10	SANDY SILTY CLAY: Yellowish-brown, damp, slightly plastic, with some black burrowing. At 21.6' plasticity and hardness increase towards base.
							21.10-22	CLAY: Brown with some gray layers, plastic, hard, fissiles towards base to shale.
-22	22							T.D. = 22'
-24	24							
-26	26							
-28	28							
-30	30							



NOTE: MW-46R REPLACES MW-46

NOT TO SCALE

ERM-Southwest, Inc.
HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

DESIGN: DB	DRAWN: LMc	CHKD.:
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FIGURE
GENERAL WELL CONSTRUCTION DETAIL
COMPLETED BELOW GRADE
MW-46R
Whirlpool
Fort Smith, Arkansas

ERM®

ERM Environmental Resources Management

RW-69 DRILLING LOG

SKETCH MAP

Proj. No. 0079781 Boring/Well ID RW-69 Date Drilled 1/7/2009

Project Whirlpool Injection Wells Owner Scott Horton

Location Fort Smith, Arkansas Boring T.D. 26 ' Boring Diam. 8.6 "

N. Coord. 35.325 ' E. Coord. -94.418 Surface Elevation 466 ' ft. MSL Datum

Screen: Type Schedule 40 PVC Diam. 4 " Length 10 ' Slot Size 0.01 "

Casing: Type Schedule 40 PVC Diam. 4 " Length 16 ' Sump Length 2.5 '

Top of Casing Elevation 466 ' Stickup 0 '

NOTES

Depth to Water: 1. Ft. 7.04 ( ) 2. Ft. 0 ( )

Drilling Company Lewis Drilling Driller Zane Ruffen

Drilling Method Hollow Stem Auger Log By Betsy Zunk

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	OVM (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
466	0					0-2	0-4	SILTY CLAY: Dark reddish brown, moist, plastic, with abundant roots.
464	2				0.0	2-4		
462	4				0.0	4-6	4-6	SILTY CLAY: Yellowish red to reddish brown mottled, moist, slightly plastic to slightly crumbly, occasional quarter inch diameter quartzite gravel with abundant roots at 4 feet.
460	6				0.0	6-8	6-10	SILTY CLAY: Yellowish red with light gray mottling, moist, slightly crumbly to slightly plastic.
458	8				0.0	8-10		
456	10							

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ERM Environmental Resources Management

RW-69 DRILLING LOG

SKETCH MAP

Proj. No. 0079781 Boring/Well ID RW-69 Date Drilled 1/7/2009

Project Whirlpool Injection Wells Owner Scott Horton

Location Fort Smith, Arkansas Boring T.D. 26 ' Boring Diam. 8.6 "

N. Coord. 35.325 ' E. Coord. -94.418 Surface Elevation 466 ' ft. MSL Datum

Screen: Type Schedule 40 PVC Diam. 4 " Length 10 ' Slot Size 0.01 "

Casing: Type Schedule 40 PVC Diam. 4 " Length 16 ' Sump Length 2.5 '

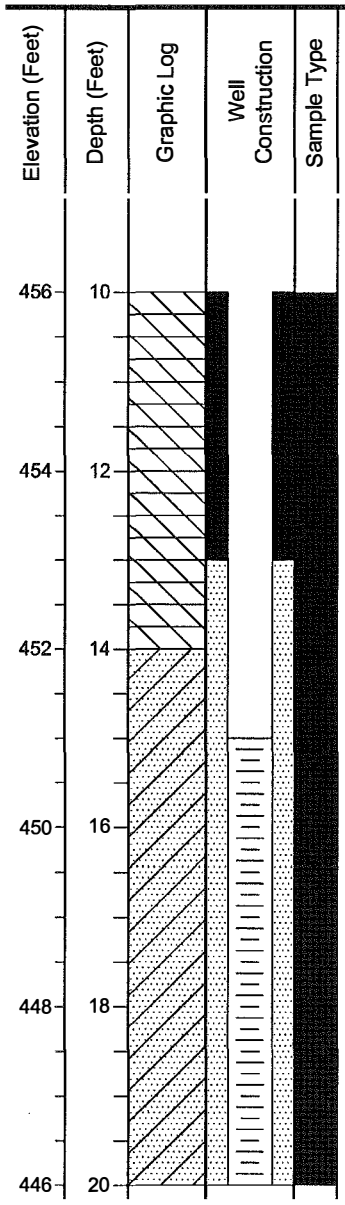
Top of Casing Elevation 466 ' Stickup 0 '

NOTES

Depth to Water: 1. Ft. 7.04 ( ) 2. Ft. 0 ( )

Drilling Company Lewis Drilling Driller Zane Ruffen

Drilling Method Hollow Stem Auger Log By Betsy Zunk



Elevation (Feet)	Depth (Feet)	OVM (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
456	10	0.0	10-12	10-14	SILTY CLAY: Reddish yellow, moist, slightly plastic with pockets of light gray, with higher sand concentrations increasing with depth.
454	12	0.0	12-14		
452	14	0.0	14-16	14-20	CLAYEY SAND: Light gray, moist, slightly plastic to slightly crumbly with pockets of yellowish red silty clay.
450	16	0.0	16-18		
448	18	0.0	18-20		At 18 feet - Black mottling along root traces.
446	20				

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ERM Environmental Resources Management

RW-69 DRILLING LOG

SKETCH MAP

Proj. No. 0079781 Boring/Well ID RW-69 Date Drilled 1/7/2009

Project Whirlpool Injection Wells Owner Scott Horton

Location Fort Smith, Arkansas Boring T.D. 26 ' Boring Diam. 8.6 "

N. Coord. 35.325 ' E. Coord. -94.418 Surface Elevation 466 ' ft. MSL Datum

Screen: Type Schedule 40 PVC Diam. 4 " Length 10 ' Slot Size 0.01 "

Casing: Type Schedule 40 PVC Diam. 4 " Length 16 ' Sump Length 2.5 '

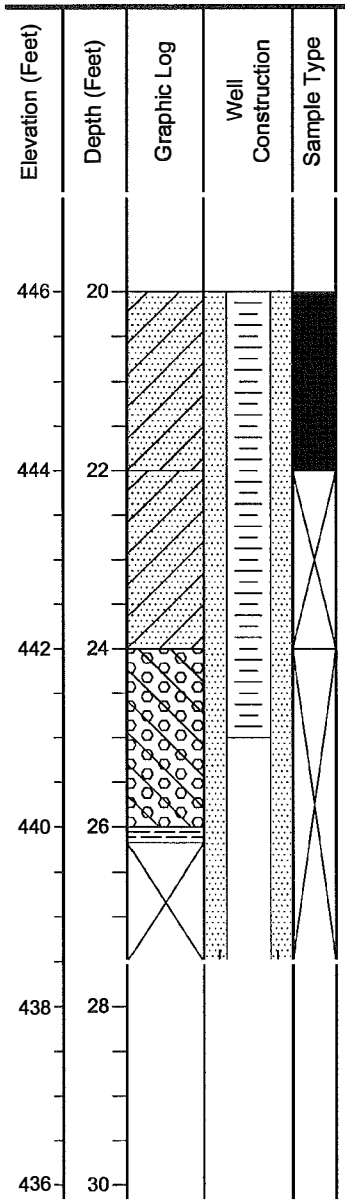
Top of Casing Elevation 466 ' Stickup 0 '

NOTES

Depth to Water: 1. Ft. 7.04 ( ) 2. Ft. 0 ( )

Drilling Company Lewis Drilling Driller Zane Ruffen

Drilling Method Hollow Stem Auger Log By Betsy Zunk



Elevation (Feet)	Depth (Feet)	OVM (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
446	20	0.0	20-22	20-22	CLAYEY SAND: Light gray with yellowish red mottling, moist, slightly plastic increasing to slightly crumbly with depth.
444	22	0.0	22-24	22-24	CLAYEY SAND: Pinkish gray, occasional quarter inch quartzite gravel, saturated, loose, mottled with yellowish red silty clay.
442	24	0.0	24-26	24-26	GRAVELLY CLAY: Yellowish red, water saturated, loose to slightly crumbly with depth.
440	26	0.0	26-26.2	26-26.2	SHALE: Very dark brown, weathered and fissil.
					T.D. = 27.5 '
438	28				
436	30				

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RAMBOLL ENVIRON

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+/ 3)2,5)/2J # 2À345ĀG37++8719Ā À	F: 2?/ ;. J N;< M/3435Ā#/07 1/ 3708Ā.;+ +
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N(,39Ā+;' 36J &58!ĀCĀ%FG+Ā ĀD358 %ĀKLĀ)/ĀĀKL	F2/H.5)ĀI:71. 2J %&%'())$
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							&'()*Ā+(, *-Ā. ((/0Ā12/03Ā34Ā2.4Ā12/03-Ā2,5. Āe2,*Ā7 /)('36-Ā0')8Ā1(, 59 3/4:(.; -Ā0')8Ā,34- Ā'3.Ā)/Ā5/,2 ; . -Ā2=:.3) Ā62>. (-Ā'3.- Ā;12/:34.4- Ā,)'<< ;('68)(*Ā?(, ;)'5-Ā7 / ';)		
	C)	CIÀ		Ā					
&()				! "		!À	+(, *. *Ā&,34- Ā2,Ā12/03-Ā0')8Ā62 *-Ā2, 5. Ā1(, 59Ā3/4:(.; -Ā,34- Ā'3. -Ā,/ <)- ;('68)(*Ā58. ;'>. -Ā0.)		
							+(, *. *Ā&,34- Ā2,Ā12/03-Ā0')8Ā1(, 59Ā3/4:(. ; -Ā,34- Ā'3.Ā)/Ā5/,2 ; . -Ā,('68)(* ;)'<<Ā58.; '>.- Ā0)		
				#!#		"À	+(, *. *Ā@,>. (-Ā2.4ĀĀ2/03-Ā0')8Ā1(, 59Ā34: (. ;- Ā0)8Ā; 34-Ā3. Ā/ Ā5, 2;. - 62> .(-Ā3.- Ā,: 12/:34.4- Ā58.; '>.- Ā0) -Ā2 . Ā0,) .2		
	C(	CIÀ				#$	+(, *. *Ā&()Ā0 ,)8. 2.4Ā,8, (. B-Ā ((/0Ā12/03-Ā0')8Ā62,*-Ā8, 24-Ā,7 '3,) . 4-Ā12*		
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				%#			&8, (. -Ā-. 2*Ā4, 29Ā62,*-Ā2,5. Ā* ((/0Ā12/03-Ā8, 24Ā,7'3 ,). 4-Ā12*		
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	E(								
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R.?/2)JĀOSMMXMV@XRSQYSZĀ[KĀO[DRMFVVMXMV@&ĀA\PXFDL&B\@FZĀĀ#]]E^

F,6.ĀEĀ/<ĀE

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

$%&#ĀGL AB; 4C?		O! &#:3<L **10/12/2017**	
E,2! &%L	**Fort Smith, Arkansas**		
E,//#(ĀN'L	**J. Pavlowsky**	Ā0#2*#(ĀN'L	**M. Wilson, PG**
Ā, .&)!2&)L	**McCray Drilling, LLC**	I5)1, 3#L	**Temporary Monitoring Well**
O)%%ĀB #&0,(L	**Hollow Stem Auger**	9$ ĀP#6!&%L	**462.22 ft amsl**
		AQĀĀP #6!&%L	**461.94 ft amsl**
$!81 %./ĀB#&0,(L	**HSA Continuous Sampler**	K,)&0L	**370019.46**
		P!3&L	**591874.44**
; # ĀĀ.3&)52&%L		N,)#0, #ĀC%!@L	**8.25 inches**
		A,&! ĀG#1&0L	**19.0 feet**
N !.* ĀĀ3%/L $20@ĀĀDSĀĀĀR.20 DĀGĀ&,ĀĀĀGA		I),J#2&ĀĀ58+#)L	**3437500S**
$2)##. L $20@ĀĀDĀ20ĀĀ@DF ISĀ F=ĀGĀ&,ĀĀĀGA		I),J#2&ĀĀ8#L	**Whirlpool Corporation**
M.5 !)ĀG%L N#.&.%&# $!.(DĀGĀ&,ĀĀĀGA FCĀGĀ&,ĀĀĀGA		T#8!)* 3L	

P #6! &%,.:7&<	O#1&0Ā:7&<	T#2,6#)" :7##&<	$!81 #ĀK,@	ĀIROĀ:118<	9)!10 %2ĀĀ	W$Ā$ĀĀ,(#	B!&#)%ĀO#32)%1,&%	;!&#)ĀE#6#	; # Ā, .3&)52&% Flush Mount
							A, 13, %		
				D@		ML	$! . ("Ā$% &!Ā&Ā), - . 'Ā%#'Ā, , 3#Ā3, 7&'Ā'(		
460		>				MH	Ā ! "#"Ā$% &!Ā*Ā+), - . 'Ā %&0! 2*Ā!. (Ā)! "Ā8, &%/.'Ā %&0, &0Ā %)33Ā7&' 2)58+ #3'Ā8, %3&		
				F@		CL	$% &ĀĀ! "'Ā)! . / %3Ā0+), - . 'Ā %&0! "Ā8, &&/.'Ā&)'2#Ā+! 2*Ā., (5 #3'Ā %0 3! . ('Ā%#'Ā2)58+ #3'Ā3&%Ā(7"		
	5								
				F@					
455		>					$% &ĀĀ! "'Ā(!)*Ā,)! . / #Ā+), - . 'Ā %&0! "Ā8, &&/.'Ā %&0! 2*Ā., (5 #3'Ā-%&0 3! . ('Ā3 %0&"Ā1! 3&%2Ā&#)"Ā3&%Ā37 %3&		
				C@					
	10					SC	$% &ĀĀ! "'Ā(!)*Ā,)! . / #Ā+), - . 'Ā %&0! "Ā8, &&/.'Ā %&0! 2*Ā., (5 #3'Ā-%&0 3! . ('Ā %&0! 6# 'Ā%#'Ā&Ā2!)3#Ā3 %0& 'Ā1! 3&%2Ā#)"Ā3&%Ā37 %3&		
				C@			Ā ! "#"Ā$. ('Ā)! "Ā! (Ā,)! . / #'Ā7%#'Ā1 ! 3&%2Ā37&'Ā58+ #3'Ā8, %3&		
450		>				GC	Ā ! "#"Ā9)! 6# 'Ā(!)*Ā,)! . / %3Ā0+), - . 'Ā35+! . / 5 !)'Ā3 7&Ā258+ #3'Ā8, %3&		
			AB; 4C?4 $E:F>@4 F>@GA<4 FDF2FH	F@		CL	$! . ("ĀĀ! "'Ā)! . / #'Ā %&0! "Ā8, &&/.'Ā?%#'Ā6#)"Ā3&%Ā17 3&%2Ā)58+ #3' 8, %3&		
	15					GC	Ā ! "#"Ā9)! 6# 'Ā)! . / #'Ā?%#Ā,&Ā2!)3#'Ā1 ! 3&%2Ā37&'Ā#&		
				F@					
445		=				MH	Ā ! "#"Ā$% &Ā#!-&0#)#(Ā3! #<'Ā, . 1 ! 3&%2Ā 8%.! &#('Ā3, 7&'Ā'(		
				F@					
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T#!,)&ĀĀ;P EEXEQ9XTP SXBYPZĀĀG% #LĀ;[RDDEXEQ9$Ā:(XPORA<@9VZĀĀĀ(FF]H

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RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

$%&#ĀGL AB; 4C=		O! &#:3<L **10/10/2017**	
E,2! &%L	**Fort Smith, Arkansas**		
E,//#(ĀN'L	**N. Zurweller, RG**	À0#2*#(ĀN'L	**M. Wilson, PG**
Ä, .&)!2&)L	**McCray Drilling, LLC**	I5)1, 3#L	**Temporary Monitoring Well**
O)%%ĀB #&0,(L	**Hollow Stem Auger**	9$ ĀP#6!&%L	**461.46 ft amsl**
AQÀĀP #6!&%L	**461.23 ft amsl**		
$!81 %./ĀB#&0,(L	**HSA Continuous Sampler**	K,)&0L	**369807.60**
P!3&L	**592005.52**		
; # ĀÀ.3&)52&%L		N,)#0, #ĀC%!@L	**8.25 inches**
A,&! ĀG#1&0L	**19.0 feet**		
N !.* ĀÀ3%/L $20@ĀĀDSÀĀĀR.20 DĀGĀ&,ĀĀGA		I),J#2&ĀB8+#)L	**3437500S**
$2)##. L $20@ĀĀDĀ20ĀĀ@DF ISÀ FCĀGĀ&,ĀĀGA		I),J#2&ĀK#L	**Whirlpool Corporation**
M.5 !)ĀG%L N#.&.%&# $!.(DĀGĀ&,ĀĀGA FDĀGĀ&,ĀĀGA		T#8!)* 3L	

P #6! &%,.:7&<	O#1&0Ā:7&<	T#2,6#)" :7##&<	$!81 #ĀK,@	ĀIROĀ:118<	9)!10 %2ĀĀ	W$Ä$ĀÄ,(#	B!&#)%ĀO#32)%1,&%	;!&#)ĀE#6#	; # Ä, .3&)52&% Flush Mount
460						MH	A, 13, % 'Ā0%&Ā), - . 'Ā %&Ā0„ &ĀA %)3'Ā, 3#Ā( )" Ä ! "#"Ā$% &ĀA0&Ā)! "%3Ā+), - . 'Ā&)!2#Ā, , &Ā0! %)33Ā%0&"Ā20#3%#6Ā( )"		
		>				CL	$% &ĀĀ ! "'Ā)#((%3Ā+), - . 'Ā %&Ā0! 2*Ā., (5 #3'Ā)&!2#Ā„ &ĀA %)3Ā ! 3&%2Ā6#)" 3&%7Ā( )" $% &ĀĀ! "'Ā)#((%3Ā+), - . 'Ā %&Ā0! "'Ā&)!2#Ā3. ('Ā2, !)3#'Ā&)!2#Ā/)! 6# 'Ā%#' 35+! . / 5 !)'Ā0! 2#Ā)„ &ĀA %)33Ā%0&"Ā1! 3&%2Ā3&%7Ā( )"		
455	5								
		>					$%&ĀĀ !" Ā3Ā!+,6#'Ā-%0Ā+ !2 *Ā,(5 #3 $% &ĀĀ ! "Ā!3Ā+, 6#'Ā0! 2#Ā+! 2*Ā., (5 #3'Ā%2,)#! 3%/.Ā0! . (Ā %&Ā0(#1&0		
450	10	=				SC	Ä ! "#"Ā$! . ('Ā)#((%3Ā+), - . 'Ā %&Ā0! "'Ā6#)"Ā7%Ā0 %0&"Ā1! 3&%2Ā3%0&" 3&%7Ā3, %3&		
	15	=	AB; 4C=4 $E:F>@4 F>@&A<4 FDFDFH			GC	Ä ! "#"Ā9)! 6#'Ā)#((%3Ā+), - . 'Ā %&Ā0. ('Ā7%#Ā,&Ā2!)3#'Ā)! 6#'Ā7%#Ā,& 2, !)3#'Ā35+), 5. (#(Ā,&Ā35+! . / 5 !)'Ā2, 0#3%#6Ā #&		
445		=				MH	Ä ! "#"Ā$% &Ā#!-&0#)#(Ā30! #<'Ā# , - %3Ā+), - . Ā! (Ā)! "%3Ā+), - .' Ā(#)" 3&%7Ā3 %0&"Ā 3%.! &#('Ā3, %3& $0! #'Ā)#((%3Ā+), - . Ā! (Ā/)! "'Ā %&Ā0#! &#)#(Ā3! #'Ā0!)('Ā! 8%!&#(' Ā(!)' $0! #'Ā(!)* Ā)!" 'Ā0!) ('Ā! 8 %&#(' Ā(!)'		
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ENVIRON

