

Mr. Mostafa Mehran
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

**RE: Installation of Sentinel Wells
Whirlpool Corporation Facility – Fort Smith, Arkansas
EPA No. ARD042755389
AFIN No. 66-00048
CAO LIS 13-202**

Dear Mr. Mehran:

Date December 10, 2015

Ramboll Environ US Corporation (Ramboll Environ), on behalf of Whirlpool Corporation (Whirlpool), is submitting this letter report documenting the installation of eight sentinel monitoring wells near the southern property boundary of the Whirlpool facility in Fort Smith, Arkansas. As discussed in Whirlpool's responses to the Arkansas Department of Environmental Quality's (ADEQ's) comments on the First Quarter Progress Report, dated September 9, 2015, Whirlpool proposed the installation of sentinel wells inside of the south, southeast and southwest property boundaries to provide early detection of migration of the southern plume.

Ramboll Environ
1807 Park 270 Drive
Suite 320
St. Louis, MO 63146
USA

T +1 314 590 2950
F +1 314 590 2951
www.ramboll-environ.com

BACKGROUND

Installation of the subject sentinel wells was proposed as a result of a series of supplemental voluntary investigations performed in 2014 and 2015 by Whirlpool Corporation. Membrane interface probe (MIP) screening and soil and groundwater sampling were performed during several events between September 2013 and August 2014 (see 2014 Annual Report for further discussion). MIP technology provides a continuous, semi-quantitative volatile organic compound (VOC) screening of soils and groundwater through a semi-permeable membrane mounted within a heated block on the lead soil probe rod. Standard and low-level MIP screening was performed during the investigations¹. MIP locations which exhibited higher electron capture device (ECD) probe responses were further investigated by performing soil probes or installing temporary wells as appropriate to gather soil and/or groundwater data.

¹ A MIP Narrative and Standard Operating Procedure (SOP) were presented in the Response to ADEQ Comments on the Property Boundary Supplementary Work Plan dated September 19, 2014 which also discusses the other probes employed during the MIP screening investigation to assess TCE impacts.

Supplemental investigation was voluntarily completed in August 2014 to assess the potential migration of trichloroethene (TCE) impact in groundwater beyond the Whirlpool facility property boundaries with a focus on the soil and groundwater conditions at the approximate boundary separating the former manufacturing building property and the proposed divestiture of the warehouse building property to the south.

Twenty-three MIP screening locations were completed along the southern boundaries and other locations south of the former manufacturing building during the Property Boundary Investigation. MIP locations M-311, M-325, M-329, M-330, M-334 through M-346, M-348 through M-351, M-356, and M-357 are shown on Figure 1. Most MIP screening results indicated no or very little response on the ECD. For the MIP locations identifying higher ECD responses, direct push soil borings and/or temporary well installations were performed in a separate but adjacent boring. The soil boring locations are identified on Figure 1 as DP-57 and DP-59 through DP-62. Soil samples were collected in each soil boring from 1 foot below ground surface (bgs) and at other depths ranging from 4 to 37 feet bgs where elevated ECD responses were identified in the respective MIPs. TCE was not detected in any of the soil samples collected. Groundwater samples were collected in temporary well screens in soil borings DP-57 and DP-59 through DP-62 and these samples were analyzed by Pace Analytical. TCE was not detected above the remedial action level (RAL) of 5 micrograms per liter ($\mu\text{g/L}$) in any of the groundwater grab samples collected during completion of the soil borings. Select groundwater grab samples collected during this investigation from MIPs M-325, M-329 and M-334 (duplicate sample collected at M-334) were analyzed using a field gas chromatograph (GC). Field GC results indicated the presence of TCE southwest of the former manufacturing building at M-325 (1,390 $\mu\text{g/L}$) and M-329 (368 $\mu\text{g/L}$). TCE was not detected in either of the samples collected from M-334 (reported detection limit of 1 $\mu\text{g/L}$).

The 2014 Property Boundary Investigation, based on the data available, indicated that no TCE was migrating in groundwater beyond the property boundaries south of the former manufacturing building (i.e. south, southeast and southwest property boundaries). However, an additional monitoring well was proposed in response to comments from ADEQ regarding the Property Boundary Investigation (Whirlpool Responses to ADEQ Comments on the Third Quarter Progress Report dated February 3, 2015). MW-182 was installed downgradient of M-325 and M-329 to assess groundwater conditions and TCE concentrations in this vicinity in June 2015. TCE was identified in MW-182 at a concentration of 193 $\mu\text{g/L}$ during the third quarter 2015 sampling event performed in July 2015.

Previous quarterly monitoring of groundwater levels suggested a southeasterly groundwater flow gradient based upon the existing monitoring wells along the south side of the property (six quarterly events during 2014 and the first two quarters of 2015); however, the installation of MW-182 provided an additional data point suggesting a more southerly groundwater flow direction as previously measured and assessed during the third quarter of 2015 (see the 2015 Third Quarter Progress Report, November 13, 2015).

In the response to ADEQ comments on the First Quarter 2015 Progress Report (dated September 9, 2015) we proposed to install sentinel wells near the south property to continue to

assess groundwater conditions along the south property boundary. The remainder of this report describes the findings from the installation and sampling of the sentinel wells.

SENTINEL WELL INSTALLATION

Prior to initiating drilling activities for the installation of the sentinel wells, both Arkansas One-Call Utility Locating Services and a private utility locator were contacted to identify underground utilities and other potential obstructions in the work areas. Figure 1 presents the location of newly installed sentinel monitoring wells (MW-185 through MW-192). The installation of the monitoring wells was conducted by Able Environmental Drilling of Yukon, Oklahoma, a licensed Arkansas well drilling contractor.

The installation of the sentinel wells was completed using hollow stem auger technique. Prior to completing well construction, temporary well screens were installed across the Basal Transmissive Zone and groundwater grab samples were obtained for 24 hour turnaround to support proper placement of each of the wells (see Table 2 for initial grab samples and subsequent quarterly monitoring data). Monitoring well installations were supervised by a Ramboll Environ geologist. Prior to setting MW-188 and MW-189, results of the groundwater grab samples indicated the presence of TCE less than RAL's but above method detection limits ($2J \mu\text{g/L}$ at TMW-188 and $2.6 \mu\text{g/L}$ at TMW-189)² (initial locations are noted on Figure 1 as TMW-188 and TMW-189). Based upon this preliminary data, MW-188 and MW-189 were re-positioned slightly to the south. Temporary locations TMW-188 and TMW-189 were abandoned in accordance with Arkansas requirements prior to installation of the permanent wells. Only TMW-188 and TMW-189 were relocated during the installation of the sentinel wells.

The screened intervals for the new wells were installed across the clayey gravel and clayey sand Basal Transmissive Zone and into the top of the shale approximately 30 to 40 feet bgs. Each well was constructed with a 2 inch diameter PVC casing and a 10 foot long PVC well screen. A 20/40 grade sand pack was installed in the well annulus around the PVC screen to approximately 2 feet above the top of the screen followed by 2 feet of annular seal consisting of hydrated bentonite chips or pellets above the top of the sand pack. The remainder of the annular space was pressure grouted with a bentonite/cement grout installed with a tremie pipe from the bottom of the open well annulus to the surface. The wells were completed at the surface with a traffic rated flush mount protective cover installed within a concrete apron. Monitoring well construction logs are included as Appendix A to this letter report.

During drilling of the monitoring well borings, soils were logged by a Ramboll Environ geologist for United States Geological Survey (USGS) classification and select soil samples were collected for geotechnical analysis. A continuous soil core was obtained from each boring for geologic logging, field screened with a photo-ionization detector (PID) and inspected for any visual evidence of potential contamination. The undisturbed soil samples were submitted to Terracon of Oklahoma City, Oklahoma, for analysis of Atterberg limits and soil classification

² Sample ID for TMW-188 is MW-188-GW-091415; Sample ID for TMW-189 is MW-189-GW-091515

based according to the Unified Soil Classification System (USCS) classification based on the grain size analysis (Appendix B).

All newly constructed monitoring wells were properly developed in accordance with ADEQ guidance (Interim Policy PRCR 96-4 Section L Page 9) between September 15 and 18, 2015.

A licensed Arkansas surveyor surveyed the wells for location and elevation on Friday, September 18, 2015.

The soil cuttings generated from drilling activities for the sentinel wells were collected and containerized in a 20 yard roll-off box and staged on the former Whirlpool manufacturing facility property. Purge water generated from groundwater development activities was containerized for disposal. The soil and water investigation derived waste was disposed of as non-hazardous waste by Environmental Remediation Specialists and transported to American Environmental Landfill, Inc. on September 18, 2015. Waste manifests are included as Appendix C to this letter report.

RESULTS OF SOIL SAMPLING

During the drilling of the sentinel wells, field screening results for VOCs were not indicative of impacted soil and no apparent visual evidence of potential contamination was noted.

Undisturbed soil samples were collected using Shelby tubes from the borings for the following wells: MW-187³ (24-24.5 feet bgs) TMW-188⁴ (16-16.5 feet bgs), MW-189 (32-32.5 feet bgs) and MW-191 (16-16.5 feet bgs). The laboratory USCS classifications were consistent with the field classification for fine-grained soils as identified in MW-187 (clayey sand), TMW-188 (lean clay) and MW-191 (lean clay). The laboratory grain size analysis and the resulting USCS classification for the coarser grained material were consistent with the field classification for MW-189 (well graded gravel with silty clay and sand). Similar to the boring log descriptions, the geotechnical data indicates the soil samples collected from above the Basal Transmissive Zone are low permeability. The more permeable Basal Transmissive Zone material is poorly sorted (i.e. well graded), which in comparison to clean, well sorted gravels and sands, are less permeable due to smaller silt, clay, and fine sand grains filling the openings between the coarser sand and gravel grains. This data is consistent with prior information regarding soil conditions at the site.

POTENTIOMETRIC AND GEOLOGIC REVIEW

Figure 2 presents the contours of the groundwater elevations at the site based on the monitoring well static water level measurements completed in October during the fourth quarter 2015 groundwater monitoring event. The hydraulic gradient is gradual to the south beneath the facility but steepens to the east and southwest beyond the extent of the former manufacturing

³ Geotechnical sample ID "MW-187-SL" corresponds to location MW-187, "MW-189A-SL" corresponds to MW-189, and "MW-191-SL" corresponds to MW-191.

⁴ Geotechnical sample ID "MW-188-SL" corresponds to location TMW-188,

building. The installation of the eight sentinel wells to the south has refined the understanding of the southern flow regime.

The water level data collected in October characterizes a southwest component to the groundwater gradient previously suggested after the installation of MW-182. Since the data set includes only one set of water level measurements, a linear interpolation of the gradient between three groups of wells was completed in order to assess the groundwater flow direction and gradients at these following locations:

- MW-25 to MW-192: A 1.67 foot change in groundwater elevation exists between these wells separated approximately 1,900 feet representing an approximate 0.0009 feet/foot gradient for the south to southeast groundwater flow beneath the building.
- MW-182 to MW-186: A 4.42 foot change in groundwater elevation exists between these wells separated approximately 330 feet representing an approximate 0.013 feet/foot gradient for the southwest groundwater flow at the southwest corner of the property; and
- ITMW-5 to MW-187: A 3.96 foot change in groundwater elevation exists between these wells separated by approximately 1,000 feet representing an approximate 0.004 feet/foot gradient for the southwest groundwater flow at the southwest corner of the property.

Although the gradient remains relatively flat beneath the building (i.e. 0.0009 feet/foot), the gradient steepens somewhat towards the southwest at the southwest corner of the building. The gradient increases to 0.004 feet/foot to 0.013 feet/foot towards the southwest based upon the October 2015 water level measurements.

Historically slug tests have been conducted on several wells for estimating hydraulic conductivity of the Basal Transmissive Zone. Slug tests conducted in early 2014 at locations in the northern portion of the south plume using a GeoProbe System® Pneumatic process produced hydraulic conductivity estimates ranging from 8.8E-04 cm/sec to 3.4E-05 cm/sec. Slug tests completed in the southern flow regime on several wells in October 2015 resulted in estimated hydraulic conductivities ranging from 1.37E-03 cm/sec (MW-188) to 2.95E-04 cm/sec (MW-186). The results for the southern wells are similar to the earlier data and are typical of hydraulic conductivities associated with silts, sandy silts and clayey sands.

Based on the orientation of the Massard Prairie Anticline with respect to the site, the shale surface beneath the site would be expected to follow the regional dip which is generally to the northwest. However, based on data from the investigations conducted at the site (not all borings went deep enough to encounter competent shale) the competent shale surface appears to slope to the southeast. Within this general gradient to the southeast, there is a southwest to northeast low implied beneath the northwest portion of the manufacturing building (Figure 3). This low in the shale surface appears to be centered along a transect from ITMW-7 to ITMW-1. To the south, just outside the former manufacturing building, there is a high in the shale surface in the area of ITMW-8. The installation of the sentinel wells on the south property boundary has refined the understanding of the bedrock surface, the extension of the southwest low in the bedrock surface, and the high south of the building at ITMW-8. Additionally, a southwest trending low also appears to be present extending southwest from TMW-189 to MW-186. The

observed groundwater flow to the southwest, at the southwest portion of the property, is consistent with the southwest trending shale surface and associated high to the east at ITMW-8.

Figure 4 presents an east-west cross section (A – A') that includes the new sentinel wells. As indicated from previous site investigation efforts 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). The Upper Fine-Grained Unit consists primarily of recent age fine grained alluvial sediment. The Basal Transmissive Zone may be equivalent to the Pleistocene age Gerty Sand and consists of unconsolidated river terrace sand and gravel. The more permeable portion of the Upper Fine Grained Unit (clayey sand) and the Basal Transmissive Zone thicken midway at a topographic high at MW-189 and gradually thin both east and west. From TMW-188 to the west to MW-187 and MW-186, the southeastern flank of the southwest-northeast bedrock trough is implied as the shale surface descends. The water level data included on the cross-section also indicates a westward gradient that steepens slightly to the west as it follows the slope of the shale surface as opposed to the highs and lows of the unconsolidated sediments above the shale.

Figure 5 presents a southwest northeast cross-section (B-B') based on historical data and additional information from the installation of the new sentinel wells. It is located generally parallel to the southeastern flank of the southwest-northeast bedrock low and is similar to Cross-Section A-A' in terms of the characteristics of the Basal higher transmissive and Upper lower transmissive units. There is very little vertical relief in the shale surface and groundwater gradient is relatively flat. It is similar to Cross section A-A' in that the potentiometric surface does not appear to be controlled by the variations in the unconsolidated sediments over the shale.

Groundwater flow in the southwest appears to be, at least in part, controlled by vertical features and gradient of the competent shale surface below the Lower Basal Transmissive Zone.