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3-A+. 4=9ĀQ2/, ;6I !()' /)4(4+Ā &25 10*,	RS 0 ĀP.2@/4; =I ::=%;@Ā25 +0
U 2..Ā0;=*/ 7B?/4=I	H; 7/,I ?E@@?M%
K.-=8Ā0-*4=9I 3?,Ā'!Ā FW0 ! ĀJRĀ/;ĀĀĀJR	K;72,;. 2ĀL4- I EĀ) D.*+
3?722=I 3?, Ā'! Ā! Ā! ĀFW0 Ā#ĀJRĀ/;Ā#ĀJR	F7;G2?ĀHBA:2 7I ?:??>??8
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	X2A-78 *I
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P.2@/4;= N>/O	L2+/,ĀN>/O	X2?;@2?1 N>22/O	3-A+. 2ĀH;	ĀFTLĀN++AO	E7-+, 4?ĀA;9	Y30 3Ā0;62	Q-/274.ĀL2*?74+/4	U-/27ĀM@2	U 2.. 0; =*/7B?/4= 604+.ĀĀ(4)'
:;=		& %	MW!"#$%&'	Ā! " #		Ā	)* +,-. / 0.- 121Ā34./Ā6- 78Ā97-14*,Ā:7;<=5Ā4//2Ā7;; /Ā,- 47*5Ā4>5Ā.49/ .1Ā;,2* 4@25 *.49/.1Ā+-*/4?Ā; 4*/		
:EM	M	(		! $! %		!"	34./Ā0.-15Ā7;=9Ā7;<=5Ā<4/,Ā49/Ā97-1ĀA; //.4=95Ā; A2Ā.-?8Ā;6B.2*5Ā4/.2 *B:7;B=626Ā97-@2.Ā3+Ā;ĀĀC5Ā/4>5Ā+-*/4?5Ā49/ .1ĀA; 4/		
:E=	<=	(		& $ # !			34/1Ā0.-1Ā*Ā:;@ 25Ā4/.2Ā.-?8Ā;6B.2*5Ā@271Ā/4>		
:MM	<M	(	MW!"#$)(	' Ā $ &			34./Ā0.-15Ā7;=9Ā7;<=5Ā4//2Ā49/Ā97-1ĀA; //.4=95Ā<4/,Ā>4Ā2=65Ā*A 2 *B:7;B=626Ā=6Ā*B:-=9B. -7Ā97-@2.Ā3+Ā;ĀĀC5Ā/4>5Ā+-*/4?5Ā; 4*/		
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::M	>M	(		! $			3,-. 25Ā@71Ā6-78Ā97-15Ā,-765Ā-A 4-/ 265Ā671 5Ā7BA: .2*Ā-4, Ā,-=6 Ā-72* B72		

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RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: MW-189		Date(s):	9/17/2015
Location:	Fort Smith, Arkansas		
Logged By:	N. Zurweller	Checked By:	W. Weber
Contractor:	Able Environmental	Purpose:	Monitoring Well
Drilling Method:	Hollow Stem Auger	GS Elevation:	485.87 ft amsl
		TOC Elevation:	485.59 ft amsl
Sampling Method:	HSA Continuous Sampler	North:	367666.29
		East:	590859.56
Borehole Dia.:	8.25 inches	Total Depth:	41.0 feet
Project Number:	1690017901		
Project Name:	Whirlpool Corporation		
Remarks:			

Well Construction:

Blank Casing:	Sch. 40 PVC 2 Inch	0 FT to 31 FT
Screen:	Sch. 40 2 Inch 0.010 PVC	31 FT to 41 FT
Annular Fill:	Cement Grout	0 FT to 27 FT
	Bentonite	27 FT to 29 FT
	Sand	29 FT to 41 FT

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
485				NM			Fill, gravel and silt, dark brown		
		2		2.3			Topsoil, yellowish brown, clayey silt, slightly cohesive, soft, moist		
	5								
480		5		0.3			Topsoil as above, trace gravel, subrounded		
				0.4		MH	Clayey Silt, yellowish brown, with gray and reddish brown mottling, trace sand, coarse, plastic, stiff, moist		
	10								
475		5		0.2		CL	Silty Clay as above, trace black nodules, very stiff		
				0.1					
	15						Silty Clay as above, trace sand, fine, stiff		
470		5		0.8			Silty Clay, reddish brown, with gray mottling, with black nodules, trace sand, coarse, slightly plastic, hard, moist		
				1.1		SC	Clayey Sand, reddish brown, with gray mottling, with silt, trace black nodules, fine sand, cohesive, soft, moist		
	20						Clayey Sand, reddish brown, fine sand, cohesive, soft, wet		
465				0.2			Clayey Sand, reddish brown and gray, fine sand, cohesive, soft, moist		
		5					Clayey Sand, reddish brown, fine sand, cohesive, wet		
				0.4			Clayey Sand as above, reddish brown and gray		
	25								
460				0.3					
		3		0.3					

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 12/18/20

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: MW-189

Project Name: **Whirlpool Corporation**

Project Number: **1690017901**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
455		3.5	MW-189-SL(32-32.5FT)-101017	0.3		GC	Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, cohesive, wet		
				0.4			Gravel, as above, trace cobbles		
	35								
450		5		0.3					
				0					
	40	1		0.3		MH	Clayey Silt, yellowish brown, with weathered shale, hard, laminated, dry		
445							Shale, very dark gray, hard, laminated, dry		
	45								
440									
	50								
435									
	55								
430									
	60								
425									
	65								
420									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 12/18/20

RAMBOLL

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: MW-204		Date(s):	9/24/2020
Location:	Fort Smith, Arkansas		
Logged By:	I. McQuaig	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Monitoring Well
Drilling Method:	Hollow Stem Auger	GS Elevation:	481.31 ft amsl
		TOC Elevation:	481.31 ft amsl
Sampling Method:	Continuous Sampler	North:	367991.31
		East:	590579.94
Borehole Dia.:	6.5 inches	Total Depth:	36.0 feet
Project Number:	1690017901		
Project Name:	Whirlpool Corporation		
Remarks:			

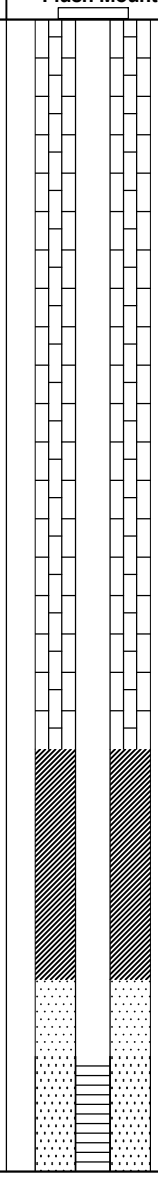
Well Construction:

Blank Casing:	Sch. 40 PVC 2 Inch	0 FT to 27 FT
Screen:	Sch. 40 2 Inch 0.010 PVC	27 FT to 37 FT
Annular Fill:	Cement Grout	0 FT to 19 FT
	Bentonite	19 FT to 25 FT
	Sand	25 FT to 37 FT

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level
							Topsoil	
480						MH	Brown clayey silt, dense, dry	
						MH	Dark brown to black clayey silt, dry, trace gravel	
	5					MH	Light brown clayey silt, trace gray mottling, slightly plastic, dry, stiff, no staining/odor	
475								
	10					MH	Light brown clayey silt, slight/trace gray to black mottling, stiff, low plasticity, dry	
470								
	15							
465								
							More clayey, slightly plastic	
	20					CL	Light brown silty clay, medium soft, plastic, trace gray mottling, dry	
460								
						CH	Tan and gray mottled fatty clay, with silt, trace sand, fine, high plasticity, soft, dry	
	25					CL	Brown and gray silty clay with fine sand, fatty, soft, saturated	
455								
						SW	Light brown and gray sand, fine, dense, with trace gray, well sorted, trace roots, saturated	

Well Construction

Flush Mount



Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 12/18/20

RAMBOLL

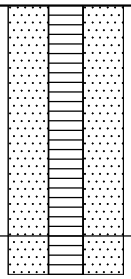
1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: MW-204

Project Name: **Whirlpool Corporation**

Project Number: **1690017901**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
450						SW	Wet		
						GP-GC	Sandy gravel with clay, subangular, fine and course, poorly sorted, moist		
	35					GP	Brown sandy gravel, course, poorly sorted, subangular, wet		
445							Shale		
	40								
440									
	45								
435									
	50								
430									
	55								
425									
	60								
420									
	65								
415									



Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 12/18/20

DRAFT

INTERNATIONAL TECHNOLOGY CORPORATION

Monitor Well Installation

ITMW 5

Well No. [illegible]

Client WHIRLPOOL Job No [illegible] Date Drilled [illegible] Sheet [illegible] of [illegible]

Site FORT SMITH, AR Elevation Pad [illegible] Top of PVC Casing [illegible]

Total Depth [illegible] Casing Size & Type 4-INCH SCH 40 PVC Screen Size [illegible]

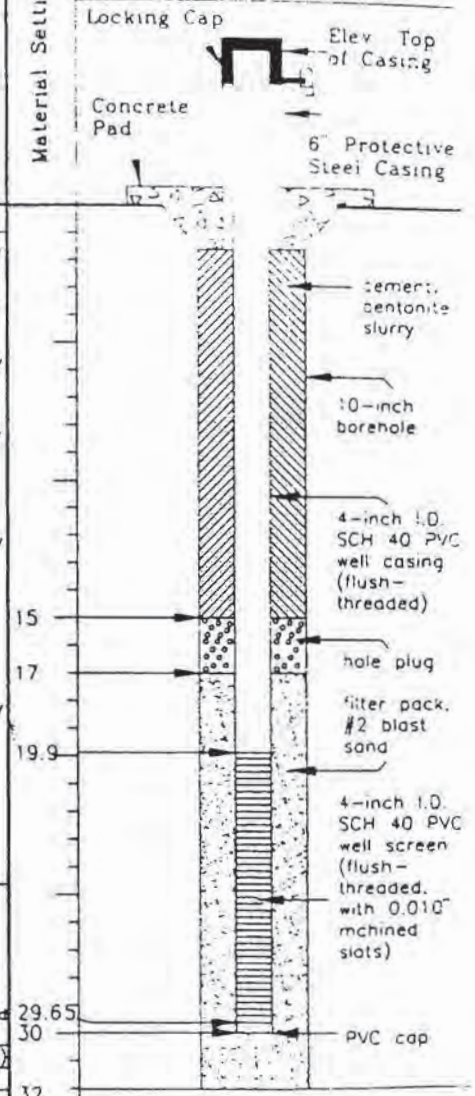
Comments 8 INCH HOLLOW STEM AUGER, 10-INCH HOLLOW STEM AUGER AND MUD ROTARY
2 [illegible] SPOON 5' CONTINUOUS SAMPLE

Depth in Feet	PID (ppm)	Symbol	Stratigraphy	Sample Description
				GRAVEL FILL
	0.0			CLAYEY SILT, light gray/strong brown, silt with clay (20–40%) low plasticity moist–wet, mottled in color
	0.0			CLAYEY SILT, light gray/strong brown, silt with clay (20–40%) low plasticity moist, some gravel sized shale fragments intermittant
5	0.0			CLAYEY SILT, strong brown/light gray, silt with clay (20–40%) low plasticity dry, firm, gravel sized shale fragments intermittant
	0.5			CLAYEY SILT, light gray/strong brown, silt with clay (30–45%) low plasticity firm, dry, mottled in color, some black staining
10				
	0.7	ML		CLAYEY SILT, light gray/strong brown, silt with clay (35–45%) low plasticity very firm, dry, slickensides at 13.5', black staining throughout mottled in color
15				
				CLAYEY SILT, light gray/strong brown, silt with clay (35–45%) low plasticity very firm, dry, mottled in color, black staining
20				
	0.5			
25		GW		CLAYEY SANDY GRAVEL, strong brown, gravel up to 1 1/2" with medium–coarse sand and clay, moist–wet
				CLAYEY SANDY GRAVEL, strong brown, gravel with medium–coarse sand and clay, saturated
30		ML		CLAYEY SILT, strong brown, silt finely laminated, crumbly with clay (10–25%)
	0.0	ML		SILT, dark gray, silt, finely laminated, medium–well lithified, fissile

TOTAL DEPTH = 32.0 FEET

Completion Data

Material Description



DRAWN BY WAL DATE [illegible] CHECKED BY APPROVED BY DRAWING NUMBER [illegible]

DRAFT

MONITOR WELL ITMW18

Client: WHIRLPOOL
Project Name: WHIRLPOOL
Project Location: FORT SMITH, ARK.
Project Number: 446498

DRILLING AND SAMPLING INFORMATION

Boring Location: ITMW18
SURFACE ELEV.(FT): 473.90
TOTAL DEPTH(FT.): 30.0
Logged By: B. HUEY
Date Started: 2/28/91
Drilled By: B. HOUSTON
Date Completed: 2/28/91

Drill Rig Type: B-61 HD TRUCK MOUNTED RIG
Drilling Method: 8-INCH HOLLOW STEM AUGER, 10-INCH HOLLOW STEM AUGER
Sampling Method: 2 FOOT SPLIT SPOON (SS)

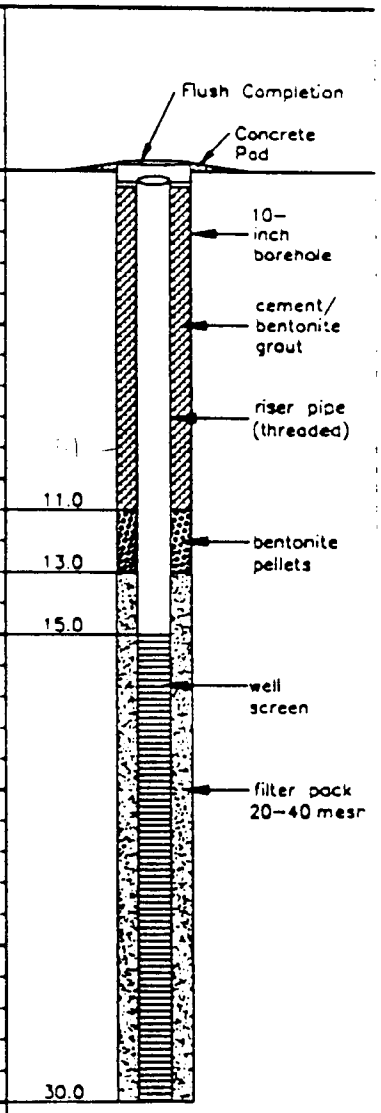
Notes: -

WELL COMPLETION DATA

Elev-Top of Casing(ft.): 473.55 Ref. Datum: MSL
1. Riser Pipe-I.D.(in.): 4 Depth(ft.): 15 Type: Sch 40 PVC
   Centralizers-Type: NA Depths(ft.): NA
2. Screen Dia.(in.): 4 Type: Sch 40 PVC FJT
   Depth Interval(ft.): 15-30 Slot Size(in.): .010
   Centralizers-Type: NA Depths(ft.): NA
3. Filter Pack Type: 20-40 Silica Depth Interval(ft.): 13-30
   Conc. Pad Size: 3'x3'x6"

DESCRIPTION	SAMPLE TYPE	SAMPLE NO.	IN. DRIVEN / IN. RECOVERED	PID	USCS	GRAPHIC LOG
CONCRETE - light gray						
CLAYEY SAND - medium plasticity; fine grained sand with 20-40% clay; orange; no odor; no stain	SS		12/12	10.4	sc	
CLAY - medium plasticity; trace gravel; hard; reddish brown; moist; no odor; no stain	SS		20/24	33.5	cl	
- tan/brown	SS		24/24	36.8		
- minor gravel; reddish brown	SS		24/24	30.7		
- increase in gravel; red/brown/tan; black stain	SS		24/24	13.2		
- minor gravel	SS		24/24	9.8		
- firm; no stain	SS		24/24	1.4		
SILTY CLAY - medium plasticity; clay with 10-30% silt; firm; red/brown/gray; moist; no odor; no stain	SS		24/24	0.0		
SILTY SAND - low plasticity; fine grained; firm to soft; red/brown; saturated; no odor; no stain	SS		24/24	0.2		
- very soft	SS		24/24	0.0		
- very fine grained sand with 10-30% silt; soft to firm	SS		24/24	2.5		
SAND - nonplastic; fine to medium grained; firm to soft; red/brown/black; saturated; no odor; no stain	SS		24/24	0.8		
SANDY CLAY - medium to high plasticity; hard; red/brown; moist no odor; no stain	SS		24/24	0.8	cl	
SAND - non plastic; fine grained with trace of large gravel-sized particles firm; red/brown; saturated; no odor; no stain	SS		24/24	3.1		
SHALE - medium plasticity; grades to shale; red/brown/black/gray	SS		24/20	3.1	sm	
	SS		24/24	0.0		
	SS		24/24	1.4		
	SS		24/24	0.2		
	SS		24/24	3.1		
	SS		24/24	0.8		
	SS		24/24	4.7		
	SS		24/24	18.8	sw	
	SS		12/24	5.3		
	SS		12/12	8.7		
	SS		12/12	2.5		
	SS		18/12	0.2	cl	
	SS		18/18	0.0		
				0.0	sp / cl	

DEPTH IN FEET: 5, 10, 15, 20, 25, 30, 35, 40



TOTAL DEPTH 29.5 FEET

INTERNATIONAL TECHNOLOGY CORPORATION	DRAFT BY	DED 4/2/91	DRAFT CHK	GHR 6-7-91	PROJ. CHK	JOM 6-7-91	APPRV. BY	JOM 6-7-91	DWG. NO.	446498-A54 Sheet 1 of 1

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1807 Park 270 Drive Suite 320, St. Louis, MO 63146

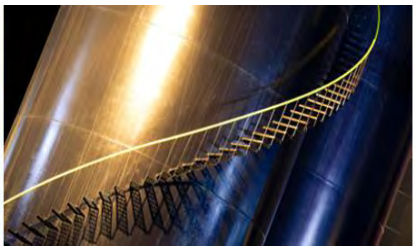
Site ID: MW-199		Date(s):	7/16/2020
Location:	Fort Smith, Arkansas		
Logged By:	J. Zellmer	Checked By:	M. Wilson
Contractor:	Environmental Works, Inc.	Purpose:	Monitoring Well
Drilling Method:	Hollow Stem Auger	GS Elevation: 463.47 ft amsl	TOC Elevation: 463.09 ft amsl
Sampling Method:	Continuous Sampler	North: 367542.01	East: 589596.86
Well Construction:		Borehole Dia.: 6.5 inches	Total Depth: 23.0 feet
Blank Casing:	Sch. 40 PVC 2 Inch 0 FT to 12 FT	Project Number:	1690017901
Screen:	Sch. 40 2 Inch 0.020 PVC 12 FT to 22 FT	Project Name:	Whirlpool Corporation
Annular Fill:	Cement Grout 0 FT to 7 FT Bentonite 7 FT to 10 FT Sand 10 FT to 22 FT	Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction (Flush Mount)
				0.0			Topsoil, trace organics		
		5		0.0			Brown silty clay, dry, stiff, low plasticity, trace black nodules		
460	5			0.0			Tannish brown silty clay, moist, high plasticity		
		5		0.0			Reddish brown silty clay, with gray mottling, trace black nodules, moist, stiff, low to medium plasticity		
455	10			0.0					
		5		0.0					
450				0.0		SP	Reddish brown sand, with clay, poorly sorted, fine-grained, moist		
	15						Reddish brown silty clay, with fine-graned sand, moist		
		5		0.0			Reddish brown silty clay, with gravel, trace, sand moist, stiff, medium plasticity		
445				0.0					
	20	3				GP	Wet gravel with silty clay and sand, poorly sorted		
				0.0			Reddish brown silty clay, dry, stiff, low plasticity		
							Weathered shale, gray		
440	25								
435									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS) - COPY.GPJ; 12/18/20

Attachment H

2021 Onsite Indoor Air and Sub-Slab Vapor Monitoring Report



ATTACHMENT H

2021 Onsite Indoor Air and Sub-Slab Vapor Monitoring Report

Whirlpool Facility
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll US Consulting, Inc

Date:
February 2022

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1 Introduction

Ramboll US Consulting, Inc. (Ramboll), on behalf of Whirlpool Corporation (Whirlpool), performed an indoor air and sub-slab soil vapor monitoring events in April and October 2021 at the former Whirlpool manufacturing building located at 6400 Jenny Lind Road in Fort Smith, Arkansas. The purpose of these fifth and sixth indoor air monitoring events were to evaluate potential vapor intrusion after renovations to the building were completed by Phoenix Investors, LLC (Phoenix) as a result of the trichloroethene (TCE) impacts in groundwater underlying the former Whirlpool building.

As summarized in the Two Year Technical Review Report (Ramboll Environ 2016a) and subsequent annual and semi-annual reports, TCE impact in groundwater exists primarily beneath the western portion of the former manufacturing building based upon historic operations performed at the site. The TCE impact in groundwater has been characterized based upon membrane interface probe (MIP) investigations, interior soil probes and borings for collection of soil and groundwater samples. Groundwater has been routinely monitored for more than 20 years.

Prior to the sale of the former manufacturing building, an assessment of indoor air quality to determine if there was a complete exposure pathway for vapor intrusion inside the building was completed. While the former manufacturing building was unoccupied, two separate indoor air and sub-slab vapor monitoring events were performed in February 2016 and June 2016 (Ramboll Environ 2016b; Ramboll Environ 2016c).

The first monitoring report concluded “the indoor air data do not indicate health risks from vapor intrusion in the open areas of the building when it is operating under normal conditions.” Indoor air and sub-slab vapor samples were collected while facility doors were open and the building fans operating. 1,2-dichloroethane (1,2-DCA); trans-1,2-dichloroethene (trans-1,2-DCE); tetrachloroethene (PCE) and TCE were detected in indoor air during the first monitoring event at concentrations below USEPA and Arkansas Department of Energy and Environment Division of Environmental Quality (ADEQ) indoor air screening levels.

The second monitoring event was conducted in June 2016 to simulate a worst-case scenario. The building ventilation system was in operation; however, all overhead doors were closed. Cis-1,2-dichloroethene (cis-1,2-DCE), PCE and TCE were detected in indoor air samples. Only TCE was detected above USEPA and ADEQ indoor air screening levels in two of the six sampled areas at concentrations of 8.1 micrograms per cubic meter (µg/m^3) and 19.4 µg/m^3 [compared to the USEPA industrial indoor air screening level of 0.88 µg/m^3 based on a conservative hazard index (HI) of 0.1].

All constituents detected in indoor air were detected in at least one sub-slab soil vapor sample; however, only TCE exceeded the USEPA sub-slab vapor screening level concentration (assuming USEPA’s default attenuation factor of 0.03) in two out of six sampled areas and vinyl chloride (VC) in one out of six sampled areas. Although the highest TCE concentrations detected in sub-slab soil vapor did not correlate with the same areas where the highest TCE indoor air concentrations were detected, it was concluded that there was a potential complete

exposure pathway due to vapor intrusion in certain areas of the building while the overhead doors are closed.

In July and October 2020 indoor air and sub-slab data were collected after extensive renovations to the building. These samples were collected from the same zones as the 2016 sampling events and from an additional office space in Zone 5. As a part of the Annual 2020 monitoring report, risk estimates were calculated based on the indoor air data; no unacceptable risks to onsite commercial workers (Ramboll 2021).

This report summarizes the data from the indoor air and soil vapor monitoring events conducted in April and October 2021. The purpose of the indoor air sampling was to assess the indoor air quality that current and future workers may encounter under current building operations.

2 Sampling Methods

2.1 Pre-Sampling Preparation

Since the February 2016 and June 2016 indoor air sampling events, the building has undergone several renovations to facilitate warehousing operations and currently houses two tenants. Renovations have included painting, concrete slab placement after filling interior pits associated with historic operations and truck bay dock leveler installations. The eastern portion of the building is separated from the western portion by a newly constructed interior wall from floor to ceiling separating Zones 4 and 5 as depicted on Figure 1.

A walk-through of the building interior was performed by Ramboll, to identify any materials that may impact air quality (i.e., solvent storage, fuel storage, maintenance chemicals, etc.) during sampling and to identify building features that might serve as preferential pathways for vapor intrusion (e.g., floor joints or cracks, below grade pits, etc.). The only potentially significant preferential pathways observed in the eastern portion of the building were construction joints in the concrete slab at various locations associated with slab placements over previous pits and truck bay dock leveler installations.

2.2 Indoor and Outdoor Air Sampling

Indoor air samples were collected on April 16, 2021, and October 19, 2021. During sampling, the building ventilation system was operating, interior overhead doors were open and exterior overhead doors and doorways were closed with exception to truck bays where loading and unloading activities were being conducted.

For the April monitoring event, sampling was performed between approximately 0704 and 1423 central standard time (CST). During the monitoring event, the outside temperature ranged from approximately 51°F to 54°F, the relative humidity ranged from 69% to 96% and the wind was from the east, northeast and the speed ranged from 5 to 12 miles per hour (mph) based upon climate data from the National Weather Service at the Fort Smith Regional Airport Station located approximately 2 miles northeast of the site (April 16, 2021, climate data).

For the October monitoring event, sampling was performed between approximately 0723 and 1547 CST. During the monitoring event, the outside temperature ranged from approximately 52°F to 77°F; relative humidity ranged from 33% to 86%; and wind was from the north, northeast at a speed between 0 mph to 10 mph based upon climate data from the National Weather Service at the Fort Smith Regional Airport Station located approximately 2 miles northeast of the site (October 19, 2021, climate data).

Indoor air samples were collected from open areas at 11 locations within Zones 1-6 (including from an enclosed office area within Zone 5) as noted on Figure 1. The locations were chosen to assess indoor air quality throughout the building with emphasis on assessing locations in the building positioned above locations exhibiting the highest TCE concentrations in the groundwater plume underneath the building. In the April 2021 sampling event, a sample was not collected at Zone 1 due to a shortage of sampling media.

An outdoor, background air sample was also collected on April 16, 2021, to evaluate potential contributions from sources other than vapor intrusion. The outdoor air sample was collected from the parking area at the northeast property boundary in the vicinity of MW-89, upwind of the building when sample collection started. An outdoor, background air sample was also collected on October 19, 2021 in the same manner as discussed above.

Indoor and outdoor air samples, including one duplicate indoor air sample, were collected at breathing height (approximately 70 inches above the ground) over an 8 hour period. Samples were collected using certified clean stainless-steel Summa canisters provided by an accredited analytical laboratory using flow control regulators preset by the laboratory to collect an 8 hour time integrated sample. The canister ID, regulator ID and initial canister pressure were logged at the beginning of sampling at each location. Initial canister negative pressures typically range from -22 inches mercury (in. Hg) to -30 in. Hg. upon receipt from the laboratory. Indoor and outdoor air samples were collected until the pressure remaining in the canister read between -1 and -8 in. Hg.

After sample collection was complete, the regulators were closed on the respective canisters and the canisters were shipped to the analytical laboratory for analysis of TCE and associated breakdown products using USEPA Method TO-15 SIM. The results are summarized in Table 1 and Table 2. The laboratory reports containing the indoor and outdoor air sampling results are attached.

2.3 Sub-Slab Vapor Sampling

A new permanent sub-slab soil vapor sampling port was installed through the floor of the building on October 23, 2019, within a newly constructed interior office area located in Zone 5 (depicted as sample location Z5-OF). On October 23, 2019, replacement sub-slab ports were installed in Zone 1 (Z1-1) and Zone 6 (Z6-1), replacing Q1 and Q6 sample ports that were damaged during building renovation. Additionally, on October 18, 2021, replacement sub-slab ports were installed in Zone 1 (Z1-1), Zone 4 (Z4-1) and Zone 5 (Z5-1). The sub-slab soil vapor sampling ports are present in the vicinity of the indoor air sampling locations discussed above. Sub-slab sampling locations are depicted on Figure 1.

Sub-slab vapor sampling was conducted on April 15, 2021, and October 20, 2021. On April 15, 2021, sampling was performed between approximately 0816 and 1433 CST (samples consist of approximate 15 minute samples collected at various times throughout the day when access was granted by the tenant). During the sub-slab vapor sampling event the outside temperature ranged from 55°F to 66°F; and the wind was from the north, northeast and ranged from 3 to 10 mph based upon climate data from the National Weather Service at the Fort Smith Airport (April 15, 2021, climate data).

The October 2021 sampling was performed between approximately 0754 and 1413 CST. On October 20, 2021, the outside temperature ranged from 59°F to 77°F; the wind was from the north, northeast and ranged from 0 to 9 mph.

Sub-slab vapor samples were collected after at least 2 liters (L) of air was purged and tested for methane (CH4), carbon dioxide (CO_2) and oxygen (O_2) content using a GEM 2000 multi-gas probe. Leak testing was conducted during purging and sampling. A shroud was placed over the sub-slab sample port, sampling train and tubing connections to and from the summa canister and helium was injected until the air in the shroud measured >15% helium using a helium detector. The helium detector was then used to measure the amount of helium in the sampling line. All helium measurements from the leak test were non-detect.

After the sampling train was determined to be adequately sealed, soil vapor samples were collected using certified clean stainless-steel summa canisters provided by an accredited analytical laboratory using flow control regulators pre-set by the laboratory to collect an approximate 15-minute time integrated sample. The canister ID, regulator ID and initial canister pressure were logged at the beginning of sampling at each location. Soil vapor samples were collected until the pressure remaining in the canister read between -1 and -15 in. Hg. After sample collection was complete, the regulators were closed on the respective canisters and the canisters were shipped to the analytical laboratory for analysis of TCE and associated breakdown products using USEPA Method TO-15 and helium for leak testing. In addition, one duplicate sub-slab samples were collected. The results are summarized in Table 3 and Table 4. The laboratory reports containing the sub-slab soil vapor sampling results are attached.

An outdoor, background air sample was collected on April 15, 2021, and October 20, 2021, to evaluate potential contributions from sources other than vapor intrusion. The outdoor air sample was collected from the parking area along the northeast property boundary in the vicinity of MW-89, upwind of the building when sample collection started.

3 Evaluation of Results

3.1 Indoor Air

As summarized in Table 1, 1,2-dichloroethane (1,2-DCA); cis-1,2-DCE; trans-1,2-dichloroethene (trans-1,2-DCE); PCE and TCE were detected in indoor air samples in April 2021. Only TCE was detected above USEPA and ADEQ indoor air screening levels in April 2021; TCE was detected in Zones 2, 3, 4, 5 and 6. TCE concentrations detected in indoor air ranged from 0.58 to 2.5 µg/m^3 (compared to the USEPA industrial indoor air screening level of 0.88 µg/m^3 based on a HI of 0.1).

As summarized in Table 2, 1,2-DCA; cis-1,2-DCE; trans-1,2-DCE; PCE and TCE were detected in indoor air samples in October 2021. Only TCE was detected above USEPA and ADEQ indoor air screening levels in October 2021; TCE was detected in Zone 5, Zone 5 Office and Zone 6. TCE concentrations detected in indoor air ranged from 0.38 µg/m^3 to 5.1 µg/m^3 (compared to the USEPA industrial indoor air screening level of 0.88 µg/m^3 based on a HI of 0.1).

PCE was detected in the outdoor/background air sample collected on October 19, 2021.

The screening levels used in this evaluation are conservative and are not intended to represent action levels.

3.2 Sub-Slab Soil Vapor

Table 3 shows that 1,1-dichloroethane (1,1-DCA); cis-1,2-DCE; trans-1,2-DCE; PCE; 1,1,1-trichloroethane (1,1,1-TCA); TCE and VC were detected in at least one sub-slab soil vapor sample. Trans-1,2-DCE; PCE; TCE and VC were detected at concentrations exceeding USEPA sub-slab vapor screening level concentrations (assuming USEPA's default attenuation factor of 0.03). Trans-1,2-DCE exceeded its respective USEPA sub-slab vapor screening level concentration in Zone 3-1; PCE in Zones 2, 3-2 and 6-1; TCE in Zones 3-2, 5-2, Zone 5 Office and 6-1 and VC in Zone 3-1.

Table 4 shows that all analyzed chemicals were detected in at least one sub-slab soil vapor sample. Only trans-1,2-DCE; PCE; TCE and VC were detected at concentrations exceeding USEPA sub-slab vapor screening level concentrations. Trans-1,2-DCE exceeded its respective USEPA sub-slab vapor screening level concentration in Zone 3-1. PCE exceeded its respective USEPA sub-slab vapor screening level concentration in Zones 2, 3-2 and 6-1. TCE exceeded its respective USEPA sub-slab vapor screening level concentration in Zone 3-1, 3-2, 5-1, 5-2, Zone 5 Office and 6-1. VC exceeded its respective USEPA sub-slab vapor screening level concentration in Zone 3-1.

PCE was detected in the outdoor/background air sample collected on October 19, 2021.

Based on these results, the presence of TCE underneath the building floor may be contributing to indoor air TCE concentrations.

3.3 Risk Estimates for Vapor Intrusion

Per ADEQ's suggestion, in the initial screening process, detected indoor air constituent concentrations were compared to non-carcinogenic screening levels based on a target hazard quotient of 0.1 to account for additive effect of multiple contaminants resulting in a TCE indoor air screening level of 0.88 µg/m^3 for the industrial worker. Results of the indoor air sampling indicated that six out of eleven samples exceeded the indoor air screening level in April 2021 and five of 11 samples exceeded the indoor air screening level in October 2021. In accordance with USEPA guidance, risk estimates were calculated for the onsite worker in each zone of the building to evaluate potential for increased risk from vapor intrusion using USEPA's equation for inhalation exposure, default exposure parameters (Table 7) and toxicity values (Table 8).

Risks for the onsite worker for each building zone are presented in Tables 5A-K and 6A-K. The cumulative hazard index for exposure to constituents in indoor in April 2021 and October 2021 ranged between 0.02 and 0.4 and 0.009 and 0.6, respectively. These values are below the USEPA target hazard index of 1. The cumulative lifetime cancer risk estimate for exposure to constituents in indoor air ranged from 2E-07 to 3E-06; these values are all below the USEPA cumulative cancer target of 1E-04.

4 Summary and Conclusion

As discussed in the previous, the indoor air data indicate a potential complete exposure pathway due to vapor intrusion into the building. Of the detected constituents, only TCE exceeded its respective indoor air screening level; however, cumulative risk estimates for the onsite worker were below or within ADEQ acceptable range of non-cancer hazard and cancer target values. These results do not indicate health risks from indoor exposures under current operating conditions similar to previous monitoring events.

5 References

Ramboll Environ. 2016a. 2015 Two Year Technical Review Report, January.

Ramboll Environ. 2016b. Onsite Indoor Air and Sub-Slab SV Data Report. April.

Ramboll Environ. 2016c. Onsite Indoor Air and Sub-Slab SV Data Report. July.

Ramboll 2021. Onsite Indoor Air and Sub-Slab Vapor Monitoring Report. February.