RESULTS OF GROUNDWATER SAMPLING

Sentinel wells MW-185 through MW-192 were sampled as part of the fourth quarter groundwater monitoring effort completed during the week of October 5, 2015. Groundwater sample results were non-detect for TCE at the new wells with the exception of MW-186 (1.2 µg/L) and MW-189 (4.1 µg/L). These levels of TCE are below the remedial action level (RAL) of 5 µg/L. MW-186 is located in the southwest corner of the property approximately 75 feet from the western property boundary and 350 feet from the southern property boundary. MW-189 is located approximately 125 feet north of the southern property boundary and approximately 50 feet up-gradient of former direct push point DP-59 which was sampled for both soil and groundwater in 2014 and results for TCE were below detection limits.

For comparison purposes, groundwater sample results from the fourth quarter 2015 groundwater monitoring event for select southern monitoring wells (MW-182, ITMW-4, ITMW-6, ITMW-9, and ITMW-10) are included in Table 3. Monitoring well MW-182 is located 340 feet northeast and up-gradient from MW-186 (see Figure 1). The TCE concentration for the fourth

quarter 2015 in MW-182 is 196 µg/L which is similar to third quarter results (193 µg/L). TCE concentrations in ITMW-4, ITMW-6, ITMW-9, and ITMW-10 are 2.3 µg/L, 3.1 µg/L, 55.6 µg/L and 437 µg/L, respectively, and these wells are located approximately 600 to 1,000 feet northeast from MW-182. Based on the shale bedrock surface (Figure 3) and potentiometric surface gradient based on October 2015 water level measurements, these wells (ITMW-4, ITMW-6, ITMW-9 and ITMW-10) appear to be located up-gradient from monitoring well MW-182 and sentinel wells MW-186 and MW-189.

SUMMARY

The sentinel wells were installed to support the early detection of contaminant concentrations, if present, near the southern property boundaries. These wells (MW-185 through MW-192) were sampled during the fourth quarter groundwater sampling effort (completed during the week of October 5, 2015) and results indicate TCE concentrations as either non-detect or below the RAL. Shale surface features to the south appear to be a controlling factor in groundwater flow and more importantly the direction of TCE migration in groundwater.

Sentinel wells MW-185 through MW-192 will continue to be monitored in conjunction with groundwater monitoring events as defined within the 2015 Remedial Action Decision Document.

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If you have any further questions or comments, please feel free to contact us.

Sincerely,



Michael F. Ellis, PE

Principal

D +1 314 590 2967
M +1 314 229 5617
mellis@environcorp.com



Andrew A. Gremos, PG, CHMM

Principal

D +1 317 803 4615
M +1 317 213 4352
agremos@environcorp.com

LIST OF ATTACHMENTS

- Table 1: Summary of Monitoring Well Construction Details
- Table 2: Summary of Groundwater Grab Sample Analytical Results
- Table 3: Summary of Groundwater Sample Analytical Results

- Figure 1: Sentinel Monitoring Well Locations
- Figure 2: Fourth Quarter 2015 Potentiometric Surface
- Figure 3: Top of Competent Shale Map
- Figure 4: Cross Section (A – A')
- Figure 5: Cross Section (B – B')

- Appendix A: Monitoring Well Construction Logs
- Appendix B: Geotechnical Results
- Appendix C: Investigation Derived Waste Manifests
- Appendix D: Laboratory Analytical Results

TABLES

TABLE 1
SUMMARY OF SENTINEL WELL CONSTRUCTION DETAILS
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Coordinates		Ground Surface Elevation (feet)	Top of Casing Elevation (feet)	Top of Screen Elevation (feet)	Bottom of Screen Elevation (feet)	Screen Length (feet)	Screened Interval (feet)
	Easting (feet)	Northing (feet)						
MW-185	592256	367995	474.10	473.86	454.10	444.10	10.00	20.0 - 30.0
MW-186	590124	367716	470.55	469.80	452.55	442.55	10.00	18.0 - 28.0
MW-187	590249	367588	477.59	477.42	453.59	443.59	10.00	24.0 - 34.0
MW-188	590646	367509	481.65	481.14	455.65	445.65	10.00	26.0 - 36.0
MW-189	590859	367666	485.87	485.59	454.87	444.87	10.00	31.0 - 41.0
MW-190	591325	367744	481.56	481.29	454.56	444.56	10.00	27.0 - 37.0
MW-191	591662	367732	477.31	476.85	454.31	444.31	10.00	23.0 - 33.0
MW-192	592078	367679	475.69	475.33	454.69	444.69	10.00	21.0 - 31.0

Notes:

Horizontal and vertical coordinates provided by Hoffman & Associates survey dated 9/18/2015.

TABLE 2
SUMMARY OF GROUNDWATER GRAB SAMPLE ANALYTICAL RESULTS (SEPTEMBER 2015)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action	MW-185	MW-186	MW-187	TMW-188
ENVIRON Sample ID	Levels per ADEQ	MW-185-GW-091615	MW-186-GW-091415	MW-187-GW-091415	MW-188-GW-091415
Lab Sample ID	RADD Issued	60202915001	60202710001	60202710002	60202710003
Sample Date	Dec 2013	09/16/2015	09/14/2015	09/14/2015	09/14/2015
Sample Method		Grab	Grab	Grab	Grab
Volatile Organic Compounds					
Acetone	12000	U (1.9)	2.9 (1.9)	5.3 (1.9)	U (9.4)
Benzene	5.0	U (0.060)	U (0.060)	U (0.060)	0.99 (0.30)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.95)
Carbon Disulfide	720	0.13 (0.12)	U (0.12)	U (0.12)	U (0.60)
Chloroethane	12000	U (0.15)	U (0.15)	0.38 (0.15)	U (0.75)
Chloroform	80	0.32 (0.14)	3.5 (0.14)	14.6 (0.14)	U (0.70)
Chloromethane	190	U (0.080)	0.25 (0.080)	0.21 (0.080)	U (0.40)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.25)
1,1-Dichloroethene	7.0	U (0.20)	U (0.20)	U (0.20)	U (1.0)
cis-1,2-Dichloroethene	70	U (0.080)	0.37 (0.080)	U (0.080)	2.4 (0.40)
Methylene Chloride	5.0	U (0.15)	U (0.15)	0.35 (0.15)	U (0.75)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	4.7 (0.85)
Trichloroethene	5.0	U (0.17)	U (0.17)	U (0.17)	2.0 (0.85)
Vinyl Chloride	2.0	U (0.13)	U (0.13)	U (0.13)	U (0.65)

Notes:

- 1 All concentrations are presented in ug/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.

U = Not Detected

() = Method Detection Limit

RADD = Remedial action decision document

ADEQ = Arkansas Department of Environmental Quality

µg/L = Micrograms per Liter

TABLE 2
SUMMARY OF GROUNDWATER GRAB SAMPLE ANALYTICAL RESULTS (SEPTEMBER 2015)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-188	TMW-189	MW-189	MW-190
ENVIRON Sample ID		MW-188A-GW-091715	MW-189-GW-091515	MW-189A-GW-091715	MW-190-GW-091415
Lab Sample ID		60203042001	60202795001	60203042002	60202710004
Sample Date		09/17/2015	09/15/2015	09/17/2015	09/14/2015
Sample Method		Grab	Grab	Grab	Grab
Volatile Organic Compounds					
Acetone	12000	3.3 (1.9)	U (1.9)	U (1.9)	2.9 (1.9)
Benzene	5.0	1.1 (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	0.23 (0.19)	U (0.19)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Chloroethane	12000	0.73 (0.15)	U (0.15)	0.36 (0.15)	U (0.15)
Chloroform	80	0.32 (0.14)	0.31 (0.14)	7.3 (0.14)	2.4 (0.14)
Chloromethane	190	0.16 (0.080)	0.14 (0.080)	U (0.080)	0.14 (0.080)
1,1-Dichloroethane	2.4	U (0.050)	<u>3.9 (0.050)</u>	0.23 (0.050)	U (0.050)
1,1-Dichloroethene	7.0	U (0.20)	0.41 (0.20)	0.49 (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	4.7 (0.080)	3.1 (0.080)	U (0.080)
Methylene Chloride	5.0	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Toluene	1000	0.78 (0.17)	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	5.0	U (0.17)	2.6 (0.17)	2.4 (0.17)	U (0.17)
Vinyl Chloride	2.0	U (0.13)	0.22 (0.13)	U (0.13)	U (0.13)

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TABLE 2
SUMMARY OF GROUNDWATER GRAB SAMPLE ANALYTICAL RESULTS (SEPTEMBER 2015)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action	MW-191	MW-192
ENVIRON Sample ID	Levels per ADEQ	MW-191-GW-091515	MW-192-GW-091615
Lab Sample ID	RADD Issued	60202795002	60202915002
Sample Date	Dec 2013	09/15/2015	09/16/2015
Sample Method		Grab	Grab
Volatile Organic Compounds			
Acetone	12000	U (1.9)	U (1.9)
Benzene	5.0	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)
Carbon Disulfide	720	U (0.12)	U (0.12)
Chloroethane	12000	U (0.15)	U (0.15)
Chloroform	80	0.17 (0.14)	4.4 (0.14)
Chloromethane	190	U (0.080)	U (0.080)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)
1,1-Dichloroethene	7.0	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	U (0.080)
Methylene Chloride	5.0	U (0.15)	U (0.15)
Toluene	1000	U (0.17)	U (0.17)
Trichloroethene	5.0	U (0.17)	U (0.17)
Vinyl Chloride	2.0	U (0.13)	U (0.13)

Notes:

- 1 All concentrations are presented in ug/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.

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TABLE 3
SUMMARY OF SELECT MONITORING WELLS AND SENTINEL MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS (OCTOBER 2015)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-9	ITMW-10	MW-182	ITMW-4	ITMW-6	MW-185	MW-186
ENVIRON Sample ID		ITMW-9-201510	ITMW-10-201510	MW-182-201510	ITMW-4-201510	ITMW-6-201510	MW-185-201510	MW-186-201510
Lab Sample ID(s)		60204563006, 021MJ060	60204563043, 021MJ045	60204296007, 021MJ07	60204563034, 021MJ039	60204563019, 021MJ047	60204296004, 021MJ02	60204296003, 021MJ03
Sample Date		10/07/2015	10/07/2015	10/05/2015	10/07/2015	10/07/2015	10/05/2015	10/05/2015
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Volatile Organic Compounds								
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	2.1 J (1.9)	UJ (1.9)	U (1.9)	U (1.9)
Benzene	5.0	U (0.060)	0.20 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7.0	0.94 J (0.16)	U (0.16)	U (0.16)	0.97 J (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	UJ (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	0.22 J (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	0.47 J (0.21)	0.63 J (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.16 J (0.14)	0.24 J (0.14)	0.21 J (0.14)	0.22 J (0.14)	U (0.14)	U (0.14)	0.21 J (0.14)
Chloromethane	190	U (0.080)	U (0.080)	0.31 (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	0.24 J (0.050)	2.9 (0.050)	U (0.050)	0.23 J (0.050)	4.3 (0.050)	U (0.050)	0.53 J (0.050)
1,2-Dichloroethane	5.0	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7.0	U (0.20)	4.7 (0.20)	U (0.20)	U (0.20)	0.53 J (0.20)	U (0.20)	0.26 J (0.20)
cis-1,2-Dichloroethene	70	26.6 (0.080)	37.5 (0.080)	17.2 (0.080)	2.8 (0.080)	5.5 (0.080)	U (0.080)	2.4 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	0.35 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	34	U (1.2)	U (1.2)	U (1.2)	U (1.2)	UJ (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5.0	U (0.15)	U (0.15)	U (0.15)	0.68 J (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5.0	0.28 J (0.10)	0.92 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	0.34 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5.0	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5.0	55.6 (0.17)	437 (0.85)	196 (0.85)	2.3 (0.17)	3.1 (0.17)	U (0.17)	1.2 (0.17)
Vinyl Chloride	2.0	1.0 (0.13)	1.5 (0.13)	0.25 J (0.13)	0.23 J (0.13)	0.21 J (0.13)	U (0.13)	U (0.13)

Notes:

- All concentrations are presented in ug/L
 - Only compounds with at least one detection are shown, with the exception of Monitored Natural Attenuation
 - Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued
- U = Not detected
J = Estimated concentration
(= Method detection limit for VOCs;
) reporting limit for all other parameters
* = Sampled on different day than other parameters with different method
- RADD = Remedial action decision document
ADEQ = Arkansas Department of Environment
VOC = Volatile organic compounds
µg/L = Micrograms per Liter

TABLE 3
SUMMARY OF SELECT MONITORING WELLS AND SENTINEL MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS (OCTOBER 2015)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-187	MW-188	MW-189	MW-190	MW-191	MW-192
ENVIRON Sample ID		MW-187-201510	MW-188-201510	MW-189-201510	MW-190-201510	MW-191-201510	MW-192-201510
Lab Sample ID(s)		60204296001, 021MJ01	60204296002, 021MJ04	60204296006, 021MJ06	60204296005, 021MJ05	60204296009, 021MJ09	60204296008, 021MJ08
Sample Date		10/05/2015	10/05/2015	10/05/2015	10/05/2015	10/05/2015	10/05/2015
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Volatile Organic Compounds							
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	2.3 (1.9)	U (1.9)	U (1.9)
Benzene	5.0	U (0.060)	U (0.060)	U (0.060)	0.68 J (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7.0	1.2 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	1.1 J (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	0.14 J (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.58 J (0.14)	U (0.14)	0.37 J (0.14)	0.15 J (0.14)	U (0.14)	1.1 (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	0.35 J (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5.0	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7.0	U (0.20)	U (0.20)	0.95 J (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	0.21 J (0.080)	U (0.080)	4.5 (0.080)	U (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	34	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5.0	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5.0	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5.0	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5.0	U (0.17)	U (0.17)	4.1 (0.17)	U (0.17)	U (0.17)	U (0.17)
Vinyl Chloride	2.0	U (0.13)	U (0.13)	0.14 J (0.13)	U (0.13)	U (0.13)	U (0.13)

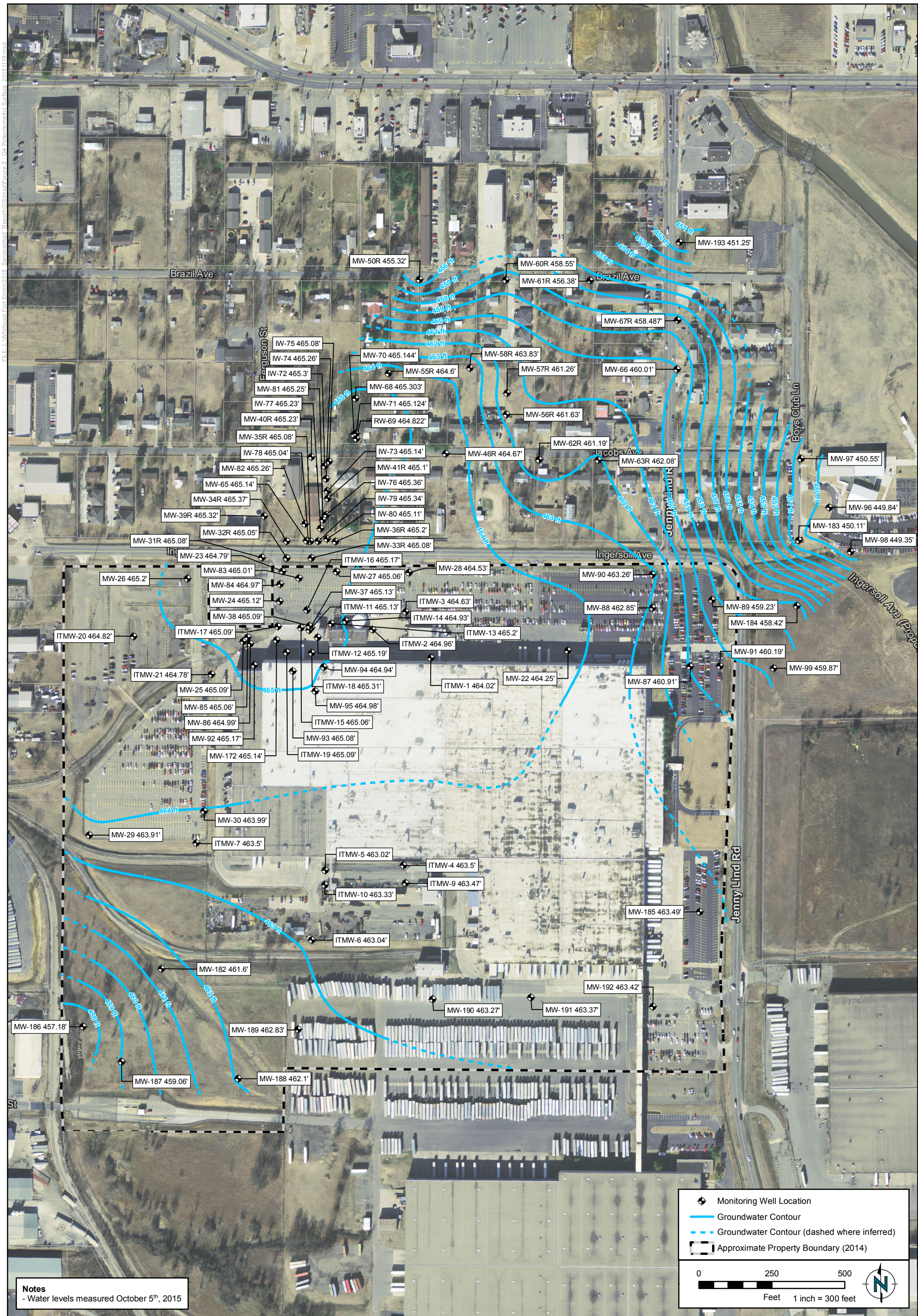
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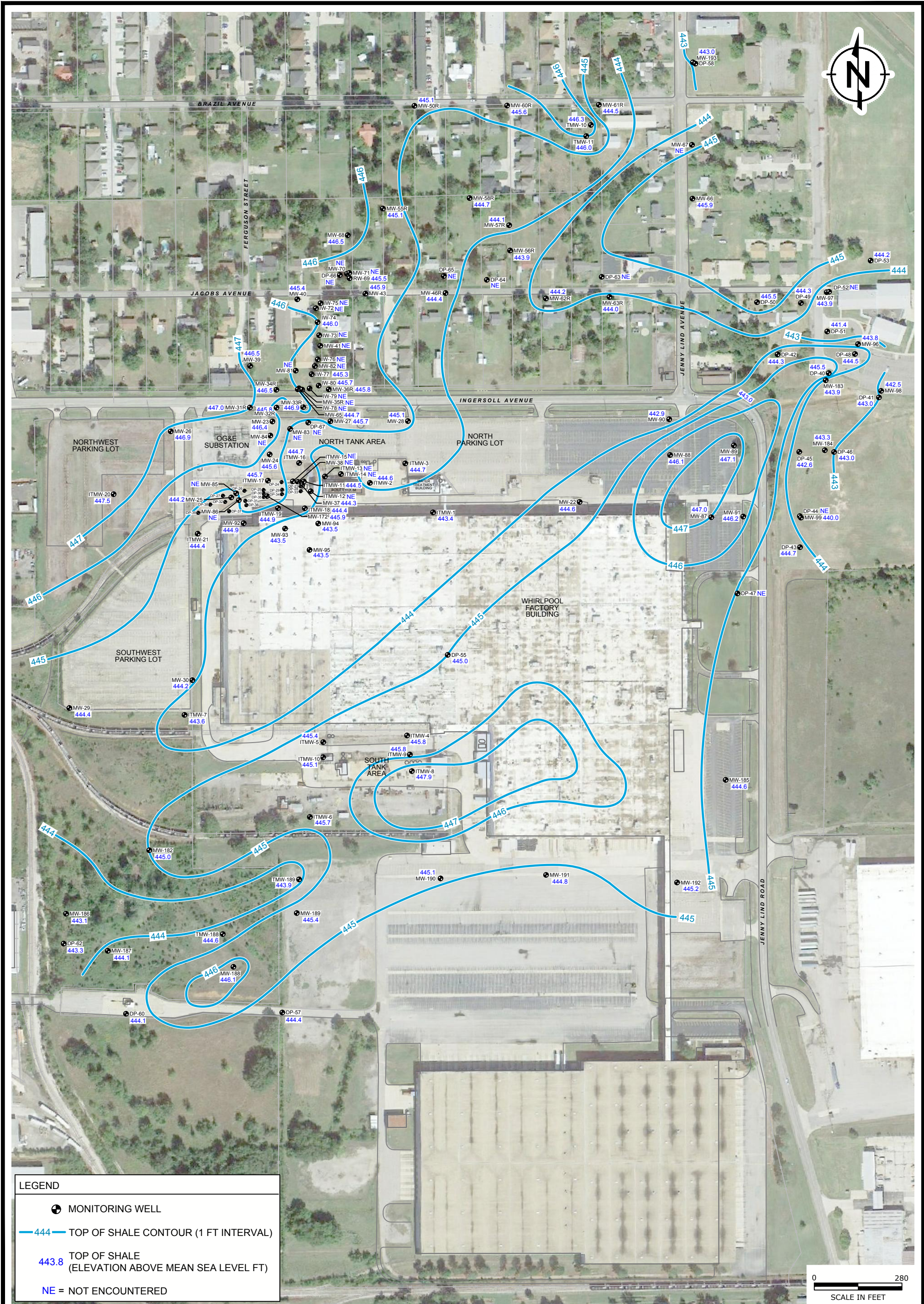
- 1 All concentrations are presented in ug/L
 - 2 Only compounds with at least one detection are shown, with the exception of Monitored Natural Attenuation
 - 3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued
- U = Not detected
J = Estimated concentration
(= Method detection limit for VOCs;
) reporting limit for all other parameters
* = Sampled on different day than other parameters with different method
- RADD = Remedial action decision document
ADEQ = Arkansas Department of Environment
VOC = Volatile organic compounds
µg/L = Micrograms per Liter

FIGURES

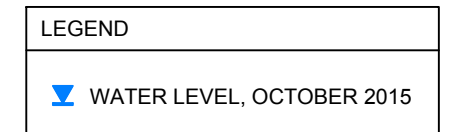
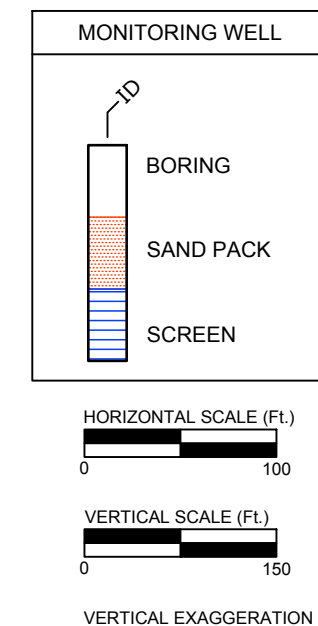
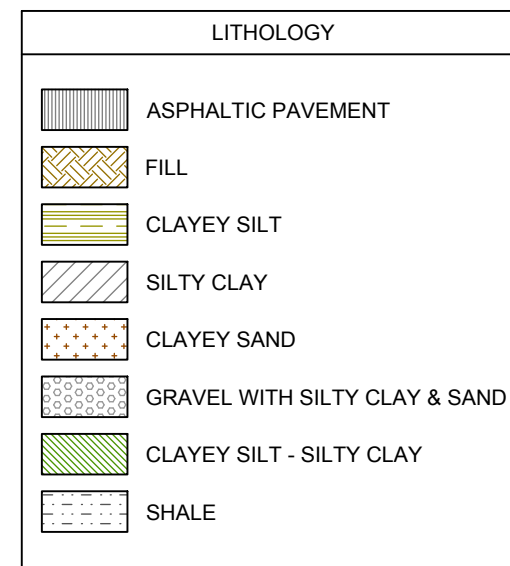
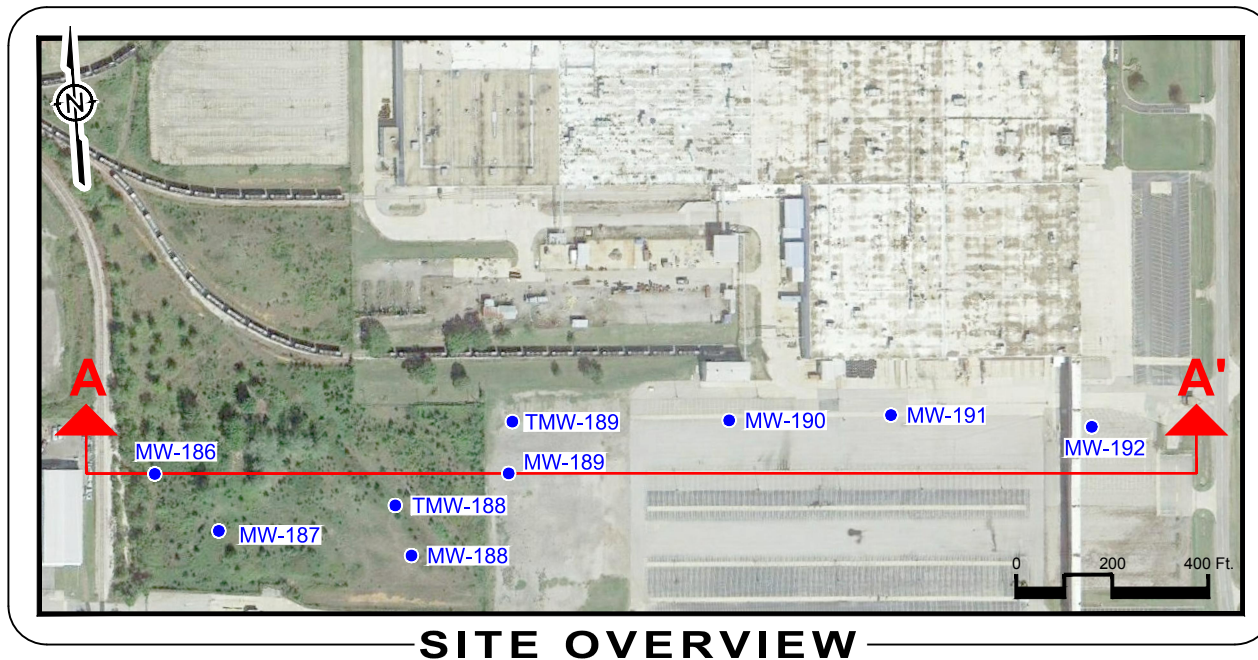
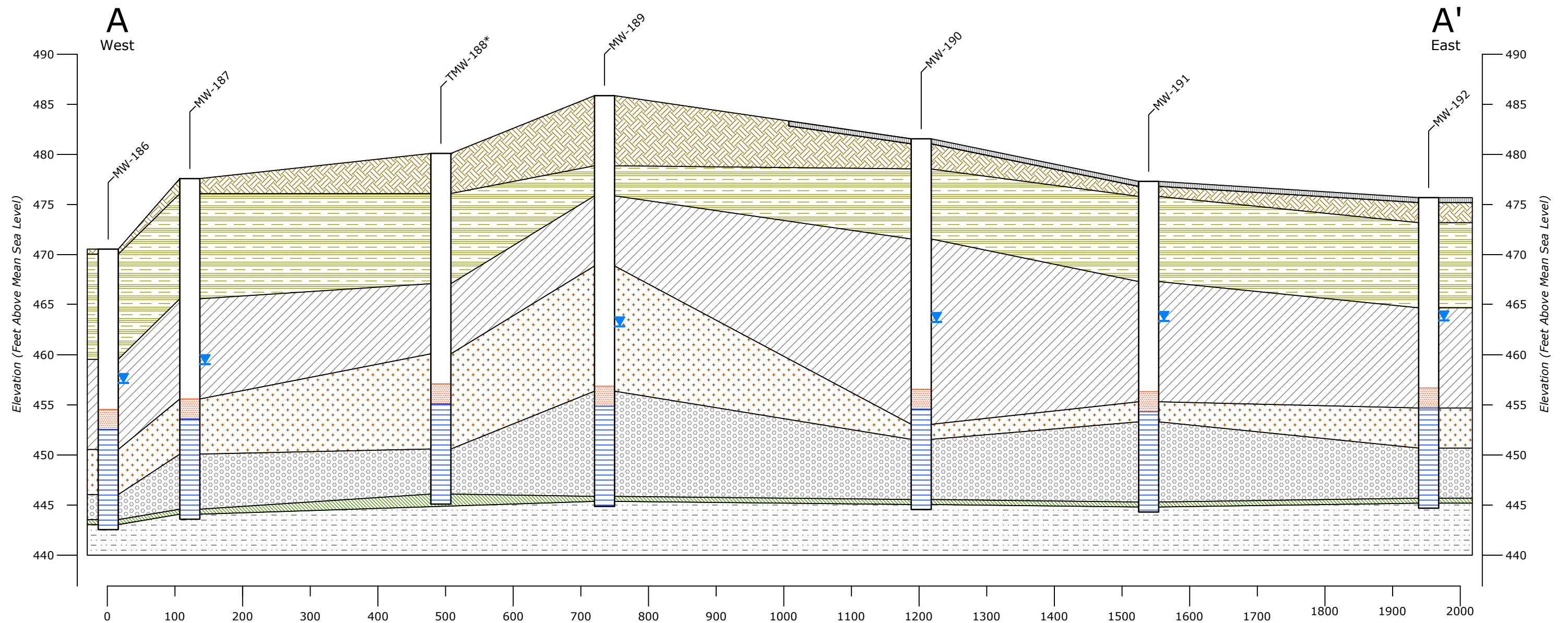