Tables

TABLE 1
INDOOR AND OUTDOOR AIR SAMPLING RESULTS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Industrial Air RSL TR = 1E-5, THQ = 0.1	Zone 2-1	Zone 3-1	Zone 3-2	Zone 4-1	Zone 4-2	Zone 5-1	Zone 5-2	Zone 5 Office	Zone 6-1
Field Sample ID		Z2-1-IA-202104	Z3-1-IA-202104	Z3-2-IA-202104	Z4-1-IA-202104	Z4-2-IA-202104	Z5-1-IA-202104	Z5-2-IA-202104	Z5-OF-IA-202104	Z6-1-IA-202104
Lab Sample ID		10555807021	10555807017	10555807019	10555807018	10555807020	10555807016	10555807013	10555807014	10555807015
Sample Date		04/16/2021	04/16/2021	04/16/2021	04/16/2021	04/16/2021	04/16/2021	04/16/2021	04/16/2021	04/16/2021
Comments										
Volatile Organic Compounds										
1,1-Dichloroethane	77	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.11)	U (0.13)	U (0.14)	U (0.14)
1,2-Dichloroethane	3.1	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.11)	U (0.13)	0.47 (0.14)	U (0.14)
1,1-Dichloroethene	88	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.11)	U (0.12)	U (0.14)	U (0.14)
cis-1,2-Dichloroethene	NA	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.19 (0.11)	1.8 (0.12)	U (0.14)	0.17 (0.14)
trans-1,2-Dichloroethene	18	U (0.14)	1.2 (0.14)	U (0.14)	1.4 (0.14)	U (0.14)	U (0.11)	U (0.12)	U (0.14)	U (0.14)
Tetrachloroethene	18	0.65 (0.12)	0.83 (0.12)	0.69 (0.12)	0.83 (0.12)	0.81 (0.12)	0.77 (0.092)	0.22 (0.11)	0.25 (0.12)	0.76 (0.12)
1,1,1-Trichloroethane	2200	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.15)	U (0.17)	U (0.19)	U (0.19)
Trichloroethene	0.88	1.4 (0.096)	1.2 (0.092)	0.58 (0.093)	1.2 (0.092)	0.73 (0.096)	2.5 (0.073)	0.92 (0.085)	0.5 (0.092)	2.2 (0.093)
Vinyl Chloride	28	U (0.046)	U (0.044)	U (0.044)	U (0.044)	U (0.046)	U (0.035)	U (0.04)	U (0.044)	U (0.044)

Notes:

1 All concentrations presented in micrograms per cubic meter

2 Concentrations that exceed the Industrial Air RSL are double underlined.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Reporting Detection Limit.
RSL -- Regional Screening Level

RAMBOLL

TABLE 1
INDOOR AND OUTDOOR AIR SAMPLING RESULTS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Zone 6-2	Zone 6-2	AA	AA
Field Sample ID	Z6-2-IA-202104	Z6-2-IA-202104 DUP	AA-1-202104	AA-2-202104
Lab Sample ID	10555807011	10555807012	10555807001	10555807010
Sample Date	04/16/2021	04/16/2021	04/15/2021	04/16/2021
Comments		Field Duplicate		
Volatile Organic Compounds				
1,1-Dichloroethane	U (0.13)	U (0.13)	U (0.13)	U (0.13)
1,2-Dichloroethane	U (0.13)	U (0.13)	U (0.13)	U (0.13)
1,1-Dichloroethene	U (0.13)	U (0.13)	U (0.13)	U (0.12)
cis-1,2-Dichloroethene	U (0.13)	U (0.13)	U (0.13)	U (0.12)
trans-1,2-Dichloroethene	U (0.13)	U (0.13)	U (0.13)	U (0.12)
Tetrachloroethene	0.4 (0.11)	0.42 (0.11)	U (0.11)	U (0.11)
1,1,1-Trichloroethane	U (0.18)	U (0.18)	U (0.18)	U (0.17)
Trichloroethene	0.92 (0.09)	0.91 (0.088)	U (0.088)	U (0.085)
Vinyl Chloride	U (0.043)	U (0.042)	U (0.042)	U (0.04)

Notes:

1 All concentrations presented in micrograms per cubic meter

2 Concentrations that exceed the Industrial Air RSL are double underlined.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Reporting Detection Limit.
RSL -- Regional Screening Level

RAMBOLL

TABLE 2
INDOOR AND OUTDOOR AIR SAMPLING RESULTS
(October 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Industrial Air RSL TR = 1E-5, THQ = 0.1	Zone 1-1	Zone 2-1	Zone 3-1	Zone 3-2	Zone 4-1	Zone 4-2	Zone 5-1	Zone 5-2	Zone 5 Office
Field Sample ID		Z1-1-IA-202110	Z2-1-IA-202110	Z3-1-IA-202110	Z3-2-IA-202110	Z4-1-IA-202110	Z4-2-IA-202110	Z5-1-IA-202110	Z5-2-IA-202110	Z5-OF-IA-202110
Lab Sample ID		10584567008	10584567009	10584567013	10584567011	10584567012	10584567010	10584567004	10584567007	10584567002
Sample Date		10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
Comments										
Volatile Organic Compounds										
1,1-Dichloroethane	77	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.14)	U (0.13)	U (0.13)	U (0.17)
1,2-Dichloroethane	3.1	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.14)	U (0.13)	U (0.13)	0.48 (0.17)
1,1-Dichloroethene	88	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.14)	U (0.13)	U (0.13)	U (0.16)
cis-1,2-Dichloroethene	NA	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.14)	0.14 (0.13)	0.17 (0.13)	U (0.16)
trans-1,2-Dichloroethene	18	U (0.13)	U (0.13)	0.29 (0.13)	U (0.13)	0.66 (0.13)	U (0.14)	U (0.13)	U (0.13)	U (0.16)
Tetrachloroethene	18	0.37 (0.11)	0.57 (0.11)	0.53 (0.11)	0.43 (0.11)	0.57 (0.11)	0.69 (0.12)	0.72 (0.11)	0.42 (0.11)	0.39 (0.14)
1,1,1-Trichloroethane	2200	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.19)	U (0.18)	U (0.18)	U (0.22)
Trichloroethene	0.88	0.38 (0.088)	0.49 (0.09)	0.51 (0.088)	0.45 (0.088)	0.67 (0.088)	0.66 (0.092)	1.6 (0.09)	4.8 (0.09)	5.1 (0.11)
Vinyl Chloride	28	U (0.042)	U (0.043)	U (0.042)	U (0.042)	U (0.042)	U (0.044)	U (0.043)	U (0.043)	U (0.052)

Notes:

1 All concentrations presented in micrograms per cubic meter ($\mu g/m^3$)

2 Concentrations that exceed the Industrial Air RSL are double underlined.

Abbreviations:

U -- Not Detected.

J -- Estimated Concentration.

( ) -- Reporting Detection Limit.

RSL -- Regional Screening Level

RAMBOLL

TABLE 2
INDOOR AND OUTDOOR AIR SAMPLING RESULTS
(October 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Zone 6-1	Zone 6-2	Zone 6-2	AA	AA
Field Sample ID	Z6-1-IA-202110	Z6-2-IA-202110	Z6-2-IA-202110 DUP	AA-1-202110	AA-2-202110
Lab Sample ID	10584567003	10584567005	10584567006	10584567001	10584567014
Sample Date	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/20/2021
Comments			Field Duplicate		
Volatile Organic Compounds					
1,1-Dichloroethane	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
1,2-Dichloroethane	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
1,1-Dichloroethene	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
cis-1,2-Dichloroethene	0.15 (0.13)	0.17 (0.13)	0.17 (0.13)	U (0.13)	U (0.13)
trans-1,2-Dichloroethene	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Tetrachloroethene	0.73 (0.11)	0.41 (0.11)	0.44 (0.11)	0.25 (0.11)	U (0.11)
1,1,1-Trichloroethane	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Trichloroethene	1.8 (0.088)	4.9 (0.088)	4.8 (0.086)	U (0.09)	U (0.088)
Vinyl Chloride	U (0.042)	U (0.042)	U (0.041)	U (0.043)	U (0.042)

Notes:

1 All concentrations presented in micrograms per cubic meter ($\mu g/m^3$)

2 Concentrations that exceed the Industrial Air RSL are double underlined.

Abbreviations:

U -- Not Detected.

J -- Estimated Concentration.

( ) -- Reporting Detection Limit.

RSL -- Regional Screening Level

RAMBOLL

TABLE 3
SUB-SLAB SOIL VAPOR SAMPLING RESULTS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Industrial SSV RSL TR = 1E-5, THQ = 0.1	Zone 2-1	Zone 3-1	Zone 3-2	Zone 4-1	Zone 5 Office	Zone 5-2	Zone 6-1	Zone 6-2	Zone 6-2
Field Sample ID		Z2-1-SS-202104	Z3-1-SS-202104	Z3-2-SS-202104	Z4-1-SS-202104	Z5-OF-SS-202104	Z5-2-SS-202104	Z6-1-SS-202104	Z6-2-SS-202104	Z6-2-SS-202104 DUP
Lab Sample ID		10555807006	10555807007	10555807005	10555807008	10555807033	10555807004	10555807009	10555807002	10555807003
Sample Date		04/15/2021	04/15/2021	04/15/2021	04/15/2021	04/15/2021	04/15/2021	04/15/2021	04/15/2021	04/15/2021
Comments										Field Duplicate
Volatile Organic Compounds										
1,1-Dichloroethane	2600	U (181)	U (391)	U (16)	U (1.5)	16.1 (8.3)	U (16)	1220 (16)	U (1.7)	U (1.6)
1,2-Dichloroethane	100	U (181)	U (391)	U (16)	U (1.5)	U (8.3)	U (16)	U (16)	U (1.7)	U (1.6)
1,1-Dichloroethene	2900	U (177)	U (383)	U (15.6)	U (1.5)	U (8.1)	U (15.6)	U (15.6)	U (1.6)	U (1.6)
cis-1,2-Dichloroethene	NA	U (177)	U (383)	U (15.6)	U (1.5)	U (8.1)	U (15.6)	31.6 (15.6)	U (1.6)	U (1.6)
trans-1,2-Dichloroethene	600	U (177)	999 (383)	U (15.6)	U (1.5)	U (8.1)	U (15.6)	U (15.6)	U (1.6)	U (1.6)
Tetrachloroethene	600	7580 (151)	U (327)	693 (13.4)	255 (1.3)	326 (7)	U (13.4)	701 (13.4)	U (1.4)	U (1.4)
1,1,1-Trichloroethane	73000	U (244)	U (527)	U (21.5)	16.8 (2)	78.6 (11.2)	52 (21.5)	4290 (43.1)	U (2.2)	U (2.2)
Trichloroethene	29	U (120)	U (259)	245 (10.6)	7.1 (1)	72.2 (5.5)	307 (10.6)	97.9 (10.6)	U (1.1)	U (1.1)
Vinyl Chloride	930	U (57.1)	40100 (124)	U (5)	U (0.48)	U (2.6)	U (5)	U (5)	U (0.53)	U (0.51)

Notes:

1 All concentrations presented in micrograms per cubic meter ($\mu g/m^3$)

2 Concentrations that exceed the Industrial SSV RSL are double underlined.

Abbreviations:

U -- Not Detected.
J -- Estimated Concentration.
( ) -- Reporting Detection Limit.
RSL -- Regional Screening Level
SSV - Sub-slab Vapor

RAMBOLL

TABLE 4
SUB-SLAB SOIL VAPOR SAMPLING RESULTS (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

Location	Industrial SSV RSL TR = 1E-5, THQ = 0.1	Z1-1	Z2-1	Z3-1	Z3-2	Z4-1	Z4-2	Z5-OF	Z5-1	Z5-2	Z6-1	Z6-2	Z6-2
Field Sample ID		Z1-1-SS-202110	Z2-1-SS-202110	Z3-1-SS-202110	Z3-2-SS-202110	Z4-1-SS-202110	Z4-2-SS-202110	Z5-OF-SS-202110	Z5-1-SS-202110	Z5-2-SS-202110	Z6-1-SS-202110	Z6-2-SS-202110	Z6-2-SS-202110 DUP
Lab Sample ID		10584567018	10584567021	10584567022	10584567019	10584567023	10584567020	10584567026	10584567024	10584567017	10584567025	10584567015	10584567016
Sample Date		10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021
Comments													Field Duplicate
Volatile Organic Compounds													
1,1-Dichloroethane	2600	U (1.5)	U (1.4)	348 (41.5)	U (1.5)	U (1.5)	4.2 (1.4)	4.7 (1.7)	U (1.5)	U (1.6)	771 (88.9)	U (1.5)	U (1.5)
1,2-Dichloroethane	100	U (1.5)	U (1.4)	U (41.5)	U (1.5)	U (1.5)	U (1.4)	U (1.7)	2.2 (1.5)	U (1.6)	U (1.5)	U (1.5)	U (1.5)
1,1-Dichloroethene	2900	U (1.5)	U (1.4)	U (40.6)	U (1.4)	U (1.5)	U (1.4)	U (1.6)	U (1.5)	U (1.6)	7.6 (1.5)	U (1.5)	U (1.5)
cis-1,2-Dichloroethene	NA	U (1.5)	U (1.4)	121 (40.6)	U (1.4)	U (1.5)	U (1.4)	U (1.6)	U (1.5)	U (1.6)	29.6 (1.5)	U (1.5)	U (1.5)
trans-1,2-Dichloroethene	600	U (1.5)	U (1.4)	1030 (40.6)	U (1.4)	U (1.5)	U (1.4)	U (1.6)	U (1.5)	U (1.6)	8.6 (1.5)	U (1.5)	U (1.5)
Tetrachloroethene	600	32 (3.7)	18500 (576)	406 (34.7)	1020 (73.2)	97.7 (1.3)	20.2 (1.2)	106 (4.1)	152 (1.3)	31.2 (1.3)	1510 (149)	1.3 (1.3)	1.6 (1.2)
1,1,1-Trichloroethane	73000	2.1 (2)	63.2 (1.9)	U (55.9)	10 (2)	29.6 (2.1)	8 (1.9)	33.4 (2.2)	71 (2.1)	114 (2.2)	3600 (120)	U (2)	U (2)
Trichloroethene	29	1.4 (1)	17.1 (0.95)	53 J (27.5)	323 (29)	7.4 (1)	1.5 (0.95)	33.1 (1.1)	1280 (30.6)	1560 (64.4)	185 (0.98)	U (1)	U (0.98)
Vinyl Chloride	930	U (0.48)	U (0.45)	44500 (1680)	U (0.46)	1.2 (0.49)	U (0.45)	U (0.53)	2.3 (0.49)	U (0.5)	U (0.47)	U (0.48)	U (0.47)

Notes:

1 All concentrations presented in micrograms per cubic meter ($\mu g/m^3$)

2 Concentrations that exceed the Industrial SSV RSL are double underlined.

Abbreviations:

U -- Not Detected.

J -- Estimated Concentration.

( ) -- Reporting Detection Limit.

Level

SSV - Sub-slab Vapor

TABLE 5
INDOOR AIR HUMAN HEALTH RISKS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 2 (Table 5a)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.2E-05	9.1E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.3E-03	1.5E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	8.0E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	2.7E-04	NA
Tetrachloroethene	0.65 (0.12)	1.5E-04	5.3E-02	2.2E-03	8.3E-09
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.3E-06	NA
Trichloroethene	1.4 (0.096)	3.2E-04	1.1E-01	5.6E-02	1.6E-07
Vinyl Chloride	U (0.046)	5.3E-06	1.9E-03	5.3E-05	8.3E-09
			Summed Risk	6E-02	3E-07

ZONE 3-1 (Table 5b)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI (ug/m^3)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.4E-05	9.8E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.4E-03	1.6E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	8.0E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	1.2 (0.14)	2.7E-04	9.8E-02	2.7E-04	NA
Tetrachloroethene	0.83 (0.12)	1.9E-04	6.8E-02	1.4E-03	5.1E-09
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.6E-06	NA
Trichloroethene	1.2 (0.092)	2.7E-04	9.8E-02	7.2E-02	2.1E-07
Vinyl Chloride	U (0.044)	5.0E-06	1.8E-03	5.4E-05	8.4E-09
			Summed Risk	8E-02	4E-07

ZONE 3-2 (Table 5c)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.2E-05	9E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.3E-03	1E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	8.0E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	2.7E-04	NA
Tetrachloroethene	0.69 (0.12)	1.6E-04	5.6E-02	3.1E-03	1E-08
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.3E-06	NA
Trichloroethene	0.58 (0.093)	1.3E-04	4.7E-02	1.4E-01	4E-07
Vinyl Chloride	U (0.044)	5.0E-06	1.8E-03	5.3E-05	8E-09
			Summed Risk	1E-01	6E-07

RAMBOLL

TABLE 5
INDOOR AIR HUMAN HEALTH RISKS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 4-1 (Table 5d)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.4E-05	9.8E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.4E-03	1.6E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	8.0E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	1.4 (0.14)	3.2E-04	1.1E-01	2.7E-04	NA
Tetrachloroethene	0.83 (0.12)	1.9E-04	6.8E-02	5.0E-03	1.8E-08
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.6E-06	NA
Trichloroethene	1.2 (0.092)	2.7E-04	9.8E-02	7.8E-02	2.3E-07
Vinyl Chloride	U (0.044)	5.0E-06	1.8E-03	5.4E-05	8.4E-09
			Summed Risk	9E-02	4E-07

ZONE 4-2 (Table 5e)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.4E-05	9.8E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.4E-03	1.6E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	8.6E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	2.9E-04	NA
Tetrachloroethene	0.81 (0.12)	1.8E-04	6.6E-02	2.5E-03	9.1E-09
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.8E-06	NA
Trichloroethene	0.73 (0.096)	1.7E-04	6.0E-02	7.5E-02	2.2E-07
Vinyl Chloride	U (0.046)	5.3E-06	1.9E-03	5.6E-05	8.8E-09
			Summed Risk	8E-02	4E-07

ZONE 5-1 (Table 5f)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.11)	1.3E-05	4.5E-03	3.2E-05	9.1E-09
1,2-Dichloroethane	U (0.11)	1.3E-05	4.5E-03	2.3E-03	1.5E-07
1,1-Dichloroethene	U (0.11)	1.3E-05	4.5E-03	8.0E-05	NA
cis-1,2-Dichloroethene	0.19 (0.11)	4.3E-05	1.5E-02	NA	NA
trans-1,2-Dichloroethene	U (0.11)	1.3E-05	4.5E-03	2.7E-04	NA
Tetrachloroethene	0.77 (0.092)	1.8E-04	6.3E-02	2.6E-03	9.5E-09
1,1,1-Trichloroethane	U (0.15)	1.7E-05	6.1E-03	4.3E-06	NA
Trichloroethene	2.5 (0.073)	5.7E-04	2.0E-01	6.5E-02	1.9E-07
Vinyl Chloride	U (0.035)	4.0E-06	1.4E-03	5.3E-05	8.3E-09
			Summed Risk	7E-02	4E-07