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* WELL HAS BEEN ABANDONED

CROSS-SECTION A-A'
WHIRLPOOL FACILITY
FORT SMITH, ARKANSAS

RAMBOLL ENVIRON

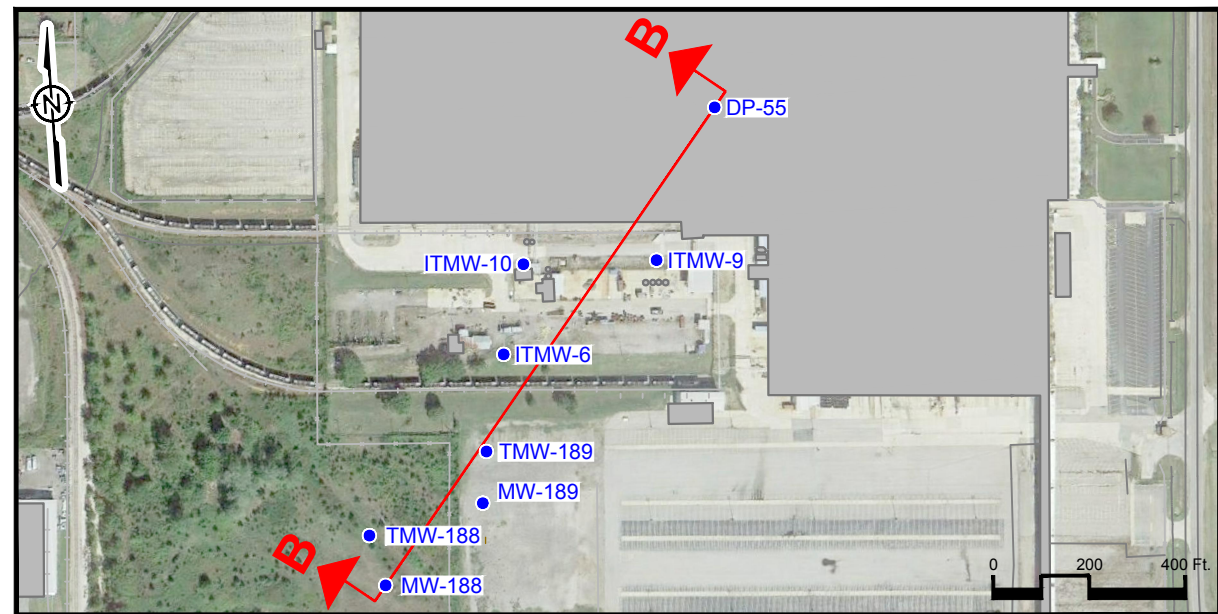
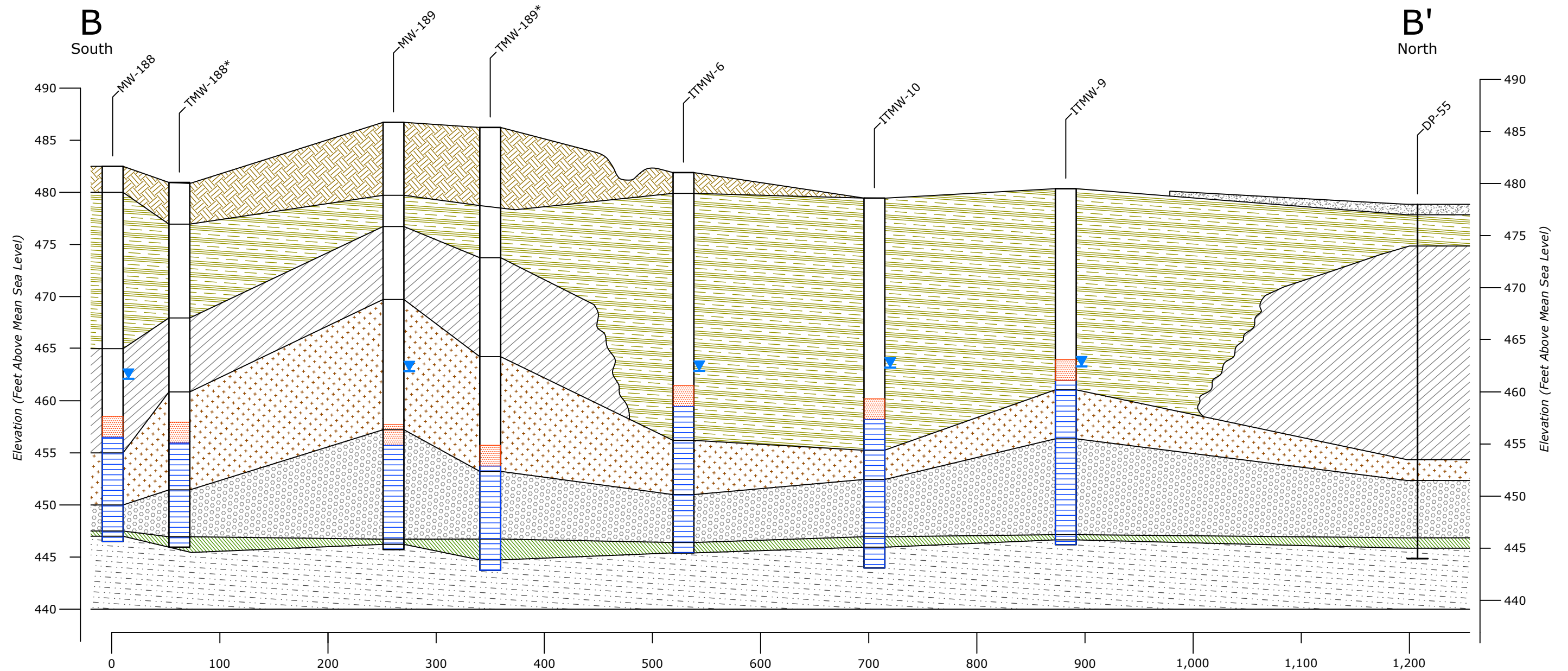
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DATE: 11/12/15

FIGURE
4

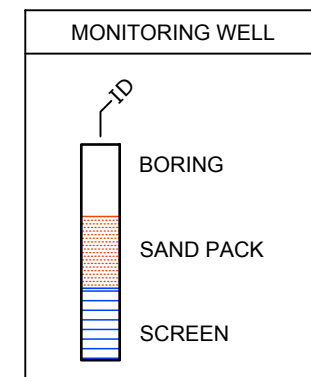
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SITE OVERVIEW

LITHOLOGY	
	ASPHALTIC PAVEMENT
	FILL
	CLAYEY SILT
	SILTY CLAY
	CLAYEY SAND
	GRAVEL WITH SILTY CLAY & SAND
	CLAYEY SILT - SILTY CLAY
	SHALE



LEGEND	
	WATER LEVEL, OCTOBER 2015
	BORING
* WELL HAS BEEN ABANDONED	

CROSS-SECTION B-B'
WHIRLPOOL FACILITY
FORT SMITH, ARKANSAS

RAMBOLL ENVIRON

DRAFTED BY: ELS/APR

DATE: 11/20/15

FIGURE
5

3437500F

APPENDIX A

Monitoring Well Construction Logs



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-185**

Date(s): **9/16/2015**

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: **474.10 ft amsl**

TOC Elevation: **473.86 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367994.98**

East: **592255.98**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 20 FT

Screen: Sch. 40 2 Inch 0.010 20 FT to 30 FT

Annular Fill: Cement Grout 0 FT to 16 FT
Bentonite 16 FT to 18 FT
Sand 18 FT to 30 FT

Borehole Dia.: **8.25 inches**

Total Depth: **30.0 feet**

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks: **Recovery and PID readings not measured.**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
							Asphalt		
							Subbase Gravel, very dark gray, loose, dry		
470	5					MH	Clayey Silt, yellowish brown, occasional reddish brown and gray mottling, trace black nodules, trace gravel, subrounded, fine, slightly plastic, slightly stiff, moist		
465	10					CL	Silty Clay, yellowish brown, frequent gray mottling, occasional black nodules, trace sand, coarse, plastic, stiff, moist		
							Silty Clay as above, very stiff		
460	15					SC	Sandy Clay, reddish brown, occasional gray mottling, with silt, fine sand, slightly plastic, cohesive, slightly stiff, moist		
455	20					SC	Clayey Sand, reddish brown, occasional gray mottling, with silt, sand, fine, cohesive, soft, moist		
450	25					GC	Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, cohesive, soft, wet		
445	30					MH	Clayey Silt, yellowish brown, slightly plastic, very stiff, laminated, moist		
							Shale, very dark gray, hard, laminated, dry		



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-186**

Date(s): **9/14/2015**

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: **470.55 ft amsl**

TOC Elevation: **469.80 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367715.75**

East: **590124.00**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 18 FT

Screen: Sch. 40 2 Inch 0.010 PVC 18 FT to 28 FT

Annular Fill: Cement Grout 0 FT to 14 FT
Bentonite 14 FT to 16 FT
Sand 16 FT to 28 FT

Borehole Dia.: **8.25 inches**

Total Depth: **28.0 feet**

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
470	2.5			0.7		MH	Topsoil, yellowish brown, clayey silt, with root hairs, loose, dry		
	5			0			Clayey Silt, yellowish brown, some dark brown and reddish brown mottling, with root hairs, dry		
465	5			0			Clayey Silt, yellowish brown, with reddish brown, frequent black nodules, trace gravel, subrounded, fine, slightly plastic, stiff, moist		
	10			0					
460	10			0		CL	Silty Clay, yellowish brown, with reddish brown and gray mottling, frequent black nodules, trace gravel, subrounded, fine, slightly plastic, stiff, moist		
	15			0					
455	15			0			Silty Clay, yellowish brown and reddish brown, occasional gray, with sand, fine, slightly plastic, slightly stiff, moist		
	20			0		SC	Clayey Sand, yellowish brown, occasional reddish brown and gray, with silt, fine sand, slightly plastic, slightly stiff, moist		
450	20			0					
	25			0		GC	Clayey Sand as above, with gray		
445	25			0.5			Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, coarse, loose, moist, cobble fragments		
	3			0		MH	Gravel, yellowish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, cohesive, wet		
				0			Clayey Silt, reddish brown, with weathered shale, very stiff, laminated, moist		
							Shale, very dark gray, hard, laminated, dry		



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-187**

Date(s): **9/14/2015**

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: **477.59 ft amsl**

TOC Elevation: **477.42 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367588.15**

East: **590248.75**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 24 FT

Screen: Sch. 40 2 Inch 0.010 24 FT to 34 FT

Annular Fill: Cement Grout 0 FT to 20 FT
Bentonite 20 FT to 22 FT
Sand 22 FT to 34 FT

Borehole Dia.: **8.25 inches**


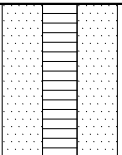

Total Depth: **34.0 feet**

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
475	2.5			0		MH	Topsoil, dark brown and yellowish brown, clayey silt, with gravel fill, angular, fine, loose to slightly cohesive, moist		
	5			0			Clayey Silt, yellowish brown, occasional reddish brown and red mottling, occasional black nodules, slightly plastic, stiff, moist		
470	5			0			Clayey Silt as above, with gravel, subrounded, with black nodules		
	10			0					
465	5			0		CL	Silty Clay, yellowish brown, with reddish brown and gray mottling, slightly plastic, stiff, moist		
	15			0					
460	4			0			Silty Clay, yellowish brown, with gray mottling, with sand, fine, plastic, soft, moist, increasing sand with depth		
	20			0					
455	5		MW-187-SL(24-24.5FT)	0		SC	Clayey Sand, reddish brown, with gray, with silt, trace black nodules, fine sand, cohesive, wet		
	25			0			Clayey Sand, yellowish brown, with gray, with silt, fine sand, cohesive, wet		
				0			Clayey Sand as above, fine to medium sand, wet		
450	5			0		GC	Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, cohesive, wet, hard drilling at 29.5 (bit chatter)		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
445	2			0		GC			
				0		CL	Silty Clay, yellowish brown and red, with gravel, subrounded, fine to coarse, with sand, fine, plastic, stiff, moist Shale, very dark gray, hard, dry, laminated		
35									
440									
40									
435									
45									
430									
50									
425									
55									
420									
60									
415									
65									
410									



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-188**

Date(s): **9/18/2015**

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: **481.65 ft amsl**

TOC Elevation: **481.14 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367509.15**

East: **590645.74**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 26 FT

Borehole Dia.: **8.25 inches**

Total Depth: **36.0 feet**

Screen: Sch. 40 2 Inch 0.010 PVC 26 FT to 36 FT


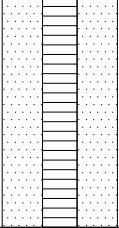


Project Number: **3433244A**

Annular Fill: Cement Grout 0 FT to 22 FT
Bentonite 22 FT to 24 FT
Sand 24 FT to 36 FT

Project Name: **Whirlpool Corporation**

Remarks: **Recovery and PID readings not measured.**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
480							Topsoil, silty, yellowish brown, occasional root hairs, loose, dry		
	5					MH	Clayey Silt, yellowish brown, with gray mottling, plastic, stiff, moist		
475							Clayey Silt as above, trace sand, coarse		
470	10						Clayey Silt, yellowish brown, with gray mottling, trace sand, coarse, trace black nodules, slightly plastic, slightly stiff to stiff, moist, increasing silt and fine sand with depth		
465	15								
460	20					CL	Silty Clay, reddish brown, trace gray mottling, frequent black nodules, trace sand, fine, slightly plastic, very stiff, dry		
							Silty Clay, reddish brown, with gray mottling, trace sand, fine, slightly plastic, slightly stiff, moist		
455	25						Sandy Clay, reddish brown, with gray mottling, with silt, fine sand slightly plastic, cohesive, soft, moist		
						SC	Clayey Sand, reddish brown, with gray mottling, sand, fine, cohesive, soft, moist		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
450							Clayey Sand as above, wet		
	35					GC	Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, cohesive, wet		
445						MH	Clayey Silt, yellowish brown, with weathered shale, hard, laminated, dry		
							Shale, very dark gray , trace weathered shale, hard, laminated, dry		
440									
435									
430									
425									
420									
415									



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**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 31 FT

Borehole Dia.: **8.25 inches**

Total Depth: **41.0 feet**

Screen: Sch. 40 2 Inch 0.010 PVC 31 FT to 41 FT

Project Number: **3433244A**

Annular Fill: Cement Grout 0 FT to 27 FT
Bentonite 27 FT to 29 FT
Sand 29 FT to 41 FT