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TABLE 5
INDOOR AIR HUMAN HEALTH RISKS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 5-2 (Table 5g)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.7E-05	7.8E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.0E-03	1.3E-07
1,1-Dichloroethene	U (0.12)	1.4E-05	4.9E-03	6.8E-05	NA
cis-1,2-Dichloroethene	1.8 (0.12)	4.1E-04	1.5E-01	NA	NA
trans-1,2-Dichloroethene	U (0.12)	1.4E-05	4.9E-03	2.3E-04	NA
Tetrachloroethene	0.22 (0.11)	5.0E-05	1.8E-02	5.7E-03	2.1E-08
1,1,1-Trichloroethane	U (0.17)	1.9E-05	6.9E-03	3.9E-06	NA
Trichloroethene	0.92 (0.085)	2.1E-04	7.5E-02	3.5E-01	1.0E-06
Vinyl Chloride	U (0.04)	4.6E-06	1.6E-03	4.5E-05	7.0E-09
			Summed Risk	4E-01	1E-06

ZONE 5 Office (Table 5h)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	0.47 (0.14)	1.1E-04	3.8E-02	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	2.5E-04	NA
Tetrachloroethene	0.25 (0.12)	5.7E-05	2.0E-02	5.7E-03	2.1E-08
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.1E-06	NA
Trichloroethene	0.5 (0.092)	1.1E-04	4.1E-02	4.3E-01	1.3E-06
Vinyl Chloride	U (0.044)	5.0E-06	1.8E-03	4.8E-05	7.5E-09
			Summed Risk	4E-01	1E-06

ZONE 6-1 (Table 5i)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.7E-05	7.8E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	9.1E-03	5.9E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	6.8E-05	NA
cis-1,2-Dichloroethene	0.17 (0.14)	3.9E-05	1.4E-02	NA	NA
trans-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	2.3E-04	NA
Tetrachloroethene	0.76 (0.12)	1.7E-04	6.2E-02	1.9E-03	7.0E-09
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	3.7E-06	NA
Trichloroethene	2.2 (0.093)	5.0E-04	1.8E-01	1.3E-01	3.7E-07
Vinyl Chloride	U (0.044)	5.0E-06	1.8E-03	4.2E-05	6.6E-09
			Summed Risk	1E-01	1E-06

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TABLE 5
INDOOR AIR HUMAN HEALTH RISKS (April 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 6-2 (Table 5j)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.7E-05	7.8E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.0E-03	1.3E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	6.8E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	2.3E-04	NA
Tetrachloroethene	0.4 (0.11)	9.1E-05	3.3E-02	6.8E-03	2.5E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	3.9E-06	NA
Trichloroethene	0.92 (0.09)	2.1E-04	7.5E-02	3.3E-01	9.7E-07
Vinyl Chloride	U (0.043)	4.9E-06	1.8E-03	4.5E-05	7.0E-09
			Summed Risk	3E-01	1E-06

ZONE 6-2 DUP

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	6.8E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	2.3E-04	NA
Tetrachloroethene	0.42 (0.11)	9.6E-05	3.4E-02	5.5E-03	2.0E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	3.9E-06	NA
Trichloroethene	0.91 (0.088)	2.1E-04	7.4E-02	3.5E-01	1.0E-06
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.6E-05	7.2E-09
			Summed Risk	4E-01	1E-06

AA

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.4E-05	9.8E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.4E-03	1.6E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	8.6E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	2.9E-04	NA
Tetrachloroethene	U (0.11)	1.3E-05	4.5E-03	8.6E-03	3.2E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.6E-06	NA
Trichloroethene	U (0.088)	1.0E-05	3.6E-03	5.7E-03	1.7E-08
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	5.5E-05	8.6E-09
			Summed Risk	2E-02	2E-07

Notes:

$\mu g/m^3$ = Microgram per cubic meter
CDI = Chronic Daily Intake
ND = Nondetect
HQ = Hazard Quotient
LCR = Lifetime Cancer Risk

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TABLE 6
INDOOR AIR HUMAN HEALTH RISKS (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 1 (Table 6a)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.37 (0.11)	8.4E-05	3.0E-02	2.1E-03	7.8E-09
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	0.38 (0.088)	8.7E-05	3.1E-02	4.3E-02	1.3E-07
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.8E-05	7.5E-09
			Summed Risk	5E-02	3E-07

ZONE 2 (Table 6b)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.57 (0.11)	1.3E-04	4.6E-02	3.3E-03	1.2E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	0.49 (0.09)	1.1E-04	4.0E-02	5.6E-02	1.6E-07
Vinyl Chloride	U (0.043)	4.9E-06	1.8E-03	4.9E-05	7.7E-09
			Summed Risk	6E-02	3E-07

ZONE 3-1 (Table 6c)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	0.29 (0.13)	6.6E-05	2.4E-02	NA	NA
Tetrachloroethene	0.53 (0.11)	1.2E-04	4.3E-02	3.0E-03	1.1E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	0.51 (0.088)	1.2E-04	4.2E-02	5.8E-02	1.7E-07
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.8E-05	7.5E-09
			Summed Risk	6E-02	3E-07

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TABLE 6
INDOOR AIR HUMAN HEALTH RISKS (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 3-2 (Table 6d)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.43 (0.11)	9.8E-05	3.5E-02	2.5E-03	9.1E-09
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	0.45 (0.088)	1.0E-04	3.7E-02	5.1E-02	1.5E-07
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.8E-05	7.5E-09
			Summed Risk	6E-02	3E-07

ZONE 4-1 (Table 6e)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	0.66 (0.13)	1.5E-04	5.4E-02	NA	NA
Tetrachloroethene	0.57 (0.11)	1.3E-04	4.6E-02	3.3E-03	1.2E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	0.67 (0.088)	1.5E-04	5.5E-02	7.6E-02	2.2E-07
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.8E-05	7.5E-09
			Summed Risk	8E-02	4E-07

ZONE 4-2 (Table 6f)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	3.2E-05	9.1E-09
1,2-Dichloroethane	U (0.14)	1.6E-05	5.7E-03	2.3E-03	1.5E-07
1,1-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	8.0E-05	NA
cis-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
trans-1,2-Dichloroethene	U (0.14)	1.6E-05	5.7E-03	NA	NA
Tetrachloroethene	0.69 (0.12)	1.6E-04	5.6E-02	3.9E-03	1.5E-08
1,1,1-Trichloroethane	U (0.19)	2.2E-05	7.7E-03	4.3E-06	NA
Trichloroethene	0.66 (0.092)	1.5E-04	5.4E-02	7.5E-02	2.2E-07
Vinyl Chloride	U (0.044)	5.0E-06	1.8E-03	5.0E-05	7.9E-09
			Summed Risk	8E-02	4E-07

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TABLE 6
INDOOR AIR HUMAN HEALTH RISKS (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 5-1 (Table 6g)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	0.14 (0.13)	3.2E-05	1.1E-02	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.72 (0.11)	1.6E-04	5.9E-02	4.1E-03	1.5E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	1.6 (0.09)	3.7E-04	1.3E-01	1.8E-01	5.3E-07
Vinyl Chloride	U (0.043)	4.9E-06	1.8E-03	4.9E-05	7.7E-09
			Summed Risk	2E-01	7E-07

ZONE 5-2 (Table 6h)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	0.17 (0.13)	3.9E-05	1.4E-02	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.42 (0.11)	9.6E-05	3.4E-02	2.4E-03	8.9E-09
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	4.8 (0.09)	1.1E-03	3.9E-01	5.5E-01	1.6E-06
Vinyl Chloride	U (0.043)	4.9E-06	1.8E-03	4.9E-05	7.7E-09
			Summed Risk	6E-01	2E-06

ZONE 5 Office (Table 6i)

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.17)	1.9E-05	6.9E-03	3.9E-05	1.1E-08
1,2-Dichloroethane	0.48 (0.17)	1.1E-04	3.9E-02	1.6E-02	1.0E-06
1,1-Dichloroethene	U (0.16)	1.8E-05	6.5E-03	9.1E-05	NA
cis-1,2-Dichloroethene	U (0.16)	1.8E-05	6.5E-03	NA	NA
trans-1,2-Dichloroethene	U (0.16)	1.8E-05	6.5E-03	NA	NA
Tetrachloroethene	0.39 (0.14)	8.9E-05	3.2E-02	2.2E-03	8.3E-09
1,1,1-Trichloroethane	U (0.22)	2.5E-05	9.0E-03	5.0E-06	NA
Trichloroethene	5.1 (0.11)	1.2E-03	4.2E-01	5.8E-01	1.7E-06
Vinyl Chloride	U (0.052)	5.9E-06	2.1E-03	5.9E-05	9.3E-09
			Summed Risk	6E-01	3E-06

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TABLE 6
INDOOR AIR HUMAN HEALTH RISKS (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

ZONE 6-1 (Table 6j)

Constituent	Air Concentration (µg/m^3)	Non-Cancer CDI (mg/m^3)	Cancer CDI (µg/m^3)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	0.15 (0.13)	3.4E-05	1.2E-02	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.73 (0.11)	1.7E-04	6.0E-02	4.2E-03	1.5E-08
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	1.8 (0.088)	4.1E-04	1.5E-01	2.1E-01	6.0E-07
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.8E-05	7.5E-09
			Summed Risk	2E-01	8E-07

ZONE 6-2 (Table 6k)

Constituent	Air Concentration (µg/m^3)	Non-Cancer CDI (mg/m^3)	Cancer CDI (µg/m^3)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	0.17 (0.13)	3.9E-05	1.4E-02	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.41 (0.11)	9.4E-05	3.3E-02	2.3E-03	8.7E-09
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	4.9 (0.088)	1.1E-03	4.0E-01	5.6E-01	1.6E-06
Vinyl Chloride	U (0.042)	4.8E-06	1.7E-03	4.8E-05	7.5E-09
			Summed Risk	6E-01	2E-06

ZONE 6-2-DUP

Constituent	Air Concentration (µg/m^3)	Non-Cancer CDI (mg/m^3)	Cancer CDI (µg/m^3)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	0.17 (0.13)	3.9E-05	1.4E-02	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.44 (0.11)	1.0E-04	3.6E-02	2.5E-03	9.3E-09
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	4.8 (0.086)	1.1E-03	3.9E-01	5.5E-01	1.6E-06
Vinyl Chloride	U (0.041)	4.7E-06	1.7E-03	4.7E-05	7.4E-09
			Summed Risk	6E-01	2E-06

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TABLE 6
INDOOR AIR HUMAN HEALTH RISKS (October 2021)
Whirlpool Facility - Fort Smith, Arkansas

AA

Constituent	Air Concentration ($\mu g/m^3$)	Non-Cancer CDI (mg/m^3)	Cancer CDI ($\mu g/m^3$)	HQ	LCR
1,1-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	3.0E-05	8.5E-09
1,2-Dichloroethane	U (0.13)	1.5E-05	5.3E-03	2.1E-03	1.4E-07
1,1-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	7.4E-05	NA
cis-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
trans-1,2-Dichloroethene	U (0.13)	1.5E-05	5.3E-03	NA	NA
Tetrachloroethene	0.25 (0.11)	5.7E-05	2.0E-02	1.4E-03	5.3E-09
1,1,1-Trichloroethane	U (0.18)	2.1E-05	7.3E-03	4.1E-06	NA
Trichloroethene	U (0.09)	1.0E-05	3.7E-03	5.1E-03	1.5E-08
Vinyl Chloride	U (0.043)	4.9E-06	1.8E-03	4.9E-05	7.7E-09
			Summed Risk	9E-03	2E-07

Notes:
$\mu g/m^3$ = Microgram per cubic meter
CDI = Chronic Daily Intake
ND = Nondetect
HQ = Hazard Quotient
LCR = Lifetime Cancer Risk

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TABLE 7
VALUES USED FOR DAILY INTAKE CALCULATIONS
Whirlpool Facility - Fort Smith, Arkansas

Scenario Timeframe: Current
Medium: Indoor air or Soil vapor
Exposure Medium: Air
Exposure Point: Groundwater
Receptor Population: Indoor C/I Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	Intake Equation
Inhalation	CA	Chemical Concentration in Air	ug/m^3	(1)	(1)	Chronic Daily Intake (CDI) (ug/m^3) = CA x ET x EF x ED x 1/CF x 1/AT
	ET	Exposure Time	hours/day	8	USEPA, 2002	
	EF	Exposure Frequency	days/year	250	USEPA, 2002	
	ED	Exposure Duration	years	25	USEPA, 2002	
	CF	Conversion Factor	hour/day	24		
	AT-C	Averaging Time (Cancer)	days	25,550	USEPA, 2002	
	AT-N	Averaging Time (Non-Cancer)	days	9,125	USEPA, 2002	

Notes:

(1) Indoor air concentrations of volatile organic compounds resulting from vapor intrusion was collected in May 2020

µg/m^3 = Micrograms per cubic meter

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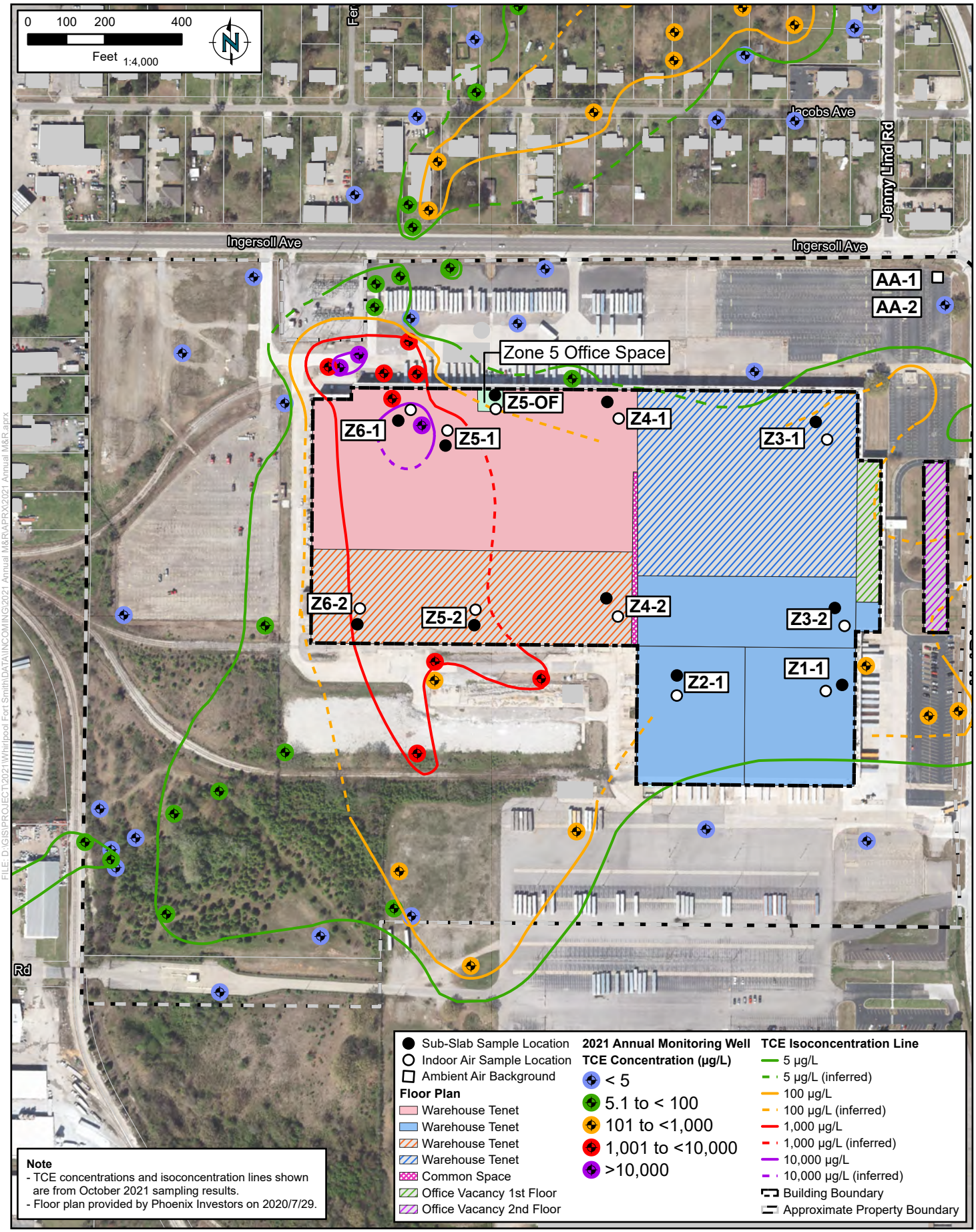
TABLE 8
TOXICITY VALUES
Whirlpool Facility - Fort Smith, Arkansas

Chemicals	Inhalation Reference Concentration (RfC) (mg/m^3)	Inhalation Unit Risk (IUR) $(\mu g/m^3)^{-1}$
1,1-Dichloroethane	5.00E-01	1.60E-06
1,2-Dichloroethane	7.00E-03	2.60E-05
1,1-Dichloroethene	2.00E-01	NA
cis-1,2-Dichloroethene	NA	NA
trans-1,2-Dichloroethene	NA	NA
Tetrachloroethene	4.00E-02	2.60E-07
1,1,1-Trichloroethane	5.00E+00	NA
Trichloroethene	2.00E-03	4.10E-06
Vinyl Chloride	1.00E-01	4.40E-06

Notes:
mg/m^3 = Milligrams per cubic meter
$\mu g/m^3$ = Micrograms per cubic meter

RAMBOLL

Figures



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DRAFTED BY: DFM | DATE: 01/12/2022

INDOOR AIR AND SUBSLAB SAMPLING LOCATIONS

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

PROJECT: 1690010633

Appendix A
Laboratory Analytical Data

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

November 15, 2021

Ian McQuaig
Ramboll US Consulting, Inc.
1807 Park 270 Dr.
Saint Louis, MO 63146

RE: Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Dear Ian McQuaig:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,

Carolynne Trout

Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures

cc: Haley Ahlers, Ramboll US Consulting, Inc.