Project Name: **Whirlpool Corporation**

Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
485	2			NM			Fill, gravel and silt, dark brown Topsoil, yellowish brown, clayey silt, slightly cohesive, soft, moist		
	5			2.3					
480				0.3			Topsoil as above, trace gravel, subrounded		
	5			0.4		MH	Clayey Silt, yellowish brown, with gray and reddish brown mottling, trace sand, coarse, plastic, stiff, moist		
	10			0.2		CL	Silty Clay as above, trace black nodules, very stiff		
475				0.1					
	5			0.8			Silty Clay as above, trace sand, fine, stiff Silty Clay, reddish brown, with gray mottling, with black nodules, trace sand, coarse, slightly plastic, hard, moist		
	15			1.1		SC	Clayey Sand, reddish brown, with gray mottling, with silt, trace black nodules, fine sand, cohesive, soft, moist		
	20			0.2			Clayey Sand, reddish brown, fine sand, cohesive, soft, wet Clayey Sand, reddish brown and gray, fine sand, cohesive, soft, moist Clayey Sand, reddish brown, fine sand, cohesive, wet		
	5			0.4					
	25			0.3			Clayey Sand as above, reddish brown and gray		
460				0.3					
	3								



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-190**

Date(s): **9/15/2015**

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: **481.56 ft amsl**

TOC Elevation: **481.29 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367744.56**

East: **591325.48**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 27 FT

Screen: Sch. 40 2 Inch 0.010 27 FT to 37 FT
PVC

Annular Fill: Cement Grout 0 FT to 23 FT
Bentonite 23 FT to 25 FT
Sand 25 FT to 37 FT

Borehole Dia.: **8.25 inches**

Total Depth: **37.0 feet**


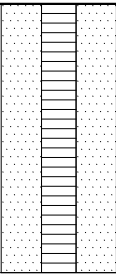

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks: **Recovery and PID readings not measured.**

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS(JH_EDITS).GPJ; 11/10/15

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
480							Asphaltic pavement Gravel Subbase Fill, clayey silt, dark grayish brown, slightly stiff, loose, dry		
	5					MH	Clayey Silt, yellowish brown, with gray and reddish brown mottling, trace gravel, fine, trace black nodules, slightly plastic, stiff, moist		
475							Clayey Silt as above, with black nodules,		
	10					CL	Silty Clay, yellowish brown, occasional gray mottling, with black nodules, trace gravel, subrounded, fine, slightly plastic, stiff, moist		
470							Silty Clay, reddish brown, with gray mottling, occasional black nodules, slightly plastic, very stiff, moist, increasing silt with depth		
	15								
465									
	20								
460									
	25						Sandy Clay, reddish brown, with gray mottling, with silt, fine sand, slightly plastic, slightly stiff, moist		
455						SC	Clayey Sand, reddish brown, trace gray mottling, with silt, with gravel, subrounded, fine to coarse, sand, fine to coarse, cohesive, slightly stiff,		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
450						GC	moist Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, slightly cohesive, wet, shale on drill bit, dark gray, hard, laminated, dry		
445	35					MH	Clayey Silt, yellowish brown, trace reddish brown, hard, laminated, dry Shale, very dark gray, hard, laminated, dry		
440	40								
435	45								
430	50								
425	55								
420	60								
415	65								



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-191**

Date(s): **9/15/2015**

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: **477.31 ft amsl**

TOC Elevation: **476.85 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367732.17**

East: **591662.33**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 23 FT

Screen: Sch. 40 2 Inch 0.010 PVC 23 FT to 33 FT

Annular Fill: Cement Grout 0 FT to 19 FT
Bentonite 19 FT to 21 FT
Sand 21 FT to 33 FT

Borehole Dia.: **8.25 inches**


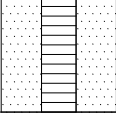

Total Depth: **33.0 feet**

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
475	1.5			0			Asphaltic Pavement		
				0			Gravel Subbase		
	5			0		MH	Clayey Silt, yellowish brown, with gray and reddish brown mottling, slightly plastic, stiff, moist		
470	5			0			Clayey Silt as above, with black nodules, trace gravel, subrounded, fine		
	10			0		CL	Silty Clay, reddish brown, occasional gray mottling, trace black nodules, slightly plastic, stiff, moist		
465	5			0			Silty Clay, reddish brown, with gray mottling, trace sand, fine, slightly plastic, slightly stiff, moist		
	15		MW-191-SL(16-16.5FT)	0					
460	5			0					
	20			0					
455	4			0		SC	Clayey Sand, reddish brown, fine sand, cohesive, moist		
				0			Sand, reddish brown, with silty clay, fine to medium sand, wet		
	25			0		GC	Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine, loose, wet		
450	2.5			0			Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, slightly cohesive, wet, increasing clay with depth		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
445	3			0					
				0		MH	Clayey Silt, yellowish brown, trace reddish brown, hard, laminated, dry Shale, very dark gray, hard, laminated, dry		
440	35								
435	40								
430	45								
425	50								
420	55								
415	60								
410	65								



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **MW-192**

Date(s): **9/15/2015**

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: **475.69 ft amsl**

TOC Elevation: **475.33 ft amsl**

Sampling Method: **HSA Continuous Sampler**

North: **367678.87**

East: **592078.07**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 21 FT

Screen: Sch. 40 2 Inch 0.010 21 FT to 31 FT
PVC

Annular Fill: Cement Grout 0 FT to 17 FT
Bentonite 17 FT to 19 FT
Sand 19 FT to 31 FT

Borehole Dia.: **8.25 inches**

Total Depth: **31.0 feet**

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks:

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
475	2.5			0.7			Asphaltic Pavement		
							Subbase Gravel		
	5			0.1		MH	Clayey Silt, yellowish brown, occasional gray and reddish brown mottling, trace black nodules, slightly plastic, slightly stiff, moist		
470	5			0.1			Clayey Silt, yellowish brown and reddish brown, occasional sand, coarse, trace black nodules, slightly plastic, slightly stiff, moist		
	10			0			Clayey Silt as above, with black nodules		
465	5			0		CL	Sandy Clay, reddish brown, with silt, trace black nodules, fine sand, slightly plastic, cohesive, soft, moist		
	15			0			Sandy Clay, reddish brown, occasional gray mottling, with clayey sand, with silt, fine sand, slightly plastic, cohesive, moist, increasing sand with depth		
460	5			0		SC	Clayey Sand, reddish brown, trace black nodules, fine to medium sand, cohesive, soft, wet		
455	4			0		GC	Gravel, reddish brown, with sand, fine to coarse, trace silty clay, gravel, subrounded, fine to coarse, loose, wet		
450	2.5			0.2			Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, cohesive, wet		



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: MW-192
Project Name: Whirlpool Corporation
Project Number: 3433244A

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
445		1		0		MH	Clayey Silt, yellowish brown, slightly plastic, hard, laminated, moist Shale, very dark gray, hard, laminated, dry		
440	35								
435	40								
430	45								
425	50								
420	55								
415	60								
410	65								



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **TMW-188**

Date(s): **9/16/2015**

Location: **Fort Smith, Arkansas**

Logged By: **N. Zurweller**

Checked By: **W. Weber**

Contractor: **Able Environmental**

Purpose: **Temporary Monitoring Well**

Drilling Method: **Hollow Stem Auger**

GS Elevation: **480.10 ft amsl**

TOC Elevation: **Not available**

Sampling Method: **HSA Continuous Sampler**

North: **367615.72**

East: **590619.15**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 25 FT

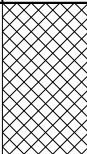
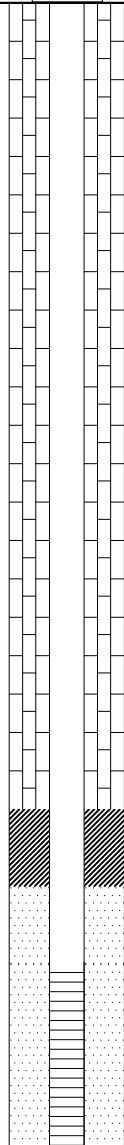
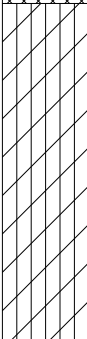
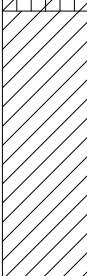
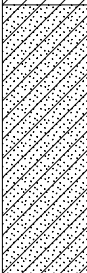
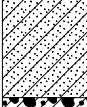
Screen: Sch. 40 2 Inch 0.010 25 FT to 35 FT


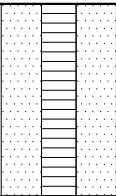
Annular Fill: Cement Grout 0 FT to 21 FT
Bentonite 21 FT to 23 FT
Sand 23 FT to 35 FT

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks: **TMW-188 abandoned on 9/17/15.**

Elevation (ft.)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
475	5	5	TMW-188-SL(16-16.5FT)	0			Fill, silty, brown, with root hairs, loose, dry		
				0	Fill, clayey silt, brown, with root hairs, loose, dry				
	5	5		0		MH	Clayey Silt, yellowish brown, with reddish brown and gray mottling, occasional red mottling, trace root hairs, hard, dry		
							Clayey Silt as above, trace gravel, subrounded, trace black nodules		
470	10	5		0					
465	15	5		0		CL	Silty Clay, yellowish brown, with reddish brown, trace gray mottling, frequent black nodules, slightly plastic, stiff, dry		
							Silty Clay as above, very stiff, slightly moist		
							Silty Clay, yellowish brown, with reddish brown, occasional gray mottling, occasional black nodules, plastic, stiff, moist, increasing silt with depth		
460	20	5		0		SC	Clayey Sand, yellowish brown, with gray mottling, trace fine sand, slightly plastic, slightly stiff, moist		
455	25	5		0			Clayey Sand, reddish brown, trace gray mottling, with silt, trace black nodules, fine sand, soft, slightly plastic, moist		
			Clayey Sand, reddish brown and gray, with silt, soft, cohesive, wet, free water at 27.5' bgs						

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
445	35	5		0		GC	Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, slightly cohesive, wet		
				0		MH	Clayey Silt, yellowish brown, some red streaking, with weathered shale, hard, laminated, dry		
440	40								
435	45								
430	50								
425	55								
420	60								
415	65								



1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: **TMW-189**

Date(s): **9/15/2015**

Location: **Fort Smith, Arkansas**

Logged By: **N. Zurweller**

Checked By: **W. Weber**

Contractor: **Able Environmental**

Purpose: **Temporary Monitoring Well**

Drilling Method: **Hollow Stem Auger**

GS Elevation: **485.38 ft amsl**

TOC Elevation: **Not available**

Sampling Method: **HSA Continuous Sampler**

North: **367772.99**

East: **590874.48**

Well Construction:

Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 32.5 FT

Screen: Sch. 40 2 Inch 0.010 PVC 32.5 FT to 42.5 FT

Annular Fill: Cement Grout 0 FT to 28.5 FT
Bentonite 28.5 FT to 30.5 FT
Sand 30.5 FT to 42.5 FT

Borehole Dia.: **8.25 inches**


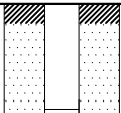



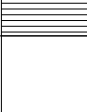

Total Depth: **42.5 feet**

Project Number: **3433244A**

Project Name: **Whirlpool Corporation**

Remarks: **TMW-189 abandoned on 9/17/15.**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction Flush Mount
485				3.1			Fill, dark brown, silt, with gravel fill, subangular, coarse, loose, dry		
	1.5			0.7			Fill, clayey silt, dark grayish brown, slightly stiff, slightly cohesive, dry		
480	5			0.4					
	5			0.4		MH	Clayey Silt, yellowish brown, with reddish brown and gray mottling, slightly plastic, stiff, moist		
475	10			0.6					
	5			1.9		CL	Silty Clay, yellowish brown, occasional gray mottling, with black nodules, frequent gravel, subrounded, fine, slightly plastic, very stiff, moist		
470	15			0.7			Silty Clay, reddish brown, with gray mottling, occasional black nodules, slightly plastic, very stiff, moist, increasing silt with depth		
	5			0.2					
465	20			0.2					
	5			0.2		SC	Clayey Sand, reddish brown, with silt, fine sand, cohesive, soft, moist		
460	25			0.2			Clayey Sand, reddish brown, fine, slightly cohesive, soft, moist		
	4			0					
				0.5			Clayey Sand as above, wet		
							Clayey Sand, reddish brown, fine, slightly cohesive, soft, moist		
							Clayey Sand as above, wet		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
455				0.6			Clayey Sand, reddish brown, with gray mottling, with silt, fine sand, cohesive, slightly stiff, moist		
	5			0.6		GC	Clayey Sand as above, with gravel, subrounded, fine, occasional medium sand, wet		
450	35			0.9			Gravel, reddish brown, with sand, fine to coarse, with silty clay, gravel, subrounded, fine to coarse, slightly cohesive, wet, auger heave in 35-40' interval		
	2			NM					
445	40			0.2		CL	Silty Clay, reddish brown, with gravel, subrounded, fine to coarse, with sand, fine to coarse, slightly plastic, cohesive, slightly laminated, wet		
	1.5						Shale, very dark gray, hard, laminated, wet		
440	45								
435	50								
430	55								
425	60								
420	65								

APPENDIX B

Geotechnical Results



October 7, 2015

Environ International Corp.
250 Monroe Avenue NW, Suite 400
Grand Rapids, MI USA 49503

Attn: Ms. Tamara Gleason
P: (616) 634-6781
E: tgleason@environcorp.com

Re: Laboratory Testing Services
Fort Smith, Arkansas Project
Terracon Project Number 35155070

Dear Ms. Gleason:

We appreciate the opportunity to provide laboratory testing services for your project. Following are the results of the laboratory testing services performed on the samples delivered to our laboratory. A summary of the laboratory test results and laboratory test reports are attached to this letter.

If you have questions or concerns, please feel free to contact me by phone (501) 847-9292 or via email at Shaun.Baker@terracon.com.

Sincerely,

Terracon Consultants, Inc.

Certificate of Authorization #223, Expires 12/31/2015

Shaun P. Baker, P.E.
Department Manager, Geotechnical Services

Jennifer K. Harmon, E.I.
Laboratory Manager



Terracon Consultants, Inc. 25809 I-30 S Bryant, AR 72022
P [501] 847 9292 F [501] 847 9210 terracon.com

Geotechnical



Environmental



Construction Materials



Facilities

Laboratory Test Results

Former Whirlpool Corporation Facility ■ Fort Smith, Arkansas

October 7, 2015 ■ Terracon Project No. 35155070



Summary of Laboratory Test Results

Sample ID	Water Content (%)	Dry Density (pcf)	Porosity ¹ (%)	Effective Porosity (%) ²	Atterberg Limits			Percent Fines (P200) (%)
					Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	
MW-187-SL(24-24.5 FT)-091415	16.6	Not tested	Not tested	Not tested	22	13	9	22
MW-188-SL(16-16.5 FT)-091415	19.5	Not tested	Not tested	Not tested	49	18	31	98
MW-189A-SL(32-32.5 FT)-091715	9.6	Not tested	Not tested	Not tested	22	18	4	12
MW-191-SL(16-16.5 FT)-091515	17.2	Not tested	Not tested	Not tested	36	16	20	85
TMW-10-SL(10-12 FT)-091615	12.4	112.5	32.0	23.5	27	15	12	18
TMW-11-SL(12.5-15 FT)-091615	15.1	111.8	32.4	22.2	24	14	10	14

¹ Based on the sample's dry density and a specific gravity S.G. = 2.65.