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10584567001	**AA-1-202110**	Air	10/19/21 14:31	10/22/21 12:50
10584567002	**Z5-OF-IA-202110**	Air	10/19/21 19:26	10/22/21 12:50
10584567003	**Z6-1-IA-202110**	Air	10/19/21 15:59	10/22/21 12:50
10584567004	**Z5-1-IA-202110**	Air	10/19/21 14:41	10/22/21 12:50
10584567005	**Z6-2-IA-202110**	Air	10/19/21 14:55	10/22/21 12:50
10584567006	**Z6-2-IA-202110 DUP**	Air	10/19/21 14:55	10/22/21 12:50
10584567007	**Z5-2-IA-202110**	Air	10/19/21 14:53	10/22/21 12:50
10584567008	**Z1-1-IA-202110**	Air	10/19/21 15:39	10/22/21 12:50
10584567009	**Z2-1-IA-202110**	Air	10/19/21 15:28	10/22/21 12:50
10584567010	**Z4-2-IA-202110**	Air	10/19/21 15:17	10/22/21 12:50
10584567011	**Z3-2-IA-202110**	Air	10/19/21 15:38	10/22/21 12:50
10584567012	**Z4-1-IA-202110**	Air	10/19/21 15:49	10/22/21 12:50
10584567013	**Z3-1-IA-202110**	Air	10/19/21 15:47	10/22/21 12:50
10584567014	**AA-2-202110**	Air	10/20/21 14:30	10/22/21 12:50
10584567015	**Z6-2-SS-202110**	Air	10/20/21 08:03	10/22/21 12:50
10584567016	**Z6-2-SS-202110 DUP**	Air	10/20/21 08:03	10/22/21 12:50
10584567017	**Z5-2-SS-202110**	Air	10/20/21 08:24	10/22/21 12:50
10584567018	**Z1-1-SS-202110**	Air	10/20/21 09:03	10/22/21 12:50
10584567019	**Z3-2-SS-202110**	Air	10/20/21 09:20	10/22/21 12:50
10584567020	**Z4-2-SS-202110**	Air	10/20/21 09:43	10/22/21 12:50
10584567021	**Z2-1-SS-202110**	Air	10/20/21 10:04	10/22/21 12:50
10584567022	**Z3-1-SS-202110**	Air	10/20/21 10:47	10/22/21 12:50
10584567023	**Z4-1-SS-202110**	Air	10/20/21 12:59	10/22/21 12:50
10584567024	**Z5-1-SS-202110**	Air	10/20/21 13:35	10/22/21 12:50
10584567025	**Z6-1-SS-202110**	Air	10/20/21 13:55	10/22/21 12:50
10584567026	**Z5-OF-SS-202110**	Air	10/20/21 14:13	10/22/21 12:50
10584567027	**Unused Canister #3225**	Air		10/22/21 12:50
10584567028	**Unused Canister #3763**	Air		10/22/21 12:50
10584567029	**Unused Canister #3650**	Air		10/22/21 12:50
10584567030	**Unused Canister #2686**	Air		10/22/21 12:50
10584567031	**Unused Canister #2817**	Air		10/22/21 12:50

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Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10584567001	**AA-1-202110**	TO-15	MJL	9
10584567002	**Z5-OF-IA-202110**	TO-15	MJL	9
10584567003	**Z6-1-IA-202110**	TO-15	MJL	9
10584567004	**Z5-1-IA-202110**	TO-15	MJL	9
10584567005	**Z6-2-IA-202110**	TO-15	MJL	9
10584567006	**Z6-2-IA-202110 DUP**	TO-15	MJL	9
10584567007	**Z5-2-IA-202110**	TO-15	MJL	9
10584567008	**Z1-1-IA-202110**	TO-15	MJL	9
10584567009	**Z2-1-IA-202110**	TO-15	MJL	9
10584567010	**Z4-2-IA-202110**	TO-15	MJL	9
10584567011	**Z3-2-IA-202110**	TO-15	MJL	9
10584567012	**Z4-1-IA-202110**	TO-15	MJL	9
10584567013	**Z3-1-IA-202110**	TO-15	MJL	9
10584567014	**AA-2-202110**	TO-15	MJL	9
10584567015	**Z6-2-SS-202110**	TO-15	MJL	9
10584567016	**Z6-2-SS-202110 DUP**	TO-15	MJL	9
10584567017	**Z5-2-SS-202110**	TO-15	MJL	9
10584567018	**Z1-1-SS-202110**	TO-15	MJL	9
10584567019	**Z3-2-SS-202110**	TO-15	MJL	9
10584567020	**Z4-2-SS-202110**	TO-15	MJL	9
10584567021	**Z2-1-SS-202110**	TO-15	MJL	9
10584567022	**Z3-1-SS-202110**	TO-15	MJL	9
10584567023	**Z4-1-SS-202110**	TO-15	MJL	9
10584567024	**Z5-1-SS-202110**	TO-15	MJL	9
10584567025	**Z6-1-SS-202110**	TO-15	MJL	9
10584567026	**Z5-OF-SS-202110**	TO-15	MJL	9

PASI-M = Pace Analytical Services - Minneapolis

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(612)607-1700

PROJECT NARRATIVE

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Method: **TO-15**
Description: TO15 MSV AIR
Client: Ramboll US Consulting, Inc
Date: November 15, 2021

General Information:
12 samples were analyzed for TO-15 by Pace Analytical Services Minneapolis. 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.

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.

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

QC Batch: 780461

R1: RPD value was outside control limits.
- DUP (Lab ID: 4157949)
  - Trichloroethene
  - Vinyl chloride

Additional Comments:

Analyte Comments:

QC Batch: 780461

C8: Result may be biased high due to carryover from previously analyzed sample.
- Z3-1-SS-202110 (Lab ID: 10584567022)
  - Trichloroethene
- Z4-2-SS-202110 (Lab ID: 10584567020)
  - Tetrachloroethene

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- DUP (Lab ID: 4157949)
  - Vinyl chloride

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(612)607-1700

PROJECT NARRATIVE

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Method: **TO-15**
Description: TO15 MSV AIR SIM SCAN
Client: Ramboll US Consulting, Inc
Date: November 15, 2021

General Information:
14 samples were analyzed for TO-15 by Pace Analytical Services Minneapolis. 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.

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.

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

Additional Comments:

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

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: AA-1-202110 **Lab ID: 10584567001** Collected: 10/19/21 14:31 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/26/21 23:56	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/26/21 23:56	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/26/21 23:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/26/21 23:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/26/21 23:56	156-60-5	
Tetrachloroethene	**0.25**	ug/m3	0.11	1.64		10/26/21 23:56	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/26/21 23:56	71-55-6	
Trichloroethene	ND	ug/m3	0.090	1.64		10/26/21 23:56	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/26/21 23:56	75-01-4	

Sample: Z5-OF-IA-202110 **Lab ID: 10584567002** Collected: 10/19/21 19:26 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.17	2.01		10/27/21 00:31	75-34-3	
1,2-Dichloroethane	**0.48**	ug/m3	0.17	2.01		10/27/21 00:31	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.16	2.01		10/27/21 00:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.16	2.01		10/27/21 00:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.16	2.01		10/27/21 00:31	156-60-5	
Tetrachloroethene	**0.39**	ug/m3	0.14	2.01		10/27/21 00:31	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.22	2.01		10/27/21 00:31	71-55-6	
Trichloroethene	**5.1**	ug/m3	0.11	2.01		10/27/21 00:31	79-01-6	
Vinyl chloride	ND	ug/m3	0.052	2.01		10/27/21 00:31	75-01-4	

Sample: Z6-1-IA-202110 **Lab ID: 10584567003** Collected: 10/19/21 15:59 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 01:05	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 01:05	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 01:05	75-35-4	
cis-1,2-Dichloroethene	**0.15**	ug/m3	0.13	1.61		10/27/21 01:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 01:05	156-60-5	
Tetrachloroethene	**0.73**	ug/m3	0.11	1.61		10/27/21 01:05	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 01:05	71-55-6	
Trichloroethene	**1.8**	ug/m3	0.088	1.61		10/27/21 01:05	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 01:05	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z5-1-IA-202110 **Lab ID: 10584567004** Collected: 10/19/21 14:41 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 01:40	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 01:40	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 01:40	75-35-4	
cis-1,2-Dichloroethene	**0.14**	ug/m3	0.13	1.64		10/27/21 01:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 01:40	156-60-5	
Tetrachloroethene	**0.72**	ug/m3	0.11	1.64		10/27/21 01:40	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/27/21 01:40	71-55-6	
Trichloroethene	**1.6**	ug/m3	0.090	1.64		10/27/21 01:40	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/27/21 01:40	75-01-4	

Sample: Z6-2-IA-202110 **Lab ID: 10584567005** Collected: 10/19/21 14:55 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 15:14	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 15:14	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 15:14	75-35-4	
cis-1,2-Dichloroethene	**0.17**	ug/m3	0.13	1.61		10/27/21 15:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 15:14	156-60-5	
Tetrachloroethene	**0.41**	ug/m3	0.11	1.61		10/27/21 15:14	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 15:14	71-55-6	
Trichloroethene	**4.9**	ug/m3	0.088	1.61		10/27/21 15:14	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 15:14	75-01-4	

Sample: Z6-2-IA-202110 DUP **Lab ID: 10584567006** Collected: 10/19/21 14:55 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.58		10/27/21 15:48	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.58		10/27/21 15:48	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.58		10/27/21 15:48	75-35-4	
cis-1,2-Dichloroethene	**0.17**	ug/m3	0.13	1.58		10/27/21 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.58		10/27/21 15:48	156-60-5	
Tetrachloroethene	**0.44**	ug/m3	0.11	1.58		10/27/21 15:48	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.58		10/27/21 15:48	71-55-6	
Trichloroethene	**4.8**	ug/m3	0.086	1.58		10/27/21 15:48	79-01-6	
Vinyl chloride	ND	ug/m3	0.041	1.58		10/27/21 15:48	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z5-2-IA-202110 **Lab ID: 10584567007** Collected: 10/19/21 14:53 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 16:23	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 16:23	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 16:23	75-35-4	
cis-1,2-Dichloroethene	**0.17**	ug/m3	0.13	1.64		10/27/21 16:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 16:23	156-60-5	
Tetrachloroethene	**0.42**	ug/m3	0.11	1.64		10/27/21 16:23	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/27/21 16:23	71-55-6	
Trichloroethene	**4.8**	ug/m3	0.090	1.64		10/27/21 16:23	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/27/21 16:23	75-01-4	

Sample: Z1-1-IA-202110 **Lab ID: 10584567008** Collected: 10/19/21 15:39 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 16:58	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 16:58	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 16:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 16:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 16:58	156-60-5	
Tetrachloroethene	**0.37**	ug/m3	0.11	1.61		10/27/21 16:58	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 16:58	71-55-6	
Trichloroethene	**0.38**	ug/m3	0.088	1.61		10/27/21 16:58	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 16:58	75-01-4	

Sample: Z2-1-IA-202110 **Lab ID: 10584567009** Collected: 10/19/21 15:28 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 17:33	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.64		10/27/21 17:33	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 17:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 17:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.64		10/27/21 17:33	156-60-5	
Tetrachloroethene	**0.57**	ug/m3	0.11	1.64		10/27/21 17:33	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.64		10/27/21 17:33	71-55-6	
Trichloroethene	**0.49**	ug/m3	0.090	1.64		10/27/21 17:33	79-01-6	
Vinyl chloride	ND	ug/m3	0.043	1.64		10/27/21 17:33	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z4-2-IA-202110 **Lab ID: 10584567010** Collected: 10/19/21 15:17 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.14	1.68		11/10/21 15:26	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.14	1.68		11/10/21 15:26	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.14	1.68		11/10/21 15:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.14	1.68		11/10/21 15:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.14	1.68		11/10/21 15:26	156-60-5	
Tetrachloroethene	**0.69**	ug/m3	0.12	1.68		11/10/21 15:26	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.19	1.68		11/10/21 15:26	71-55-6	
Trichloroethene	**0.66**	ug/m3	0.092	1.68		11/10/21 15:26	79-01-6	
Vinyl chloride	ND	ug/m3	0.044	1.68		11/10/21 15:26	75-01-4	

Sample: Z3-2-IA-202110 **Lab ID: 10584567011** Collected: 10/19/21 15:38 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 18:42	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 18:42	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 18:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 18:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 18:42	156-60-5	
Tetrachloroethene	**0.43**	ug/m3	0.11	1.61		10/27/21 18:42	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 18:42	71-55-6	
Trichloroethene	**0.45**	ug/m3	0.088	1.61		10/27/21 18:42	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 18:42	75-01-4	

Sample: Z4-1-IA-202110 **Lab ID: 10584567012** Collected: 10/19/21 15:49 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:17	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:17	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:17	156-59-2	
trans-1,2-Dichloroethene	**0.66**	ug/m3	0.13	1.61		10/27/21 19:17	156-60-5	
Tetrachloroethene	**0.57**	ug/m3	0.11	1.61		10/27/21 19:17	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 19:17	71-55-6	
Trichloroethene	**0.67**	ug/m3	0.088	1.61		10/27/21 19:17	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 19:17	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z3-1-IA-202110 **Lab ID: 10584567013** Collected: 10/19/21 15:47 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 19:52	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 19:52	156-59-2	
trans-1,2-Dichloroethene	**0.29**	ug/m3	0.13	1.61		10/27/21 19:52	156-60-5	
Tetrachloroethene	**0.53**	ug/m3	0.11	1.61		10/27/21 19:52	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 19:52	71-55-6	
Trichloroethene	**0.51**	ug/m3	0.088	1.61		10/27/21 19:52	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 19:52	75-01-4	

Sample: AA-2-202110 **Lab ID: 10584567014** Collected: 10/20/21 14:30 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 20:27	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.13	1.61		10/27/21 20:27	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 20:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.13	1.61		10/27/21 20:27	156-60-5	
Tetrachloroethene	ND	ug/m3	0.11	1.61		10/27/21 20:27	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	0.18	1.61		10/27/21 20:27	71-55-6	
Trichloroethene	ND	ug/m3	0.088	1.61		10/27/21 20:27	79-01-6	
Vinyl chloride	ND	ug/m3	0.042	1.61		10/27/21 20:27	75-01-4	

Sample: Z6-2-SS-202110 **Lab ID: 10584567015** Collected: 10/20/21 08:03 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 01:10	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 01:10	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 01:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 01:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 01:10	156-60-5	
Tetrachloroethene	**1.3**	ug/m3	1.3	1.83		10/30/21 01:10	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.83		10/30/21 01:10	71-55-6	
Trichloroethene	ND	ug/m3	1.0	1.83		10/30/21 01:10	79-01-6	
Vinyl chloride	ND	ug/m3	0.48	1.83		10/30/21 01:10	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z6-2-SS-202110 DUP **Lab ID: 10584567016** Collected: 10/20/21 08:03 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.8		10/30/21 06:29	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.8		10/30/21 06:29	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.8		10/30/21 06:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.8		10/30/21 06:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.8		10/30/21 06:29	156-60-5	
Tetrachloroethene	**1.6**	ug/m3	1.2	1.8		10/30/21 06:29	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.8		10/30/21 06:29	71-55-6	
Trichloroethene	ND	ug/m3	0.98	1.8		10/30/21 06:29	79-01-6	
Vinyl chloride	ND	ug/m3	0.47	1.8		10/30/21 06:29	75-01-4	

Sample: Z5-2-SS-202110 **Lab ID: 10584567017** Collected: 10/20/21 08:24 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.6	1.94		10/30/21 05:54	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.6	1.94		10/30/21 05:54	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.6	1.94		10/30/21 05:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.6	1.94		10/30/21 05:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	1.94		10/30/21 05:54	156-60-5	
Tetrachloroethene	**31.2**	ug/m3	1.3	1.94		10/30/21 05:54	127-18-4	
1,1,1-Trichloroethane	**114**	ug/m3	2.2	1.94		10/30/21 05:54	71-55-6	
Trichloroethene	**1560**	ug/m3	64.4	118		11/03/21 12:03	79-01-6	
Vinyl chloride	ND	ug/m3	0.50	1.94		10/30/21 05:54	75-01-4	

Sample: Z1-1-SS-202110 **Lab ID: 10584567018** Collected: 10/20/21 09:03 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 03:32	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.83		10/30/21 03:32	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 03:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 03:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		10/30/21 03:32	156-60-5	
Tetrachloroethene	**32.0**	ug/m3	3.7	2.71		11/02/21 17:09	127-18-4	
1,1,1-Trichloroethane	**2.1**	ug/m3	2.0	1.83		10/30/21 03:32	71-55-6	
Trichloroethene	**1.4**	ug/m3	1.0	1.83		10/30/21 03:32	79-01-6	
Vinyl chloride	ND	ug/m3	0.48	1.83		10/30/21 03:32	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z3-2-SS-202110 **Lab ID: 10584567019** Collected: 10/20/21 09:20 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.77		10/30/21 02:56	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.77		10/30/21 02:56	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.77		10/30/21 02:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.77		10/30/21 02:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.77		10/30/21 02:56	156-60-5	
Tetrachloroethene	**1020**	ug/m3	73.2	53.1		11/02/21 19:22	127-18-4	
1,1,1-Trichloroethane	**10**	ug/m3	2.0	1.77		10/30/21 02:56	71-55-6	
Trichloroethene	**323**	ug/m3	29.0	53.1		11/02/21 19:22	79-01-6	
Vinyl chloride	ND	ug/m3	0.46	1.77		10/30/21 02:56	75-01-4	

Sample: Z4-2-SS-202110 **Lab ID: 10584567020** Collected: 10/20/21 09:43 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**4.2**	ug/m3	1.4	1.74		10/30/21 02:21	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.4	1.74		10/30/21 02:21	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 02:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 02:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 02:21	156-60-5	
Tetrachloroethene	**20.2**	ug/m3	1.2	1.74		10/30/21 02:21	127-18-4	C8
1,1,1-Trichloroethane	**8.0**	ug/m3	1.9	1.74		10/30/21 02:21	71-55-6	
Trichloroethene	**1.5**	ug/m3	0.95	1.74		10/30/21 02:21	79-01-6	
Vinyl chloride	ND	ug/m3	0.45	1.74		10/30/21 02:21	75-01-4	

Sample: Z2-1-SS-202110 **Lab ID: 10584567021** Collected: 10/20/21 10:04 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.4	1.74		10/30/21 01:45	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.4	1.74		10/30/21 01:45	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 01:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 01:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		10/30/21 01:45	156-60-5	
Tetrachloroethene	**18500**	ug/m3	576	417.6		11/02/21 20:23	127-18-4	
1,1,1-Trichloroethane	**63.2**	ug/m3	1.9	1.74		10/30/21 01:45	71-55-6	
Trichloroethene	**17.1**	ug/m3	0.95	1.74		10/30/21 01:45	79-01-6	
Vinyl chloride	ND	ug/m3	0.45	1.74		10/30/21 01:45	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z3-1-SS-202110 **Lab ID: 10584567022** Collected: 10/20/21 10:47 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**348**	ug/m3	41.5	50.4		10/30/21 07:34	75-34-3	
1,2-Dichloroethane	ND	ug/m3	41.5	50.4		10/30/21 07:34	107-06-2	
1,1-Dichloroethene	ND	ug/m3	40.6	50.4		10/30/21 07:34	75-35-4	
cis-1,2-Dichloroethene	**121**	ug/m3	40.6	50.4		10/30/21 07:34	156-59-2	
trans-1,2-Dichloroethene	**1030**	ug/m3	40.6	50.4		10/30/21 07:34	156-60-5	
Tetrachloroethene	**406**	ug/m3	34.7	50.4		10/30/21 07:34	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	55.9	50.4		10/30/21 07:34	71-55-6	
Trichloroethene	**53.0**	ug/m3	27.5	50.4		10/30/21 07:34	79-01-6	C8
Vinyl chloride	**44500**	ug/m3	1680	6451		11/02/21 20:53	75-01-4	