² Based on the sample's moist density and a specific gravity S.G. = 2.65. The effective porosity is commonly 5 to 10 percent less than the total porosity per "Geology of Petroleum, 1967."

Additional laboratory test results can be found on the following test reports.

ASTM D4318

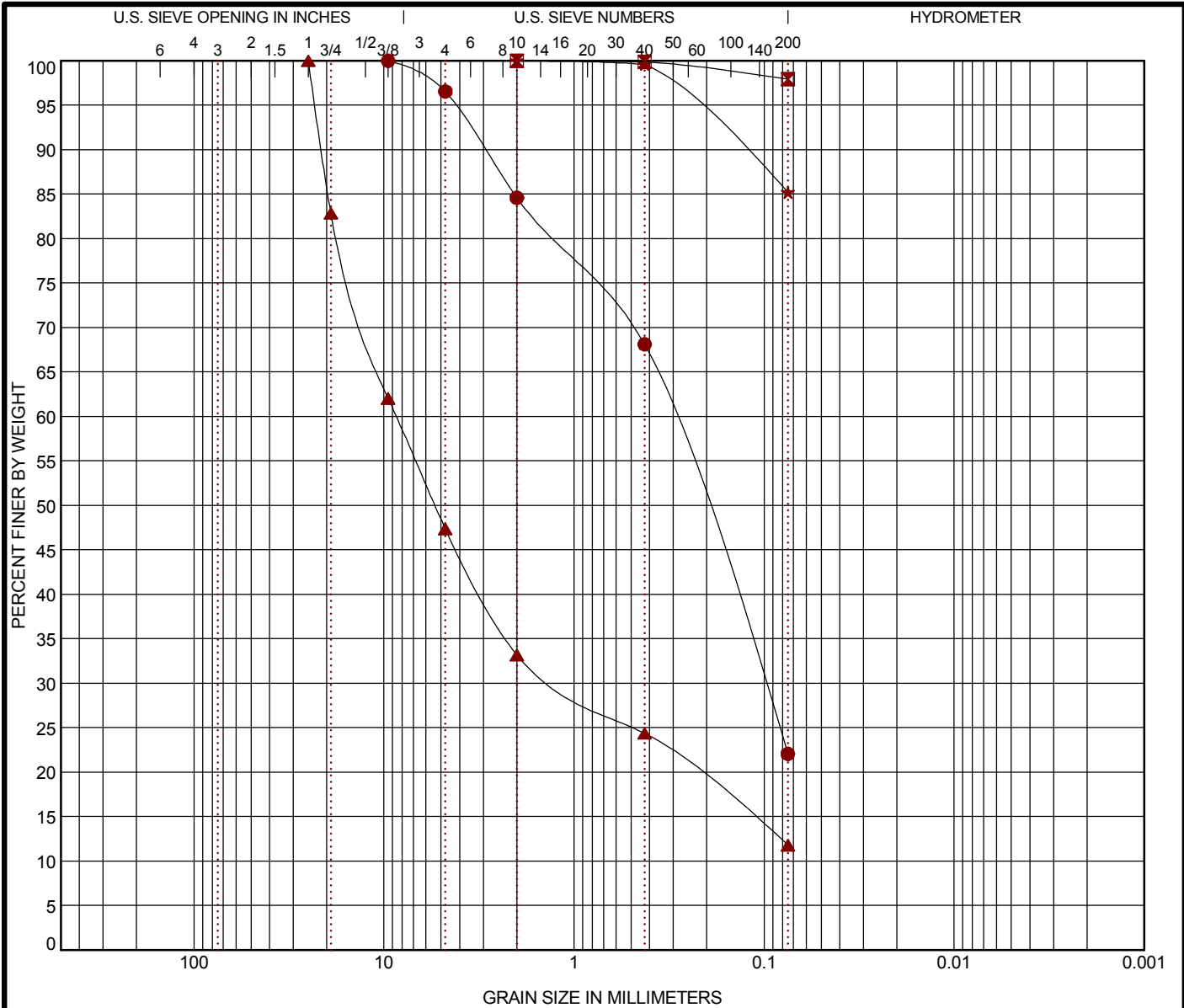


LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS 35155070.GPJ TERRACON2015.GDT 10/7/15

EXHIBIT: B-2

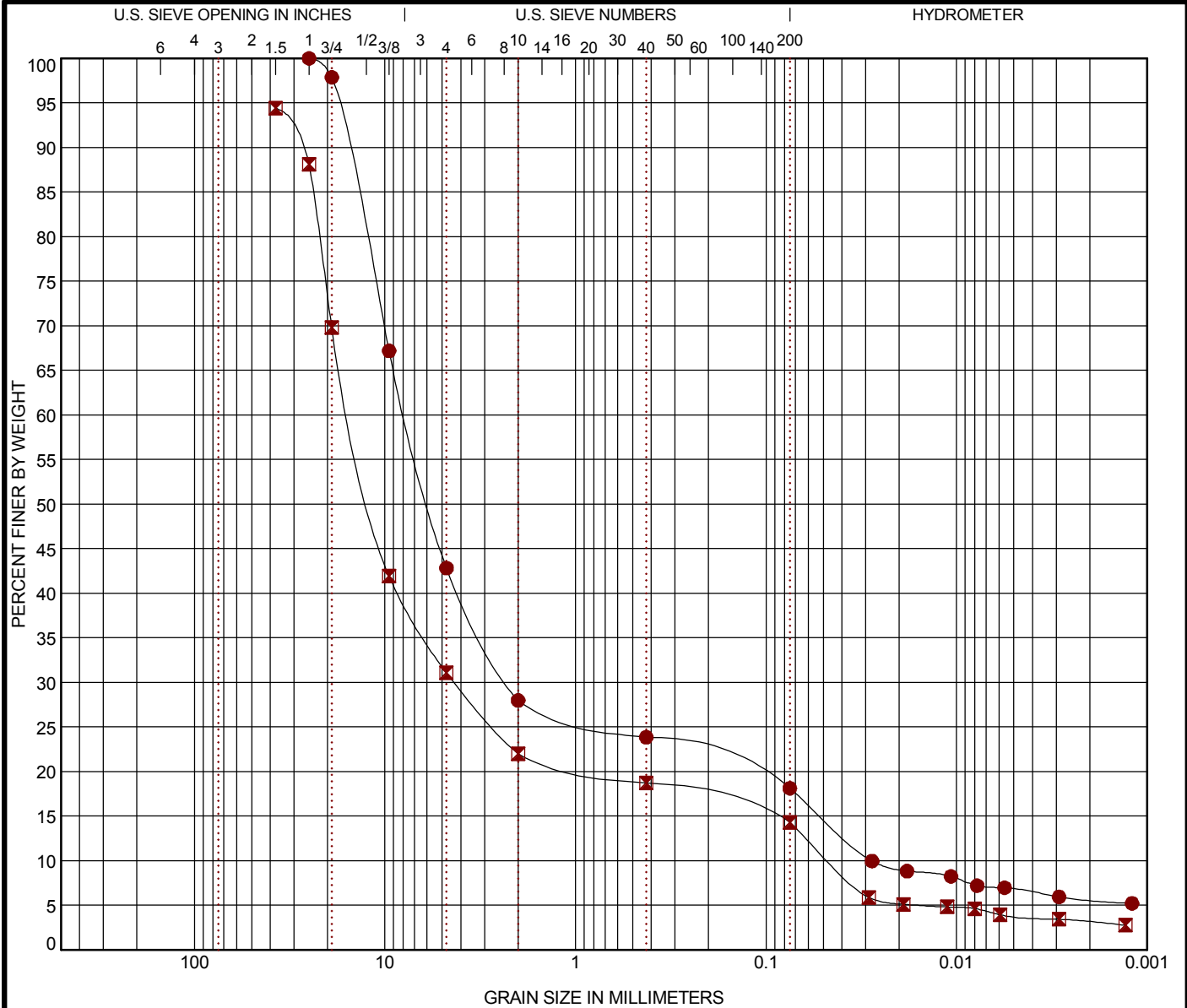
GRAIN SIZE DISTRIBUTION

ASTM D422



GRAIN SIZE DISTRIBUTION

ASTM D422



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification		AASHTO Classification		LL	PL	PI	Cc	Cu
● TMW-10	10 - 12	CLAYEY GRAVEL with SAND(GC)		A-2-6(0)		27	15	12	23.41	277.28
■ TMW-11	12.5 - 15	CLAYEY GRAVEL with SAND(GC)		A-2-4(0)		24	14	10	26.64	323.87
Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Gravel	%Sand	%Silt	%Clay	
● TMW-10	10 - 12	25	7.742	2.249	0.028	57.2	24.7	11.3	6.8	
■ TMW-11	12.5 - 15	37.5	14.892	4.271	0.046	63.3	16.8	10.5	3.8	

PROJECT: Contract Laboratory Testing

SITE: Former Whirlpool Corp. Fort Smith Facility
Fort Smith, Arkansas

Terracon
25809 I-30 South
Bryant, Arkansas

PROJECT NUMBER: 35155070

CLIENT: ENVIRON International Corporation
Grand Rapids, Michigan

EXHIBIT: B-4

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS & AASHTO COMBINED 35155070.GPJ TERRACON2012.GDT 10/7/15

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

Company: Ramboll Environ
Address: 1807 Park 270 Dr Ste 300
St. Louis, MO 63146
Email To: nzurweller@environcorp.com
Phone: 636-574-6883 Fax: _____
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Nick Zurweller
Copy To: Tammy Gleason
Purchase Order No.: NA
Project Name: Fort Smith, AR
Project Number: _____

Section C Invoice Information:

Attention: Tammy Gleason
Company Name: Ramboll ENVIRON
Address: 250 Monroe Ave. NW Grand Rapids, MI 49503
Pace Quote Reference: _____
Pace Project Manager: _____
Pace Profile #: _____

Page: 1 of 1
004835

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____
Site Location: _____
STATE: _____

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	Matrix Codes (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analysis Test ↓	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	TSP	BAK	Zinc Acetate & NaOH	Other	Atterburg Limits	Grain Size		Porosity	Effective Porosity																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Run analysis as requested by Tammy Gleason (ENVIRON)	<u>Nick Zurweller</u>	<u>9/17/15</u>	<u>08:30</u>	<u>Tammy Gleason</u>						

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nick Zurweller
SIGNATURE of SAMPLER: Nick Zurweller
DATE Signed (MM/DD/YY): 9/18/15

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

APPENDIX C

Investigation Derived Waste Manifests



American Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

Generator

Generator's Name: Whirlpool Corp.

Mailing Address: 6400 Jenny Lane Rd
FT Smith ARK

Point of Generation
Address: SHINE

City State Zip

City State Zip

Contact: KEVIN DUCKWORTH 918 832 8888
Name Phone

Manifest

Job No. SOIL MIV233WPC01

Bill to Name: ERS

Address: 1105 North Peoria

TULSA OK 74106
City State Zip

Contact: KEVIN DUCKWORTH 918 832 8888
Name Phone

Common Name of Waste Material

Container
No. Type Total Quantity Unit
ROLLOFF 20 yards

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 9-18-15

Transporter

Transporter Name: ERS

Driver Name (Print): David R. Roll

Address: 1105 North Peoria

Tag No. IS65N State: OK

City, State Zip: TULSA OK

USDOT No. 8755N

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

Ship Date 9-18-15

Driver Signature

Delivery Date 9-21-15

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 9-21-15

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 Corp

Mailing Address: 6400 Jenny Lane Rd

FT TULSA HWY 12

Point of Generation

Address: Same

City State Zip

City State Zip

Contact: Ken Duckworth 918 832 8888

Name Phone

Manifest

Job No. MIN 233 WPC02

Bill to Name: ERS

Address: 1105 North Peoria

City State Zip

Contact: Ken Duckworth 918 832 8888

Name Phone

Common Name of Waste Material

Purge water

Container

No. Type

Total
Quantity

Unit

103 Totes (3)

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: ERS

Address: 1105 North Peoria

City, State Zip: Tulsa OK

Driver Name (Print): David

Tag No. State:

USDOT No.

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

Ship Date

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.

Name of Authorized Agent

Signature

Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

APPENDIX D

Laboratory Analytical Results

September 15, 2015

Wendy Stonestreet
Environ International Corporation
7500 College Blvd Ste 925
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60202710

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on September 15, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Colleen Clyne
colleen.clyne@pacelabs.com
Project Manager

Enclosures

cc: Tamara Gleason, ENVIRON International Corporation



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FORT SMITH, AR

Pace Project No.: 60202710

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

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SAMPLE SUMMARY

Project: FORT SMITH, AR

Pace Project No.: 60202710

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60202710001	MW-186-GW-091415	Water	09/14/15 17:30	09/15/15 07:40
60202710002	MW-187-GW-091415	Water	09/14/15 17:15	09/15/15 07:40
60202710003	MW-188-GW-091415	Water	09/14/15 18:30	09/15/15 07:40
60202710004	MW-190-GW-091415	Water	09/14/15 18:05	09/15/15 07:40
60202710005	TRIPBLANK-01-091415	Water	09/14/15 08:00	09/15/15 07:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR

Pace Project No.: 60202710

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60202710001	MW-186-GW-091415	EPA 5030B/8260	PGH	38
60202710002	MW-187-GW-091415	EPA 5030B/8260	PGH	38
60202710003	MW-188-GW-091415	EPA 5030B/8260	PGH	38
60202710004	MW-190-GW-091415	EPA 5030B/8260	PGH	38
60202710005	TRIPBLANK-01-091415	EPA 5030B/8260	PGH	38

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FORT SMITH, AR

Pace Project No.: 60202710

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Environ_AR

Date: September 15, 2015

General Information:

5 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: MSV/71695

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

Additional Comments:

Analyte Comments:

QC Batch: MSV/71695

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

- MW-188-GW-091415 (Lab ID: 60202710003)
- 4-Bromofluorobenzene (S)

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202710

Sample: MW-186-GW-091415 **Lab ID: 60202710001** Collected: 09/14/15 17:30 Received: 09/15/15 07:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	2.9J	ug/L	10.0	1.9	1		09/15/15 10:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/15/15 10:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/15/15 10:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/15/15 10:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/15/15 10:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/15/15 10:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/15/15 10:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/15/15 10:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/15/15 10:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		09/15/15 10:57	75-00-3	
Chloroform	3.5	ug/L	1.0	0.14	1		09/15/15 10:57	67-66-3	
Chloromethane	0.25J	ug/L	1.0	0.080	1		09/15/15 10:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/15/15 10:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		09/15/15 10:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/15/15 10:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 10:57	75-35-4	
cis-1,2-Dichloroethene	0.37J	ug/L	1.0	0.080	1		09/15/15 10:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 10:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/15/15 10:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/15/15 10:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/15/15 10:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/15/15 10:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/15/15 10:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/15/15 10:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/15/15 10:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/15/15 10:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/15/15 10:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/15/15 10:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/15/15 10:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/15/15 10:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/15/15 10:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		09/15/15 10:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		09/15/15 10:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/15/15 10:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		09/15/15 10:57	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		09/15/15 10:57	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		09/15/15 10:57	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/15/15 10:57		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202710

Sample: MW-187-GW-091415 **Lab ID: 60202710002** Collected: 09/14/15 17:15 Received: 09/15/15 07:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	5.3J	ug/L	10.0	1.9	1		09/15/15 11:12	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/15/15 11:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/15/15 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/15/15 11:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/15/15 11:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/15/15 11:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/15/15 11:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/15/15 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/15/15 11:12	108-90-7	
Chloroethane	0.38J	ug/L	1.0	0.15	1		09/15/15 11:12	75-00-3	
Chloroform	14.6	ug/L	1.0	0.14	1		09/15/15 11:12	67-66-3	
Chloromethane	0.21J	ug/L	1.0	0.080	1		09/15/15 11:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/15/15 11:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		09/15/15 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/15/15 11:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		09/15/15 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/15/15 11:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/15/15 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/15/15 11:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/15/15 11:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/15/15 11:12	591-78-6	
Methylene chloride	0.35J	ug/L	1.0	0.15	1		09/15/15 11:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/15/15 11:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/15/15 11:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/15/15 11:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/15/15 11:12	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/15/15 11:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/15/15 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/15/15 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		09/15/15 11:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		09/15/15 11:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/15/15 11:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		09/15/15 11:12	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	80-120		1		09/15/15 11:12	17060-07-0	
Toluene-d8 (S)	96	%	80-120		1		09/15/15 11:12	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/15/15 11:12		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202710

Sample: MW-188-GW-091415 **Lab ID: 60202710003** Collected: 09/14/15 18:30 Received: 09/15/15 07:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	ND	ug/L	50.0	9.4	5		09/15/15 11:41	67-64-1	
Benzene	0.99J	ug/L	5.0	0.30	5		09/15/15 11:41	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.95	5		09/15/15 11:41	75-27-4	
Bromoform	ND	ug/L	5.0	0.35	5		09/15/15 11:41	75-25-2	
Bromomethane	ND	ug/L	25.0	0.80	5		09/15/15 11:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	3.0	5		09/15/15 11:41	78-93-3	
Carbon disulfide	ND	ug/L	25.0	0.60	5		09/15/15 11:41	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.90	5		09/15/15 11:41	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1.0	5		09/15/15 11:41	108-90-7	
Chloroethane	ND	ug/L	5.0	0.75	5		09/15/15 11:41	75-00-3	
Chloroform	ND	ug/L	5.0	0.70	5		09/15/15 11:41	67-66-3	
Chloromethane	ND	ug/L	5.0	0.40	5		09/15/15 11:41	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.0	5		09/15/15 11:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.25	5		09/15/15 11:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.60	5		09/15/15 11:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.0	5		09/15/15 11:41	75-35-4	
cis-1,2-Dichloroethene	2.4J	ug/L	5.0	0.40	5		09/15/15 11:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.0	5		09/15/15 11:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.80	5		09/15/15 11:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.70	5		09/15/15 11:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.60	5		09/15/15 11:41	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.90	5		09/15/15 11:41	100-41-4	
2-Hexanone	ND	ug/L	50.0	6.0	5		09/15/15 11:41	591-78-6	
Methylene chloride	ND	ug/L	5.0	0.75	5		09/15/15 11:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	2.1	5		09/15/15 11:41	108-10-1	
Styrene	ND	ug/L	5.0	0.60	5		09/15/15 11:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.75	5		09/15/15 11:41	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.50	5		09/15/15 11:41	127-18-4	
Toluene	4.7J	ug/L	5.0	0.85	5		09/15/15 11:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.55	5		09/15/15 11:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1.0	5		09/15/15 11:41	79-00-5	
Trichloroethene	2.0J	ug/L	5.0	0.85	5		09/15/15 11:41	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.65	5		09/15/15 11:41	75-01-4	
Xylene (Total)	ND	ug/L	15.0	2.1	5		09/15/15 11:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		5		09/15/15 11:41	460-00-4	1e
1,2-Dichloroethane-d4 (S)	94	%	80-120		5		09/15/15 11:41	17060-07-0	
Toluene-d8 (S)	96	%	80-120		5		09/15/15 11:41	2037-26-5	
Preservation pH	1.0		0.10	0.10	5		09/15/15 11:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202710

Sample: MW-190-GW-091415 **Lab ID: 60202710004** Collected: 09/14/15 18:05 Received: 09/15/15 07:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	2.9J	ug/L	10.0	1.9	1		09/15/15 11:26	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/15/15 11:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/15/15 11:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/15/15 11:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/15/15 11:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/15/15 11:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/15/15 11:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/15/15 11:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/15/15 11:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		09/15/15 11:26	75-00-3	
Chloroform	2.4	ug/L	1.0	0.14	1		09/15/15 11:26	67-66-3	
Chloromethane	0.14J	ug/L	1.0	0.080	1		09/15/15 11:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/15/15 11:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		09/15/15 11:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/15/15 11:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 11:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		09/15/15 11:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 11:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/15/15 11:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/15/15 11:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/15/15 11:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/15/15 11:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/15/15 11:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/15/15 11:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/15/15 11:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/15/15 11:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/15/15 11:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/15/15 11:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/15/15 11:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/15/15 11:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/15/15 11:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		09/15/15 11:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		09/15/15 11:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/15/15 11:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		09/15/15 11:26	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		09/15/15 11:26	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		09/15/15 11:26	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/15/15 11:26		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202710

Sample: TRIPBLANK-01-091415 **Lab ID:** 60202710005 **Collected:** 09/14/15 08:00 **Received:** 09/15/15 07:40 **Matrix:** Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	ND	ug/L	10.0	1.9	1		09/15/15 10:43	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/15/15 10:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/15/15 10:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/15/15 10:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/15/15 10:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/15/15 10:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/15/15 10:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/15/15 10:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/15/15 10:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		09/15/15 10:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		09/15/15 10:43	67-66-3	
Chloromethane	0.089J	ug/L	1.0	0.080	1		09/15/15 10:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/15/15 10:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		09/15/15 10:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/15/15 10:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 10:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		09/15/15 10:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/15/15 10:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/15/15 10:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/15/15 10:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/15/15 10:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/15/15 10:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/15/15 10:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/15/15 10:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/15/15 10:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/15/15 10:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/15/15 10:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/15/15 10:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/15/15 10:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/15/15 10:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/15/15 10:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		09/15/15 10:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		09/15/15 10:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/15/15 10:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-120		1		09/15/15 10:43	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		09/15/15 10:43	17060-07-0	
Toluene-d8 (S)	94	%	80-120		1		09/15/15 10:43	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/15/15 10:43		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60202710

QC Batch:	MSV/71695	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	60202710001, 60202710002, 60202710003, 60202710004, 60202710005		

METHOD BLANK:	1632840	Matrix:	Water
Associated Lab Samples:	60202710001, 60202710002, 60202710003, 60202710004, 60202710005		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	09/15/15 09:31	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	09/15/15 09:31	
1,1,2-Trichloroethane	ug/L	ND	1.0	09/15/15 09:31	
1,1-Dichloroethane	ug/L	ND	1.0	09/15/15 09:31	
1,1-Dichloroethene	ug/L	ND	1.0	09/15/15 09:31	
1,2-Dichloroethane	ug/L	ND	1.0	09/15/15 09:31	
1,2-Dichloropropane	ug/L	ND	1.0	09/15/15 09:31	
2-Butanone (MEK)	ug/L	ND	10.0	09/15/15 09:31	
2-Hexanone	ug/L	ND	10.0	09/15/15 09:31	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	09/15/15 09:31	
Acetone	ug/L	ND	10.0	09/15/15 09:31	
Benzene	ug/L	ND	1.0	09/15/15 09:31	
Bromodichloromethane	ug/L	ND	1.0	09/15/15 09:31	
Bromoform	ug/L	ND	1.0	09/15/15 09:31	
Bromomethane	ug/L	ND	5.0	09/15/15 09:31	
Carbon disulfide	ug/L	ND	5.0	09/15/15 09:31	
Carbon tetrachloride	ug/L	ND	1.0	09/15/15 09:31	
Chlorobenzene	ug/L	ND	1.0	09/15/15 09:31	
Chloroethane	ug/L	ND	1.0	09/15/15 09:31	
Chloroform	ug/L	ND	1.0	09/15/15 09:31	
Chloromethane	ug/L	ND	1.0	09/15/15 09:31	
cis-1,2-Dichloroethene	ug/L	ND	1.0	09/15/15 09:31	
cis-1,3-Dichloropropene	ug/L	ND	1.0	09/15/15 09:31	
Dibromochloromethane	ug/L	ND	1.0	09/15/15 09:31	
Ethylbenzene	ug/L	ND	1.0	09/15/15 09:31	
Methylene chloride	ug/L	ND	1.0	09/15/15 09:31	
Styrene	ug/L	ND	1.0	09/15/15 09:31	
Tetrachloroethene	ug/L	ND	1.0	09/15/15 09:31	
Toluene	ug/L	ND	1.0	09/15/15 09:31	
trans-1,2-Dichloroethene	ug/L	ND	1.0	09/15/15 09:31	
trans-1,3-Dichloropropene	ug/L	ND	1.0	09/15/15 09:31	
Trichloroethene	ug/L	ND	1.0	09/15/15 09:31	
Vinyl chloride	ug/L	ND	1.0	09/15/15 09:31	
Xylene (Total)	ug/L	ND	3.0	09/15/15 09:31	
1,2-Dichloroethane-d4 (S)	%	92	80-120	09/15/15 09:31	
4-Bromofluorobenzene (S)	%	100	80-120	09/15/15 09:31	
Toluene-d8 (S)	%	96	80-120	09/15/15 09:31	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60202710

LABORATORY CONTROL SAMPLE: 1632841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.6	98	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	18.4	92	73-121	
1,1,2-Trichloroethane	ug/L	20	18.1	91	80-120	
1,1-Dichloroethane	ug/L	20	20.9	105	80-120	
1,1-Dichloroethene	ug/L	20	19.1	96	80-120	
1,2-Dichloroethane	ug/L	20	19.5	98	81-120	
1,2-Dichloropropane	ug/L	20	19.4	97	80-120	
2-Butanone (MEK)	ug/L	100	101	101	67-122	
2-Hexanone	ug/L	100	99.2	99	75-121	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	76-120	
Acetone	ug/L	100	110	110	72-120	
Benzene	ug/L	20	21.6	108	80-120	
Bromodichloromethane	ug/L	20	19.9	100	80-120	
Bromoform	ug/L	20	18.7	94	73-138	
Bromomethane	ug/L	20	19.0	95	38-137	
Carbon disulfide	ug/L	20	22.5	112	71-129	
Carbon tetrachloride	ug/L	20	20.1	101	67-146	
Chlorobenzene	ug/L	20	20.2	101	80-120	
Chloroethane	ug/L	20	20.0	100	76-120	
Chloroform	ug/L	20	19.1	96	80-120	
Chloromethane	ug/L	20	16.6	83	34-165	
cis-1,2-Dichloroethene	ug/L	20	19.9	100	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.0	105	80-120	
Dibromochloromethane	ug/L	20	19.1	96	80-126	
Ethylbenzene	ug/L	20	20.2	101	80-120	
Methylene chloride	ug/L	20	21.6	108	80-120	
Styrene	ug/L	20	20.2	101	80-123	
Tetrachloroethene	ug/L	20	21.3	106	80-123	
Toluene	ug/L	20	20.5	102	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.1	95	80-129	
Trichloroethene	ug/L	20	19.2	96	80-120	
Vinyl chloride	ug/L	20	23.5	117	62-125	
Xylene (Total)	ug/L	60	61.4	102	80-120	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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QUALIFIERS

Project: FORT SMITH, AR

Pace Project No.: 60202710

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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: MSV/71695

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

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR

Pace Project No.: 60202710

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60202710001	MW-186-GW-091415	EPA 5030B/8260	MSV/71695		
60202710002	MW-187-GW-091415	EPA 5030B/8260	MSV/71695		
60202710003	MW-188-GW-091415	EPA 5030B/8260	MSV/71695		
60202710004	MW-190-GW-091415	EPA 5030B/8260	MSV/71695		
60202710005	TRIPBLANK-01-091415	EPA 5030B/8260	MSV/71695		

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Sample Condition Upon Receipt

WO#: 60202710



60202710

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: CF +0.6 T-239 / CF +0.6 T-262 Type of Ice: Wet Blue ☐ None ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 5-5

Date and initials of person examining contents: 09/15/15

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>24 Hr</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> , Coliform, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>Cover</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:
Additional labels attached to 5035A vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y ☒ N ☐ Field Data Required? Y ☐ N ☒

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: ORC

Date: 09/15/15

CHAIN-OF-CUSTODY / Analytical Request Document

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

Enviro Analytical™
www.enviroan.com

Section A Required Client Information:				Section B Required Project Information:				Section C Invoice Information:				
Company: Environ		Report To: Wendy Stonestreet		Attention: Tamara Gleason		Company Name:		REGULATORY AGENCY		Page: 1 of 1		
Address: 7500 College Blvd., Ste. 925		Copy To: Tamara Gleason		Address:		Address:		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER				
Email To: wstonestreet@environcorp.com		Purchase Order No.:		Purchase Order No.:		Purchase Order No.:		<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER				
Phone: 913-553-5926		Project Name: Fort Smith, AR		Project Name: Colleen Clyne (913) 563-1406		Project Name: Colleen Clyne (913) 563-1406		Site Location				
Requested Due Date/TAT: 24 Hr TAT		Project Number:		Project Number:		Project Number:		STATE: AR				
ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE	MATRIX CODE
1	MW-186-GW-091415	DRINKING WATER	WT	WT	WT	WT	WT	WT	WT	WT	WT	WT
2	MW-187-GW-091415	WASTE WATER	WW	WW	WW	WW	WW	WW	WW	WW	WW	WW
3	MW-188-GW-091415	PRODUCT	P	P	P	P	P	P	P	P	P	P
4	MW-190-GW-091415	SOIL/SOLID	SL	SL	SL	SL	SL	SL	SL	SL	SL	SL
5	Test Blank-01-091415	OIL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
6		WIPE	WP	WP	WP	WP	WP	WP	WP	WP	WP	WP
7		AIR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
8		OTHER	OT	OT	OT	OT	OT	OT	OT	OT	OT	OT
9		TISSUE	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS
10												
11												
12												
Section E Requested Analysis Filtered (Y/N)												
Analysis Test ↑ 9260 client specific list												
Preservatives H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other												
# OF CONTAINERS 3 1 2												
SAMPLE TEMP AT COLLECTION DATE TIME DATE TIME DATE TIME DATE TIME DATE TIME DATE TIME												
RELINQUISHED BY / AFFILIATION DATE TIME ACCEPTED BY / AFFILIATION DATE TIME SAMPLE CONDITIONS												
ADDITIONAL COMMENTS 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT! 24 Hr TAT!												
Temp in °C Received on Today Sealed Samples Intact												