Sample: Z4-1-SS-202110 **Lab ID: 10584567023** Collected: 10/20/21 12:59 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.87		10/30/21 05:18	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.87		10/30/21 05:18	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 05:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 05:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 05:18	156-60-5	
Tetrachloroethene	**97.7**	ug/m3	1.3	1.87		10/30/21 05:18	127-18-4	
1,1,1-Trichloroethane	**29.6**	ug/m3	2.1	1.87		10/30/21 05:18	71-55-6	
Trichloroethene	**7.4**	ug/m3	1.0	1.87		10/30/21 05:18	79-01-6	
Vinyl chloride	**1.2**	ug/m3	0.49	1.87		10/30/21 05:18	75-01-4	

Sample: Z5-1-SS-202110 **Lab ID: 10584567024** Collected: 10/20/21 13:35 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	ND	ug/m3	1.5	1.87		10/30/21 07:04	75-34-3	
1,2-Dichloroethane	**2.2**	ug/m3	1.5	1.87		10/30/21 07:04	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 07:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 07:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.87		10/30/21 07:04	156-60-5	
Tetrachloroethene	**152**	ug/m3	1.3	1.87		10/30/21 07:04	127-18-4	
1,1,1-Trichloroethane	**71.0**	ug/m3	2.1	1.87		10/30/21 07:04	71-55-6	
Trichloroethene	**1280**	ug/m3	30.6	56.1		11/02/21 18:51	79-01-6	
Vinyl chloride	**2.3**	ug/m3	0.49	1.87		10/30/21 07:04	75-01-4	

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ANALYTICAL RESULTS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Sample: Z6-1-SS-202110 **Lab ID: 10584567025** Collected: 10/20/21 13:55 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**771**	ug/m3	88.9	108		11/02/21 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.8		10/30/21 04:07	107-06-2	
1,1-Dichloroethene	**7.6**	ug/m3	1.5	1.8		10/30/21 04:07	75-35-4	
cis-1,2-Dichloroethene	**29.6**	ug/m3	1.5	1.8		10/30/21 04:07	156-59-2	
trans-1,2-Dichloroethene	**8.6**	ug/m3	1.5	1.8		10/30/21 04:07	156-60-5	
Tetrachloroethene	**1510**	ug/m3	149	108		11/02/21 19:52	127-18-4	
1,1,1-Trichloroethane	**3600**	ug/m3	120	108		11/02/21 19:52	71-55-6	
Trichloroethene	**185**	ug/m3	0.98	1.8		10/30/21 04:07	79-01-6	
Vinyl chloride	ND	ug/m3	0.47	1.8		10/30/21 04:07	75-01-4	

Sample: Z5-OF-SS-202110 **Lab ID: 10584567026** Collected: 10/20/21 14:13 Received: 10/22/21 12:50 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
1,1-Dichloroethane	**4.7**	ug/m3	1.7	2.02		10/30/21 04:43	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.7	2.02		10/30/21 04:43	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.6	2.02		10/30/21 04:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.6	2.02		10/30/21 04:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	2.02		10/30/21 04:43	156-60-5	
Tetrachloroethene	**106**	ug/m3	4.1	2.99		11/02/21 18:21	127-18-4	
1,1,1-Trichloroethane	**33.4**	ug/m3	2.2	2.02		10/30/21 04:43	71-55-6	
Trichloroethene	**33.1**	ug/m3	1.1	2.02		10/30/21 04:43	79-01-6	
Vinyl chloride	ND	ug/m3	0.53	2.02		10/30/21 04:43	75-01-4	

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 780461
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567015, 10584567016, 10584567017, 10584567018, 10584567019, 10584567020, 10584567021, 10584567022, 10584567023, 10584567024, 10584567025, 10584567026

METHOD BLANK: 4156570
Matrix: Air
Associated Lab Samples: 10584567015, 10584567016, 10584567017, 10584567018, 10584567019, 10584567020, 10584567021, 10584567022, 10584567023, 10584567024, 10584567025, 10584567026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	10/29/21 11:52	
1,1-Dichloroethane	ug/m3	ND	0.82	10/29/21 11:52	
1,1-Dichloroethene	ug/m3	ND	0.81	10/29/21 11:52	
1,2-Dichloroethane	ug/m3	ND	0.82	10/29/21 11:52	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	10/29/21 11:52	
Tetrachloroethene	ug/m3	ND	0.69	10/29/21 11:52	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	10/29/21 11:52	
Trichloroethene	ug/m3	ND	0.55	10/29/21 11:52	
Vinyl chloride	ug/m3	ND	0.26	10/29/21 11:52	

LABORATORY CONTROL SAMPLE: 4156571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	59.3	62.0	105	70-130	
1,1-Dichloroethane	ug/m3	43.9	44.3	101	70-133	
1,1-Dichloroethene	ug/m3	43.5	38.2	88	70-130	
1,2-Dichloroethane	ug/m3	44.4	45.8	103	70-132	
cis-1,2-Dichloroethene	ug/m3	43.4	44.1	101	70-137	
Tetrachloroethene	ug/m3	73.4	73.6	100	70-130	
trans-1,2-Dichloroethene	ug/m3	43.6	42.5	98	70-130	
Trichloroethene	ug/m3	58.4	58.4	100	70-130	
Vinyl chloride	ug/m3	28	25.6	91	70-137	

SAMPLE DUPLICATE: 4157949

Parameter	Units	10584567022 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	17.1J		25	
1,1-Dichloroethane	ug/m3	348	338	3	25	
1,1-Dichloroethene	ug/m3	ND	11J		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	121	113	6	25	
Tetrachloroethene	ug/m3	406	377	7	25	
trans-1,2-Dichloroethene	ug/m3	1030	971	6	25	
Trichloroethene	ug/m3	53.0	37.7	34	25	R1
Vinyl chloride	ug/m3	44500	21700	69	25	E,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 779479
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR SIM SCAN
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567001, 10584567002, 10584567003, 10584567004

METHOD BLANK: 4151358 Matrix: Air
Associated Lab Samples: 10584567001, 10584567002, 10584567003, 10584567004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.11	10/26/21 11:56	
1,1-Dichloroethane	ug/m3	ND	0.082	10/26/21 11:56	
1,1-Dichloroethene	ug/m3	ND	0.081	10/26/21 11:56	
1,2-Dichloroethane	ug/m3	ND	0.082	10/26/21 11:56	
cis-1,2-Dichloroethene	ug/m3	ND	0.081	10/26/21 11:56	
Tetrachloroethene	ug/m3	ND	0.069	10/26/21 11:56	
trans-1,2-Dichloroethene	ug/m3	ND	0.081	10/26/21 11:56	
Trichloroethene	ug/m3	ND	0.055	10/26/21 11:56	
Vinyl chloride	ug/m3	ND	0.026	10/26/21 11:56	

LABORATORY CONTROL SAMPLE: 4151359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	0.59	0.56	95	70-130	
1,1-Dichloroethane	ug/m3	0.44	0.42	95	70-133	
1,1-Dichloroethene	ug/m3	0.44	0.41	95	70-130	
1,2-Dichloroethane	ug/m3	0.44	0.42	94	70-132	
cis-1,2-Dichloroethene	ug/m3	0.43	0.42	98	70-137	
Tetrachloroethene	ug/m3	0.73	0.70	95	70-130	
trans-1,2-Dichloroethene	ug/m3	0.44	0.43	98	70-130	
Trichloroethene	ug/m3	0.58	0.58	100	70-130	
Vinyl chloride	ug/m3	0.28	0.27	96	70-137	

SAMPLE DUPLICATE: 4152351

Parameter	Units	10582126013 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	.031J		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	0.18	0.18	1	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 779758
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR SIM SCAN
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567005, 10584567006, 10584567007, 10584567008, 10584567009, 10584567011, 10584567012, 10584567013, 10584567014

METHOD BLANK: 4152813
Matrix: Air
Associated Lab Samples: 10584567005, 10584567006, 10584567007, 10584567008, 10584567009, 10584567011, 10584567012, 10584567013, 10584567014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.11	10/27/21 10:54	
1,1-Dichloroethane	ug/m3	ND	0.082	10/27/21 10:54	
1,1-Dichloroethene	ug/m3	ND	0.081	10/27/21 10:54	
1,2-Dichloroethane	ug/m3	ND	0.082	10/27/21 10:54	
cis-1,2-Dichloroethene	ug/m3	ND	0.081	10/27/21 10:54	
Tetrachloroethene	ug/m3	ND	0.069	10/27/21 10:54	
trans-1,2-Dichloroethene	ug/m3	ND	0.081	10/27/21 10:54	
Trichloroethene	ug/m3	ND	0.055	10/27/21 10:54	
Vinyl chloride	ug/m3	ND	0.026	10/27/21 10:54	

LABORATORY CONTROL SAMPLE: 4152814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	0.59	0.58	99	70-130	
1,1-Dichloroethane	ug/m3	0.44	0.42	97	70-133	
1,1-Dichloroethene	ug/m3	0.44	0.42	96	70-130	
1,2-Dichloroethane	ug/m3	0.44	0.42	95	70-132	
cis-1,2-Dichloroethene	ug/m3	0.43	0.45	105	70-137	
Tetrachloroethene	ug/m3	0.73	0.76	104	70-130	
trans-1,2-Dichloroethene	ug/m3	0.44	0.44	101	70-130	
Trichloroethene	ug/m3	0.58	0.60	103	70-130	
Vinyl chloride	ug/m3	0.28	0.28	100	70-137	

SAMPLE DUPLICATE: 4154283

Parameter	Units	10584567014 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	.095J		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	.084J		25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

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QUALITY CONTROL DATA

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

QC Batch: 782843
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR SIM SCAN
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10584567010

METHOD BLANK: 4167911
Matrix: Air
Associated Lab Samples: 10584567010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.11	11/10/21 11:21	
1,1-Dichloroethane	ug/m3	ND	0.082	11/10/21 11:21	
1,1-Dichloroethene	ug/m3	ND	0.081	11/10/21 11:21	
1,2-Dichloroethane	ug/m3	ND	0.082	11/10/21 11:21	
cis-1,2-Dichloroethene	ug/m3	ND	0.081	11/10/21 11:21	
Tetrachloroethene	ug/m3	ND	0.069	11/10/21 11:21	
trans-1,2-Dichloroethene	ug/m3	ND	0.081	11/10/21 11:21	
Trichloroethene	ug/m3	ND	0.055	11/10/21 11:21	
Vinyl chloride	ug/m3	ND	0.026	11/10/21 11:21	

LABORATORY CONTROL SAMPLE: 4167912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	0.59	0.64	107	70-130	
1,1-Dichloroethane	ug/m3	0.44	0.47	106	70-133	
1,1-Dichloroethene	ug/m3	0.44	0.47	108	70-130	
1,2-Dichloroethane	ug/m3	0.44	0.51	114	70-132	
cis-1,2-Dichloroethene	ug/m3	0.43	0.47	107	70-137	
Tetrachloroethene	ug/m3	0.73	0.81	110	70-130	
trans-1,2-Dichloroethene	ug/m3	0.44	0.46	106	70-130	
Trichloroethene	ug/m3	0.58	0.63	108	70-130	
Vinyl chloride	ug/m3	0.28	0.30	107	70-137	

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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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C8	Result may be biased high due to carryover from previously analyzed sample.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
R1	RPD value was outside control limits.

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Whirlpool Fort Smith
Pace Project No.: 10584567

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10584567015	**Z6-2-SS-202110**	TO-15	780461		
10584567016	**Z6-2-SS-202110 DUP**	TO-15	780461		
10584567017	**Z5-2-SS-202110**	TO-15	780461		
10584567018	**Z1-1-SS-202110**	TO-15	780461		
10584567019	**Z3-2-SS-202110**	TO-15	780461		
10584567020	**Z4-2-SS-202110**	TO-15	780461		
10584567021	**Z2-1-SS-202110**	TO-15	780461		
10584567022	**Z3-1-SS-202110**	TO-15	780461		
10584567023	**Z4-1-SS-202110**	TO-15	780461		
10584567024	**Z5-1-SS-202110**	TO-15	780461		
10584567025	**Z6-1-SS-202110**	TO-15	780461		
10584567026	**Z5-OF-SS-202110**	TO-15	780461		
10584567001	**AA-1-202110**	TO-15	779479		
10584567002	**Z5-OF-IA-202110**	TO-15	779479		
10584567003	**Z6-1-IA-202110**	TO-15	779479		
10584567004	**Z5-1-IA-202110**	TO-15	779479		
10584567005	**Z6-2-IA-202110**	TO-15	779758		
10584567006	**Z6-2-IA-202110 DUP**	TO-15	779758		
10584567007	**Z5-2-IA-202110**	TO-15	779758		
10584567008	**Z1-1-IA-202110**	TO-15	779758		
10584567009	**Z2-1-IA-202110**	TO-15	779758		
10584567010	**Z4-2-IA-202110**	TO-15	782843		
10584567011	**Z3-2-IA-202110**	TO-15	779758		
10584567012	**Z4-1-IA-202110**	TO-15	779758		
10584567013	**Z3-1-IA-202110**	TO-15	779758		
10584567014	**AA-2-202110**	TO-15	779758		

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www.pacelabs.com

AIR: CHAIN-OF-C

The Chain-of-Custody is a LEGAL DOC

WO# : 10584567

10584567

49741

Page: 1 of 3

Section A Required Client Information:

Company: RAMBOLL
Address: 1807 Park 270 Dr
St. Louis, MO 63146
Email To: imcquaig@ramboll.com
Phone: Fax:
Requested Due Date/TAT: STANDARD TAT

Section B Required Project Information:

Report To: imcquaig@ramboll.com
Copy To: cchavers@ramboll.com
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #: 39436

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other____

Location of Sampling by State _____

Reporting Units: ug/m³___ mg/m³___ PPBV___ PPMV___ Other___

Report Level II.___ III.___ IV.___ Other____

'Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tediar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	AA-1-202110	6LC	n/a	10/19/21	0723	10/19/21	1431	-29	-5	1592	0367							X			001
2	Z5-OF-IA-202110				0736		1926	-29	-8	2689	0132										002
3	Z6-1-IA-202110				0736		1559	-29	-4	1583	1369										003
4	Z5-1-IA-202110				0738		1441	-30	-6	2376	0089										004
5	Z6-2-IA-202110				0749		1455	-30	-6	1232	1805										005
6	Z6-2-IA-202110 DUP				0749		1455	-30	-4	0671	1038										006
7	Z5-2-IA-202110				0751		1453	-30	-6	3506	0878										007
8	Z1-1-IA-202110				0813		1539	-30	-6	2320	0094										008
9	Z2-1-IA-202110				0818		1528	-30	-6	0658	1280										009
10	Z4-2-IA-202110				0817		1517	-28	-5	0164	0321										010
11	Z3-2-IA-202110				0814		1538	-30	-5	3621	0280										011
12	Z4-1-IA-202110				0830		1549	-30	-4	0056	1068										012

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
IAN MCQUAIG / RAMBOLL	10/20/21	1715	[signature] Pace	10/22/21	12:50

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: IAN MCQUAIG

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY) 10/20/2021

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

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www.pacelabs.com

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

49742

Page: 2 of 3

Section A Required Client Information:

Company: RAMBOLL
Address: 1807 Park 270 Dr St. Louis, MO 63146
Email To: imcquaig@ramboll.com
Phone: Fax:
Requested Due Date/TAT: STANDARD TAT

Section B Required Project Information:

Report To: imcquaig@ramboll.com
Copy To: cchavers@ramboll.com
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #: 39436

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other____

Location of Sampling by State _____

Reporting Units: ug/m³___ mg/m³___ PPBV___ PPMV___ Other___

Report Level II.___ III.___ IV.___ Other____

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Method:

ITEM #	Sample ID	MEDIA CODE	PID Reading (Client only)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE - END/GRAB DATE	COMPOSITE - END/GRAB TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	Z3-1-IA-202110	6LC	n/a	10/19/21	0829	10/19/21	1547	-29	-5	4011	1438								X		013
2	AA-2-202110	6LC		10/20/21	0723	10/20/21	1430	-30	-5	2357	0052										014
3	Z6-2-SS-202110	1LC			0754		0803	-29	-3	3530	2896										015
4	Z6-2-SS-202110 DUP				0754		0803	-30	-3	0748	2988										016
5	Z5-2-SS-202110				0816		0824	-29	-3	2252	2657										017
6	Z1-1-SS-202110				0853		0903	-30	-3	3122	2967										018
7	Z3-2-SS-202110				0912		0920	-30	-2	3262	2713										019
8	Z4-2-SS-202110				0935		0943	-30	-2	0905	3008										020
9	Z2-1-SS-202110				0957		1004	-30	-4	2851	3207										021
10	Z3-1-SS-202110				1039		1047	-30	-1	3158	3010										022
11	Z4-1-SS-202110				1251		1259	-29	-3	2976	2772										023
12	Z5-1-SS-202110				1324		1335	-30	-2	3830	3095										024

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
IAN McQUAIG / RAMBOLL	10/20/21	1715	[signature] Pace	10/22/21	12:50

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: IAN McQUAIG
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM / DD / YY): 10/20/2021

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386 FC046Rev.01, 03Feb2010

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www.pacelabs.com

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

49743

Section A Required Client Information:

Company: RAMBOLL
Address: 1807 Park 270 Dr St. Louis, MO 63146
Email To: imcquaig@ramboll.com
Phone: Fax:
Requested Due Date/TAT: Standard TAT

Section B Required Project Information:

Report To: imcquaig@ramboll.com
Copy To: cchavers@ramboll.com
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #: 39436

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other____

Location of Sampling by State _____

Reporting Units: ug/m³ ___ mg/m³ ___ PPBV ___ PPMV ___ Other ___

Report Level II.___ III.___ IV.___ Other_____

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	'Section D Required Client Information AIR SAMPLE ID (Sample IDs MUST BE UNIQUE)	MEDIA CODE	PID Reading (Client only)	COLLECTED Composite Start DATE	Composite Start TIME	Composite - End/Grab DATE	Composite - End/Grab TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method: PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	Z6-1-SS-202110	1LC	N/a	10/20/21	1345	10/20/21	1355	-30	-4	3052	3203							X			025
2	Z5-OF-SS-202110	1LC	N/a	10/20/21	1405	10/20/21	1413	-29	-5	2633	2672							X			026
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
IAN MCQUAIG / RAMBOLL	10/20/21	1715	[signature] Pace	10/22/21	12:50

SAMPLE CONDITIONS

—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: IAN MCQUAIG

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY) 10/20/2021

ORIGINAL

Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR) - Air	Document Revised: 13Oct2021 Page 1 of 1
	Document No.: ENV-FRM-MIN4-0113 Rev.01	Pace Analytical Services - Minneapolis

Air Sample Condition Upon Receipt

Client Name: Ramboll

Project: **WO#: 10584567**

PM: CT1 **Due Date: 10/29/21**

CLIENT: ENVIRON

Courier: [X] FedEx [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial

Tracking Number: [X] See Exception

Custody Seal on Cooler/Box Present? [ ] Yes [X] No

Seals Intact? [ ] Yes [X] No

Packing Material: [ ] Bubble Wrap [ ] Bubble Bags [ ] Foam [X] None [ ] Tin Can [ ] Other:

Date & Initials of Person Examining Contents: RL 10/22/21

				Comments:
Chain of Custody Present?	[X] Yes	[ ] No		1.
Chain of Custody Filled Out?	[X] Yes	[ ] No		2.
Chain of Custody Relinquished?	[X] Yes	[ ] No		3.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	4.
Samples Arrived within Hold Time?	[X] Yes	[ ] No		5.
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No		6.
Rush Turn Around Time Requested?	[ ] Yes	[X] No		7.
Sufficient Volume?	[X] Yes	[ ] No		8.
Correct Containers Used? **(Tedlar bags not acceptable container for TO-15 or APH)**	[X] Yes	[ ] No		9.
-Pace Containers Used?	[X] Yes	[ ] No		
Containers Intact? **(visual inspection/no leaks when pressurized)**	[X] Yes	[ ] No		10.
Media: (Air Can) | Airbag				11. Individually Certified Cans? Y | (N) (list which samples)
Is sufficient information available to reconcile samples to the COC?	[X] Yes	[ ] No		12.
Do cans need to be pressurized? **(DO NOT PRESSURIZE 3C or ASTM 1946!!!)**	[X] Yes	[ ] No		13.