September 16, 2015

Wendy Stonestreet
Environ International Corporation
7500 College Blvd Ste 925
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60202795

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on September 16, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Colleen Clyne
colleen.clyne@pacelabs.com
Project Manager

Enclosures

cc: Tamara Gleason, ENVIRON International Corporation



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FORT SMITH, AR

Pace Project No.: 60202795

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

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SAMPLE SUMMARY

Project: FORT SMITH, AR

Pace Project No.: 60202795

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60202795001	MW-189-GW-091515	Water	09/15/15 17:55	09/16/15 02:57
60202795002	MW-191-GW-091515	Water	09/15/15 18:15	09/16/15 02:57
60202795003	TRIPBLANK-02-091515	Water	09/15/15 18:15	09/16/15 02:57

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR

Pace Project No.: 60202795

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60202795001	MW-189-GW-091515	EPA 5030B/8260	PGH	38
60202795002	MW-191-GW-091515	EPA 5030B/8260	PGH	38
60202795003	TRIPBLANK-02-091515	EPA 5030B/8260	PGH	38

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FORT SMITH, AR

Pace Project No.: 60202795

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Environ_AR

Date: September 16, 2015

General Information:

3 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: MSV/71721

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

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202795

Sample: MW-189-GW-091515 **Lab ID: 60202795001** Collected: 09/15/15 17:55 Received: 09/16/15 02:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	ND	ug/L	10.0	1.9	1		09/16/15 10:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/16/15 10:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/16/15 10:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/16/15 10:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/16/15 10:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/16/15 10:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/16/15 10:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/16/15 10:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/16/15 10:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		09/16/15 10:19	75-00-3	
Chloroform	0.31J	ug/L	1.0	0.14	1		09/16/15 10:19	67-66-3	
Chloromethane	0.14J	ug/L	1.0	0.080	1		09/16/15 10:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/16/15 10:19	124-48-1	
1,1-Dichloroethane	3.9	ug/L	1.0	0.050	1		09/16/15 10:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/16/15 10:19	107-06-2	
1,1-Dichloroethene	0.41J	ug/L	1.0	0.20	1		09/16/15 10:19	75-35-4	
cis-1,2-Dichloroethene	4.7	ug/L	1.0	0.080	1		09/16/15 10:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/16/15 10:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/16/15 10:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/16/15 10:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/16/15 10:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/16/15 10:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/16/15 10:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/16/15 10:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/16/15 10:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/16/15 10:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/16/15 10:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/16/15 10:19	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/16/15 10:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/16/15 10:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/16/15 10:19	79-00-5	
Trichloroethene	2.6	ug/L	1.0	0.17	1		09/16/15 10:19	79-01-6	
Vinyl chloride	0.22J	ug/L	1.0	0.13	1		09/16/15 10:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/16/15 10:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		09/16/15 10:19	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120		1		09/16/15 10:19	17060-07-0	
Toluene-d8 (S)	94	%	80-120		1		09/16/15 10:19	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/16/15 10:19		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202795

Sample: MW-191-GW-091515 **Lab ID: 60202795002** Collected: 09/15/15 18:15 Received: 09/16/15 02:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	ND	ug/L	10.0	1.9	1		09/16/15 10:34	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/16/15 10:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/16/15 10:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/16/15 10:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/16/15 10:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/16/15 10:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/16/15 10:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/16/15 10:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/16/15 10:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		09/16/15 10:34	75-00-3	
Chloroform	0.17J	ug/L	1.0	0.14	1		09/16/15 10:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		09/16/15 10:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/16/15 10:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		09/16/15 10:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/16/15 10:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		09/16/15 10:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		09/16/15 10:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/16/15 10:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/16/15 10:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/16/15 10:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/16/15 10:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/16/15 10:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/16/15 10:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/16/15 10:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/16/15 10:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/16/15 10:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/16/15 10:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/16/15 10:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/16/15 10:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/16/15 10:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/16/15 10:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		09/16/15 10:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		09/16/15 10:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/16/15 10:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		09/16/15 10:34	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120		1		09/16/15 10:34	17060-07-0	
Toluene-d8 (S)	93	%	80-120		1		09/16/15 10:34	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/16/15 10:34		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60202795

Sample: TRIPBLANK-02-091515 **Lab ID:** 60202795003 **Collected:** 09/15/15 18:15 **Received:** 09/16/15 02:57 **Matrix:** Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260									
Acetone	ND	ug/L	10.0	1.9	1		09/16/15 10:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		09/16/15 10:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		09/16/15 10:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		09/16/15 10:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		09/16/15 10:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		09/16/15 10:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		09/16/15 10:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		09/16/15 10:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		09/16/15 10:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		09/16/15 10:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		09/16/15 10:05	67-66-3	
Chloromethane	0.16J	ug/L	1.0	0.080	1		09/16/15 10:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		09/16/15 10:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		09/16/15 10:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/16/15 10:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		09/16/15 10:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		09/16/15 10:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		09/16/15 10:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		09/16/15 10:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		09/16/15 10:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		09/16/15 10:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/16/15 10:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		09/16/15 10:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/16/15 10:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		09/16/15 10:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		09/16/15 10:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/16/15 10:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		09/16/15 10:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		09/16/15 10:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		09/16/15 10:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		09/16/15 10:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		09/16/15 10:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		09/16/15 10:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/16/15 10:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		09/16/15 10:05	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120		1		09/16/15 10:05	17060-07-0	
Toluene-d8 (S)	93	%	80-120		1		09/16/15 10:05	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		09/16/15 10:05		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60202795

QC Batch: MSV/71721

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60202795001, 60202795002, 60202795003

METHOD BLANK: 1633527

Matrix: Water

Associated Lab Samples: 60202795001, 60202795002, 60202795003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	09/16/15 09:36	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	09/16/15 09:36	
1,1,2-Trichloroethane	ug/L	ND	1.0	09/16/15 09:36	
1,1-Dichloroethane	ug/L	ND	1.0	09/16/15 09:36	
1,1-Dichloroethene	ug/L	ND	1.0	09/16/15 09:36	
1,2-Dichloroethane	ug/L	ND	1.0	09/16/15 09:36	
1,2-Dichloropropane	ug/L	ND	1.0	09/16/15 09:36	
2-Butanone (MEK)	ug/L	ND	10.0	09/16/15 09:36	
2-Hexanone	ug/L	ND	10.0	09/16/15 09:36	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	09/16/15 09:36	
Acetone	ug/L	ND	10.0	09/16/15 09:36	
Benzene	ug/L	ND	1.0	09/16/15 09:36	
Bromodichloromethane	ug/L	ND	1.0	09/16/15 09:36	
Bromoform	ug/L	ND	1.0	09/16/15 09:36	
Bromomethane	ug/L	ND	5.0	09/16/15 09:36	
Carbon disulfide	ug/L	ND	5.0	09/16/15 09:36	
Carbon tetrachloride	ug/L	ND	1.0	09/16/15 09:36	
Chlorobenzene	ug/L	ND	1.0	09/16/15 09:36	
Chloroethane	ug/L	ND	1.0	09/16/15 09:36	
Chloroform	ug/L	ND	1.0	09/16/15 09:36	
Chloromethane	ug/L	ND	1.0	09/16/15 09:36	
cis-1,2-Dichloroethene	ug/L	ND	1.0	09/16/15 09:36	
cis-1,3-Dichloropropene	ug/L	ND	1.0	09/16/15 09:36	
Dibromochloromethane	ug/L	ND	1.0	09/16/15 09:36	
Ethylbenzene	ug/L	ND	1.0	09/16/15 09:36	
Methylene chloride	ug/L	ND	1.0	09/16/15 09:36	
Styrene	ug/L	ND	1.0	09/16/15 09:36	
Tetrachloroethene	ug/L	ND	1.0	09/16/15 09:36	
Toluene	ug/L	ND	1.0	09/16/15 09:36	
trans-1,2-Dichloroethene	ug/L	ND	1.0	09/16/15 09:36	
trans-1,3-Dichloropropene	ug/L	ND	1.0	09/16/15 09:36	
Trichloroethene	ug/L	ND	1.0	09/16/15 09:36	
Vinyl chloride	ug/L	ND	1.0	09/16/15 09:36	
Xylene (Total)	ug/L	ND	3.0	09/16/15 09:36	
1,2-Dichloroethane-d4 (S)	%	90	80-120	09/16/15 09:36	
4-Bromofluorobenzene (S)	%	98	80-120	09/16/15 09:36	
Toluene-d8 (S)	%	98	80-120	09/16/15 09:36	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60202795

LABORATORY CONTROL SAMPLE: 1633528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	102	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	17.4	87	73-121	
1,1,2-Trichloroethane	ug/L	20	17.3	87	80-120	
1,1-Dichloroethane	ug/L	20	21.5	107	80-120	
1,1-Dichloroethene	ug/L	20	19.4	97	80-120	
1,2-Dichloroethane	ug/L	20	20.5	103	81-120	
1,2-Dichloropropane	ug/L	20	20.5	102	80-120	
2-Butanone (MEK)	ug/L	100	107	107	67-122	
2-Hexanone	ug/L	100	92.9	93	75-121	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	76-120	
Acetone	ug/L	100	109	109	72-120	
Benzene	ug/L	20	22.2	111	80-120	
Bromodichloromethane	ug/L	20	20.5	103	80-120	
Bromoform	ug/L	20	18.7	94	73-138	
Bromomethane	ug/L	20	20.2	101	38-137	
Carbon disulfide	ug/L	20	22.5	112	71-129	
Carbon tetrachloride	ug/L	20	20.6	103	67-146	
Chlorobenzene	ug/L	20	19.3	97	80-120	
Chloroethane	ug/L	20	19.7	99	76-120	
Chloroform	ug/L	20	20.2	101	80-120	
Chloromethane	ug/L	20	15.5	77	34-165	
cis-1,2-Dichloroethene	ug/L	20	20.7	104	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.8	109	80-120	
Dibromochloromethane	ug/L	20	18.7	93	80-126	
Ethylbenzene	ug/L	20	19.0	95	80-120	
Methylene chloride	ug/L	20	22.3	112	80-120	
Styrene	ug/L	20	19.9	100	80-123	
Tetrachloroethene	ug/L	20	19.9	99	80-123	
Toluene	ug/L	20	20.1	101	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.5	97	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	80-129	
Trichloroethene	ug/L	20	20.2	101	80-120	
Vinyl chloride	ug/L	20	22.1	110	62-125	
Xylene (Total)	ug/L	60	59.8	100	80-120	
1,2-Dichloroethane-d4 (S)	%			91	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			95	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FORT SMITH, AR

Pace Project No.: 60202795

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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: MSV/71721

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR

Pace Project No.: 60202795

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60202795001	MW-189-GW-091515	EPA 5030B/8260	MSV/71721		
60202795002	MW-191-GW-091515	EPA 5030B/8260	MSV/71721		
60202795003	TRIPBLANK-02-091515	EPA 5030B/8260	MSV/71721		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO# : 60202795



Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: CF +0.6 T-239 / CF +0.6 T-262

Type of Ice: Ice Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 4.5

Date and initials of person examining contents: prg/17/15 prg/16/15

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>24hr</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Includes date/time/ID/analyses	Matrix: <u>WT</u>	15.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Exceptions: <u>VOA</u> Coliform, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	18.
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	19.
Pace Trip Blank lot # (if purchased): <u>Cover</u>		20.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	21.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	22. List State:
Additional labels attached to 5035A vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	23.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: CPC

Date: 09/16/15

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:									
Company:	Environ	Report To:	Wendy Stonestreet	Attention:	Tamara Gleason								
Address:	7500 College Blvd., Ste. 925	Copy To:	Tamara Gleason	Company Name:									
	Overland Park, KS 66210		tgleaseon@environcorp.com	Address:									
Email To:	wstonestreet@environcorp.com	Purchase Order No.:		Pace Quote Reference:									
Phone:	913-553-5926	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne (913) 563-1406								
Requested Due Date/TAT:	24 hr TAT	Project Number:		Pace Profile #:	7444 water, 7709 soil								
				<table border="1"> <tr> <td>Site Location</td> <td>AR</td> </tr> <tr> <td colspan="2">STATE:</td> </tr> </table>		Site Location	AR	STATE:					
Site Location	AR												
STATE:													
				<table border="1"> <tr> <td colspan="2">REGULATORY AGENCY</td> </tr> <tr> <td><input type="checkbox"/> NPDES</td> <td><input type="checkbox"/> GROUND WATER</td> </tr> <tr> <td><input type="checkbox"/> UST</td> <td><input type="checkbox"/> RCRA</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> OTHER</td> </tr> </table>		REGULATORY AGENCY		<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/>	<input type="checkbox"/> OTHER
REGULATORY AGENCY													
<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER												
<input type="checkbox"/> UST	<input type="checkbox"/> RCRA												
<input type="checkbox"/>	<input type="checkbox"/> OTHER												

Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS		SAMPLE ID (A-Z, 0-9 /, .) Sample IDs MUST BE UNIQUE		MATRIX CODE (see valid codes to left)		SAMPLE TYPE (G=GRAB C=COMP)		COLLECTED				# OF CONTAINERS		PRESERVATIVES		Requested Analysis Filtered (Y/N)	
ITEM #	MATRIX	CODE	SAMPLE ID	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	
1	MW-189-GW-091515			WTG	G	9/15/15	1755	9/15/15	1755	3								
2	MW-191-GW-091515			WTG	G	9/15/15	1815	9/15/15	1815	3								
3	TRP Blank-02-091515			WTG	G					2								
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
ADDITIONAL COMMENTS 24 Hr GAT i																		
RELINQUISHED BY / AFFILIATION [Signature] / ENVIRON																		
DATE 9/15/15																		
TIME 1840																		
ACCEPTED BY / AFFILIATION [Signature] / ENVIRON																		
DATE 9/16/15																		
TIME 0257																		
SAMPLE CONDITIONS Received on 9/15/15 Ice (Y/N) Custody Sealed (Y/N) Cooler (Y/N) Samples Intact (Y/N)																		