Gauge #: [ ] 10AIR26 [ ] 10AIR34 [ ] 10AIR35 [X] 10AIR17 [ ] 10AIR47 [ ] 10AIR48

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
AA-1	1592	367	-5.5	+5	Z6-2	3530	2896	-2.5	+10
Z5-OF	2689	132	-10	"	Z6-2 Dup	748	2988	-2	"
Z6-1	1583	1369	-5	"	Z5-2	2252	2657	-4	"
Z5-1	2376	89	-5.5	"	Z1-1	3122	2967	-2.5	"
Z6-2	1232	1805	-5	"	Z3-2	3262	2713	-1.5	"
Z6-2 Dup	671	1038	-4.5	"	Z4-2	905	3008	-1	"
Z5-2	3506	878	-5.5	"	Z2-1	2851	3207	-1	"
Z1-1	2320	94	-5	"	Z3-1	3158	3010	0	"
Z2-1	658	1280	-5.5	"	Z4-1	2976	2772	-3	"
Z4-2	164	321	-6	"	Z5-1	3830	3085	-3	"
Z3-2	3621	280	-5	"	Z6-1	3052	3203	-2	"
Z4-1	56	1068	-5	"	Z5-OF	2633	2672	-5	"
Z3-1	4011	1438	-5	"	unused	3225	3214	-29	
AA-2	2357	52	-5	+5	"	3763	2955	-29	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Carolynne Trout **Date:** 10/25/21

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

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - Air**	Document Revised: 13Oct2021 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0113 Rev.01**	Pace Analytical Services - **Minneapolis**

Air Sample Condition Upon Receipt

Client Name:

Project #: 10584567_cont.

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: _____ ☐ See Exception

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No

Seals Intact? ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Tin Can ☐ Other: _____

Date & Initials of Person Examining Contents: _____

				Comments:
Chain of Custody Present?	☐ Yes	☐ No		1.
Chain of Custody Filled Out?	☐ Yes	☐ No		2.
Chain of Custody Relinquished?	☐ Yes	☐ No		3.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☐ Yes	☐ No		5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☐ No		6.
Rush Turn Around Time Requested?	☐ Yes	☐ No		7.
Sufficient Volume?	☐ Yes	☐ No		8.
Correct Containers Used? **(Tedlar bags not acceptable container for TO-15 or APH)**	☐ Yes	☐ No		9.
-Pace Containers Used?	☐ Yes	☐ No		
Containers Intact? **(visual inspection/no leaks when pressurized)**	☐ Yes	☐ No		10.
Media: Air Can | Airbag				11. Individually Certified Cans? Y | N (list which samples)
Is sufficient information available to reconcile samples to the COC?	☐ Yes	☐ No		12.
Do cans need to be pressurized? **(DO NOT PRESSURIZE 3C or ASTM 1946!!!)**	☐ Yes	☐ No		13.

Gauge #: ☐ 10AIR26 ☐ 10AIR34 ☐ 10AIR35 ☐ 10AIR17 ☐ 10AIR47 ☐ 10AIR48

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
unused	3650	1381	-30						
"	26886	1402	-29						
"	2817	361	-30						

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Carolynne Trout **Date:** 10/25/21

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

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) Exception Form**	Document Revised: 04Jun2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0142 Rev.01**	Pace Analytical Services - **Minneapolis**

SCUR Exceptions:

Workorder #:

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank		
Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature	
9753 8446 3466	
3477	
3488	
3455	
3444	
3499	

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Comments:

Appendix B
Field Notes

10/18/21 Whirlpool

ANNUAL SAMPLING

0700 RAMBOLL (REH) on site: I. McQuay, C. Chavers, D. Meyer, J. Zellner, M. Schappert, G. Penaflor, L. Borucki, Nick Martin

- Tailgate/H+S meeting
- Weather safety
  - 55° F (high 78°), clear wind 5 mph NE

0750 IM offsite to pick up generator for vapor pin reinstallation

0845 On site w/generator

0945 Setting vapor points Z5-1, Z4-1, Z4-2

1130 Vapor point installation complete
- picking up equipment to develop MW-205 + 206
- offsite to return generator

1215 On site

1350 Setting up to develop MW-205
DTW: 14.95 ft btoc
TD: 28.95 ft btoc
1 well vol: 2.28 gal ; 3 well vol: 6.85 gal

Rite in the Rain

10/18/21 Whirlpool

1400 Installing new dedicated tubing in MW-205

1408 Begin purge MW-205
- 900 mL/min
- DTW stable @ 14.98 ft

1453 8gal purged (>3 well vol)
- DTW: 14.98 ft

1505 Mob to dump IDW

1530 Mob to develop MW-206

1540 MW-206:
DTW: 17.50 ft bpc
TD: 31.60 ft bpc
1 well vol: 2.21 gal
3 well vol: 6.89 gal
installing new dedicated tubing

1555 Purging MW-206
- 750 mL/min, water clear
- DTW stable @ 17.95 ft

1700 8gal purged (>3 well vol)
- DTW: 17.95 ft
- water clear

1715 Mob to dump purge water and set samples

1830 IM Hsize / EOD

Annual Sampling

0700 REM ON SITE: IM, CC, DM, MS, NM, JZ, GP, LB
- H&S / Tailgate Meeting
- Weather: 54° (high 79°), clear
Wind ENE 5mph

0715 IM + CC to warehouse to set IA summa canisters, SEE LOG for times, summa IDs + pressure/vac numbers

0900 Canisters placed
- mob to MS to pick up eqpt. for groundwater sampling

0950 CAL YSI # FA03972
Spec Cond. (7 mS/cm): 6.58 mS/cm
pH4: 3.92
pH7: 6.88
pH10: 10.03
ORP (230): 227.6 mV
DO%: 91.0%

DO calc
baro. pressure: 30.13 inHg
30.13 × 25.4 = 765.3 mmHg
765.3 − 15.169 = 750.133 mmHg
O/R

1023 CAL Complete
- mob to MW-29 to sample

1030 Setting up at MW-29, SEE LOG

1145 SAMPLE MW-29 + MS/MSD
VOCs
Fe^{2+}: 0.05 mg/L

Rite in the Rain

10/19/21 Whirlpool

1200 Mob to dump IDW

1212 Mob to MW-184 to sample

1240 Begin purging (installed new dedicated tubing); SEE LOG

1325 SAMPLE MW-184 DUP-01 VOCs Fe^{2+} = 0.17

1345 Mob to dump IDW

1425 Meet CC at AA-1 to start collecting IA/AA canisters (SEE Air Sampling LOG for final pressures + times)

1601 ~~D~~ Collected all IA canisters but Z5-OF-IA; Still had vac of -16, will wait until lower
- offsite for IM + CC lunch

1630 On site @ staging area to help CoC + sample packing

1715 Check Z5-OF-IA can, pressure at -15; will check again later

1805 Z5-OF-IA at -11, will check again later

1815 IM offsite to assemble SS summers

10/19/21 WHIRLPOOL

1910 Summas assembled

1915 IM mob to collect Z5-OF-IA canister

1926 IM on site, Z5-OF-IA canister -8 vac; shut and collect

1945 IM offsite; EOD

Rite in the Rain

10/20/21 Whirlpool

ANNUAL SAMPLING

0700 REH on site: IM, CC, DM, GP, JZ, LB, MS, NM
- H2S / Tailgate Meeting
- Weather: 57° (high 81°), clear, wind 4mph NE

0715 IM + CC mob to set AA-2 can in the NE corner of site

0723 Set AA-2 canister (see log for pressure + CAN ID)

0725 IM + CC mob to Stryker warehouse to begin sub slab (SS) sampling (See Log for can pressures and times, can IDs)

0736 Setting up to sample Z6-2-SS

	1L	2L	
CH4	0.0	0.0	%
CO2	0.2	0.2	%
O2	20.5	20.4	%
Bal	79.3	79.4	%
He	0	0	ppm

0807 Setting up to sample Z5-2-SS

0807 Setting up to sample Z5-2-SS

	1L	2L	
CH4	0	0	%
CO2	1.9	1.9	%
O2	18.6	18.5	%
Bal	79.5	79.6	%
He	0	0	ppm

0841 Setting up to sample Z4-SS

	1L	2L	
CH4	0	0	%
CO2	0	0	%
O2	20.3	19.6	%
Bal	79.7	80.3	%
He	6050	5300	ppm

* Helium in shroud was 18%, concentration of helium in tedlar bag was <10% of helium in shroud (~2.4% of He in shroud)

0905 Setting up to sample Z3-2-SS

	1L	2L	
CH4	0	0	%
CO2	0.9	0.9	%
O2	18.9	18.8	%
Bal	80.2	80.2	%
He	350	0	ppm

Rite in the Rain

0924 Setting up to sample Z4-2-SS

	1L	2L	
CH_4	0	0	%
CO_2	0.5	2.0	%
O_2	19.6	13.0	%
Bal	85.7	85.0	%
He	~~0.5~~ 0	0	ppm

0948 Setting up to sample ~~Z0-1-SS~~ Z2-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	4.4	4.4	%
O_2	15.5	15.5	%
Bal	80.1	80.1	%
He	0	0	ppm

1015 Setting up on Z3-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	14.8	14.8	%
O_2	0	0	%
Bal	85.2	85.2	%
He	0	0	ppm

* 14ppm CO measured in sub slab on 1L meas.
* 1ppm H_2S + 14ppm CO detected in 2L purge

1115 IM + CC offsite for lunch and charge GEM + MGD-2000

1200 IM + CC on site

1225 Setting up to sample Z4-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	1.5	1.5	%
O_2	18.4	18.3	%
Bal	80.1	80.2	%
He	0	0	ppm

1315 Setting up to sample Z5-1-SS

	1L	2L	
CH_4	0	0	%
CO_2	0.3	0.3	%
O_2	19.7	19.5	%
Bal	80.0	80.2	%
He	0	0	ppm

1337 Setting up on Z6-1-SS

	1L	2L	
CH_4	0.1	0	%
CO_2	2.4	2.2	%
O_2	16.5	17.1	%
Bal	81.0	80.7	%
He	0	0	ppm

Rite in the Rain

1358 Setting up on ZS-OF-SS

	1L	2L	
CH_4	0.1	0	%
CO_2	0	0	%
O_2	20.5	20.5	%
Bal	79.4	79.5	%
He	0	0	ppm

1430 COLLECTED
AA-2-202110

1500 Mob to pack summas and complete COC

1715 Drop summas at Fedex
- mob to site to assist with sample sorting / CoC

1810 IM offsite / EOD

10/21/21 Whirlpool

ANNUAL SAMPLING

0700 REH on site: IM, CC, DM, NM, CP, JZ, LB
- H&S / Tailgate meeting
- weather: 54°F (high 73°), clear, wind SW 4mph, baro: 30.17 inHg

0720 CAL YSI # 18K100534
- Spec. Cond : 7043 µS/cm
- ORP : 244.0
- pH4 : ~~7.16~~ cal 4.13
- pH7 : 7.16
- pH10 : 10.12
- DO : 104.3%

0810 Mob to RW-69

0815 Setting up on RW-69

0830 Begin purging RW-69; SEE LOG

0925 SAMPLE RW-69-202110 Fe-6.1 mg/L
VOCs, MNA parameters

1010 Mob to dump purge water

1030 Mob to IW-73 to sample

1112 Purging IW-73; SEE LOG

1210 SAMPLE IW-73-202110 Fe: 0.33
VOCs, MNA parameters

Rite in the Rain

1330 Mob to dump purge water
1415 Begin purging TMW-22R; SEE LOG
1515 SAMPLE
TMW-22R-202110
Fe^{2+} = 2.76 mg/L
VOCs, ISCR parameters
- waiting on VFA vials
1545 VFA vials delivered
- collected VFA
- packing eqpt
1605 Mob to staging area to dump purge water and assist with CoC
1800 Samples given to Pace courier
1825 IM offsite

10/22/21 Whirlpool

ANNUAL SAMPLING

0700 REH on-site: IM, CC, DM, GP, JZ
- weather 51°F, clear, wind W 1mph, baro: 30.14 inHg
0715 Hrs / Tailgate meeting
0720 CAL YSI # FA03788
Spec Cond : 6.83 mS/cm
ORP : 238.3 mV
pH4 : 4.02
pH7 : 6.92
pH10 : 10.03
DO% : 101.1%
0740 Mob to sample IW-77
0805 Setting up on IW-77
0810 Purging IW-77, SEE LOG
0905 SAMPLE
IW-77-202110
Fe^{2+} = 0.08
VOCs
- mob to dump purge water, sort samples and pack equipment
1015 OFFSITE mob to St. Louis

Rite in the Rain

Appendix C
Air Sampling Logs

Ramboll - Air Sampling Log

Project Number:	1690020850	Date:	10/19/21
Project Name:	Whirlpool Fort Smith	Sampler(s):	IM, CC

Field Parameters

Sample ID	Sample Start Date	Sample Start Time	Sample End Date	Sample End Time	Initial Vacuum ("Hg)	Final Vacuum ("Hg)	Canister ID	Regulator ID	Helium (ppm or percent)	Notes
AA-1-202110	10/19/21	723	10/19/21	1431	-29	-5	1592	0367		
Z5-OF-IA-202110	10/19/21	736	10/19/21	1926	-29	-8	2689	0132		
Z6-1-IA-202110	10/19/21	736	10/19/21	1559	-29	-4	1583	1369		
Z5-1-IA-202110	10/19/21	738	10/19/21	1441	-30	-6	2376	0089		
Z6-2-IA-202110	10/19/21	749	10/19/21	1455	-30	-6	1232	1805		
Z6-2-IA-202110-DUP	10/19/21	749	10/19/21	1455	-30	-4	0671	1038		
Z5-2-IA-202110	10/19/21	751	10/19/21	1453	-30	-6	3506	0878		
Z1-1-IA-202110	10/19/21	813	10/19/21	1539	-30	-6	2320	0094		
Z2-1-IA-202110	10/19/21	818	10/19/21	1528	-30	-6	0658	1280		
Z4-2-IA-202110	10/19/21	817	10/19/21	1517	-28	-5	0164	0321		
Z3-2-IA-202110	10/19/21	814	10/19/21	1538	-30	-5	3621	0280		
Z4-1-IA-202110	10/19/21	830	10/19/21	1549	-30	-4	56	1068		
Z3-1-IA-202110	10/19/21	829	10/19/21	1547	-29	-5	4011	1438		

Weather:	**Comments:**
Sunny Cloudy Partly Cloudy Other	
Wind Direction:	
Wind Speed (mph): 0-10 10-25 >25	
Temperature (F):	

Ramboll - Air Sampling Log

Project Number: 1690020850 | Date: 10/20/21

Project Name: Whirlpool Fort Smith | Sampler(s): IM, CC

Field Parameters

Sample ID	Sample Start Date	Sample Start Time	Sample End Date	Sample End Time	Initial Vacuum ("Hg)	Final Vacuum ("Hg)	Canister ID	Regulator ID	Helium (ppm or percent)	Notes
AA-2-202110	10/20/21	723	10/20/21	1430	-30	-5	2357	0052	NM	
Z6-2-SS-202110	10/20/21	754	~~803~~	803	-29	-3	3530	2896	0	
Z6-2-SS-202110 DUP	10/20/21	754	~~803~~	803	-30	-3	0748	2988	0	
Z5-2-SS-202110	10/20/21	816	10/20/21	824	-29	-3	2252	2657	0	
Z1-1-SS-202110	10/20/21	853	10/20/21	903	-30	-3	3122	2967	5300	18% He in shroud
Z3-2-SS-202110	10/20/21	912	10/20/21	920	-30	-2	3262	2713	0	
Z4-2-SS-202110	10/20/21	935	10/20/21	943	-30	-2	905	3008	0	
Z2-1-SS-202110	10/20/21	957	10/20/21	1004	-30	-4	2851	3207	0	
Z3-1-SS-202110	10/20/21	1039	10/20/21	1047	-30	-1	3158	3010	0	
Z4-1-SS-202110	10/20/21	1251	10/20/21	1259	-29	-3	2976	2772	0	
Z5-1-SS-202110	10/20/21	1324	10/20/21	1335	-30	-2	3830	3095	0	
Z6-1-SS-202110	10/20/21	1345	10/20/21	1355	-30	-4	3052	3203	0	
Z5-OF-SS-202110	10/20/21	1405	10/20/21	1413	-29	-5	2633	2672	0	

Weather:

Sunny Cloudy Partly Cloudy Other

Wind Direction: NE

Wind Speed (mph): 0-10 10-25 >25

Temperature (F): 54° / 79°

Comments: