



August 28, 2014

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

**Re: Boys and Girls Club Initial Report of Findings**  
**Whirlpool Corporation**  
**Fort Smith, Arkansas**  
**EPA No. ARD042755389**  
**AFIN No. 66-00048**  
**CAO LIS 13-202**

Dear Mr. Mehran:

ENVIRON International Corporation (ENVIRON), on behalf of Whirlpool Corporation, today submitted an Initial Report of Findings to the Executive Director of the Boys and Girls Club summarizing the investigation thus far at the Boys and Girls Club facility located at 6015 Boys and Girls Club Lane in Fort Smith, Arkansas. With this letter, we are also providing this information to the Arkansas Department of Environmental Quality (ADEQ) for regulatory review.

In summary, following a well-defined scientific process, no trichloroethene (TCE) was found in any soil samples or in eight of the nine groundwater samples taken on the Boys and Girls Club property. These results indicate that impacted groundwater only marginally extends beyond the boundaries of the Jenny Lind Road expansion project. The impacted groundwater is only beneath a small corner of the undeveloped piece of the Boys and Girls Club property that will be separated from the rest of the Boys and Girls Club property by the Ingersoll Avenue expansion project.

Additionally, no TCE was detected in a surface water sample collected from the Whirlpool property surface water discharge to the drainage ditch that flows from Jenny Lind Road along the south side of the Boys and Girls Club parking lot. Further, no TCE was detected in sediment samples collected from the drainage ditch.

Thus, with the exception of one groundwater sample taken just off the location of the planned road expansion, no TCE was found in the groundwater, in soils, or in drainage areas on the Boys and Girls Club property. Even in the area where the single sample indicated groundwater with TCE above detection limits, there continues to be no exposure pathway to TCE and thus no health risk to anyone enjoying the Boys and Girls Club facilities or undeveloped fields.

In order to facilitate ongoing monitoring of this location, Whirlpool is requesting access to install four permanent monitoring wells. We propose working with the Boys and Girls Club to select final locations for these wells in areas that meet the scientific objectives to validate the ongoing safety of the area while minimizing any impact on the Boys and Girls Club's intended use of the property. The monitoring well locations will then be submitted to ADEQ for approval before installation. Attached Figure 2 contains proposed locations for permanent monitoring wells.

A Final Northeast Corner Investigation Report will be prepared after the proposed monitoring wells are installed and sampled. This future report will contain all documentation prepared for this investigation including logs for membrane interface probes (MIPs), soil probes and monitoring wells, and laboratory data reports. This future report will be submitted to ADEQ with a copy provided to the Boys and Girls Club.

## **INVESTIGATION BACKGROUND**

The objective of the investigation was to delineate the extent of TCE impact in the soil and groundwater extending north and east from the Whirlpool property. The scope of this investigation was described in a July 29, 2014, letter (July 29 letter) to ADEQ titled *Northeast Corner Supplemental Work Plan* (June 20, 2014, correspondence with ADEQ described the installation of the five new monitoring wells installed on the Whirlpool property which are part of this investigation).

The investigation was performed in two phases. The initial phase consisted of five new groundwater monitoring wells on the Whirlpool property. The second phase included MIPs and soil probes for collection of soil and groundwater samples at locations on the Whirlpool property and at off-site locations on the Boys and Girls Club and City of Fort Smith properties.

Collectively, the investigation included the following:

- Five new groundwater monitoring wells on the Whirlpool property;
- Seventeen MIPs (used for preliminary soil and groundwater screening) on Whirlpool property, Boys and Girls Club property and city of Fort Smith property;
- Fourteen soil probes for collection of soil and groundwater samples on Whirlpool property, Boys and Girls Club property and city of Fort Smith property;
- One surface water sample from the Whirlpool discharge to the drainage ditch; and
- Three sediment samples from the drainage ditch.

The five monitoring wells and 14 soil probes facilitated collection of 44 soil samples and 19 groundwater samples to confirm no impact to soil exists and to delineate the limited extent of groundwater impact extending north and east towards the Boys and Girls Club property.

In addition, surface water and sediment samples were collected from the drainage ditch located at the northeast corner of the intersection of Jenny Lind Road and Ingersoll Avenue. This drainage ditch flows east toward Mill Creek from Ingersoll Avenue and is located south of the Boys and Girls Club parking lot.

## **RESULTS**

A summary of groundwater sample analytical results is provided as Table 1 and Figure 1 depicts the groundwater results for the specific sampling locations.

### **Phase I**

As outlined in the July 29 letter and shown on Figure 1, TCE was not detected in monitoring wells directly north of the northeast corner of the Whirlpool manufacturing building at MW-88 and MW-90. TCE was detected at 19.5 parts per billion (ppb) in groundwater at MW-89, located at the northeast corner of the Whirlpool property. TCE was also detected in groundwater at MW-87 and MW-91, at 564 ppb and 234 ppb, respectively. TCE was not detected in any of the soil samples collected from the soil borings for installation of these five wells (Table 2). The laboratory reports are provided as Attachment A.

Although TCE was detected in groundwater in samples taken from three of these five wells, the TCE concentrations measured in groundwater at the northeast corner are significantly lower than concentrations measured during previous investigations and current monitoring at the northwest corner of the Whirlpool property. In addition, the TCE concentrations in groundwater decreased significantly near the Whirlpool property boundaries.

### **Phase II**

The results of Phase II of the investigation to delineate the extent of TCE impacts in groundwater are depicted on Figure 1. Figure 1 shows two TCE concentration contour lines consisting of non-detect and 5 ppb. The 5 ppb TCE concentration is the Remedial Action Level (RAL) for groundwater at locations beyond the Whirlpool property boundaries [5 ppb is the drinking water criteria established by USEPA identified as the maximum contaminant level (MCL)]. The TCE concentrations in many of the groundwater samples collected from the soil probes were below detection limits. However, the results depicted on Figure 2 indicate that the northwest corner of the Boys and Girls Club property south of the future Ingersoll Avenue road expansion project exhibits TCE impacts in groundwater marginally above the 5 ppb RAL. The TCE concentration in DP-45 located at the northwest corner of this parcel was 6.8 ppb. The only other soil probe location exhibiting a TCE concentration in groundwater exceeding the RAL consisted of DP-42 located west of the Boys and Girls Club property on the City of Ft. Smith property. The TCE concentration at DP-42 was 6.4 ppb.

No TCE or chlorinated solvents have been detected in soil samples collected during the initial or the current phase of the investigation (see Table 2). Low concentrations of acetone (a typical laboratory artifact) and bromomethane and bromoform (inadvertent byproducts of chlorination of drinking water) were detected in soil samples. These constituents are not associated with the Whirlpool property and pose no risks at the concentrations detected in soil samples.

No TCE or chlorinated solvents were detected in a surface water sample collected from the surface water discharge to the drainage ditch during a rain storm on the evening of Monday, August 18, 2014. No TCE or chlorinated solvents were detected in three sediment samples collected from the drainage ditch on Wednesday, August 20, 2014. The sample locations are depicted on Figure 3 and the laboratory results of these samples are summarized on Table 3. The laboratory reports are provided as Attachment A.

In summary, limited TCE impact was discovered in groundwater at concentrations marginally exceeding the RAL. This impact is limited to the northwest corner of the Boys and Girls Club property south of the future expansion of Ingersoll Avenue and to the City of Fort Smith property acquired for the expansion of Jenny Lind Road. No TCE impact was discovered in soil, sediment or surface water during this investigation.

There are no known complete exposure pathways to the impacted groundwater that marginally extends beyond the Whirlpool property boundary to cause health risk concerns.

We request access to install four permanent groundwater monitoring wells at the locations depicted on Figure 2. These permanent groundwater monitoring wells will be used to confirm the results of this investigation and to monitor groundwater in the future for any significant changes in groundwater conditions. These monitoring wells are proposed to be installed as flush-mount wells with bolted covers to preclude access from visitors to the Boys and Girls Club facility. Three of the proposed locations are located in generally inconspicuous locations along the parking lot and at the front entrance to the facility, and one monitoring well is positioned near the future right-of-way along the future Jenny Lind Road expansion project. Assuming we can reach an agreement with the Boys and Girls Club on location and terms of installation of these monitoring wells, and receive approval on these locations from ADEQ, we intend to conduct installation during September 2014.

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If you have any questions or comments please contact me at your earliest convenience.

Sincerely,

**ENVIRON International Corporation**



Michael F. Ellis, PE  
Principal

**LIST OF APPENDICES**

- Table 1: Summary of Groundwater Sample Analytical Results
- Table 2: Summary of Soil Sample Analytical Results
- Table 3: Summary of Surface Water and Sediment Results
- Figure 1: Northeast Corner Groundwater Results
- Figure 2: Proposed Monitoring Well Locations
- Figure 3: Surface water and sediment sample locations
- Appendix A: Laboratory Reports (only laboratory reports applicable to the Boys and Girls Club are included)

## **TABLES**

**TABLE 1**  
**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS**  
**Whirlpool Corporation; Fort Smith, AR**

Location	Remedial Action Levels per ADEQ	MW-87 20140625-GW-MW-87 60172431001	MW-88 20140624-GW-MW-88 60172300001	MW-89 20140624-GW-MW-89 60172300002	MW-90 20140625-GW-MW-90 60172431002	MW-91 20140625-GW-MW-91 60172431003	DP-40 DP-40-082014 60175526002	DP-41 DP-41-082014 60175526001	DP-42 DP-42-082014 60175526003	DP-43 DP-43-082014 60175526004	DP-44 DP-44-082014 60175526005	
ENVIRON Sample ID												
Lab Sample ID												
Sample Method												
Sample Date	RADD	06/25/2014	06/24/2014	06/24/2014	06/25/2014	06/25/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014
Comments	Issued 2014											
<b>Volatile Organic Compounds</b>												
Acetone	12000	U (10)	7.5 J (10)	5.9 J (10)	6.4 J (10)	6.9 J (10)	U (10)					
Benzene	5.0	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
Bromodichloromethane	80	U (5)	7.5 J (5)	5.9 J (5)	6.4 J (5)	6.9 J (5)	U (5)	U (5)				
Bromoform	80	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
Bromomethane	7.0	U (7)	U (7)	U (7)	U (7)	U (7)	U (7)	U (7)				
2-Butanone	4900	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)				
Carbon Disulfide	720	U (10)	U (10)	U (10)	3.2 J (10)	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)
Carbon Tetrachloride	5	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
Chlorobenzene	100	U (5)	U (2.4)	U (2.4)								
Chloroethane	12000	U (10)	U (5)	U (5)								
Chloroform	80	U (5)	U (5)	U (5)	1.6 J (5)	4.8 J (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)
Chloromethane	190	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)				
Dibromochloromethane	80	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1-Dichloroethane	2.4	2.1 J (2.4)	U (2.4)	U (2.4)	U (2.4)	0.93 J (2.4)	U (2.4)					
1,2-Dichloroethane	5.0	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1-Dichloroethene	7.0	5.8 (5)	U (5)	U (5)	U (5)	2.6 J (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)
cis-1,2-Dichloroethene	70	41.8 (5)	U (5)	U (5)	U (5)	21.7 (5)	0.55 J (5)	U (5)	U (5)	U (5)	U (5)	U (5)
trans-1,2-Dichloroethene	100	4.5 J (5)	U (5)	U (5)	U (5)	2.2 J (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)
1,2-Dichloropropane	5.0	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
1,3-Dichloropropene (total)	0.41	U (1)	U (1)	U (1)	U (1)	U (1)	U (1)	U (1)				
cis-1,3-Dichloropropene		U (1)	U (1)	U (1)	U (1)	U (1)	U (1)	U (1)				
trans-1,3-Dichloropropene		U (1)	U (1)	U (1)	U (1)	U (1)	U (1)	U (1)				
Ethyl Benzene	700	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
2-Hexanone	34	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)				
4-Methyl-2-pentanone	1000	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)	U (10)				
Methylene Chloride	5.0	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
Styrene	100	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1,2,2-Tetrachloroethane	0.066	U (1)	U (1)	U (1)	U (1)	U (1)	U (1)	U (1)				
Tetrachloroethene	5.0	2.6 J (5)	U (5)	U (5)	U (5)	1.1 J (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)
Toluene	1000	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1,1-Trichloroethane	200	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1,2-Trichloroethane	5.0	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				
Trichloroethene	5.0	<u>564 (50)</u>	U (5)	<u>19.5 (5)</u>	U (5)	<u>234 (25)</u>	3.2 J (5)	U (5)	<u>6.4 (5)</u>	U (5)	U (5)	U (5)
Vinyl Chloride	2.0	U (2)	U (2)	U (2)	U (2)	U (2)	U (2)	U (2)				
Xylenes (total)	10000	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)				

**Notes:**

- 1 All concentrations are presented in ug/L.  
 2 Only compounds with at least one detection are shown.  
 3 Results that exceed the ALs for Fort Smith ADEQ RADD issued Dec 2013 are double underlined.

**Abbreviations:**

U -- Not Detected  
 J -- Estimated Concentration  
 ( ) -- Detection Limit  
 RADD -- Remedial Action Decision Document  
 ADEQ -- Arkansas Department of Environmental Quality  
 ug/L = micrograms per Liter

**TABLE 1**  
**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS**  
**Whirlpool Corporation; Fort Smith, AR**

Location	Remedial Action	DP-45	DP-46	DP-47	DP-48	DP-49	DP-50	DP-51	DP-52	DP-53
ENVIRON Sample ID	Sample ID	DP-45-082014 60175526006	DP-46-082014 60175765001	DP-47-082014 60175765002	DP-48-082014 60145935001	DP-49-GW-20140817 60176049001	DP-50-082014 60145935002	DP-51-GW-082014 60176267001	DP-52-GW-082014 60176125001	DP-53-GW-082014 60176267002
Lab Sample ID	ADEQ									
Sample Method	RADD									
Sample Date	Comments	8/11/2014 Issued 2014	8/13/2014	8/13/2014	8/15/2014	8/17/2014	8/15/2014	8/20/2014	8/19/2014	8/20/2014
<b>Volatile Organic Compounds</b>										
Acetone	12000	U (10)	U (10)	10.8 (10)	9.2 J (10)	U (10)	22.0 (10)	U (10)	16.5 (10)	U (10)
Benzene	5.0	U (5)	U (5)	U (5)	U (5)	U (5)				
Bromodichloromethane	80	U (5)	U (5)	U (5)	16.5 (5)	U (5)				
Bromoform	80	U (5)	U (5)	U (5)	U (5)	U (5)				
Bromomethane	7.0	U (7)	U (7)	U (7)	U (7)	U (7)				
2-Butanone	4900	U (10)	U (10)	U (10)	U (10)	16.4 (10)	6.3 J (10)	U (10)	U (10)	U (10)
Carbon Disulfide	720	U (10)	U (10)	U (10)	U (10)	U (10)				
Carbon Tetrachloride	5	U (5)	U (5)	U (5)	U (5)	U (5)				
Chlorobenzene	100	U (2.4)	U (2.4)	U (2.4)	U (2.4)	U (2.4)				
Chloroethane	12000	U (5)	U (5)	U (5)	U (5)	U (5)				
Chloroform	80	U (5)	U (5)	U (5)	U (5)	U (5)				
Chloromethane	190	U (10)	U (10)	U (10)	U (10)	U (10)				
Dibromochloromethane	80	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1-Dichloroethane	2.4	U (2.4)	U (2.4)	U (2.4)	U (2.4)	U (2.4)				
1,2-Dichloroethane	5.0	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1-Dichloroethene	7.0	U (5)	U (5)	U (5)	U (5)	U (5)				
cis-1,2-Dichloroethene	70	1.3 J (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)
trans-1,2-Dichloroethene	100	U (5)	U (5)	U (5)	U (5)	U (5)				
1,2-Dichloropropane	5.0	U (5)	U (5)	U (5)	U (5)	U (5)				
1,3-Dichloropropene (total)	0.41	U (1)	U (1)	U (1)	U (1)	U (1)				
cis-1,3-Dichloropropene		U (1)	U (1)	U (1)	U (1)	U (1)				
trans-1,3-Dichloropropene		U (1)	U (1)	U (1)	U (1)	U (1)				
Ethyl Benzene	700	U (5)	U (5)	U (5)	U (5)	U (5)				
2-Hexanone	34	U (10)	U (10)	U (10)	U (10)	U (10)				
4-Methyl-2-pentanone	1000	U (10)	U (10)	U (10)	U (10)	U (10)				
Methylene Chloride	5.0	U (5)	U (5)	U (5)	U (5)	U (5)				
Styrene	100	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1,2,2-Tetrachloroethane	0.066	U (1)	U (1)	U (1)	U (1)	U (1)				
Tetrachloroethene	5.0	U (5)	U (5)	U (5)	U (5)	U (5)				
Toluene	1000	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1,1-Trichloroethane	200	U (5)	U (5)	U (5)	U (5)	U (5)				
1,1,2-Trichloroethane	5.0	U (5)	U (5)	U (5)	U (5)	U (5)				
Trichloroethene	5.0	<u>6.8 (5)</u>	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)	U (5)
Vinyl Chloride	2.0	U (2)	U (2)	U (2)	U (2)	U (2)				
Xylenes (total)	10000	U (5)	U (5)	U (5)	U (5)	U (5)				

**Notes:**

- 1 All concentrations are presented in ug/L.  
 2 Only compounds with at least one detection are shown.  
 3 Results that exceed the ALs for Fort Smith ADEQ RADD issued Dec 2013 are double underlined.

**Abbreviations:**

U -- Not Detected  
 J -- Estimated Concentration  
 ( ) -- Detection Limit  
 RADD -- Remedial Action Decision Document  
 ADEQ -- Arkansas Department of Environmental Quality  
 ug/L = micrograms per Liter

**TABLE 2**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - NORTHEAST CORNER**  
**Whirlpool Corporation; Fort Smith, AR**

Location	MW-87	MW-87	MW-88	MW-89	MW-90	MW-90	MW-91	DP-40	DP-40	
ENVIRON Sample ID	Remedial Action	MW-87 (15.0 FT) - 062014	MW-87 (4.5 FT) - 062014	MW-88 (12.0 FT) - 062014	MW-89 (17.5 FT) - 062014	MW-90 (14.5 FT) - 062014	MW-90 (20.5 FT) - 062014	MW-91 (12.5 FT) - 062014	DP-40 (4.0 FT) - 082014	DP-40 (11.0 FT) - 082014
Lab Sample ID	Levels per	60172280002	60172280001	60172176003	60172176004	60172176001	60172176002	60172280003	60175335001	60175335002
Collection Depth (ft bgs)	ADEQ RADD	15	4.5	12	17.5	14.5	20.5	12.5	4.0	11.0
Sample Method	Sample Date	Issued 2014	06/24/2014	06/24/2014	06/23/2014	06/23/2014	06/23/2014	06/24/2014	8/7/2014	8/7/2014
Comments										
<b>Volatile Organic Compounds</b>										
Acetone	NE	U (0.0169)	0.0259 (0.0177)	U (0.0176)	U (0.0176)	U (0.0203)	U (0.0201)	0.0188 (0.0186)	U (0.0195)	U (0.0177)
Benzene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Bromodichloromethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Bromoform	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Bromomethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
2-Butanone	NE	U (0.0084)	U (0.0088)	U (0.0088)	U (0.0088)	U (0.0102)	U (0.01)	U (0.0093)	U (0.0097)	U (0.0089)
Carbon Disulfide	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Carbon Tetrachloride	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Chlorobenzene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Chloroethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Chloroform	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Chloromethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Dibromochloromethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,1-Dichloroethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,2-Dichloroethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,1,1-Dichloroethene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
cis-1,2-Dichloroethene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
trans-1,2-Dichloroethene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,2-Dichloropropane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,3-Dichloropropene (total)	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
cis-1,3-Dichloropropene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
trans-1,3-Dichloropropene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Ethyl Benzene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
2-Hexanone	NE	U (0.0169)	U (0.0177)	U (0.0176)	U (0.0176)	U (0.0203)	U (0.0201)	U (0.0186)	U (0.0195)	U (0.0177)
4-Methyl-2-pentanone	NE	U (0.0084)	U (0.0088)	U (0.0088)	U (0.0088)	U (0.0102)	U (0.01)	U (0.0093)	U (0.0097)	U (0.0089)
Methylene Chloride	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Styrene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,1,2,2-Tetrachloroethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Tetrachloroethene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Toluene	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,1,1-Trichloroethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
1,1,2-Trichloroethane	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)
Trichloroethene	0.129	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)
Vinyl Chloride	NE	U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)
Xylenes (total)		U (0.0042)	U (0.0044)	U (0.0044)	U (0.0044)	U (0.0051)	U (0.005)	U (0.0047)	U (0.0049)	U (0.0044)

**Notes:**

- 1 All concentrations are presented in mg/kg.  
 2 Only compounds with at least one detection are shown.  
 3 None of the detected concentration exceed the ALs for Fort Smith ADEQ RADD issued December 2013.

**Abbreviations:**

- U -- Not Detected.  
 J -- Estimated Concentration.  
 () -- Detection Limit.  
 RADD -- Remedial Action Decision Document  
 ADEQ -- Arkansas Department of Environmental Quality  
 mg/kg = milligram per kilogram  
 NE = Not Established

**TABLE 2**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - NORTHEAST CORNER**  
**Whirlpool Corporation; Fort Smith, AR**

Location	DP-40	DP-41	DP-41	DP-41	DP-42	DP-42	DP-42	DP-43	DP-43	DP-43
ENVIRON Sample ID	DP-40 (14.5 FT) - 082014	DP-41 (4.0 FT) - 082014	DP-41 (10.0 FT) - 082014	DP-41 (14.0 FT) - 082014	DP-42 (4.0 FT) - 082014	DP-42 (8.0 FT) - 082014	DP-42 (12.0 FT) - 082014	DP-43-SL (4.0 FT) - 20140811	DP-43-SL (10.0 FT) - 20140811	DP-43-SL (19.0 FT) - 20140811
Lab Sample ID	60175335003	60175425001	60175425002	60175425003	60175425004	60175425005	60175425006	60175525001	60175525002	60175525003
Collection Depth (ft bgs)	14.5	4.0	10.0	14.0	4.0	8.0	12.0	4.0	10.0	19.0
Sample Method										
Sample Date	8/7/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/11/2014	8/11/2014	8/11/2014
Comments										
<b>Volatile Organic Compound</b>										
Acetone	U (0.0194)	U (0.0240)	U (0.0182)	U (0.0181)	U (0.0196)	U (0.0185)	U (0.0171)	U (0.0243)	U (0.0173)	U (0.0167)
Benzene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Bromodichloromethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Bromoform	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Bromomethane	U (0.0048)	0.0031 J (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
2-Butanone	U (0.0097)	U (0.0120)	U (0.0091)	U (0.0091)	U (0.0098)	U (0.0092)	U (0.0086)	U (0.0121)	U (0.0089)	U (0.0084)
Carbon Disulfide	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Carbon Tetrachloride	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Chlorobenzene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Chloroethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Chloroform	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Chloromethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Dibromochloromethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,1-Dichloroethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,2-Dichloroethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,1-Dichloroethene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
cis-1,2-Dichloroethene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
trans-1,2-Dichloroethene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,2-Dichloropropane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,3-Dichloropropene (total)	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
cis-1,3-Dichloropropene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
trans-1,3-Dichloropropene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Ethyl Benzene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
2-Hexanone	U (0.0194)	U (0.0240)	U (0.0182)	U (0.0181)	U (0.0196)	U (0.0185)	U (0.0171)	U (0.0243)	U (0.0173)	U (0.0167)
4-Methyl-2-pentanone	U (0.0097)	U (0.0120)	U (0.0091)	U (0.0091)	U (0.0196)	U (0.0092)	U (0.0086)	U (0.0121)	U (0.0089)	U (0.0084)
Methylene Chloride	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0098)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Styrene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,1,2,2-Tetrachloroethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Tetrachloroethene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Toluene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,1,1-Trichloroethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
1,1,2-Trichloroethane	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Trichloroethene	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Vinyl Chloride	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)
Xylenes (total)	U (0.0048)	U (0.0060)	U (0.0043)	U (0.0045)	U (0.0049)	U (0.0046)	U (0.0043)	U (0.0061)	U (0.0044)	U (0.0042)

**Notes:**

- 1 All concentrations are presented in mg/kg.  
 2 Only compounds with at least one detection are shown.  
 3 None of the detected concentration exceed the ALs for Fort Smith ADEQ RADD issued December 2013.

**Abbreviations:**

U -- Not Detected.  
 J -- Estimated Concentration.  
 ( ) -- Detection Limit.  
 RADD -- Remedial Action Decision Document  
 ADEQ -- Arkansas Department of Environmental Quality  
 mg/kg = milligram per kilogram  
 NE = Not Established

**TABLE 2**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - NORTHEAST CORNER**  
**Whirlpool Corporation; Fort Smith, AR**

Location	DP-44	DP-44	DP-44	DP-44	DP-45	DP-45	DP-45	DP-46	DP-46	DP-46
ENVIRON Sample ID	DP-44-SL (4.0 FT) - 20140811	DP-44-SL (11.0 FT) - 20140811	DP-44-SL (18.0 FT) - 20140811	DP-44-SL (21.5 FT) - 20140811	DP-45-SL (4.0 FT) - 20140811	DP-45-SL (12.0 FT) - 20140811	DP-45-SL (18.0 FT) - 20140811	DP-46-SL (4.5 FT) - 20140811	DP-46-SL (13.5 FT) - 20140811	DP-46-SL (18.0 FT) - 20140811
Lab Sample ID	60175525004	60175525005	60175525006	60175525007	60175525008	60175525009	60175525008	60175646001	60175646002	60175646003
Collection Depth (ft bgs)	4.0	11.0	18.0	21.5	4.0	12.0	18.0	4.5	13.5	18.0
Sample Method										
Sample Date	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/11/2014	8/12/2014	8/12/2014	8/12/2014
Comments										
<b>Volatile Organic Compound</b>										
Acetone	U (0.0233)	U (0.0184)	U (0.0196)	U (0.0204)	0.0371 (0.0177)	U (0.0197)	U (0.0180)	U (0.0210)	U (0.0166)	U (0.0167)
Benzene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Bromodichloromethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Bromoform	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Bromomethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
2-Butanone	U (0.0117)	U (0.0092)	U (0.0098)	U (0.0102)	U (0.0089)	U (0.0098)	U (0.0090)	U (0.0105)	U (0.0083)	U (0.0083)
Carbon Disulfide	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Carbon Tetrachloride	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Chlorobenzene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Chloroethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Chloroform	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Chloromethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Dibromochloromethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,1-Dichloroethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,2-Dichloroethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,1-Dichloroethene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
cis-1,2-Dichloroethene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
trans-1,2-Dichloroethene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,2-Dichloropropane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,3-Dichloropropene (total)	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
cis-1,3-Dichloropropene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
trans-1,3-Dichloropropene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Ethyl Benzene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
2-Hexanone	U (0.0233)	U (0.0184)	U (0.0196)	U (0.0204)	U (0.0177)	U (0.0197)	U (0.0180)	U (0.0210)	U (0.0166)	U (0.0167)
4-Methyl-2-pentanone	U (0.0117)	U (0.0092)	U (0.0098)	U (0.0102)	U (0.0089)	U (0.0098)	U (0.0090)	U (0.0105)	U (0.0083)	U (0.0083)
Methylene Chloride	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Styrene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,1,2,2-Tetrachloroethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Tetrachloroethene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Toluene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,1,1-Trichloroethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
1,1,2-Trichloroethane	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Trichloroethene	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Vinyl Chloride	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)
Xylenes (total)	U (0.0058)	U (0.0046)	U (0.0049)	U (0.0051)	U (0.0044)	U (0.0049)	U (0.0045)	U (0.0052)	U (0.0042)	U (0.0042)

**Notes:**

- 1 All concentrations are presented in mg/kg.  
 2 Only compounds with at least one detection are shown.  
 3 None of the detected concentration exceed the ALs for Fort Smith ADEQ RADD issued December 2013.

**Abbreviations:**

U -- Not Detected.  
 J -- Estimated Concentration.  
 ( ) -- Detection Limit.  
 RADD -- Remedial Action Decision Document  
 ADEQ -- Arkansas Department of Environmental Quality  
 mg/kg = milligram per kilogram  
 NE = Not Established

**TABLE 2**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - NORTHEAST CORNER**  
**Whirlpool Corporation; Fort Smith, AR**

Location	DP-47	DP-47	DP-48	DP-48	DP-49	DP-49	DP-49	DP-50	DP-50	DP-51
ENVIRON Sample ID	DP-47-SL (5.0 FT) - 20140811	DP-47-SL (22.0 FT) - 20140811	DP-48-SL (4.0 FT) - 20140814	DP-48-SL (11.5 FT) - 20140814	DP-49-SL (4.0 FT) - 20140814	DP-49-SL (10.0 FT) - 20140814	DP-49-SL (13.0 FT) - 20140814	DP-50 - SL (4.0 FT) - 20140814	DP-50 - SL (10.0 FT) - 20140814	DP-51-SL-(1.0) FT - 20140818
Lab Sample ID	60175646004	60175646005	60175927001	60175927002	60175927003	60175927004	60175927005	60175927006	60175927007	60176014001
Collection Depth (ft bgs)	5.0	22.0	4.0	11.5	4.0	10.0	13.0	4.0	10.0	1.0
Sample Method										
Sample Date	8/12/2014	8/12/2014	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/14/2014	8/19/2014
Comments										
<b>Volatile Organic Compound</b>										
Acetone	U (0.0202)	U (0.0173)	0.0153 J (0.0185)	0.0093 J (0.0172)	0.0154 J (0.0194)	0.0123 J (0.0174)	0.0142 J (0.0226)	U (0.0184)	U (0.0159)	0.0414 (0.0197)
Benzene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Bromodichloromethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Bromoform	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Bromomethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
2-Butanone	U (0.0101)	U (0.0087)	U (0.0092)	U (0.0086)	U (0.0097)	U (0.0087)	U (0.0113)	U (0.0092)	U (0.0079)	U (0.0098)
Carbon Disulfide	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Carbon Tetrachloride	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Chlorobenzene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Chloroethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Chloroform	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Chloromethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Dibromochloromethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,1-Dichloroethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,2-Dichloroethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,1-Dichloroethene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
cis-1,2-Dichloroethene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
trans-1,2-Dichloroethene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,2-Dichloropropane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,3-Dichloropropene (total)	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
cis-1,3-Dichloropropene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
trans-1,3-Dichloropropene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Ethyl Benzene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
2-Hexanone	U (0.0202)	U (0.0173)	U (0.0185)	U (0.0172)	U (0.0194)	U (0.0174)	U (0.0226)	U (0.0184)	U (0.0159)	U (0.0197)
4-Methyl-2-pentanone	U (0.0101)	U (0.0087)	U (0.0092)	U (0.0086)	U (0.0097)	U (0.0087)	U (0.0113)	U (0.0092)	U (0.0079)	U (0.0098)
Methylene Chloride	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Styrene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,1,2,2-Tetrachloroethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Tetrachloroethene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Toluene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,1,1-Trichloroethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
1,1,2-Trichloroethane	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Trichloroethene	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Vinyl Chloride	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)
Xylenes (total)	U (0.0050)	U (0.0043)	U (0.0046)	U (0.0043)	U (0.0048)	U (0.0043)	U (0.0056)	U (0.0046)	U (0.0040)	U (0.0049)

**Notes:**

- 1 All concentrations are presented in mg/kg.  
 2 Only compounds with at least one detection are shown.  
 3 None of the detected concentration exceed the ALs for Fort Smith ADEQ RADD issued December 2013.

**Abbreviations:**

- U -- Not Detected.  
 J -- Estimated Concentration.  
 ( ) -- Detection Limit.  
 RADD -- Remedial Action Decision Document  
 ADEQ -- Arkansas Department of Environmental Quality  
 mg/kg = milligram per kilogram  
 NE = Not Established

**TABLE 2**  
**SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - NORTHEAST CORNER**  
**Whirlpool Corporation; Fort Smith, AR**

Location	DP-51	DP-52	DP-52	DP-53	DP-53
DP-51-SL-(14.0 FT) -	DP-52-SL-(4.0 FT) -	DP-52-SL-(11.0 FT) -	DP-53-SL-(1.0 FT) -	DP-53-SL-(8.5 FT) -	
ENVIRON Sample ID	20140818	20140818	20140818	20140818	20140818
Lab Sample ID	60176014002	60176014003	60176014004	60176014004	60176014005
Collection Depth (ft bgs)	14.0	4.0	11.0	1.0	8.5
Sample Method					
Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014
Comments					
<b>Volatile Organic Compound</b>					
Acetone	U (0.0159)	0.0202 (0.0185)	0.0094 J (0.0164)	0.0587 (0.0179)	0.0101 (0.0177)
Benzene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Bromodichloromethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Bromoform	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Bromomethane	0.0081 (0.0040)	0.0093 (0.0046)	U (0.0041)	0.0093 (0.0045)	U (0.0044)
2-Butanone	U (0.0079)	U (0.0093)	U (0.0093)	0.0063 J (0.0082)	U (0.0089)
Carbon Disulfide	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Carbon Tetrachloride	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Chlorobenzene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Chloroethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Chloroform	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Chloromethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Dibromochloromethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,1-Dichloroethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,2-Dichloroethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,1-Dichloroethene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
cis-1,2-Dichloroethene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
trans-1,2-Dichloroethene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,2-Dichloropropane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,3-Dichloropropene (total)	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
cis-1,3-Dichloropropene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
trans-1,3-Dichloropropene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Ethyl Benzene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
2-Hexanone	U (0.0159)	U (0.0185)	U (0.0164)	U (0.0179)	U (0.0177)
4-Methyl-2-pentanone	U (0.0079)	U (0.0093)	U (0.0093)	U (0.0082)	U (0.0089)
Methylene Chloride	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Styrene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,1,2,2-Tetrachloroethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Tetrachloroethene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Toluene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,1,1-Trichloroethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
1,1,2-Trichloroethane	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Trichloroethene	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Vinyl Chloride	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)
Xylenes (total)	U (0.0040)	U (0.0046)	U (0.0041)	U (0.0045)	U (0.0044)

**Notes:**

1

All concentrations are presented in mg/kg.

2

Only compounds with at least one detection are shown.

3

None of the detected concentration exceed the ALs for Fort Smith ADEQ RADD issued December 2013.

**Abbreviations:**

U -- Not Detected.

J -- Estimated Concentration.

(-) -- Detection Limit.

RADD -- Remedial Action Decision Document

ADEQ -- Arkansas Department of Environment

mg/kg = milligram per kilogram

NE = Not Established

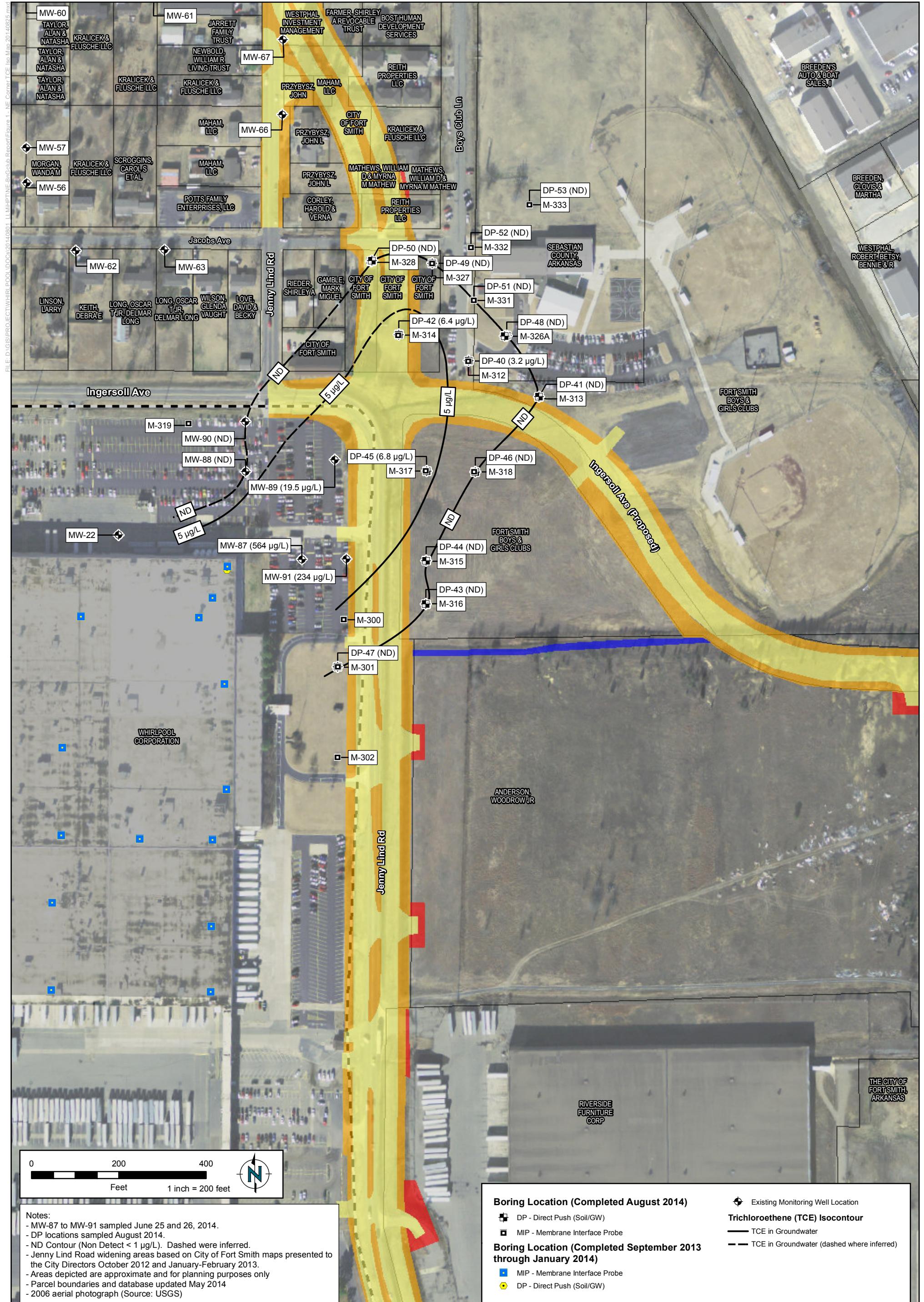
**TABLE 3**  
**SUMMARY OF SURFACE WATER AND SEDIMENT RESULTS**  
**Whirlpool Corporation; Fort Smith, AR**

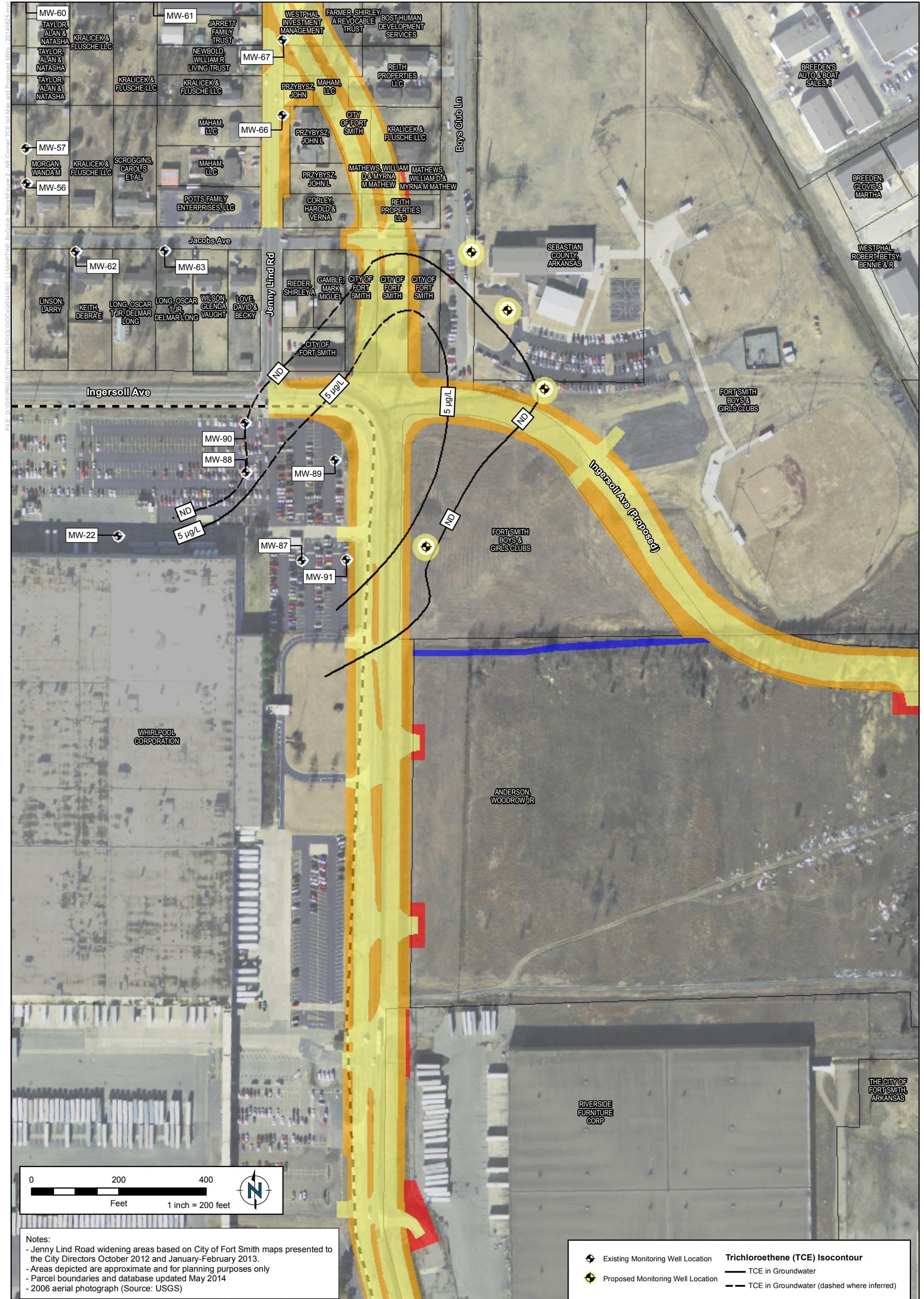
Location	Remedial Action	SED-01	SED-02	SED-03	NE- MANHOLE*
		ENVIRON Sample ID	Lab Sample ID	Sample Method	Sample Date
		SED-01-SL-20140820	SED-02-SL-20140820	SED-03-SL-20140820	NE-MANHOLE-SW-20140818
			60176262001	60176262002	60176262003
					60176049002
					8/18/2014
<b>Volatile Organic Compounds</b>					
Bromodichloromethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Carbon Tetrachloride	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Chlorobenzene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Chloroethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (10.0)
Chloroform	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Chloromethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (10.0)
Dibromochloromethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (2.4)
1,1-Dichloroethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
1,2-Dichloroethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
1,1-Dichloroethene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
cis-1,2-Dichloroethene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
trans-1,2-Dichloroethene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
1,2-Dichloropropane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
cis-1,3-Dichloropropene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (1.0)
trans-1,3-Dichloropropene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Methylene Chloride	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
1,1,2,2-Tetrachloroethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Tetrachloroethene	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
1,1,1-Trichloroethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
1,1,2-Trichloroethane	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Trichloroethene	0.129	U (0.0055)	U (0.0065)	U (0.0045)	U (5.0)
Vinyl Chloride	NE	U (0.0055)	U (0.0065)	U (0.0045)	U (2.0)

**Notes:**

- 1 All concentrations are presented in mg/kg except where noted with an asterick (\*) by sample location.
- 2 None of the detected concentration exceed the ALs for Fort Smith ADEQ RADD issued December 2013.
- 3 \* Locations are presented in ug/L.

## **FIGURES**







*August 28, 2014*

## **APPENDIX A: Laboratory Reports**

July 15, 2014

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

RE: Project: FORT SMITH, AR  
Pace Project No.: 60172176

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on June 24, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORT SMITH, AR  
Pace Project No.: 60172176

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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.: 60172176

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60172176001	<b>MW-90 (14.5 FT) - 062014</b>	Solid	06/23/14 11:20	06/24/14 01:48
60172176002	<b>MW-90 (20.5 FT) - 062014</b>	Solid	06/23/14 11:45	06/24/14 01:48
60172176003	<b>MW-88 (12.0 FT) - 062014</b>	Solid	06/23/14 08:50	06/24/14 01:48
60172176004	<b>MW-89 (17.5 FT) - 062014</b>	Solid	06/23/14 14:00	06/24/14 01:48
60172176005	<b>TRIP BLANK 01 - 062014</b>	Solid	06/23/14 08:50	06/24/14 01:48

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## SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR  
Pace Project No.: 60172176

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60172176001	<b>MW-90 (14.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172176002	<b>MW-90 (20.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172176003	<b>MW-88 (12.0 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172176004	<b>MW-89 (17.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172176005	<b>TRIP BLANK 01 - 062014</b>	EPA 8260	JKL	37

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## PROJECT NARRATIVE

Project: FORT SMITH, AR  
Pace Project No.: 60172176

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**Method:** EPA 8260  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** July 15, 2014

### **General Information:**

5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### **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/62527

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

### **Additional Comments:**

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

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172176

Sample: MW-90 (14.5 FT) - 062014    Lab ID: 60172176001    Collected: 06/23/14 11:20    Received: 06/24/14 01:48    Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.3	10.2	1		06/24/14 19:09	67-64-1	
Benzene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	71-43-2	
Bromodichloromethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-27-4	
Bromoform	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-25-2	
Bromomethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.2	5.1	1		06/24/14 19:09	78-93-3	
Carbon disulfide	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-15-0	
Carbon tetrachloride	ND ug/kg		5.1	2.5	1		06/24/14 19:09	56-23-5	
Chlorobenzene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	108-90-7	
Chloroethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-00-3	
Chloroform	ND ug/kg		5.1	2.5	1		06/24/14 19:09	67-66-3	
Chloromethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	74-87-3	
Dibromochloromethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	10061-02-6	
Ethylbenzene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	100-41-4	
2-Hexanone	ND ug/kg		20.3	10.2	1		06/24/14 19:09	591-78-6	
Methylene chloride	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.2	5.1	1		06/24/14 19:09	108-10-1	
Styrene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	79-34-5	
Tetrachloroethene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	127-18-4	
Toluene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.1	2.5	1		06/24/14 19:09	79-00-5	
Trichloroethene	ND ug/kg		5.1	2.5	1		06/24/14 19:09	79-01-6	
Vinyl chloride	ND ug/kg		5.1	2.5	1		06/24/14 19:09	75-01-4	
Xylene (Total)	ND ug/kg		5.1	2.5	1		06/24/14 19:09	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	98 %		80-120		1		06/24/14 19:09	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		06/24/14 19:09	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		75-129		1		06/24/14 19:09	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>10 %</b>		0.50	0.50	1		06/25/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172176

Sample: MW-90 (20.5 FT) - 062014 Lab ID: 60172176002 Collected: 06/23/14 11:45 Received: 06/24/14 01:48 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.1	10.0	1		06/24/14 19:24	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.0	5.0	1		06/24/14 19:24	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		06/24/14 19:24	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		06/24/14 19:24	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	74-87-3	
Dibromochloromethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	100-41-4	
2-Hexanone	ND ug/kg		20.1	10.0	1		06/24/14 19:24	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.0	5.0	1		06/24/14 19:24	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 19:24	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 19:24	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		06/24/14 19:24	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		06/24/14 19:24	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		80-120		1		06/24/14 19:24	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		06/24/14 19:24	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		75-129		1		06/24/14 19:24	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>10.4 %</b>		0.50	0.50	1		06/25/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172176

Sample: MW-88 (12.0 FT) - 062014 Lab ID: 60172176003 Collected: 06/23/14 08:50 Received: 06/24/14 01:48 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		17.6	8.8	1		06/24/14 19:40	67-64-1	
Benzene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	71-43-2	
Bromodichloromethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-27-4	
Bromoform	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-25-2	
Bromomethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.8	4.4	1		06/24/14 19:40	78-93-3	
Carbon disulfide	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-15-0	
Carbon tetrachloride	ND ug/kg		4.4	2.2	1		06/24/14 19:40	56-23-5	
Chlorobenzene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	108-90-7	
Chloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-00-3	
Chloroform	ND ug/kg		4.4	2.2	1		06/24/14 19:40	67-66-3	
Chloromethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	74-87-3	
Dibromochloromethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	10061-02-6	
Ethylbenzene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	100-41-4	
2-Hexanone	ND ug/kg		17.6	8.8	1		06/24/14 19:40	591-78-6	
Methylene chloride	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.8	4.4	1		06/24/14 19:40	108-10-1	
Styrene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	127-18-4	
Toluene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:40	79-00-5	
Trichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:40	79-01-6	
Vinyl chloride	ND ug/kg		4.4	2.2	1		06/24/14 19:40	75-01-4	
Xylene (Total)	ND ug/kg		4.4	2.2	1		06/24/14 19:40	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	97 %		80-120		1		06/24/14 19:40	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		06/24/14 19:40	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		06/24/14 19:40	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	15.2 %		0.50	0.50	1		06/25/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172176

Sample: MW-89 (17.5 FT) - 062014    Lab ID: 60172176004    Collected: 06/23/14 14:00    Received: 06/24/14 01:48    Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		17.6	8.8	1		06/24/14 19:55	67-64-1	
Benzene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	71-43-2	
Bromodichloromethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-27-4	
Bromoform	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-25-2	
Bromomethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.8	4.4	1		06/24/14 19:55	78-93-3	
Carbon disulfide	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-15-0	
Carbon tetrachloride	ND ug/kg		4.4	2.2	1		06/24/14 19:55	56-23-5	
Chlorobenzene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	108-90-7	
Chloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-00-3	
Chloroform	ND ug/kg		4.4	2.2	1		06/24/14 19:55	67-66-3	
Chloromethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	74-87-3	
Dibromochloromethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	10061-02-6	
Ethylbenzene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	100-41-4	
2-Hexanone	ND ug/kg		17.6	8.8	1		06/24/14 19:55	591-78-6	
Methylene chloride	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.8	4.4	1		06/24/14 19:55	108-10-1	
Styrene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	127-18-4	
Toluene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	2.2	1		06/24/14 19:55	79-00-5	
Trichloroethene	ND ug/kg		4.4	2.2	1		06/24/14 19:55	79-01-6	
Vinyl chloride	ND ug/kg		4.4	2.2	1		06/24/14 19:55	75-01-4	
Xylene (Total)	ND ug/kg		4.4	2.2	1		06/24/14 19:55	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	98 %		80-120		1		06/24/14 19:55	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		06/24/14 19:55	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		75-129		1		06/24/14 19:55	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	11.7 %		0.50	0.50	1		06/25/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172176

Sample: TRIP BLANK 01 - 062014 Lab ID: 60172176005 Collected: 06/23/14 08:50 Received: 06/24/14 01:48 Matrix: Solid

*Results reported on a "wet-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.0	10.0	1		06/24/14 20:10	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.0	5.0	1		06/24/14 20:10	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		06/24/14 20:10	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		06/24/14 20:10	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	74-87-3	
Dibromochloromethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	100-41-4	
2-Hexanone	ND ug/kg		20.0	10.0	1		06/24/14 20:10	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.0	5.0	1		06/24/14 20:10	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		06/24/14 20:10	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		06/24/14 20:10	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		06/24/14 20:10	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		06/24/14 20:10	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	97 %		80-120		1		06/24/14 20:10	2037-26-5	
4-Bromofluorobenzene (S)	98 %		76-123		1		06/24/14 20:10	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		75-129		1		06/24/14 20:10	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60172176

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QC Batch:	MSV/62527	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60172176001, 60172176002, 60172176003, 60172176004, 60172176005		

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METHOD BLANK: 1400132                                  Matrix: Solid  
Associated Lab Samples: 60172176001, 60172176002, 60172176003, 60172176004, 60172176005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	06/24/14 17:37	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	06/24/14 17:37	
1,1,2-Trichloroethane	ug/kg	ND	5.0	06/24/14 17:37	
1,1-Dichloroethane	ug/kg	ND	5.0	06/24/14 17:37	
1,1-Dichloroethene	ug/kg	ND	5.0	06/24/14 17:37	
1,2-Dichloroethane	ug/kg	ND	5.0	06/24/14 17:37	
1,2-Dichloropropane	ug/kg	ND	5.0	06/24/14 17:37	
2-Butanone (MEK)	ug/kg	ND	10.0	06/24/14 17:37	
2-Hexanone	ug/kg	ND	20.0	06/24/14 17:37	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	06/24/14 17:37	
Acetone	ug/kg	ND	20.0	06/24/14 17:37	
Benzene	ug/kg	ND	5.0	06/24/14 17:37	
Bromodichloromethane	ug/kg	ND	5.0	06/24/14 17:37	
Bromoform	ug/kg	ND	5.0	06/24/14 17:37	
Bromomethane	ug/kg	ND	5.0	06/24/14 17:37	
Carbon disulfide	ug/kg	ND	5.0	06/24/14 17:37	
Carbon tetrachloride	ug/kg	ND	5.0	06/24/14 17:37	
Chlorobenzene	ug/kg	ND	5.0	06/24/14 17:37	
Chloroethane	ug/kg	ND	5.0	06/24/14 17:37	
Chloroform	ug/kg	ND	5.0	06/24/14 17:37	
Chloromethane	ug/kg	ND	5.0	06/24/14 17:37	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	06/24/14 17:37	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	06/24/14 17:37	
Dibromochloromethane	ug/kg	ND	5.0	06/24/14 17:37	
Ethylbenzene	ug/kg	ND	5.0	06/24/14 17:37	
Methylene chloride	ug/kg	ND	5.0	06/24/14 17:37	
Styrene	ug/kg	ND	5.0	06/24/14 17:37	
Tetrachloroethene	ug/kg	ND	5.0	06/24/14 17:37	
Toluene	ug/kg	ND	5.0	06/24/14 17:37	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	06/24/14 17:37	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	06/24/14 17:37	
Trichloroethene	ug/kg	ND	5.0	06/24/14 17:37	
Vinyl chloride	ug/kg	ND	5.0	06/24/14 17:37	
Xylene (Total)	ug/kg	ND	5.0	06/24/14 17:37	
1,2-Dichloroethane-d4 (S)	%	93	75-129	06/24/14 17:37	
4-Bromofluorobenzene (S)	%	97	76-123	06/24/14 17:37	
Toluene-d8 (S)	%	97	80-120	06/24/14 17:37	

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

## REPORT OF LABORATORY ANALYSIS

## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60172176

LABORATORY CONTROL SAMPLE: 1400133

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	97.6	98	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	93.3	93	73-120	
1,1,2-Trichloroethane	ug/kg	100	92.9	93	76-120	
1,1-Dichloroethane	ug/kg	100	92.9	93	71-120	
1,1-Dichloroethene	ug/kg	100	94.6	95	76-130	
1,2-Dichloroethane	ug/kg	100	94.1	94	78-120	
1,2-Dichloropropane	ug/kg	100	91.8	92	80-120	
2-Butanone (MEK)	ug/kg	500	445	89	55-135	
2-Hexanone	ug/kg	500	473	95	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	450	90	71-128	
Acetone	ug/kg	500	515	103	43-144	
Benzene	ug/kg	100	89.3	89	80-120	
Bromodichloromethane	ug/kg	100	94.1	94	80-120	
Bromoform	ug/kg	100	102	102	75-124	
Bromomethane	ug/kg	100	136	136	38-150	
Carbon disulfide	ug/kg	100	112	112	58-137	
Carbon tetrachloride	ug/kg	100	97.6	98	75-140	
Chlorobenzene	ug/kg	100	97.4	97	80-120	
Chloroethane	ug/kg	100	100	100	65-127	
Chloroform	ug/kg	100	92.2	92	74-120	
Chloromethane	ug/kg	100	115	115	39-138	
cis-1,2-Dichloroethene	ug/kg	100	95.2	95	76-124	
cis-1,3-Dichloropropene	ug/kg	100	90.5	90	82-120	
Dibromochloromethane	ug/kg	100	102	102	80-124	
Ethylbenzene	ug/kg	100	99.4	99	80-120	
Methylene chloride	ug/kg	100	111	111	70-123	
Styrene	ug/kg	100	97.0	97	79-120	
Tetrachloroethene	ug/kg	100	99.6	100	78-128	
Toluene	ug/kg	100	92.7	93	79-120	
trans-1,2-Dichloroethene	ug/kg	100	92.2	92	76-124	
trans-1,3-Dichloropropene	ug/kg	100	97.4	97	80-124	
Trichloroethene	ug/kg	100	90.5	90	80-120	
Vinyl chloride	ug/kg	100	104	104	57-132	
Xylene (Total)	ug/kg	300	289	96	79-120	
1,2-Dichloroethane-d4 (S)	%			97	75-129	
4-Bromofluorobenzene (S)	%			101	76-123	
Toluene-d8 (S)	%			99	80-120	

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
 Pace Project No.: 60172176

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QC Batch:	PMST/9762	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60172176001, 60172176002, 60172176003, 60172176004		

---

METHOD BLANK: 1400483                          Matrix: Solid

Associated Lab Samples: 60172176001, 60172176002, 60172176003, 60172176004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	06/25/14 00:00	

---

SAMPLE DUPLICATE: 1400484

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	60171944001	22.6	23.0	2	20

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## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: FORT SMITH, AR  
Pace Project No.: 60172176

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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/62527

[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.: 60172176

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60172176001	MW-90 (14.5 FT) - 062014	EPA 8260	MSV/62527		
60172176002	MW-90 (20.5 FT) - 062014	EPA 8260	MSV/62527		
60172176003	MW-88 (12.0 FT) - 062014	EPA 8260	MSV/62527		
60172176004	MW-89 (17.5 FT) - 062014	EPA 8260	MSV/62527		
60172176005	TRIP BLANK 01 - 062014	EPA 8260	MSV/62527		
60172176001	MW-90 (14.5 FT) - 062014	ASTM D2974	PMST/9762		
60172176002	MW-90 (20.5 FT) - 062014	ASTM D2974	PMST/9762		
60172176003	MW-88 (12.0 FT) - 062014	ASTM D2974	PMST/9762		
60172176004	MW-89 (17.5 FT) - 062014	ASTM D2974	PMST/9762		

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## Sample Condition Upon Receipt

WO# : 60172176



60172176

Optional

Proj Due Date:

Proj Name:

Client Name: EnvironCourier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  vsaTracking #: \_\_\_\_\_ 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  2P1CThermometer Used: T-239 / T-194Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 2-4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: pv

Chain of Custody present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody filled out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler name & signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples arrived within holding time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Kits</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>1 Day</u>	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
Containers intact:	<input 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 type="checkbox"/> N/A	11.	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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>preservative SL</u>	13.	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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 type="checkbox"/> N/A	14.	
Exceptions: <u>VOA, coliform, TOC, O&amp;G, WI-DRO (water), Phenolics</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): <u>111813-3</u>		15.	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>AR</u>	

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution:

Held per Tamara Gleason pending rush water results in 48hrProject Manager Review: MWDate 6/24/14

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Environ	Report To: Wendy Stonestreet	Copy To: Tamara Gleason	Attention: Tamara Gleason		
Address: 7500 College Blvd., Ste. 925	Purchase Order No.: tgleason@environcorp.com	Pace Quote Reference:	Company Name: ENVIRON	REGULATORY AGENCY	
Overland Park, KS 66210		Pace Project Manager:	Address:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
Email To: wstonestreet@environcorp.com	Project Name: Fort Smith, AR	Pace Profile #:	Pace Profile #: MJ Walls	<input type="checkbox"/> UST	<input type="checkbox"/> DRINKING WATER
Phone: 913-563-5926	Project Number: 3433233A	Site Location:	STATE: AR	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Requested Due Date/TAT: 1 - Day	TAT	Residual Chlorine (Y/N)			
10/17/07					
Requested Analysis Filtered (Y/N)					
Analysis Test					
Y/N					
#	SAMPLE ID (A-Z, 0-9, -,) Sample IDs MUST BE UNIQUE	COLLECTED		Preservatives	
		Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WT PRODUCT P SOLID SL OIL OL WINE WP AIR AR OTHER OT TISSUE TS	COMPOSITE START	COMPOSITE END/GRAB	NaOH
ITEM	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	# OF CONTAINERS	SAMPLE TEMP AT COLLECTION	Pace Project No./ Lab I.D.
1	MW-90 (14.5 FT)-062014	5L	6	10/19/120	20170118084
2	MW-90 (30.5 FT)-062014	1	1	1145	✓
3	MW-88 (12.0 FT)-062014	1	1	0850	✓
4	MW-89 (17.5 FT)-062014	1	1	1400	✓
5	TRIP BLANK 01 -062014	1	2	20/99	✓
6				✓	✓
7					
8					
9					
10					
11					
12	ADDITIONAL COMMENTS	REINQUISITION BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
1 - Day TAT	ENVIRON 10/17/07	10/19/07	1/24	048 2-4 Y Y Y	
SAMPLE NAME AND SIGNATURE		PRINT NAME OF SAMPLER: Nich Zuercher			
		SIGNATURE OF SAMPLER: 			
Temp in °C Received on _____ Custody Sealed Cooler (Y/N)		Samples intact (Y/N)			

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

July 17, 2014

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

RE: Project: FORT SMITH, AR  
Pace Project No.: 60172280

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on June 25, 2014. 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.

Amended report revised to correct for reporting TCE sample 60172280010.

Amended report, REV-2 on 7/16/14, to add additional sample testing per the clients request.

Amended report, REV-3 on 7/17/14, to add additional sample testing per the clients requests.

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

Sincerely,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: FORT SMITH, AR  
Pace Project No.: 60172280

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60172280001	MW-87 (4.5 FT) - 062014	Solid	06/24/14 07:40	06/25/14 08:15
60172280002	MW-87 (15.0 FT) - 062014	Solid	06/24/14 07:55	06/25/14 08:15
60172280003	MW-91 (12.5 FT) - 062014	Solid	06/24/14 09:56	06/25/14 08:15
60172280004	DP-23 (4.5 FT) - 062014	Solid	06/24/14 13:20	06/25/14 08:15
60172280005	DP-23 (10.0 FT) - 062014	Solid	06/24/14 13:35	06/25/14 08:15
60172280006	DP-23 (15.0 FT) - 062014	Solid	06/24/14 13:40	06/25/14 08:15
60172280007	DP-23 (17.5 FT) - 062014	Solid	06/24/14 13:55	06/25/14 08:15
60172280008	DP-23 (20.5 FT) - 062014	Solid	06/24/14 14:10	06/25/14 08:15
60172280009	DP-28 (4.5 FT) - 062014	Solid	06/24/14 14:50	06/25/14 08:15
60172280010	DP-28 (7.5 FT) - 062014	Solid	06/24/14 15:00	06/25/14 08:15
60172280011	DP-28 (12.0 FT) - 062014	Solid	06/24/14 15:10	06/25/14 08:15
60172280012	DP-28 (17.0 FT) - 062014	Solid	06/24/14 15:20	06/25/14 08:15
60172280013	DP-28 (20.5 FT) - 062015	Solid	06/24/14 15:40	06/25/14 08:15
60172280014	DP-28 (26.5 FT) - 062014	Solid	06/24/14 15:50	06/25/14 08:15
60172280015	TRIP BLANK 02 - 062014	Solid	06/24/14 07:40	06/25/14 08:15

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## SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR  
Pace Project No.: 60172280

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60172280001	<b>MW-87 (4.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280002	<b>MW-87 (15.0 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280003	<b>MW-91 (12.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280004	<b>DP-23 (4.5 FT) - 062014</b>	EPA 8260	JKL	37
60172280005	<b>DP-23 (10.0 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280006	<b>DP-23 (15.0 FT) - 062014</b>	EPA 8260	JKL	37
60172280008	<b>DP-23 (20.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280009	<b>DP-28 (4.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280010	<b>DP-28 (7.5 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280011	<b>DP-28 (12.0 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280012	<b>DP-28 (17.0 FT) - 062014</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60172280013	<b>DP-28 (20.5 FT) - 062015</b>	EPA 8260	JKL	37
		ASTM D2974	DWC	1

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## PROJECT NARRATIVE

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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**Method:** **EPA 8260**  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** July 17, 2014

### General Information:

12 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### Hold Time:

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

H1: Analysis conducted outside the EPA method holding time.

- MW-87 (15.0 FT) - 062014 (Lab ID: 60172280002)
- MW-87 (4.5 FT) - 062014 (Lab ID: 60172280001)
- MW-91 (12.5 FT) - 062014 (Lab ID: 60172280003)

### 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/62575

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

QC Batch: MSV/62603

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

QC Batch: MSV/62998

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

### Additional Comments:

Sample Comments:

Analyzed outside of holding time per the clients request.

- MW-87 (4.5 FT) - 062014 (Lab ID: 60172280001)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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**Method:** EPA 8260

**Description:** 8260 MSV 5035A VOA

**Client:** Environ\_AR

**Date:** July 17, 2014

### Sample Comments:

Analyzed outside of holding time per the clients request.

- MW-87 (15.0 FT) - 062014 (Lab ID: 60172280002)

Analysis performed outside of holding time per the clients request.

- DP-23 (4.5 FT) - 062014 (Lab ID: 60172280004)
- DP-23 (15.0 FT) - 062014 (Lab ID: 60172280006)
- DP-28 (4.5 FT) - 062014 (Lab ID: 60172280009)
- DP-28 (12.0 FT) - 062014 (Lab ID: 60172280011)
- DP-28 (17.0 FT) - 062014 (Lab ID: 60172280012)

### Analyte Comments:

QC Batch: MSV/62575

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

- DP-23 (10.0 FT) - 062014 (Lab ID: 60172280005)
  - Vinyl chloride
- DP-28 (7.5 FT) - 062014 (Lab ID: 60172280010)
  - Vinyl chloride

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.: 60172280

Sample: MW-87 (4.5 FT) - 062014 Lab ID: 60172280001 Collected: 06/24/14 07:40 Received: 06/25/14 08:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Comments: • Analyzed outside of holding time per the clients request.

Parameters	Results	Units	Limit	Report MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	25.9 ug/kg		17.7	8.8	1		07/15/14 18:19	67-64-1	H1
Benzene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	71-43-2	H1
Bromodichloromethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-27-4	H1
Bromoform	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-25-2	H1
Bromomethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	74-83-9	H1
2-Butanone (MEK)	ND ug/kg		8.8	4.4	1		07/15/14 18:19	78-93-3	H1
Carbon disulfide	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-15-0	H1
Carbon tetrachloride	ND ug/kg		4.4	2.2	1		07/15/14 18:19	56-23-5	H1
Chlorobenzene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	108-90-7	H1
Chloroethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-00-3	H1
Chloroform	ND ug/kg		4.4	2.2	1		07/15/14 18:19	67-66-3	H1
Chloromethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	74-87-3	H1
Dibromochloromethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	124-48-1	H1
1,1-Dichloroethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-34-3	H1
1,2-Dichloroethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	107-06-2	H1
1,1-Dichloroethene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-35-4	H1
cis-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	156-59-2	H1
trans-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	156-60-5	H1
1,2-Dichloropropane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	78-87-5	H1
cis-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	10061-01-5	H1
trans-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	10061-02-6	H1
Ethylbenzene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	100-41-4	H1
2-Hexanone	ND ug/kg		17.7	8.8	1		07/15/14 18:19	591-78-6	H1
Methylene chloride	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-09-2	H1
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.8	4.4	1		07/15/14 18:19	108-10-1	H1
Styrene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	100-42-5	H1
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	79-34-5	H1
Tetrachloroethene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	127-18-4	H1
Toluene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	108-88-3	H1
1,1,1-Trichloroethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	71-55-6	H1
1,1,2-Trichloroethane	ND ug/kg		4.4	2.2	1		07/15/14 18:19	79-00-5	H1
Trichloroethene	ND ug/kg		4.4	2.2	1		07/15/14 18:19	79-01-6	H1
Vinyl chloride	ND ug/kg		4.4	2.2	1		07/15/14 18:19	75-01-4	H1
Xylene (Total)	ND ug/kg		4.4	2.2	1		07/15/14 18:19	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	103 %		80-120		1		07/15/14 18:19	2037-26-5	
4-Bromofluorobenzene (S)	104 %		76-123		1		07/15/14 18:19	460-00-4	
1,2-Dichloroethane-d4 (S)	114 %		75-129		1		07/15/14 18:19	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	11.7 %		0.50	0.50	1		07/16/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172280

Sample: MW-87 (15.0 FT) - 062014 Lab ID: 60172280002 Collected: 06/24/14 07:55 Received: 06/25/14 08:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Comments: • Analyzed outside of holding time per the clients request.

Parameters	Results	Units	Limit	Report MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		16.9	8.4	1		07/15/14 18:34	67-64-1	H1
Benzene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	71-43-2	H1
Bromodichloromethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-27-4	H1
Bromoform	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-25-2	H1
Bromomethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	74-83-9	H1
2-Butanone (MEK)	ND ug/kg		8.4	4.2	1		07/15/14 18:34	78-93-3	H1
Carbon disulfide	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-15-0	H1
Carbon tetrachloride	ND ug/kg		4.2	2.1	1		07/15/14 18:34	56-23-5	H1
Chlorobenzene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	108-90-7	H1
Chloroethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-00-3	H1
Chloroform	ND ug/kg		4.2	2.1	1		07/15/14 18:34	67-66-3	H1
Chloromethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	74-87-3	H1
Dibromochloromethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	124-48-1	H1
1,1-Dichloroethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-34-3	H1
1,2-Dichloroethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	107-06-2	H1
1,1-Dichloroethene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-35-4	H1
cis-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	156-59-2	H1
trans-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	156-60-5	H1
1,2-Dichloropropane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	78-87-5	H1
cis-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	10061-01-5	H1
trans-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	10061-02-6	H1
Ethylbenzene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	100-41-4	H1
2-Hexanone	ND ug/kg		16.9	8.4	1		07/15/14 18:34	591-78-6	H1
Methylene chloride	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-09-2	H1
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.4	4.2	1		07/15/14 18:34	108-10-1	H1
Styrene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	100-42-5	H1
1,1,2,2-Tetrachloroethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	79-34-5	H1
Tetrachloroethene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	127-18-4	H1
Toluene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	108-88-3	H1
1,1,1-Trichloroethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	71-55-6	H1
1,1,2-Trichloroethane	ND ug/kg		4.2	2.1	1		07/15/14 18:34	79-00-5	H1
Trichloroethene	ND ug/kg		4.2	2.1	1		07/15/14 18:34	79-01-6	H1
Vinyl chloride	ND ug/kg		4.2	2.1	1		07/15/14 18:34	75-01-4	H1
Xylene (Total)	ND ug/kg		4.2	2.1	1		07/15/14 18:34	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		07/15/14 18:34	2037-26-5	
4-Bromofluorobenzene (S)	104 %		76-123		1		07/15/14 18:34	460-00-4	
1,2-Dichloroethane-d4 (S)	118 %		75-129		1		07/15/14 18:34	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	14.3 %		0.50	0.50	1		07/16/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60172280

Sample: MW-91 (12.5 FT) - 062014 Lab ID: 60172280003 Collected: 06/24/14 09:56 Received: 06/25/14 08:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	18.8 ug/kg		18.6	9.3	1		07/15/14 18:49	67-64-1	H1
Benzene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	71-43-2	H1
Bromodichloromethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-27-4	H1
Bromoform	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-25-2	H1
Bromomethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	74-83-9	H1
2-Butanone (MEK)	ND ug/kg		9.3	4.7	1		07/15/14 18:49	78-93-3	H1
Carbon disulfide	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-15-0	H1
Carbon tetrachloride	ND ug/kg		4.7	2.3	1		07/15/14 18:49	56-23-5	H1
Chlorobenzene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	108-90-7	H1
Chloroethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-00-3	H1
Chloroform	ND ug/kg		4.7	2.3	1		07/15/14 18:49	67-66-3	H1
Chloromethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	74-87-3	H1
Dibromochloromethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	124-48-1	H1
1,1-Dichloroethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-34-3	H1
1,2-Dichloroethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	107-06-2	H1
1,1-Dichloroethene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-35-4	H1
cis-1,2-Dichloroethene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	156-59-2	H1
trans-1,2-Dichloroethene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	156-60-5	H1
1,2-Dichloropropane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	78-87-5	H1
cis-1,3-Dichloropropene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	10061-01-5	H1
trans-1,3-Dichloropropene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	10061-02-6	H1
Ethylbenzene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	100-41-4	H1
2-Hexanone	ND ug/kg		18.6	9.3	1		07/15/14 18:49	591-78-6	H1
Methylene chloride	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-09-2	H1
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.3	4.7	1		07/15/14 18:49	108-10-1	H1
Styrene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	100-42-5	H1
1,1,2,2-Tetrachloroethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	79-34-5	H1
Tetrachloroethene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	127-18-4	H1
Toluene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	108-88-3	H1
1,1,1-Trichloroethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	71-55-6	H1
1,1,2-Trichloroethane	ND ug/kg		4.7	2.3	1		07/15/14 18:49	79-00-5	H1
Trichloroethene	ND ug/kg		4.7	2.3	1		07/15/14 18:49	79-01-6	H1
Vinyl chloride	ND ug/kg		4.7	2.3	1		07/15/14 18:49	75-01-4	H1
Xylene (Total)	ND ug/kg		4.7	2.3	1		07/15/14 18:49	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		07/15/14 18:49	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		07/15/14 18:49	460-00-4	
1,2-Dichloroethane-d4 (S)	115 %		75-129		1		07/15/14 18:49	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	13.5 %		0.50	0.50	1		07/16/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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QC Batch:	MSV/62575	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60172280004, 60172280005, 60172280006, 60172280008, 60172280009, 60172280010, 60172280011, 60172280012, 60172280013		

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METHOD BLANK:	1400840	Matrix:	Solid
Associated Lab Samples:	60172280004, 60172280005, 60172280006, 60172280008, 60172280009, 60172280010, 60172280011, 60172280012, 60172280013		

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	06/25/14 16:48	
1,1,2-Tetrachloroethane	ug/kg	ND	5.0	06/25/14 16:48	
1,1,2-Trichloroethane	ug/kg	ND	5.0	06/25/14 16:48	
1,1-Dichloroethane	ug/kg	ND	5.0	06/25/14 16:48	
1,1-Dichloroethene	ug/kg	ND	5.0	06/25/14 16:48	
1,2-Dichloroethane	ug/kg	ND	5.0	06/25/14 16:48	
1,2-Dichloropropane	ug/kg	ND	5.0	06/25/14 16:48	
2-Butanone (MEK)	ug/kg	ND	10.0	06/25/14 16:48	
2-Hexanone	ug/kg	ND	20.0	06/25/14 16:48	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	06/25/14 16:48	
Acetone	ug/kg	ND	20.0	06/25/14 16:48	
Benzene	ug/kg	ND	5.0	06/25/14 16:48	
Bromodichloromethane	ug/kg	ND	5.0	06/25/14 16:48	
Bromoform	ug/kg	ND	5.0	06/25/14 16:48	
Bromomethane	ug/kg	2.7J	5.0	06/25/14 16:48	
Carbon disulfide	ug/kg	ND	5.0	06/25/14 16:48	
Carbon tetrachloride	ug/kg	ND	5.0	06/25/14 16:48	
Chlorobenzene	ug/kg	ND	5.0	06/25/14 16:48	
Chloroethane	ug/kg	ND	5.0	06/25/14 16:48	
Chloroform	ug/kg	ND	5.0	06/25/14 16:48	
Chloromethane	ug/kg	ND	5.0	06/25/14 16:48	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	06/25/14 16:48	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	06/25/14 16:48	
Dibromochloromethane	ug/kg	ND	5.0	06/25/14 16:48	
Ethylbenzene	ug/kg	ND	5.0	06/25/14 16:48	
Methylene chloride	ug/kg	ND	5.0	06/25/14 16:48	
Styrene	ug/kg	ND	5.0	06/25/14 16:48	
Tetrachloroethene	ug/kg	ND	5.0	06/25/14 16:48	
Toluene	ug/kg	ND	5.0	06/25/14 16:48	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	06/25/14 16:48	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	06/25/14 16:48	
Vinyl chloride	ug/kg	ND	5.0	06/25/14 16:48	
Xylene (Total)	ug/kg	ND	5.0	06/25/14 16:48	
1,2-Dichloroethane-d4 (S)	%	99	75-129	06/25/14 16:48	
4-Bromofluorobenzene (S)	%	99	76-123	06/25/14 16:48	
Toluene-d8 (S)	%	100	80-120	06/25/14 16:48	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60172280

LABORATORY CONTROL SAMPLE: 1400841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	87.5	88	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	90.4	90	73-120	
1,1,2-Trichloroethane	ug/kg	100	90.0	90	76-120	
1,1-Dichloroethane	ug/kg	100	86.5	87	71-120	
1,1-Dichloroethene	ug/kg	100	85.8	86	76-130	
1,2-Dichloroethane	ug/kg	100	89.2	89	78-120	
1,2-Dichloropropane	ug/kg	100	86.4	86	80-120	
2-Butanone (MEK)	ug/kg	500	402	80	55-135	
2-Hexanone	ug/kg	500	446	89	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	411	82	71-128	
Acetone	ug/kg	500	466	93	43-144	
Benzene	ug/kg	100	86.2	86	80-120	
Bromodichloromethane	ug/kg	100	90.4	90	80-120	
Bromoform	ug/kg	100	98.3	98	75-124	
Bromomethane	ug/kg	100	128	128	38-150	
Carbon disulfide	ug/kg	100	103	103	58-137	
Carbon tetrachloride	ug/kg	100	87.9	88	75-140	
Chlorobenzene	ug/kg	100	90.4	90	80-120	
Chloroethane	ug/kg	100	93.8	94	65-127	
Chloroform	ug/kg	100	86.0	86	74-120	
Chloromethane	ug/kg	100	105	105	39-138	
cis-1,2-Dichloroethene	ug/kg	100	89.7	90	76-124	
cis-1,3-Dichloropropene	ug/kg	100	84.1	84	82-120	
Dibromochloromethane	ug/kg	100	93.6	94	80-124	
Ethylbenzene	ug/kg	100	89.0	89	80-120	
Methylene chloride	ug/kg	100	94.5	94	70-123	
Styrene	ug/kg	100	88.6	89	79-120	
Tetrachloroethene	ug/kg	100	91.9	92	78-128	
Toluene	ug/kg	100	84.2	84	79-120	
trans-1,2-Dichloroethene	ug/kg	100	86.8	87	76-124	
trans-1,3-Dichloropropene	ug/kg	100	91.5	92	80-124	
Vinyl chloride	ug/kg	100	96.1	96	57-132	
Xylene (Total)	ug/kg	300	268	89	79-120	
1,2-Dichloroethane-d4 (S)	%			98	75-129	
4-Bromofluorobenzene (S)	%			98	76-123	
Toluene-d8 (S)	%			96	80-120	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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QC Batch:	MSV/62603	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60172280004, 60172280005, 60172280006, 60172280008, 60172280009, 60172280010, 60172280011, 60172280012, 60172280013		

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METHOD BLANK:	1401487	Matrix:	Solid
Associated Lab Samples:	60172280004, 60172280005, 60172280006, 60172280008, 60172280009, 60172280010, 60172280011, 60172280012, 60172280013		

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	ND	5.0	06/26/14 22:29	
Methylene chloride	ug/kg	ND	5.0	06/26/14 22:29	
Trichloroethene	ug/kg	ND	5.0	06/26/14 22:29	
Vinyl chloride	ug/kg	ND	5.0	06/26/14 22:29	
1,2-Dichloroethane-d4 (S)	%	97	75-129	06/26/14 22:29	
4-Bromofluorobenzene (S)	%	97	76-123	06/26/14 22:29	
Toluene-d8 (S)	%	100	80-120	06/26/14 22:29	

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LABORATORY CONTROL SAMPLE: 1401488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	100	92.7	93	76-124	
Methylene chloride	ug/kg	100	113	113	70-123	
Trichloroethene	ug/kg	100	90.9	91	80-120	
Vinyl chloride	ug/kg	100	92.7	93	57-132	
1,2-Dichloroethane-d4 (S)	%			102	75-129	
4-Bromofluorobenzene (S)	%			100	76-123	
Toluene-d8 (S)	%			100	80-120	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60172280

QC Batch:	MSV/62998	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60172280001, 60172280002, 60172280003		

METHOD BLANK: 1410713                          Matrix: Solid

Associated Lab Samples: 60172280001, 60172280002, 60172280003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	07/15/14 18:03	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	07/15/14 18:03	
1,1,2-Trichloroethane	ug/kg	ND	5.0	07/15/14 18:03	
1,1-Dichloroethane	ug/kg	ND	5.0	07/15/14 18:03	
1,1-Dichloroethene	ug/kg	ND	5.0	07/15/14 18:03	
1,2-Dichloroethane	ug/kg	ND	5.0	07/15/14 18:03	
1,2-Dichloropropane	ug/kg	ND	5.0	07/15/14 18:03	
2-Butanone (MEK)	ug/kg	ND	10.0	07/15/14 18:03	
2-Hexanone	ug/kg	ND	20.0	07/15/14 18:03	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	07/15/14 18:03	
Acetone	ug/kg	ND	20.0	07/15/14 18:03	
Benzene	ug/kg	ND	5.0	07/15/14 18:03	
Bromodichloromethane	ug/kg	ND	5.0	07/15/14 18:03	
Bromoform	ug/kg	ND	5.0	07/15/14 18:03	
Bromomethane	ug/kg	ND	5.0	07/15/14 18:03	
Carbon disulfide	ug/kg	ND	5.0	07/15/14 18:03	
Carbon tetrachloride	ug/kg	ND	5.0	07/15/14 18:03	
Chlorobenzene	ug/kg	ND	5.0	07/15/14 18:03	
Chloroethane	ug/kg	ND	5.0	07/15/14 18:03	
Chloroform	ug/kg	ND	5.0	07/15/14 18:03	
Chloromethane	ug/kg	ND	5.0	07/15/14 18:03	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	07/15/14 18:03	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	07/15/14 18:03	
Dibromochloromethane	ug/kg	ND	5.0	07/15/14 18:03	
Ethylbenzene	ug/kg	ND	5.0	07/15/14 18:03	
Methylene chloride	ug/kg	ND	5.0	07/15/14 18:03	
Styrene	ug/kg	ND	5.0	07/15/14 18:03	
Tetrachloroethene	ug/kg	ND	5.0	07/15/14 18:03	
Toluene	ug/kg	ND	5.0	07/15/14 18:03	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	07/15/14 18:03	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	07/15/14 18:03	
Trichloroethene	ug/kg	ND	5.0	07/15/14 18:03	
Vinyl chloride	ug/kg	ND	5.0	07/15/14 18:03	
Xylene (Total)	ug/kg	ND	5.0	07/15/14 18:03	
1,2-Dichloroethane-d4 (S)	%	102	75-129	07/15/14 18:03	
4-Bromofluorobenzene (S)	%	100	76-123	07/15/14 18:03	
Toluene-d8 (S)	%	99	80-120	07/15/14 18:03	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60172280

LABORATORY CONTROL SAMPLE: 1410714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	94.2	94	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	90.0	90	73-120	
1,1,2-Trichloroethane	ug/kg	100	88.6	89	76-120	
1,1-Dichloroethane	ug/kg	100	89.7	90	71-120	
1,1-Dichloroethene	ug/kg	100	89.4	89	76-130	
1,2-Dichloroethane	ug/kg	100	94.7	95	78-120	
1,2-Dichloropropane	ug/kg	100	89.6	90	80-120	
2-Butanone (MEK)	ug/kg	500	466	93	55-135	
2-Hexanone	ug/kg	500	473	95	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	483	97	71-128	
Acetone	ug/kg	500	458	92	43-144	
Benzene	ug/kg	100	89.3	89	80-120	
Bromodichloromethane	ug/kg	100	93.6	94	80-120	
Bromoform	ug/kg	100	96.3	96	75-124	
Bromomethane	ug/kg	100	105	105	38-150	
Carbon disulfide	ug/kg	100	100	100	58-137	
Carbon tetrachloride	ug/kg	100	92.6	93	75-140	
Chlorobenzene	ug/kg	100	87.1	87	80-120	
Chloroethane	ug/kg	100	96.4	96	65-127	
Chloroform	ug/kg	100	93.5	94	74-120	
Chloromethane	ug/kg	100	111	111	39-138	
cis-1,2-Dichloroethene	ug/kg	100	85.0	85	76-124	
cis-1,3-Dichloropropene	ug/kg	100	92.4	92	82-120	
Dibromochloromethane	ug/kg	100	92.8	93	80-124	
Ethylbenzene	ug/kg	100	87.8	88	80-120	
Methylene chloride	ug/kg	100	83.9	84	70-123	
Styrene	ug/kg	100	89.3	89	79-120	
Tetrachloroethene	ug/kg	100	84.9	85	78-128	
Toluene	ug/kg	100	87.9	88	79-120	
trans-1,2-Dichloroethene	ug/kg	100	87.3	87	76-124	
trans-1,3-Dichloropropene	ug/kg	100	89.7	90	80-124	
Trichloroethene	ug/kg	100	88.6	89	80-120	
Vinyl chloride	ug/kg	100	97.6	98	57-132	
Xylene (Total)	ug/kg	300	261	87	79-120	
1,2-Dichloroethane-d4 (S)	%			100	75-129	
4-Bromofluorobenzene (S)	%			99	76-123	
Toluene-d8 (S)	%			101	80-120	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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QC Batch:	PMST/9764	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60172280004, 60172280005, 60172280006, 60172280008, 60172280009, 60172280010		

---

METHOD BLANK: 1400860	Matrix: Solid
Associated Lab Samples:	60172280004, 60172280005, 60172280006, 60172280008, 60172280009, 60172280010

---

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	06/25/14 00:00	

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SAMPLE DUPLICATE: 1400861

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7516259001	14.1			

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60172280

QC Batch: PMST/9766 Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60172280011, 60172280012, 60172280013

METHOD BLANK: 1401289 Matrix: Solid

Associated Lab Samples: 60172280011, 60172280012, 60172280013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	06/26/14 00:00	

SAMPLE DUPLICATE: 1401290

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.0	17.4	2	20	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60172280

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QC Batch:	PMST/9831	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60172280001, 60172280002, 60172280003		

---

METHOD BLANK: 1411285                          Matrix: Solid

Associated Lab Samples: 60172280001, 60172280002, 60172280003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	07/16/14 00:00	

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SAMPLE DUPLICATE: 1411286

Parameter	Units	60172280001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.7	11.6	1	20	

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## QUALIFIERS

Project: FORT SMITH, AR

Pace Project No.: 60172280

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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/62575

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

Batch: MSV/62603

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

Batch: MSV/62998

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

### ANALYTE QUALIFIERS

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

H1 Analysis conducted outside the EPA method holding time.

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: FORT SMITH, AR  
Pace Project No.: 60172280

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60172280001	MW-87 (4.5 FT) - 062014	EPA 8260	MSV/62998		
60172280002	MW-87 (15.0 FT) - 062014	EPA 8260	MSV/62998		
60172280003	MW-91 (12.5 FT) - 062014	EPA 8260	MSV/62998		
60172280004	DP-23 (4.5 FT) - 062014	EPA 8260	MSV/62575		
60172280004	DP-23 (4.5 FT) - 062014	EPA 8260	MSV/62603		
60172280005	DP-23 (10.0 FT) - 062014	EPA 8260	MSV/62575		
60172280005	DP-23 (10.0 FT) - 062014	EPA 8260	MSV/62603		
60172280006	DP-23 (15.0 FT) - 062014	EPA 8260	MSV/62575		
60172280006	DP-23 (15.0 FT) - 062014	EPA 8260	MSV/62603		
60172280008	DP-23 (20.5 FT) - 062014	EPA 8260	MSV/62575		
60172280008	DP-23 (20.5 FT) - 062014	EPA 8260	MSV/62603		
60172280009	DP-28 (4.5 FT) - 062014	EPA 8260	MSV/62575		
60172280009	DP-28 (4.5 FT) - 062014	EPA 8260	MSV/62603		
60172280010	DP-28 (7.5 FT) - 062014	EPA 8260	MSV/62575		
60172280010	DP-28 (7.5 FT) - 062014	EPA 8260	MSV/62603		
60172280011	DP-28 (12.0 FT) - 062014	EPA 8260	MSV/62575		
60172280011	DP-28 (12.0 FT) - 062014	EPA 8260	MSV/62603		
60172280012	DP-28 (17.0 FT) - 062014	EPA 8260	MSV/62575		
60172280012	DP-28 (17.0 FT) - 062014	EPA 8260	MSV/62603		
60172280013	DP-28 (20.5 FT) - 062015	EPA 8260	MSV/62575		
60172280013	DP-28 (20.5 FT) - 062015	EPA 8260	MSV/62603		
60172280001	MW-87 (4.5 FT) - 062014	ASTM D2974	PMST/9831		
60172280002	MW-87 (15.0 FT) - 062014	ASTM D2974	PMST/9831		
60172280003	MW-91 (12.5 FT) - 062014	ASTM D2974	PMST/9831		
60172280005	DP-23 (10.0 FT) - 062014	ASTM D2974	PMST/9764		
60172280008	DP-23 (20.5 FT) - 062014	ASTM D2974	PMST/9764		
60172280009	DP-28 (4.5 FT) - 062014	ASTM D2974	PMST/9764		
60172280010	DP-28 (7.5 FT) - 062014	ASTM D2974	PMST/9764		
60172280011	DP-28 (12.0 FT) - 062014	ASTM D2974	PMST/9766		
60172280012	DP-28 (17.0 FT) - 062014	ASTM D2974	PMST/9766		
60172280013	DP-28 (20.5 FT) - 062015	ASTM D2974	PMST/9766		

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## Sample Condition Upon Receipt

WO# : 60172280



60172280

Optional
Proj Due Date:
Proj Name:

Client Name: EnvironCourier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other Tracking #: B043 8677 0990Pace Shipping Label Used? Yes  No *Knight*Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other Thermometer Used: T-239 / T-194Type of Ice:  Wet  Blue  None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 2.4Date and initials of person examining  
contents: JHS 9/25/14 935

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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>3 day TAT</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 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>soil</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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>MW</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>111813-3</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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>Ft Smith, AR</u>

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: a for MJWDate: 10/25

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Environ	Report To: Wendy Stonestreet	Copy To: Tamara Gleason	Attention: Tamara Gleason		
Address: 7500 College Blvd., Ste. 925 Overland Park, KS 66210	Purchase Order No.:	Email To: wstonestreet@environcorp.com	Company Name: Enviro	REGULATORY AGENCY	
Phone: 913-563-5926 Fax: Requested Due Date/TAT: 3 - Day TAT	Project Name: Fort Smith, AR	Project Number: 3433233A	Address:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
			Pace Quote Reference:	<input type="checkbox"/> UST	<input type="checkbox"/> OTHER
			Pace Project Manager:	<input type="checkbox"/> RORA	
			Pace Profile #: 7444, line 1	Site Location STATE:	AR
				Residual Chlorine (Y/N)	
				(60/170)	
Requested Analysis Filtered (Y/N)					
ITEM #	SAMPLE ID (A-Z, 0-9, -, Sample IDs MUST BE UNIQUE)	COLLECTED		Preservatives	
		DATE	TIME	DATE	TIME
1	MW-87(11.5 FT) -06/20/14	SLC	6/24/14 0740	5	X
2	MW-87 (15.0 FT) -06/20/14		0755		
3	MW-91 (12.5 FT) -06/20/14		0950		
4	DP-23 (4.5 FT) -06/20/14		1320		
5	DP-23 (10.0 FT) -06/20/14		1335		
6	DP-23 (15.0 FT) -06/20/14		1340		
7	DP-23 (17.5 FT) -06/20/14		1355		
8	DP-23 (20.5 FT) -06/20/14		1410		
9	DP-28 (4.5 FT) -06/20/14		1450		
10	DP-28 (7.5 FT) -06/20/14		1500		
11	DP-28 (12.0 FT) -06/20/14		1510		
12	DP-28 (17.0 FT) -06/20/14		1520		
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME
3-Day TAT		Enviro		6/25/14 0150	24
See samples for hold					
ACCEPTED BY / AFFILIATION					
PRINT NAME OF SAMPLER: Nick Surveiller		DATE: 6/21/14		SAMPLE CONDITIONS	
SIGNATURE OF SAMPLER:		DATE Signed (MM/DD/YY):			
SAMPLE NAME AND SIGNATURE					
Temp in °C					
Received on _____					
Custody Sealed (Y/N)					
Samples intact (Y/N)					

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



June 26, 2014

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

RE: Project: FORT SMITH, AR  
Pace Project No.: 60172300

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on June 25, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation  
Wayne Weber, Environ



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORT SMITH, AR  
Pace Project No.: 60172300

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
Illinois Certification #: 003097  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-13-4  
Utah Certification #: KS000212013-3  
Illinois Certification #: 003097

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## SAMPLE SUMMARY

Project: FORT SMITH, AR  
Pace Project No.: 60172300

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60172300001	20140624-GW-MW-88	Water	06/24/14 14:20	06/25/14 08:15
60172300002	20140624-GW-MW-89	Water	06/24/14 16:40	06/25/14 08:15
60172300003	TRIP BLANK-GW-01	Water	06/24/14 08:00	06/25/14 08:15

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## SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR  
Pace Project No.: 60172300

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60172300001	20140624-GW-MW-88	EPA 5030B/8260	PRG	38
60172300002	20140624-GW-MW-89	EPA 5030B/8260	PRG	38
60172300003	TRIP BLANK-GW-01	EPA 5030B/8260	PRG	38

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## PROJECT NARRATIVE

Project: FORT SMITH, AR  
Pace Project No.: 60172300

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**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** Environ\_AR

**Date:** June 26, 2014

### **General Information:**

3 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **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/62580

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.: 60172300

Sample: 20140624-GW-MW-88 Lab ID: 60172300001 Collected: 06/24/14 14:20 Received: 06/25/14 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Acetone	ND ug/L		10.0	5.0	1		06/26/14 10:16	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/26/14 10:16	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/26/14 10:16	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/26/14 10:16	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/26/14 10:16	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/26/14 10:16	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		06/26/14 10:16	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/26/14 10:16	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/26/14 10:16	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/26/14 10:16	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		06/26/14 10:16	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/26/14 10:16	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/26/14 10:16	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		06/26/14 10:16	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:16	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:16	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:16	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:16	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/26/14 10:16	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/26/14 10:16	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/26/14 10:16	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/26/14 10:16	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/26/14 10:16	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/26/14 10:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/26/14 10:16	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/26/14 10:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/26/14 10:16	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:16	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/26/14 10:16	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:16	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:16	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:16	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/26/14 10:16	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/26/14 10:16	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		80-120		1		06/26/14 10:16	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		80-120		1		06/26/14 10:16	17060-07-0	
Toluene-d8 (S)	98 %		80-120		1		06/26/14 10:16	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		06/26/14 10:16		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60172300

Sample: 20140624-GW-MW-89 Lab ID: 60172300002 Collected: 06/24/14 16:40 Received: 06/25/14 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Acetone	ND ug/L		10.0	5.0	1		06/26/14 10:31	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/26/14 10:31	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/26/14 10:31	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/26/14 10:31	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/26/14 10:31	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/26/14 10:31	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		06/26/14 10:31	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/26/14 10:31	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/26/14 10:31	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/26/14 10:31	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		06/26/14 10:31	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/26/14 10:31	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/26/14 10:31	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		06/26/14 10:31	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:31	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:31	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:31	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:31	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/26/14 10:31	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/26/14 10:31	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/26/14 10:31	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/26/14 10:31	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/26/14 10:31	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/26/14 10:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/26/14 10:31	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/26/14 10:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/26/14 10:31	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:31	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/26/14 10:31	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:31	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:31	79-00-5	
Trichloroethene	19.5 ug/L		5.0	0.50	1		06/26/14 10:31	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/26/14 10:31	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/26/14 10:31	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95 %		80-120		1		06/26/14 10:31	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		80-120		1		06/26/14 10:31	17060-07-0	
Toluene-d8 (S)	95 %		80-120		1		06/26/14 10:31	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		06/26/14 10:31		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60172300

Sample: TRIP BLANK-GW-01	Lab ID: 60172300003	Collected: 06/24/14 08:00	Received: 06/25/14 08:15	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		06/26/14 10:02	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/26/14 10:02	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/26/14 10:02	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/26/14 10:02	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/26/14 10:02	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/26/14 10:02	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		06/26/14 10:02	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/26/14 10:02	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/26/14 10:02	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/26/14 10:02	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		06/26/14 10:02	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/26/14 10:02	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/26/14 10:02	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		06/26/14 10:02	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:02	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:02	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:02	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:02	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/26/14 10:02	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/26/14 10:02	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/26/14 10:02	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/26/14 10:02	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/26/14 10:02	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/26/14 10:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/26/14 10:02	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/26/14 10:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/26/14 10:02	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:02	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/26/14 10:02	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:02	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/26/14 10:02	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		06/26/14 10:02	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/26/14 10:02	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/26/14 10:02	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		80-120		1		06/26/14 10:02	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		80-120		1		06/26/14 10:02	17060-07-0	
Toluene-d8 (S)	98 %		80-120		1		06/26/14 10:02	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		06/26/14 10:02		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60172300

QC Batch:	MSV/62580	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	60172300001, 60172300002, 60172300003		

METHOD BLANK: 1400905 Matrix: Water

Associated Lab Samples: 60172300001, 60172300002, 60172300003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	06/26/14 09:48	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/26/14 09:48	
1,1,2-Trichloroethane	ug/L	ND	5.0	06/26/14 09:48	
1,1-Dichloroethane	ug/L	ND	2.4	06/26/14 09:48	
1,1-Dichloroethene	ug/L	ND	5.0	06/26/14 09:48	
1,2-Dichloroethane	ug/L	ND	5.0	06/26/14 09:48	
1,2-Dichloropropane	ug/L	ND	5.0	06/26/14 09:48	
2-Butanone (MEK)	ug/L	ND	10.0	06/26/14 09:48	
2-Hexanone	ug/L	ND	10.0	06/26/14 09:48	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	06/26/14 09:48	
Acetone	ug/L	ND	10.0	06/26/14 09:48	
Benzene	ug/L	ND	5.0	06/26/14 09:48	
Bromodichloromethane	ug/L	ND	5.0	06/26/14 09:48	
Bromoform	ug/L	ND	5.0	06/26/14 09:48	
Bromomethane	ug/L	ND	7.0	06/26/14 09:48	
Carbon disulfide	ug/L	ND	10.0	06/26/14 09:48	
Carbon tetrachloride	ug/L	ND	5.0	06/26/14 09:48	
Chlorobenzene	ug/L	ND	5.0	06/26/14 09:48	
Chloroethane	ug/L	ND	10.0	06/26/14 09:48	
Chloroform	ug/L	ND	5.0	06/26/14 09:48	
Chloromethane	ug/L	ND	10.0	06/26/14 09:48	
cis-1,2-Dichloroethene	ug/L	ND	5.0	06/26/14 09:48	
cis-1,3-Dichloropropene	ug/L	ND	1.0	06/26/14 09:48	
Dibromochloromethane	ug/L	ND	5.0	06/26/14 09:48	
Ethylbenzene	ug/L	ND	5.0	06/26/14 09:48	
Methylene chloride	ug/L	1.2J	5.0	06/26/14 09:48	
Styrene	ug/L	ND	5.0	06/26/14 09:48	
Tetrachloroethene	ug/L	ND	5.0	06/26/14 09:48	
Toluene	ug/L	ND	5.0	06/26/14 09:48	
trans-1,2-Dichloroethene	ug/L	ND	5.0	06/26/14 09:48	
trans-1,3-Dichloropropene	ug/L	ND	1.0	06/26/14 09:48	
Trichloroethene	ug/L	ND	5.0	06/26/14 09:48	
Vinyl chloride	ug/L	ND	2.0	06/26/14 09:48	
Xylene (Total)	ug/L	ND	5.0	06/26/14 09:48	
1,2-Dichloroethane-d4 (S)	%	95	80-120	06/26/14 09:48	
4-Bromofluorobenzene (S)	%	99	80-120	06/26/14 09:48	
Toluene-d8 (S)	%	97	80-120	06/26/14 09:48	

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.: 60172300

LABORATORY CONTROL SAMPLE: 1400906

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	21.0	105	73-124	
1,1,2-Trichloroethane	ug/L	20	20.7	103	80-120	
1,1-Dichloroethane	ug/L	20	20.3	102	77-120	
1,1-Dichloroethene	ug/L	20	20.5	103	78-126	
1,2-Dichloroethane	ug/L	20	19.6	98	77-123	
1,2-Dichloropropane	ug/L	20	21.2	106	80-121	
2-Butanone (MEK)	ug/L	100	98.8	99	52-145	
2-Hexanone	ug/L	100	93.2	93	57-139	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	71-131	
Acetone	ug/L	100	94.7	95	32-155	
Benzene	ug/L	20	20.9	105	80-120	
Bromodichloromethane	ug/L	20	21.8	109	80-120	
Bromoform	ug/L	20	21.3	107	73-124	
Bromomethane	ug/L	20	16.8	84	31-144	
Carbon disulfide	ug/L	20	22.0	110	65-125	
Carbon tetrachloride	ug/L	20	20.2	101	78-128	
Chlorobenzene	ug/L	20	20.8	104	80-120	
Chloroethane	ug/L	20	23.9	119	55-137	
Chloroform	ug/L	20	21.0	105	79-120	
Chloromethane	ug/L	20	8.9J	44	22-138	
cis-1,2-Dichloroethene	ug/L	20	20.7	104	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.0	105	80-120	
Dibromochloromethane	ug/L	20	20.2	101	80-120	
Ethylbenzene	ug/L	20	20.4	102	80-121	
Methylene chloride	ug/L	20	24.0	120	73-126	
Styrene	ug/L	20	21.7	108	80-120	
Tetrachloroethene	ug/L	20	20.6	103	80-121	
Toluene	ug/L	20	20.2	101	80-122	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	79-121	
trans-1,3-Dichloropropene	ug/L	20	20.0	100	80-127	
Trichloroethene	ug/L	20	19.9	100	80-120	
Vinyl chloride	ug/L	20	17.9	90	59-120	
Xylene (Total)	ug/L	60	62.5	104	80-121	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			95	80-120	

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## QUALIFIERS

Project: FORT SMITH, AR  
Pace Project No.: 60172300

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

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

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/62580

[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.: 60172300

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60172300001	20140624-GW-MW-88	EPA 5030B/8260	MSV/62580		
60172300002	20140624-GW-MW-89	EPA 5030B/8260	MSV/62580		
60172300003	TRIP BLANK-GW-01	EPA 5030B/8260	MSV/62580		

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## Sample Condition Upon Receipt

WO# : 60172300



60172300

Client Name: Enviro

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other Tracking #: 8043 8611 9074 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  200cThermometer Used: T-239  T-194Type of Ice: Wet  Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 0.8

(circle one)

Temperature should be above freezing to 6°C

Date and initials of person examining contents: AH 6/25

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. 1 day	
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: WT	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: VOA, Coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): DSCS14-34FD		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:	

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: mws

Date: 4/26/14

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Environ	Address: 7500 College Blvd., Ste. 925 Overland Park, KS 66210	Report To: Wendy Stonestreet Copy To: Tamara Gleason	Purchase Order No.: <a href="mailto:wstonestreet@environcorp.com">wstonestreet@environcorp.com</a>	Attention: Tamara Gleason Company Name: ENVIRON	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER
Email To: <a href="mailto:913-553-5926">913-553-5926</a>	Phone: 913-553-5926	Project Name: Fort Smith, AR	Project Number: <b>3433233A</b>	Address: <a href="mailto:tgleason@environcorp.com">tgleason@environcorp.com</a> Pace Project Manager: M.J. Walls Pace Profile #: 7444, line 1	Pace Quote Reference: Pace Project Manager: Pace Profile #: 7444, line 1
Requested Due Date/TAT: <b>1 - Day TAT</b>				RESIDUAL CHLORINE (Y/N) <b>6017230</b>	
SAMPLE ID (A-Z, 0-9, -, ) Sample IDs MUST BE UNIQUE		Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS		REQUERED ANALYSIS FILTERED (Y/N) <b>N</b>	
Section D Required Client Information		COLLECTED COMPOSITE START	SAMPLE TEMP AT COLLECTION # OF CONTAINERS	PRESERVATIVES B260 client specific list ANALYSIS TEST 8260 client specific list	
ITEM #	MATRIX CODE (see valid codes to left)	DATE	TIME	HCl HNO3 H2SO4 # OF PRESERVED SAMPLE TYPE (G=GRAB C=COMP)	Preservatives Other NaOH Na2SO3 Methanol HCl HNO3 H2SO4 # OF CONTAINERS SAMPLE TEMP AT COLLECTION # OF CONTAINERS
1	20140624-GW-MW-88	WT G	6-24-14 1430	3	X
2	20140624-GW-MW-89	WT G	6-24-14 1640	3	X
3	Trip Blank - GW-01		6-24-14	6	X
4	Temperature Blank			1	X
5					
6					
7					
8					
9					
10					
11					
12					
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION
<b>1 - DAY TAT</b>		<b>Jeff M. Nelson / ENVIRON</b>	<b>6-24-14</b>	<b>17:00</b>	<b>Accepted by / Affiliation</b>
Temp in °C		6/25	8:15	DATE	TIME
Received on		0.8	Y	DATE Signed	TIME
Customary Sealed (Y/N)		PRINT Name of SAMPLER:	SAMPLER NAME AND SIGNATURE		
Samples Intact (Y/N)		SIGNATURE of SAMPLER:	Signature		
Coated (Y/N)		Comments			
Section A Required Client Information:		Section B Required Project Information:			

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

June 27, 2014

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

RE: Project: Fort Smith  
Pace Project No.: 60172431

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation  
Wayne Weber, Environ



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Fort Smith  
Pace Project No.: 60172431

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
Illinois Certification #: 003097  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-13-4  
Utah Certification #: KS000212013-3  
Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Fort Smith  
Pace Project No.: 60172431

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60172431001	20140625-GW-MW-87	Water	06/25/14 10:50	06/26/14 02:03
60172431002	20140625-GW-MW-90	Water	06/25/14 08:00	06/26/14 02:03
60172431003	20140625-GW-MW-91	Water	06/25/14 13:15	06/26/14 02:03
60172431004	TRIP BLANK	Water	06/25/14 13:15	06/26/14 02:03

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## SAMPLE ANALYTE COUNT

Project: Fort Smith  
Pace Project No.: 60172431

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60172431001	20140625-GW-MW-87	EPA 5030B/8260	PRG	38
60172431002	20140625-GW-MW-90	EPA 5030B/8260	PRG	38
60172431003	20140625-GW-MW-91	EPA 5030B/8260	PRG	38
60172431004	TRIP BLANK	EPA 5030B/8260	PRG	38

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Fort Smith  
Pace Project No.: 60172431

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**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** Environ\_AR

**Date:** June 27, 2014

### **General Information:**

4 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **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/62615

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

### **Additional Comments:**

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

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## ANALYTICAL RESULTS

Project: Fort Smith  
Pace Project No.: 60172431

Sample: 20140625-GW-MW-87 Lab ID: 60172431001 Collected: 06/25/14 10:50 Received: 06/26/14 02:03 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		06/27/14 10:27	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/27/14 10:27	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/27/14 10:27	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/27/14 10:27	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/27/14 10:27	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/27/14 10:27	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		06/27/14 10:27	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/27/14 10:27	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/27/14 10:27	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/27/14 10:27	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		06/27/14 10:27	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/27/14 10:27	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/27/14 10:27	124-48-1	
1,1-Dichloroethane	<b>2.1J</b> ug/L		2.4	0.50	1		06/27/14 10:27	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:27	107-06-2	
1,1-Dichloroethene	<b>5.8</b> ug/L		5.0	0.50	1		06/27/14 10:27	75-35-4	
cis-1,2-Dichloroethene	<b>41.8</b> ug/L		5.0	0.50	1		06/27/14 10:27	156-59-2	
trans-1,2-Dichloroethene	<b>4.5J</b> ug/L		5.0	0.50	1		06/27/14 10:27	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/27/14 10:27	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 10:27	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 10:27	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/27/14 10:27	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/27/14 10:27	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/27/14 10:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/27/14 10:27	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/27/14 10:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/27/14 10:27	79-34-5	
Tetrachloroethene	<b>2.6J</b> ug/L		5.0	0.50	1		06/27/14 10:27	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/27/14 10:27	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:27	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:27	79-00-5	
Trichloroethene	<b>564</b> ug/L		50.0	5.0	10		06/27/14 11:11	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/27/14 10:27	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/27/14 10:27	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		80-120		1		06/27/14 10:27	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		80-120		1		06/27/14 10:27	17060-07-0	
Toluene-d8 (S)	97 %		80-120		1		06/27/14 10:27	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		06/27/14 10:27		

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## ANALYTICAL RESULTS

Project: Fort Smith  
Pace Project No.: 60172431

Sample: 20140625-GW-MW-90 Lab ID: 60172431002 Collected: 06/25/14 08:00 Received: 06/26/14 02:03 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Acetone	ND ug/L		10.0	5.0	1		06/27/14 10:42	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/27/14 10:42	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/27/14 10:42	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/27/14 10:42	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/27/14 10:42	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/27/14 10:42	78-93-3	
Carbon disulfide	3.2J ug/L		10.0	2.5	1		06/27/14 10:42	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/27/14 10:42	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/27/14 10:42	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/27/14 10:42	75-00-3	
Chloroform	1.6J ug/L		5.0	0.50	1		06/27/14 10:42	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/27/14 10:42	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/27/14 10:42	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		06/27/14 10:42	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:42	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		06/27/14 10:42	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/27/14 12:51	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/27/14 10:42	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/27/14 10:42	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 10:42	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 10:42	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/27/14 10:42	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/27/14 10:42	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/27/14 10:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/27/14 10:42	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/27/14 10:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/27/14 10:42	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		06/27/14 10:42	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/27/14 10:42	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:42	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:42	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		06/27/14 12:51	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/27/14 10:42	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/27/14 10:42	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		80-120		1		06/27/14 10:42	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		80-120		1		06/27/14 10:42	17060-07-0	
Toluene-d8 (S)	99 %		80-120		1		06/27/14 10:42	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		06/27/14 10:42		

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## ANALYTICAL RESULTS

Project: Fort Smith  
Pace Project No.: 60172431

Sample: 20140625-GW-MW-91      Lab ID: 60172431003      Collected: 06/25/14 13:15      Received: 06/26/14 02:03      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Acetone	ND ug/L		10.0	5.0	1		06/27/14 10:56	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/27/14 10:56	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/27/14 10:56	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/27/14 10:56	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/27/14 10:56	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/27/14 10:56	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		06/27/14 10:56	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/27/14 10:56	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/27/14 10:56	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/27/14 10:56	75-00-3	
Chloroform	4.8J ug/L		5.0	0.50	1		06/27/14 10:56	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/27/14 10:56	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/27/14 10:56	124-48-1	
1,1-Dichloroethane	0.93J ug/L		2.4	0.50	1		06/27/14 10:56	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:56	107-06-2	
1,1-Dichloroethene	2.6J ug/L		5.0	0.50	1		06/27/14 10:56	75-35-4	
cis-1,2-Dichloroethene	21.7 ug/L		5.0	0.50	1		06/27/14 10:56	156-59-2	
trans-1,2-Dichloroethene	2.2J ug/L		5.0	0.50	1		06/27/14 10:56	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/27/14 10:56	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 10:56	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 10:56	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/27/14 10:56	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/27/14 10:56	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/27/14 10:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/27/14 10:56	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/27/14 10:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/27/14 10:56	79-34-5	
Tetrachloroethene	1.1J ug/L		5.0	0.50	1		06/27/14 10:56	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/27/14 10:56	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:56	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 10:56	79-00-5	
Trichloroethene	234 ug/L		25.0	2.5	5		06/27/14 11:25	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/27/14 10:56	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/27/14 10:56	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102 %		80-120		1		06/27/14 10:56	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		80-120		1		06/27/14 10:56	17060-07-0	
Toluene-d8 (S)	94 %		80-120		1		06/27/14 10:56	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		06/27/14 10:56		

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## ANALYTICAL RESULTS

Project: Fort Smith  
Pace Project No.: 60172431

Sample: TRIP BLANK		Lab ID: 60172431004		Collected: 06/25/14 13:15		Received: 06/26/14 02:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		06/27/14 09:15	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		06/27/14 09:15	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		06/27/14 09:15	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		06/27/14 09:15	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		06/27/14 09:15	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		06/27/14 09:15	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		06/27/14 09:15	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		06/27/14 09:15	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		06/27/14 09:15	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		06/27/14 09:15	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		06/27/14 09:15	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		06/27/14 09:15	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		06/27/14 09:15	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		06/27/14 09:15	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		06/27/14 09:15	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		06/27/14 09:15	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/27/14 09:15	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		06/27/14 09:15	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		06/27/14 09:15	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 09:15	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		06/27/14 09:15	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		06/27/14 09:15	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		06/27/14 09:15	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		06/27/14 09:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		06/27/14 09:15	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		06/27/14 09:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		06/27/14 09:15	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		06/27/14 09:15	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		06/27/14 09:15	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 09:15	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		06/27/14 09:15	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		06/27/14 09:15	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		06/27/14 09:15	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		06/27/14 09:15	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		80-120		1		06/27/14 09:15	460-00-4	
1,2-Dichloroethane-d4 (S)	91 %		80-120		1		06/27/14 09:15	17060-07-0	
Toluene-d8 (S)	97 %		80-120		1		06/27/14 09:15	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		06/27/14 09:15		

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## QUALITY CONTROL DATA

Project: Fort Smith  
Pace Project No.: 60172431

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QC Batch:	MSV/62615	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	60172431001, 60172431002, 60172431003, 60172431004		

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METHOD BLANK: 1401669                          Matrix: Water

Associated Lab Samples: 60172431001, 60172431002, 60172431003, 60172431004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	06/27/14 09:01	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/27/14 09:01	
1,1,2-Trichloroethane	ug/L	ND	5.0	06/27/14 09:01	
1,1-Dichloroethane	ug/L	ND	2.4	06/27/14 09:01	
1,1-Dichloroethene	ug/L	ND	5.0	06/27/14 09:01	
1,2-Dichloroethane	ug/L	ND	5.0	06/27/14 09:01	
1,2-Dichloropropane	ug/L	ND	5.0	06/27/14 09:01	
2-Butanone (MEK)	ug/L	ND	10.0	06/27/14 09:01	
2-Hexanone	ug/L	ND	10.0	06/27/14 09:01	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	06/27/14 09:01	
Acetone	ug/L	ND	10.0	06/27/14 09:01	
Benzene	ug/L	ND	5.0	06/27/14 09:01	
Bromodichloromethane	ug/L	ND	5.0	06/27/14 09:01	
Bromoform	ug/L	ND	5.0	06/27/14 09:01	
Bromomethane	ug/L	ND	7.0	06/27/14 09:01	
Carbon disulfide	ug/L	ND	10.0	06/27/14 09:01	
Carbon tetrachloride	ug/L	ND	5.0	06/27/14 09:01	
Chlorobenzene	ug/L	ND	5.0	06/27/14 09:01	
Chloroethane	ug/L	ND	10.0	06/27/14 09:01	
Chloroform	ug/L	ND	5.0	06/27/14 09:01	
Chloromethane	ug/L	ND	10.0	06/27/14 09:01	
cis-1,2-Dichloroethene	ug/L	ND	5.0	06/27/14 09:01	
cis-1,3-Dichloropropene	ug/L	ND	1.0	06/27/14 09:01	
Dibromochloromethane	ug/L	ND	5.0	06/27/14 09:01	
Ethylbenzene	ug/L	ND	5.0	06/27/14 09:01	
Methylene chloride	ug/L	ND	5.0	06/27/14 09:01	
Styrene	ug/L	ND	5.0	06/27/14 09:01	
Tetrachloroethene	ug/L	ND	5.0	06/27/14 09:01	
Toluene	ug/L	ND	5.0	06/27/14 09:01	
trans-1,2-Dichloroethene	ug/L	ND	5.0	06/27/14 09:01	
trans-1,3-Dichloropropene	ug/L	ND	1.0	06/27/14 09:01	
Trichloroethene	ug/L	ND	5.0	06/27/14 09:01	
Vinyl chloride	ug/L	ND	2.0	06/27/14 09:01	
Xylene (Total)	ug/L	ND	5.0	06/27/14 09:01	
1,2-Dichloroethane-d4 (S)	%	92	80-120	06/27/14 09:01	
4-Bromofluorobenzene (S)	%	99	80-120	06/27/14 09:01	
Toluene-d8 (S)	%	99	80-120	06/27/14 09:01	

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

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## QUALITY CONTROL DATA

Project: Fort Smith  
Pace Project No.: 60172431

LABORATORY CONTROL SAMPLE: 1401670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	20.7	104	73-124	
1,1,2-Trichloroethane	ug/L	20	20.5	103	80-120	
1,1-Dichloroethane	ug/L	20	20.4	102	77-120	
1,1-Dichloroethene	ug/L	20	19.4	97	78-126	
1,2-Dichloroethane	ug/L	20	18.4	92	77-123	
1,2-Dichloropropane	ug/L	20	21.7	108	80-121	
2-Butanone (MEK)	ug/L	100	101	101	52-145	
2-Hexanone	ug/L	100	96.8	97	57-139	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	108	71-131	
Acetone	ug/L	100	98.8	99	32-155	
Benzene	ug/L	20	20.7	104	80-120	
Bromodichloromethane	ug/L	20	21.3	106	80-120	
Bromoform	ug/L	20	21.7	108	73-124	
Bromomethane	ug/L	20	15.7	78	31-144	
Carbon disulfide	ug/L	20	20.9	104	65-125	
Carbon tetrachloride	ug/L	20	19.7	99	78-128	
Chlorobenzene	ug/L	20	20.9	105	80-120	
Chloroethane	ug/L	20	24.5	122	55-137	
Chloroform	ug/L	20	20.2	101	79-120	
Chloromethane	ug/L	20	8.8J	44	22-138	
cis-1,2-Dichloroethene	ug/L	20	20.0	100	80-120	
cis-1,3-Dichloropropene	ug/L	20	20.9	104	80-120	
Dibromochloromethane	ug/L	20	20.7	104	80-120	
Ethylbenzene	ug/L	20	20.8	104	80-121	
Methylene chloride	ug/L	20	22.5	112	73-126	
Styrene	ug/L	20	22.2	111	80-120	
Tetrachloroethene	ug/L	20	20.4	102	80-121	
Toluene	ug/L	20	20.1	101	80-122	
trans-1,2-Dichloroethene	ug/L	20	18.3	91	79-121	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	80-127	
Trichloroethene	ug/L	20	19.4	97	80-120	
Vinyl chloride	ug/L	20	15.0	75	59-120	
Xylene (Total)	ug/L	60	64.1	107	80-121	
1,2-Dichloroethane-d4 (S)	%			90	80-120	
4-Bromofluorobenzene (S)	%			94	80-120	
Toluene-d8 (S)	%			96	80-120	

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

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Fort Smith  
Pace Project No.: 60172431

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

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

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/62615

[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  
 Pace Project No.: 60172431

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60172431001	20140625-GW-MW-87	EPA 5030B/8260	MSV/62615		
60172431002	20140625-GW-MW-90	EPA 5030B/8260	MSV/62615		
60172431003	20140625-GW-MW-91	EPA 5030B/8260	MSV/62615		
60172431004	TRIP BLANK	EPA 5030B/8260	MSV/62615		

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## Sample Condition Upon Receipt

WO# : 60172431



60172431

Client Name: Environ

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  VFATracking #: \_\_\_\_\_ 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  ZPLC

Thermometer Used: T-239 / T-194

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

Cooler Temperature: 4.4

Date and initials of person examining  
contents: J.B. 6/26

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. 1-3 day	
Sufficient volume:	<input 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: WT	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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): 5/6/14		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:	

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: mw

Date: 10/26/14

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <b>Environ</b>	Report To: Wendy Stonestreet	Copy To: Tamara Gleason	Attention: <b>Tamara Gleason</b>	Company Name: <b>ENVIRON</b>	REGULATORY AGENCY
Address: 7500 College Blvd., Ste. 925	Purchase Order No.:	tgleason@environcorp.com	Address:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
Overland Park, KS 66210	Project Name: Fort Smith, AR	Pace Quote Reference:		<input type="checkbox"/> UST	<input type="checkbox"/> DRINKING WATER
Email To: <a href="mailto:wstonestreet@environcorp.com">wstonestreet@environcorp.com</a>	Project Number: <b>3433233A</b>	Pace Project Manager:		<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Phone: 913-553-5926	Fax:	Pace Profile #: 7444, line 1	Site Location:	STATE: AR	
Requested Due Date/TAT: <b>1-Day TAT</b>					
Requested Analysis Filtered (Y/N)					
<b>SAMPLE ID</b> (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes		Preservatives		Pace Project No./Lab I.D.  <i>6017243!</i>
	MATRIX CODE	CODE	COLLECTED	ANALYSIS TEST	
	DRINKING WATER	DW			
	WATER	WT			
	WASTE/WATER PRODUCT	WW			
	SOIL/SOLID OIL	P			
	WIPES	SL			
	AIR	OL			
	OTHER	WP			
	TISSUE	AR			
		OT			
		TS			
#	ITEM #	SAMPLE TYPE (G=GRAB C=COMP)		# OF CONTAINERS	SAMPLE TEMP AT COLLECTION
		MATRIX CODE (see valid codes to left)	COMPOSITE ENDGRAB		
1	20140625-GW-MW-97	WT	G	3	6-25-14 1050
2	20140625-GW-MW-90	WT	G	7	6-25-14 0800
3	20140625-GW-MW-91	WT	G	1	6-25-14 1315
4	TRIP BLANK				
5					
6					
7					
8					
9					
10					
11					
12					
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		TIME	ACCEPTED BY / AFFILIATION
<b>1-Day TAT</b>		<b>Jeff Wilson ENVIRON 6-25-14 1445</b>		6/26	2003 4,4 Y Y Y
SAMPLE NAME AND SIGNATURE					
PRINT NAME OF SAMPLER: <b>Jeff Wilson</b>					
SIGNATURE OF SAMPLER: <b>Jeff Wilson</b>					

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

August 11, 2014

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

RE: Project: Ft. Smith Soil  
Pace Project No.: 60175335

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 08, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Ft. Smith Soil  
Pace Project No.: 60175335

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Ft. Smith Soil  
 Pace Project No.: 60175335

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60175335001	DP-40 (4.0 FT) - 082014	Solid	08/07/14 13:05	08/08/14 08:40
60175335002	DP-40 (11.0 FT) - 082014	Solid	08/07/14 13:25	08/08/14 08:40
60175335003	DP-40 (14.5 FT) - 082014	Solid	08/07/14 14:20	08/08/14 08:40
60175335004	TRIP BLANK	Solid	08/07/14 13:05	08/08/14 08:40

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## SAMPLE ANALYTE COUNT

Project: Ft. Smith Soil  
Pace Project No.: 60175335

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60175335001	DP-40 (4.0 FT) - 082014	EPA 8260	JKL	37
		ASTM D2974	TMD	1
60175335002	DP-40 (11.0 FT) - 082014	EPA 8260	JKL	37
		ASTM D2974	TMD	1
60175335003	DP-40 (14.5 FT) - 082014	EPA 8260	JKL	37
		ASTM D2974	TMD	1
60175335004	TRIP BLANK	EPA 8260	JKL	37

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Ft. Smith Soil  
Pace Project No.: 60175335

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**Method:** **EPA 8260**  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** August 11, 2014

### **General Information:**

4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

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

### **Initial Calibrations (including MS Tune as applicable):**

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

### **Continuing Calibration:**

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

### **Internal Standards:**

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

### **Surrogates:**

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

### **Method Blank:**

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

### **Laboratory Control Spike:**

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

QC Batch: MSV/63457

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1422645)
  - Bromomethane
  - Chloromethane

### **Matrix Spikes:**

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

QC Batch: MSV/63457

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: Ft. Smith Soil  
Pace Project No.: 60175335

Sample: DP-40 (4.0 FT) - 082014 Lab ID: 60175335001 Collected: 08/07/14 13:05 Received: 08/08/14 08:40 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		19.5	9.7	1		08/08/14 18:09	67-64-1	
Benzene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	71-43-2	
Bromodichloromethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-27-4	
Bromoform	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-25-2	
Bromomethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	74-83-9	L3
2-Butanone (MEK)	ND ug/kg		9.7	4.9	1		08/08/14 18:09	78-93-3	
Carbon disulfide	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-15-0	
Carbon tetrachloride	ND ug/kg		4.9	2.4	1		08/08/14 18:09	56-23-5	
Chlorobenzene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	108-90-7	
Chloroethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-00-3	
Chloroform	ND ug/kg		4.9	2.4	1		08/08/14 18:09	67-66-3	
Chloromethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	74-87-3	L3
Dibromochloromethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	10061-02-6	
Ethylbenzene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	100-41-4	
2-Hexanone	ND ug/kg		19.5	9.7	1		08/08/14 18:09	591-78-6	
Methylene chloride	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.7	4.9	1		08/08/14 18:09	108-10-1	
Styrene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	79-34-5	
Tetrachloroethene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	127-18-4	
Toluene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.9	2.4	1		08/08/14 18:09	79-00-5	
Trichloroethene	ND ug/kg		4.9	2.4	1		08/08/14 18:09	79-01-6	
Vinyl chloride	ND ug/kg		4.9	2.4	1		08/08/14 18:09	75-01-4	
Xylene (Total)	ND ug/kg		4.9	2.4	1		08/08/14 18:09	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	106 %		80-120		1		08/08/14 18:09	2037-26-5	
4-Bromofluorobenzene (S)	105 %		76-123		1		08/08/14 18:09	460-00-4	
1,2-Dichloroethane-d4 (S)	114 %		75-129		1		08/08/14 18:09	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	14.7 %		0.50	0.50	1		08/09/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Soil  
Pace Project No.: 60175335

Sample: DP-40 (11.0 FT) - 082014 Lab ID: 60175335002 Collected: 08/07/14 13:25 Received: 08/08/14 08:40 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		17.7	8.9	1		08/08/14 18:25	67-64-1	
Benzene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	71-43-2	
Bromodichloromethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-27-4	
Bromoform	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-25-2	
Bromomethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	74-83-9	L3
2-Butanone (MEK)	ND ug/kg		8.9	4.4	1		08/08/14 18:25	78-93-3	
Carbon disulfide	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-15-0	
Carbon tetrachloride	ND ug/kg		4.4	2.2	1		08/08/14 18:25	56-23-5	
Chlorobenzene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	108-90-7	
Chloroethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-00-3	
Chloroform	ND ug/kg		4.4	2.2	1		08/08/14 18:25	67-66-3	
Chloromethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	74-87-3	L3
Dibromochloromethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	10061-02-6	
Ethylbenzene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	100-41-4	
2-Hexanone	ND ug/kg		17.7	8.9	1		08/08/14 18:25	591-78-6	
Methylene chloride	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.9	4.4	1		08/08/14 18:25	108-10-1	
Styrene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	127-18-4	
Toluene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	2.2	1		08/08/14 18:25	79-00-5	
Trichloroethene	ND ug/kg		4.4	2.2	1		08/08/14 18:25	79-01-6	
Vinyl chloride	ND ug/kg		4.4	2.2	1		08/08/14 18:25	75-01-4	
Xylene (Total)	ND ug/kg		4.4	2.2	1		08/08/14 18:25	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	105 %		80-120		1		08/08/14 18:25	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/08/14 18:25	460-00-4	
1,2-Dichloroethane-d4 (S)	111 %		75-129		1		08/08/14 18:25	17060-07-0	
<b>Percent Moisture</b>									
Percent Moisture			Analytical Method: ASTM D2974						
Percent Moisture	12.1 %		0.50	0.50	1		08/09/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Soil  
Pace Project No.: 60175335

Sample: DP-40 (14.5 FT) - 082014 Lab ID: 60175335003 Collected: 08/07/14 14:20 Received: 08/08/14 08:40 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		19.4	9.7	1		08/08/14 18:40	67-64-1	
Benzene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	71-43-2	
Bromodichloromethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-27-4	
Bromoform	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-25-2	
Bromomethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	74-83-9	L3
2-Butanone (MEK)	ND ug/kg		9.7	4.8	1		08/08/14 18:40	78-93-3	
Carbon disulfide	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-15-0	
Carbon tetrachloride	ND ug/kg		4.8	2.4	1		08/08/14 18:40	56-23-5	
Chlorobenzene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	108-90-7	
Chloroethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-00-3	
Chloroform	ND ug/kg		4.8	2.4	1		08/08/14 18:40	67-66-3	
Chloromethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	74-87-3	L3
Dibromochloromethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	10061-02-6	
Ethylbenzene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	100-41-4	
2-Hexanone	ND ug/kg		19.4	9.7	1		08/08/14 18:40	591-78-6	
Methylene chloride	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.7	4.8	1		08/08/14 18:40	108-10-1	
Styrene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	79-34-5	
Tetrachloroethene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	127-18-4	
Toluene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.8	2.4	1		08/08/14 18:40	79-00-5	
Trichloroethene	ND ug/kg		4.8	2.4	1		08/08/14 18:40	79-01-6	
Vinyl chloride	ND ug/kg		4.8	2.4	1		08/08/14 18:40	75-01-4	
Xylene (Total)	ND ug/kg		4.8	2.4	1		08/08/14 18:40	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	104 %		80-120		1		08/08/14 18:40	2037-26-5	
4-Bromofluorobenzene (S)	104 %		76-123		1		08/08/14 18:40	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/08/14 18:40	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	<b>12.4 %</b>		0.50	0.50	1		08/09/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Soil  
Pace Project No.: 60175335

Sample: TRIP BLANK      Lab ID: 60175335004      Collected: 08/07/14 13:05      Received: 08/08/14 08:40      Matrix: Solid

**Results reported on a "wet-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.0	10.0	1		08/08/14 17:39	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	74-83-9	L3
2-Butanone (MEK)	ND ug/kg		10.0	5.0	1		08/08/14 17:39	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		08/08/14 17:39	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		08/08/14 17:39	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	74-87-3	L3
Dibromochloromethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	100-41-4	
2-Hexanone	ND ug/kg		20.0	10.0	1		08/08/14 17:39	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.0	5.0	1		08/08/14 17:39	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		08/08/14 17:39	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		08/08/14 17:39	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		08/08/14 17:39	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		08/08/14 17:39	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	105 %		80-120		1		08/08/14 17:39	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/08/14 17:39	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		75-129		1		08/08/14 17:39	17060-07-0	

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## QUALITY CONTROL DATA

Project: Ft. Smith Soil  
Pace Project No.: 60175335

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QC Batch:	MSV/63457	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60175335001, 60175335002, 60175335003, 60175335004		

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METHOD BLANK: 1422644 Matrix: Solid

Associated Lab Samples: 60175335001, 60175335002, 60175335003, 60175335004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/08/14 17:23	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	08/08/14 17:23	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/08/14 17:23	
1,1-Dichloroethane	ug/kg	ND	5.0	08/08/14 17:23	
1,1-Dichloroethene	ug/kg	ND	5.0	08/08/14 17:23	
1,2-Dichloroethane	ug/kg	ND	5.0	08/08/14 17:23	
1,2-Dichloropropane	ug/kg	ND	5.0	08/08/14 17:23	
2-Butanone (MEK)	ug/kg	ND	10.0	08/08/14 17:23	
2-Hexanone	ug/kg	ND	20.0	08/08/14 17:23	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	08/08/14 17:23	
Acetone	ug/kg	ND	20.0	08/08/14 17:23	
Benzene	ug/kg	ND	5.0	08/08/14 17:23	
Bromodichloromethane	ug/kg	ND	5.0	08/08/14 17:23	
Bromoform	ug/kg	ND	5.0	08/08/14 17:23	
Bromomethane	ug/kg	ND	5.0	08/08/14 17:23	
Carbon disulfide	ug/kg	ND	5.0	08/08/14 17:23	
Carbon tetrachloride	ug/kg	ND	5.0	08/08/14 17:23	
Chlorobenzene	ug/kg	ND	5.0	08/08/14 17:23	
Chloroethane	ug/kg	ND	5.0	08/08/14 17:23	
Chloroform	ug/kg	ND	5.0	08/08/14 17:23	
Chloromethane	ug/kg	ND	5.0	08/08/14 17:23	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/08/14 17:23	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/08/14 17:23	
Dibromochloromethane	ug/kg	ND	5.0	08/08/14 17:23	
Ethylbenzene	ug/kg	ND	5.0	08/08/14 17:23	
Methylene chloride	ug/kg	2.5J	5.0	08/08/14 17:23	
Styrene	ug/kg	ND	5.0	08/08/14 17:23	
Tetrachloroethene	ug/kg	ND	5.0	08/08/14 17:23	
Toluene	ug/kg	ND	5.0	08/08/14 17:23	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/08/14 17:23	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/08/14 17:23	
Trichloroethene	ug/kg	ND	5.0	08/08/14 17:23	
Vinyl chloride	ug/kg	ND	5.0	08/08/14 17:23	
Xylene (Total)	ug/kg	ND	5.0	08/08/14 17:23	
1,2-Dichloroethane-d4 (S)	%	101	75-129	08/08/14 17:23	
4-Bromofluorobenzene (S)	%	102	76-123	08/08/14 17:23	
Toluene-d8 (S)	%	105	80-120	08/08/14 17:23	

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## QUALITY CONTROL DATA

Project: Ft. Smith Soil

Pace Project No.: 60175335

LABORATORY CONTROL SAMPLE: 1422645

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	102	102	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	83.3	83	73-120	
1,1,2-Trichloroethane	ug/kg	100	86.6	87	76-120	
1,1-Dichloroethane	ug/kg	100	96.8	97	71-120	
1,1-Dichloroethene	ug/kg	100	101	101	76-130	
1,2-Dichloroethane	ug/kg	100	100	100	78-120	
1,2-Dichloropropane	ug/kg	100	101	101	80-120	
2-Butanone (MEK)	ug/kg	500	489	98	55-135	
2-Hexanone	ug/kg	500	423	85	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	484	97	71-128	
Acetone	ug/kg	500	514	103	43-144	
Benzene	ug/kg	100	96.7	97	80-120	
Bromodichloromethane	ug/kg	100	104	104	80-120	
Bromoform	ug/kg	100	93.9	94	75-124	
Bromomethane	ug/kg	100	151	151	38-150 L0	
Carbon disulfide	ug/kg	100	110	110	58-137	
Carbon tetrachloride	ug/kg	100	103	103	75-140	
Chlorobenzene	ug/kg	100	88.3	88	80-120	
Chloroethane	ug/kg	100	102	102	65-127	
Chloroform	ug/kg	100	96.8	97	74-120	
Chloromethane	ug/kg	100	143	143	39-138 L0	
cis-1,2-Dichloroethene	ug/kg	100	102	102	76-124	
cis-1,3-Dichloropropene	ug/kg	100	101	101	82-120	
Dibromochloromethane	ug/kg	100	93.8	94	80-124	
Ethylbenzene	ug/kg	100	85.9	86	80-120	
Methylene chloride	ug/kg	100	92.7	93	70-123	
Styrene	ug/kg	100	97.0	97	79-120	
Tetrachloroethene	ug/kg	100	87.6	88	78-128	
Toluene	ug/kg	100	96.2	96	79-120	
trans-1,2-Dichloroethene	ug/kg	100	97.0	97	76-124	
trans-1,3-Dichloropropene	ug/kg	100	90.9	91	80-124	
Trichloroethene	ug/kg	100	97.5	97	80-120	
Vinyl chloride	ug/kg	100	110	110	57-132	
Xylene (Total)	ug/kg	300	254	85	79-120	
1,2-Dichloroethane-d4 (S)	%			100	75-129	
4-Bromofluorobenzene (S)	%			104	76-123	
Toluene-d8 (S)	%			106	80-120	

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## QUALITY CONTROL DATA

Project: Ft. Smith Soil  
Pace Project No.: 60175335

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QC Batch:	PMST/9897	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60175335001, 60175335002, 60175335003		

---

METHOD BLANK: 1422922 Matrix: Solid

Associated Lab Samples: 60175335001, 60175335002, 60175335003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	08/09/14 00:00	

---

SAMPLE DUPLICATE: 1422923

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.7	14.7	0	20	

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## QUALIFIERS

Project: Ft. Smith Soil  
Pace Project No.: 60175335

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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/63457

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

### ANALYTE QUALIFIERS

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Ft. Smith Soil  
Pace Project No.: 60175335

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60175335001	DP-40 (4.0 FT) - 082014	EPA 8260	MSV/63457		
60175335002	DP-40 (11.0 FT) - 082014	EPA 8260	MSV/63457		
60175335003	DP-40 (14.5 FT) - 082014	EPA 8260	MSV/63457		
60175335004	TRIP BLANK	EPA 8260	MSV/63457		
60175335001	DP-40 (4.0 FT) - 082014	ASTM D2974	PMST/9897		
60175335002	DP-40 (11.0 FT) - 082014	ASTM D2974	PMST/9897		
60175335003	DP-40 (14.5 FT) - 082014	ASTM D2974	PMST/9897		

## REPORT OF LABORATORY ANALYSIS

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## Sample Condition Upon Receipt

WO# : 60175335



60175335

Client Name: Environ

Optional

Proj Due Date:

Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other Pace Shipping Label Used? Yes  No 

Tracking #: 1013 3011 2330

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  zpc

Thermometer Used: -239 T-194

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

Cooler Temperature: 4.0

Date and initials of person examining  
contents: att 8/8

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. Kits
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. 1 day
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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: SL	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: AR

Client Notification/ Resolution:

Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: A. L. (AJW)

Date: 8/8

CHAIN-OF-CUSTODY / Analytical Request Document

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



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Section A

### **Required Client Information:**

Section B

### **Required Project Information:**

Section C

### **Invoice Information:**

August 13, 2014

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

RE: Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 09, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60175425001	DP-41 (4.0 FT) - 082014	Solid	08/08/14 07:40	08/09/14 01:32
60175425002	DP-41 (10.0 FT) - 082014	Solid	08/08/14 08:05	08/09/14 01:32
60175425003	DP-41 (14.0 FT) - 082014	Solid	08/08/14 08:15	08/09/14 01:32
60175425004	DP-42 (4.0 FT) - 082014	Solid	08/08/14 10:20	08/09/14 01:32
60175425005	DP-42 (8-0 FT) - 082014	Solid	08/08/14 10:30	08/09/14 01:32
60175425006	DP-42 (12.0 FT) - 082014	Solid	08/08/14 10:40	08/09/14 01:32
60175425007	TB06-20140808	Solid	08/08/14 10:40	08/09/14 01:32

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## SAMPLE ANALYTE COUNT

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60175425001	DP-41 (4.0 FT) - 082014	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175425002	DP-41 (10.0 FT) - 082014	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175425003	DP-41 (14.0 FT) - 082014	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175425004	DP-42 (4.0 FT) - 082014	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175425005	DP-42 (8-0 FT) - 082014	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175425006	DP-42 (12.0 FT) - 082014	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175425007	TB06-20140808	EPA 8260	TJT	37

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## PROJECT NARRATIVE

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

**Method:** **EPA 8260**  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** August 13, 2014

### **General Information:**

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

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

### **Initial Calibrations (including MS Tune as applicable):**

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

### **Continuing Calibration:**

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

### **Internal Standards:**

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

### **Surrogates:**

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

### **Method Blank:**

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

### **Laboratory Control Spike:**

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

QC Batch: MSV/63498

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1424042)
- cis-1,3-Dichloropropene

### **Matrix Spikes:**

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

### **Additional Comments:**

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

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: DP-41 (4.0 FT) - 082014 Lab ID: 60175425001 Collected: 08/08/14 07:40 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		24.0	12.0	1		08/11/14 16:22	67-64-1	
Benzene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	71-43-2	
Bromodichloromethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-27-4	
Bromoform	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-25-2	
Bromomethane	3.1J ug/kg		6.0	3.0	1		08/11/14 16:22	74-83-9	
2-Butanone (MEK)	ND ug/kg		12.0	6.0	1		08/11/14 16:22	78-93-3	
Carbon disulfide	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-15-0	
Carbon tetrachloride	ND ug/kg		6.0	3.0	1		08/11/14 16:22	56-23-5	
Chlorobenzene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	108-90-7	
Chloroethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-00-3	
Chloroform	ND ug/kg		6.0	3.0	1		08/11/14 16:22	67-66-3	
Chloromethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	74-87-3	
Dibromochloromethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	124-48-1	
1,1-Dichloroethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-34-3	
1,2-Dichloroethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	107-06-2	
1,1-Dichloroethene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	156-60-5	
1,2-Dichloropropane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	10061-02-6	
Ethylbenzene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	100-41-4	
2-Hexanone	ND ug/kg		24.0	12.0	1		08/11/14 16:22	591-78-6	
Methylene chloride	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		12.0	6.0	1		08/11/14 16:22	108-10-1	
Styrene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	79-34-5	
Tetrachloroethene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	127-18-4	
Toluene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		6.0	3.0	1		08/11/14 16:22	79-00-5	
Trichloroethene	ND ug/kg		6.0	3.0	1		08/11/14 16:22	79-01-6	
Vinyl chloride	ND ug/kg		6.0	3.0	1		08/11/14 16:22	75-01-4	
Xylene (Total)	ND ug/kg		6.0	3.0	1		08/11/14 16:22	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/11/14 16:22	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/11/14 16:22	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		75-129		1		08/11/14 16:22	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	17.6 %		0.50	0.50	1		08/11/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: DP-41 (10.0 FT) - 082014 Lab ID: 60175425002 Collected: 08/08/14 08:05 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		18.2	9.1	1		08/11/14 16:37	67-64-1	
Benzene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	71-43-2	
Bromodichloromethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-27-4	
Bromoform	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-25-2	
Bromomethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.1	4.6	1		08/11/14 16:37	78-93-3	
Carbon disulfide	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-15-0	
Carbon tetrachloride	ND ug/kg		4.6	2.3	1		08/11/14 16:37	56-23-5	
Chlorobenzene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	108-90-7	
Chloroethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-00-3	
Chloroform	ND ug/kg		4.6	2.3	1		08/11/14 16:37	67-66-3	
Chloromethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	74-87-3	
Dibromochloromethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	10061-02-6	
Ethylbenzene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	100-41-4	
2-Hexanone	ND ug/kg		18.2	9.1	1		08/11/14 16:37	591-78-6	
Methylene chloride	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.1	4.6	1		08/11/14 16:37	108-10-1	
Styrene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	79-34-5	
Tetrachloroethene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	127-18-4	
Toluene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 16:37	79-00-5	
Trichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 16:37	79-01-6	
Vinyl chloride	ND ug/kg		4.6	2.3	1		08/11/14 16:37	75-01-4	
Xylene (Total)	ND ug/kg		4.6	2.3	1		08/11/14 16:37	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	102 %		80-120		1		08/11/14 16:37	2037-26-5	
4-Bromofluorobenzene (S)	97 %		76-123		1		08/11/14 16:37	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		75-129		1		08/11/14 16:37	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	15.0 %		0.50	0.50	1		08/11/14 00:00		

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: DP-41 (14.0 FT) - 082014 Lab ID: 60175425003 Collected: 08/08/14 08:15 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		18.1	9.1	1		08/11/14 16:53	67-64-1	
Benzene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	71-43-2	
Bromodichloromethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-27-4	
Bromoform	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-25-2	
Bromomethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.1	4.5	1		08/11/14 16:53	78-93-3	
Carbon disulfide	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-15-0	
Carbon tetrachloride	ND ug/kg		4.5	2.3	1		08/11/14 16:53	56-23-5	
Chlorobenzene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	108-90-7	
Chloroethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-00-3	
Chloroform	ND ug/kg		4.5	2.3	1		08/11/14 16:53	67-66-3	
Chloromethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	74-87-3	
Dibromochloromethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	10061-02-6	
Ethylbenzene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	100-41-4	
2-Hexanone	ND ug/kg		18.1	9.1	1		08/11/14 16:53	591-78-6	
Methylene chloride	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.1	4.5	1		08/11/14 16:53	108-10-1	
Styrene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	79-34-5	
Tetrachloroethene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	127-18-4	
Toluene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.5	2.3	1		08/11/14 16:53	79-00-5	
Trichloroethene	ND ug/kg		4.5	2.3	1		08/11/14 16:53	79-01-6	
Vinyl chloride	ND ug/kg		4.5	2.3	1		08/11/14 16:53	75-01-4	
Xylene (Total)	ND ug/kg		4.5	2.3	1		08/11/14 16:53	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/11/14 16:53	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/11/14 16:53	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		75-129		1		08/11/14 16:53	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	14.4 %		0.50	0.50	1		08/11/14 00:00		

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: DP-42 (4.0 FT) - 082014 Lab ID: 60175425004 Collected: 08/08/14 10:20 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		19.6	9.8	1		08/11/14 17:08	67-64-1	
Benzene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	71-43-2	
Bromodichloromethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-27-4	
Bromoform	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-25-2	
Bromomethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.8	4.9	1		08/11/14 17:08	78-93-3	
Carbon disulfide	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-15-0	
Carbon tetrachloride	ND ug/kg		4.9	2.4	1		08/11/14 17:08	56-23-5	
Chlorobenzene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	108-90-7	
Chloroethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-00-3	
Chloroform	ND ug/kg		4.9	2.4	1		08/11/14 17:08	67-66-3	
Chloromethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	74-87-3	
Dibromochloromethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	10061-02-6	
Ethylbenzene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	100-41-4	
2-Hexanone	ND ug/kg		19.6	9.8	1		08/11/14 17:08	591-78-6	
Methylene chloride	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.8	4.9	1		08/11/14 17:08	108-10-1	
Styrene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	79-34-5	
Tetrachloroethene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	127-18-4	
Toluene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.9	2.4	1		08/11/14 17:08	79-00-5	
Trichloroethene	ND ug/kg		4.9	2.4	1		08/11/14 17:08	79-01-6	
Vinyl chloride	ND ug/kg		4.9	2.4	1		08/11/14 17:08	75-01-4	
Xylene (Total)	ND ug/kg		4.9	2.4	1		08/11/14 17:08	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/11/14 17:08	2037-26-5	
4-Bromofluorobenzene (S)	96 %		76-123		1		08/11/14 17:08	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		75-129		1		08/11/14 17:08	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>17.8 %</b>		0.50	0.50	1		08/11/14 00:00		

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: DP-42 (8-0 FT) - 082014 Lab ID: 60175425005 Collected: 08/08/14 10:30 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		18.5	9.2	1		08/11/14 17:23	67-64-1	
Benzene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	71-43-2	
Bromodichloromethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-27-4	
Bromoform	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-25-2	
Bromomethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.2	4.6	1		08/11/14 17:23	78-93-3	
Carbon disulfide	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-15-0	
Carbon tetrachloride	ND ug/kg		4.6	2.3	1		08/11/14 17:23	56-23-5	
Chlorobenzene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	108-90-7	
Chloroethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-00-3	
Chloroform	ND ug/kg		4.6	2.3	1		08/11/14 17:23	67-66-3	
Chloromethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	74-87-3	
Dibromochloromethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	10061-02-6	
Ethylbenzene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	100-41-4	
2-Hexanone	ND ug/kg		18.5	9.2	1		08/11/14 17:23	591-78-6	
Methylene chloride	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.2	4.6	1		08/11/14 17:23	108-10-1	
Styrene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	79-34-5	
Tetrachloroethene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	127-18-4	
Toluene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.6	2.3	1		08/11/14 17:23	79-00-5	
Trichloroethene	ND ug/kg		4.6	2.3	1		08/11/14 17:23	79-01-6	
Vinyl chloride	ND ug/kg		4.6	2.3	1		08/11/14 17:23	75-01-4	
Xylene (Total)	ND ug/kg		4.6	2.3	1		08/11/14 17:23	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/11/14 17:23	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/11/14 17:23	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/11/14 17:23	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	9.7 %		0.50	0.50	1		08/11/14 00:00		

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: DP-42 (12.0 FT) - 082014 Lab ID: 60175425006 Collected: 08/08/14 10:40 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		17.1	8.6	1		08/11/14 17:39	67-64-1	
Benzene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	71-43-2	
Bromodichloromethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-27-4	
Bromoform	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-25-2	
Bromomethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.6	4.3	1		08/11/14 17:39	78-93-3	
Carbon disulfide	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-15-0	
Carbon tetrachloride	ND ug/kg		4.3	2.1	1		08/11/14 17:39	56-23-5	
Chlorobenzene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	108-90-7	
Chloroethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-00-3	
Chloroform	ND ug/kg		4.3	2.1	1		08/11/14 17:39	67-66-3	
Chloromethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	74-87-3	
Dibromochloromethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	10061-02-6	
Ethylbenzene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	100-41-4	
2-Hexanone	ND ug/kg		17.1	8.6	1		08/11/14 17:39	591-78-6	
Methylene chloride	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.6	4.3	1		08/11/14 17:39	108-10-1	
Styrene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	79-34-5	
Tetrachloroethene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	127-18-4	
Toluene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.3	2.1	1		08/11/14 17:39	79-00-5	
Trichloroethene	ND ug/kg		4.3	2.1	1		08/11/14 17:39	79-01-6	
Vinyl chloride	ND ug/kg		4.3	2.1	1		08/11/14 17:39	75-01-4	
Xylene (Total)	ND ug/kg		4.3	2.1	1		08/11/14 17:39	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		80-120		1		08/11/14 17:39	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		08/11/14 17:39	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		75-129		1		08/11/14 17:39	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>10.9 %</b>		0.50	0.50	1		08/11/14 00:00		

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## ANALYTICAL RESULTS

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Sample: TB06-20140808 Lab ID: 60175425007 Collected: 08/08/14 10:40 Received: 08/09/14 01:32 Matrix: Solid

**Results reported on a "wet-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.0	10.0	1		08/12/14 10:08	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.0	5.0	1		08/12/14 10:08	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		08/12/14 10:08	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		08/12/14 10:08	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	74-87-3	
Dibromochloromethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	100-41-4	
2-Hexanone	ND ug/kg		20.0	10.0	1		08/12/14 10:08	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.0	5.0	1		08/12/14 10:08	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		08/12/14 10:08	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		08/12/14 10:08	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		08/12/14 10:08	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		08/12/14 10:08	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 10:08	2037-26-5	
4-Bromofluorobenzene (S)	97 %		76-123		1		08/12/14 10:08	460-00-4	
1,2-Dichloroethane-d4 (S)	88 %		75-129		1		08/12/14 10:08	17060-07-0	

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## QUALITY CONTROL DATA

Project: Ft. Smith Whirlpool Soil

Pace Project No.: 60175425

QC Batch:	MSV/63488	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60175425001, 60175425002, 60175425003, 60175425004, 60175425005, 60175425006		

METHOD BLANK:	1423834	Matrix:	Solid
Associated Lab Samples:	60175425001, 60175425002, 60175425003, 60175425004, 60175425005, 60175425006		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/11/14 15:19	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	08/11/14 15:19	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/11/14 15:19	
1,1-Dichloroethane	ug/kg	ND	5.0	08/11/14 15:19	
1,1-Dichloroethene	ug/kg	ND	5.0	08/11/14 15:19	
1,2-Dichloroethane	ug/kg	ND	5.0	08/11/14 15:19	
1,2-Dichloropropane	ug/kg	ND	5.0	08/11/14 15:19	
2-Butanone (MEK)	ug/kg	ND	10.0	08/11/14 15:19	
2-Hexanone	ug/kg	ND	20.0	08/11/14 15:19	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	08/11/14 15:19	
Acetone	ug/kg	ND	20.0	08/11/14 15:19	
Benzene	ug/kg	ND	5.0	08/11/14 15:19	
Bromodichloromethane	ug/kg	ND	5.0	08/11/14 15:19	
Bromoform	ug/kg	ND	5.0	08/11/14 15:19	
Bromomethane	ug/kg	ND	5.0	08/11/14 15:19	
Carbon disulfide	ug/kg	ND	5.0	08/11/14 15:19	
Carbon tetrachloride	ug/kg	ND	5.0	08/11/14 15:19	
Chlorobenzene	ug/kg	ND	5.0	08/11/14 15:19	
Chloroethane	ug/kg	ND	5.0	08/11/14 15:19	
Chloroform	ug/kg	ND	5.0	08/11/14 15:19	
Chloromethane	ug/kg	ND	5.0	08/11/14 15:19	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/11/14 15:19	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/11/14 15:19	
Dibromochloromethane	ug/kg	ND	5.0	08/11/14 15:19	
Ethylbenzene	ug/kg	ND	5.0	08/11/14 15:19	
Methylene chloride	ug/kg	ND	5.0	08/11/14 15:19	
Styrene	ug/kg	ND	5.0	08/11/14 15:19	
Tetrachloroethene	ug/kg	ND	5.0	08/11/14 15:19	
Toluene	ug/kg	ND	5.0	08/11/14 15:19	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/11/14 15:19	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/11/14 15:19	
Trichloroethene	ug/kg	ND	5.0	08/11/14 15:19	
Vinyl chloride	ug/kg	ND	5.0	08/11/14 15:19	
Xylene (Total)	ug/kg	ND	5.0	08/11/14 15:19	
1,2-Dichloroethane-d4 (S)	%	99	75-129	08/11/14 15:19	
4-Bromofluorobenzene (S)	%	100	76-123	08/11/14 15:19	
Toluene-d8 (S)	%	100	80-120	08/11/14 15:19	

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

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## QUALITY CONTROL DATA

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

LABORATORY CONTROL SAMPLE: 1423835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	94.6	95	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	89.7	90	73-120	
1,1,2-Trichloroethane	ug/kg	100	88.9	89	76-120	
1,1-Dichloroethane	ug/kg	100	81.8	82	71-120	
1,1-Dichloroethene	ug/kg	100	89.5	89	76-130	
1,2-Dichloroethane	ug/kg	100	93.8	94	78-120	
1,2-Dichloropropane	ug/kg	100	93.0	93	80-120	
2-Butanone (MEK)	ug/kg	500	428	86	55-135	
2-Hexanone	ug/kg	500	461	92	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	462	92	71-128	
Acetone	ug/kg	500	400	80	43-144	
Benzene	ug/kg	100	88.9	89	80-120	
Bromodichloromethane	ug/kg	100	94.1	94	80-120	
Bromoform	ug/kg	100	91.7	92	75-124	
Bromomethane	ug/kg	100	80.9	81	38-150	
Carbon disulfide	ug/kg	100	94.2	94	58-137	
Carbon tetrachloride	ug/kg	100	89.6	90	75-140	
Chlorobenzene	ug/kg	100	90.4	90	80-120	
Chloroethane	ug/kg	100	91.7	92	65-127	
Chloroform	ug/kg	100	83.9	84	74-120	
Chloromethane	ug/kg	100	92.6	93	39-138	
cis-1,2-Dichloroethene	ug/kg	100	96.1	96	76-124	
cis-1,3-Dichloropropene	ug/kg	100	84.6	85	82-120	
Dibromochloromethane	ug/kg	100	92.9	93	80-124	
Ethylbenzene	ug/kg	100	88.6	89	80-120	
Methylene chloride	ug/kg	100	72.0	72	70-123	
Styrene	ug/kg	100	91.3	91	79-120	
Tetrachloroethene	ug/kg	100	86.5	87	78-128	
Toluene	ug/kg	100	91.6	92	79-120	
trans-1,2-Dichloroethene	ug/kg	100	86.5	86	76-124	
trans-1,3-Dichloropropene	ug/kg	100	85.3	85	80-124	
Trichloroethene	ug/kg	100	92.1	92	80-120	
Vinyl chloride	ug/kg	100	83.5	83	57-132	
Xylene (Total)	ug/kg	300	266	89	79-120	
1,2-Dichloroethane-d4 (S)	%			96	75-129	
4-Bromofluorobenzene (S)	%			96	76-123	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1423836      1423837

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60175350006	Spike Conc.	Spike Conc.	MS Result						
1,1,1-Trichloroethane	ug/kg	ND	101	101	81.6	78.2	81	77	21-144	4	43
1,1,2,2-Tetrachloroethane	ug/kg	ND	101	101	59.4	50.2	59	50	10-151	17	46
1,1,2-Trichloroethane	ug/kg	ND	101	101	75.2	72.4	74	71	10-140	4	46

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1423836		1423837									
		MS		MSD		MS		MSD		MSD		% Rec	Max
		60175350006	Spike Conc.	Spike Conc.	Result	MSD Result	MS % Rec	MSD % Rec	MSD % Rec	MSD % Rec	Limits	RPD	RPD
1,1-Dichloroethane	ug/kg	ND	101	101	68.0	68.9	67	68	19-137	1	43		
1,1-Dichloroethene	ug/kg	ND	101	101	80.7	75.5	80	75	27-143	7	41		
1,2-Dichloroethane	ug/kg	ND	101	101	73.9	69.7	73	69	21-147	6	38		
1,2-Dichloropropane	ug/kg	ND	101	101	74.7	76.4	74	75	15-145	2	43		
2-Butanone (MEK)	ug/kg	ND	506	506	343	355	68	70	10-160	3	50		
2-Hexanone	ug/kg	ND	506	506	425	403	84	80	10-160	5	50		
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	506	506	380	373	75	74	10-152	2	47		
Acetone	ug/kg	ND	506	506	333	322	66	64	10-160	3	49		
Benzene	ug/kg	ND	101	101	75.3	75.2	74	74	22-144	0	38		
Bromodichloromethane	ug/kg	ND	101	101	78.0	75.9	77	75	10-143	3	42		
Bromoform	ug/kg	ND	101	101	72.1	73.1	71	72	10-145	1	44		
Bromomethane	ug/kg	ND	101	101	59.3	60.8	59	60	10-137	3	47		
Carbon disulfide	ug/kg	ND	101	101	80.5	104	79	103	10-142	26	44		
Carbon tetrachloride	ug/kg	ND	101	101	77.3	77.9	76	77	15-153	1	45		
Chlorobenzene	ug/kg	ND	101	101	72.9	73.1	72	72	10-145	0	46		
Chloroethane	ug/kg	ND	101	101	69.6	71.2	69	70	17-134	2	42		
Chloroform	ug/kg	ND	101	101	72.1	67.1	71	66	17-138	7	44		
Chloromethane	ug/kg	ND	101	101	55.1	43.1	54	43	10-128	24	39		
cis-1,2-Dichloroethene	ug/kg	ND	101	101	80.5	80.1	80	79	17-140	1	46		
cis-1,3-Dichloropropene	ug/kg	ND	101	101	70.1	69.8	69	69	10-142	0	43		
Dibromochloromethane	ug/kg	ND	101	101	73.9	74.4	73	73	10-149	1	42		
Ethylbenzene	ug/kg	ND	101	101	79.2	79.2	78	78	10-154	0	42		
Methylene chloride	ug/kg	7.4	101	101	59.3	60.0	51	52	15-140	1	46		
Styrene	ug/kg	ND	101	101	76.4	72.8	75	72	10-142	5	44		
Tetrachloroethene	ug/kg	ND	101	101	77.9	76.8	77	76	10-150	1	48		
Toluene	ug/kg	ND	101	101	77.3	77.2	76	76	11-150	0	40		
trans-1,2-Dichloroethene	ug/kg	ND	101	101	76.8	73.2	76	72	20-140	5	42		
trans-1,3-Dichloropropene	ug/kg	ND	101	101	68.8	68.0	68	67	10-149	1	41		
Trichloroethene	ug/kg	ND	101	101	99.3	101	98	100	14-146	2	45		
Vinyl chloride	ug/kg	ND	101	101	74.7	71.9	74	71	19-131	4	37		
Xylene (Total)	ug/kg	ND	303	303	224	223	74	74	10-154	0	41		
1,2-Dichloroethane-d4 (S)	%						100	100	75-129				
4-Bromofluorobenzene (S)	%							98	98	76-123			
Toluene-d8 (S)	%							100	101	80-120			

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Ft. Smith Whirlpool Soil

Pace Project No.: 60175425

QC Batch: MSV/63498

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 60175425007

METHOD BLANK: 1424041

Matrix: Solid

Associated Lab Samples: 60175425007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1-Dichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1-Dichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
1,2-Dichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,2-Dichloropropane	ug/kg	ND	5.0	08/12/14 09:37	
2-Butanone (MEK)	ug/kg	ND	10.0	08/12/14 09:37	
2-Hexanone	ug/kg	ND	20.0	08/12/14 09:37	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	08/12/14 09:37	
Acetone	ug/kg	ND	20.0	08/12/14 09:37	
Benzene	ug/kg	ND	5.0	08/12/14 09:37	
Bromodichloromethane	ug/kg	ND	5.0	08/12/14 09:37	
Bromoform	ug/kg	ND	5.0	08/12/14 09:37	
Bromomethane	ug/kg	ND	5.0	08/12/14 09:37	
Carbon disulfide	ug/kg	ND	5.0	08/12/14 09:37	
Carbon tetrachloride	ug/kg	ND	5.0	08/12/14 09:37	
Chlorobenzene	ug/kg	ND	5.0	08/12/14 09:37	
Chloroethane	ug/kg	ND	5.0	08/12/14 09:37	
Chloroform	ug/kg	ND	5.0	08/12/14 09:37	
Chloromethane	ug/kg	ND	5.0	08/12/14 09:37	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/12/14 09:37	
Dibromochloromethane	ug/kg	ND	5.0	08/12/14 09:37	
Ethylbenzene	ug/kg	ND	5.0	08/12/14 09:37	
Methylene chloride	ug/kg	ND	5.0	08/12/14 09:37	
Styrene	ug/kg	ND	5.0	08/12/14 09:37	
Tetrachloroethene	ug/kg	ND	5.0	08/12/14 09:37	
Toluene	ug/kg	ND	5.0	08/12/14 09:37	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/12/14 09:37	
Trichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
Vinyl chloride	ug/kg	ND	5.0	08/12/14 09:37	
Xylene (Total)	ug/kg	ND	5.0	08/12/14 09:37	
1,2-Dichloroethane-d4 (S)	%	95	75-129	08/12/14 09:37	
4-Bromofluorobenzene (S)	%	98	76-123	08/12/14 09:37	
Toluene-d8 (S)	%	101	80-120	08/12/14 09:37	

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## QUALITY CONTROL DATA

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

LABORATORY CONTROL SAMPLE: 1424042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	87.9	88	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	90.1	90	73-120	
1,1,2-Trichloroethane	ug/kg	100	91.4	91	76-120	
1,1-Dichloroethane	ug/kg	100	99.4	99	71-120	
1,1-Dichloroethene	ug/kg	100	102	102	76-130	
1,2-Dichloroethane	ug/kg	100	81.6	82	78-120	
1,2-Dichloropropane	ug/kg	100	86.5	87	80-120	
2-Butanone (MEK)	ug/kg	500	393	79	55-135	
2-Hexanone	ug/kg	500	447	89	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	436	87	71-128	
Acetone	ug/kg	500	495	99	43-144	
Benzene	ug/kg	100	85.4	85	80-120	
Bromodichloromethane	ug/kg	100	88.4	88	80-120	
Bromoform	ug/kg	100	90.4	90	75-124	
Bromomethane	ug/kg	100	74.7	75	38-150	
Carbon disulfide	ug/kg	100	95.0	95	58-137	
Carbon tetrachloride	ug/kg	100	84.2	84	75-140	
Chlorobenzene	ug/kg	100	89.1	89	80-120	
Chloroethane	ug/kg	100	76.9	77	65-127	
Chloroform	ug/kg	100	77.8	78	74-120	
Chloromethane	ug/kg	100	41.1	41	39-138	
cis-1,2-Dichloroethene	ug/kg	100	88.7	89	76-124	
cis-1,3-Dichloropropene	ug/kg	100	80.7	81	82-120 L0	
Dibromochloromethane	ug/kg	100	89.1	89	80-124	
Ethylbenzene	ug/kg	100	88.2	88	80-120	
Methylene chloride	ug/kg	100	83.5	83	70-123	
Styrene	ug/kg	100	89.3	89	79-120	
Tetrachloroethene	ug/kg	100	87.9	88	78-128	
Toluene	ug/kg	100	84.7	85	79-120	
trans-1,2-Dichloroethene	ug/kg	100	98.2	98	76-124	
trans-1,3-Dichloropropene	ug/kg	100	85.2	85	80-124	
Trichloroethene	ug/kg	100	88.5	88	80-120	
Vinyl chloride	ug/kg	100	72.5	72	57-132	
Xylene (Total)	ug/kg	300	264	88	79-120	
1,2-Dichloroethane-d4 (S)	%			91	75-129	
4-Bromofluorobenzene (S)	%			97	76-123	
Toluene-d8 (S)	%			100	80-120	

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## QUALITY CONTROL DATA

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

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QC Batch:	PMST/9898	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60175425001, 60175425002, 60175425003, 60175425004, 60175425005, 60175425006		

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METHOD BLANK: 1423546                                  Matrix: Solid

Associated Lab Samples: 60175425001, 60175425002, 60175425003, 60175425004, 60175425005, 60175425006

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	08/11/14 00:00	

---

SAMPLE DUPLICATE: 1423547

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Parameter	Units	60175425001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.6	16.6	6	20	

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## QUALIFIERS

Project: Ft. Smith Whirlpool Soil

Pace Project No.: 60175425

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Ft. Smith Whirlpool Soil  
Pace Project No.: 60175425

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60175425001	DP-41 (4.0 FT) - 082014	EPA 8260	MSV/63488		
60175425002	DP-41 (10.0 FT) - 082014	EPA 8260	MSV/63488		
60175425003	DP-41 (14.0 FT) - 082014	EPA 8260	MSV/63488		
60175425004	DP-42 (4.0 FT) - 082014	EPA 8260	MSV/63488		
60175425005	DP-42 (8-0 FT) - 082014	EPA 8260	MSV/63488		
60175425006	DP-42 (12.0 FT) - 082014	EPA 8260	MSV/63488		
60175425007	TB06-20140808	EPA 8260	MSV/63498		
60175425001	DP-41 (4.0 FT) - 082014	ASTM D2974	PMST/9898		
60175425002	DP-41 (10.0 FT) - 082014	ASTM D2974	PMST/9898		
60175425003	DP-41 (14.0 FT) - 082014	ASTM D2974	PMST/9898		
60175425004	DP-42 (4.0 FT) - 082014	ASTM D2974	PMST/9898		
60175425005	DP-42 (8-0 FT) - 082014	ASTM D2974	PMST/9898		
60175425006	DP-42 (12.0 FT) - 082014	ASTM D2974	PMST/9898		

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## Sample Condition Upon Receipt

WO# : 60175425



60175425

Client Name: Enviro

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other 

Tracking #: \_\_\_\_\_

Pace Shipping Label Used? Yes  No 

Optional

Proj Due Date:

Proj Name:

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other 

Thermometer Used: T-239 / T-194

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

Cooler Temperature: 2.2

Date and initials of person examining  
contents: att 8/9

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. Kits
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. 1 day
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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: SL	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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed      Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): 102813 - 3		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: AR

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: 6/1/11Date: 8/12/11  
att 8/11/11

Section A Required Client Information		Section B Required Project Information:		Section C Invoice Information:	
Company: Environ	Report To: Wendy Stonestreet	Copy To: Tamara Gleason	Attention: Tamara Gleason		
Address: 7500 College Blvd., Ste. 925	Purchase Order No.: tgleason@environcorp.com	Address:	Company Name:		
Overland Park, KS 66210		Pace Quote:	REGULATORY AGENCY		
Email To: wstonestreet@environcorp.com	Project Name: Fort Smith, AR	Pace Project Manager:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
Phone: 913-553-5926 Fax:	Project Number:	Pace Profile #:	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Requested Due Date/TAT: 1-DAY TAT		Site Location:	AR		STATE:
Requested Analysis Filtered (Y/N)					
Analysis Test <input checked="" type="checkbox"/> 8260 client specific list <input checked="" type="checkbox"/> Preservatives <input checked="" type="checkbox"/> Methanol <input checked="" type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> <input checked="" type="checkbox"/> NaOH <input checked="" type="checkbox"/> HCl <input checked="" type="checkbox"/> HNO <sub>3</sub> <input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input checked="" type="checkbox"/> Unpreserved # OF CONTAINERS SAMPLE TEMP AT COLLECTION MATRIX CODE (see valid codes to left)					
Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER W WASTE/WATER WW PRODUCT P SOLID SL WIPE OL OIL WP AIR AR OTHER OI TISSUE TS					
Section D Required Client Information		COLLECTED		TIME	
ITEM#	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	COMPOSITE START	COMPOSITE END/GRAB	DATE	TIME
1	DP-112, DP-411 (4.0 FT) - 082014	8/14 0740	8/14 0740	5	<input checked="" type="checkbox"/>
2	DP-411 (10.0 FT) - 082014	0805	0805		<input checked="" type="checkbox"/>
3	DP-411 (4.0 FT) - 082014	0815	0815		<input checked="" type="checkbox"/>
4	DP-412 (4.0 FT) - 082014			1020	<input checked="" type="checkbox"/>
5	DP-412 (8.0 FT) - 082014			1030	<input checked="" type="checkbox"/>
6	DP-42 (12.0 FT) - 082014			1040	<input checked="" type="checkbox"/>
7	Tripp Blank H06 - 082014	WT	WT		<input checked="" type="checkbox"/>
8	Temp Blank	WT	WT		<input checked="" type="checkbox"/>
9					
10					
11					
12					
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME
1-DAY TAT ! (24 hr.)		Mary K.		8/8/14	12:45
				Accepted By / Affiliation	Accepted Date
				8/9	01:32
				Print Name of Sampler:	Nich Zurneier
				Signature of Sampler:	
				Date Signed (MM/DD/YY):	8/8/14
				Temp in °C	
				Received on (MM/DD/YY)	
				Custody Sealed (Y/N)	
				Samples In/Out (Y/N)	

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

August 13, 2014

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

RE: Project: FORT SMITH, AR  
Pace Project No.: 60175525

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORT SMITH, AR  
Pace Project No.: 60175525

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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.: 60175525

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60175525001	DP-43-SL (4.0 FT) - 20140811	Solid	08/11/14 09:15	08/12/14 01:30
60175525002	DP-43-SL (10.0 FT) - 20140811	Solid	08/11/14 09:40	08/12/14 01:30
60175525003	DP-43-SL (19.0 FT) - 20140811	Solid	08/11/14 10:07	08/12/14 01:30
60175525004	DP-44-SL (4.0 FT) - 20140811	Solid	08/11/14 11:09	08/12/14 01:30
60175525005	DP-44-SL (11.0 FT) - 20140811	Solid	08/11/14 11:28	08/12/14 01:30
60175525006	DP-44-SL (18.0 FT) - 20140811	Solid	08/11/14 11:41	08/12/14 01:30
60175525007	DP-44-SL (21.5 FT) - 20140811	Solid	08/11/14 12:07	08/12/14 01:30
60175525008	DP-45-SL (4.0 FT) - 20140811	Solid	08/11/14 14:49	08/12/14 01:30
60175525009	DP-45-SL (12.0 FT) - 20140811	Solid	08/11/14 15:10	08/12/14 01:30
60175525010	DP-45-SL (18.0 FT) - 20140811	Solid	08/11/14 15:25	08/12/14 01:30

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## SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR  
Pace Project No.: 60175525

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60175525001	DP-43-SL (4.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525002	DP-43-SL (10.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525003	DP-43-SL (19.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525004	DP-44-SL (4.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525005	DP-44-SL (11.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525006	DP-44-SL (18.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525007	DP-44-SL (21.5 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525008	DP-45-SL (4.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525009	DP-45-SL (12.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1
60175525010	DP-45-SL (18.0 FT) - 20140811	EPA 8260 ASTM D2974	TJT TMD	37 1

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: FORT SMITH, AR  
Pace Project No.: 60175525

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**Method:** EPA 8260  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** August 13, 2014

### General Information:

10 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### Hold Time:

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

### Initial Calibrations (including MS Tune as applicable):

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

### Continuing Calibration:

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

### Internal Standards:

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

### Surrogates:

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

### Method Blank:

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

### Laboratory Control Spike:

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

QC Batch: MSV/63498

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1424042)
- cis-1,3-Dichloropropene

### Matrix Spikes:

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

### Additional Comments:

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

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-43-SL (4.0 FT) - Lab ID: 60175525001 Collected: 08/11/14 09:15 Received: 08/12/14 01:30 Matrix: Solid  
20140811

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		24.3	12.1	1		08/12/14 12:27	67-64-1	
Benzene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	71-43-2	
Bromodichloromethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-27-4	
Bromoform	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-25-2	
Bromomethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	74-83-9	
2-Butanone (MEK)	ND ug/kg		12.1	6.1	1		08/12/14 12:27	78-93-3	
Carbon disulfide	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-15-0	
Carbon tetrachloride	ND ug/kg		6.1	3.0	1		08/12/14 12:27	56-23-5	
Chlorobenzene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	108-90-7	
Chloroethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-00-3	
Chloroform	ND ug/kg		6.1	3.0	1		08/12/14 12:27	67-66-3	
Chloromethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	74-87-3	
Dibromochloromethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	124-48-1	
1,1-Dichloroethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-34-3	
1,2-Dichloroethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	107-06-2	
1,1-Dichloroethene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	156-60-5	
1,2-Dichloropropane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	10061-02-6	
Ethylbenzene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	100-41-4	
2-Hexanone	ND ug/kg		24.3	12.1	1		08/12/14 12:27	591-78-6	
Methylene chloride	3.3J ug/kg		6.1	3.0	1		08/12/14 12:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		12.1	6.1	1		08/12/14 12:27	108-10-1	
Styrene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	79-34-5	
Tetrachloroethene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	127-18-4	
Toluene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		6.1	3.0	1		08/12/14 12:27	79-00-5	
Trichloroethene	ND ug/kg		6.1	3.0	1		08/12/14 12:27	79-01-6	
Vinyl chloride	ND ug/kg		6.1	3.0	1		08/12/14 12:27	75-01-4	
Xylene (Total)	ND ug/kg		6.1	3.0	1		08/12/14 12:27	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	103 %		80-120		1		08/12/14 12:27	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/12/14 12:27	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		75-129		1		08/12/14 12:27	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>22.1</b> %		0.50	0.50	1		08/12/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-43-SL (10.0 FT) - Lab ID: 60175525002 Collected: 08/11/14 09:40 Received: 08/12/14 01:30 Matrix: Solid  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		17.8	8.9	1		08/12/14 12:42	67-64-1	
Benzene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	71-43-2	
Bromodichloromethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-27-4	
Bromoform	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-25-2	
Bromomethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.9	4.4	1		08/12/14 12:42	78-93-3	
Carbon disulfide	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-15-0	
Carbon tetrachloride	ND ug/kg		4.4	2.2	1		08/12/14 12:42	56-23-5	
Chlorobenzene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	108-90-7	
Chloroethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-00-3	
Chloroform	ND ug/kg		4.4	2.2	1		08/12/14 12:42	67-66-3	
Chloromethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	74-87-3	
Dibromochloromethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	10061-02-6	
Ethylbenzene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	100-41-4	
2-Hexanone	ND ug/kg		17.8	8.9	1		08/12/14 12:42	591-78-6	
Methylene chloride	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.9	4.4	1		08/12/14 12:42	108-10-1	
Styrene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	127-18-4	
Toluene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 12:42	79-00-5	
Trichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 12:42	79-01-6	
Vinyl chloride	ND ug/kg		4.4	2.2	1		08/12/14 12:42	75-01-4	
Xylene (Total)	ND ug/kg		4.4	2.2	1		08/12/14 12:42	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 12:42	2037-26-5	
4-Bromofluorobenzene (S)	98 %		76-123		1		08/12/14 12:42	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		75-129		1		08/12/14 12:42	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	13.7 %		0.50	0.50	1		08/12/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-43-SL (19.0 FT) - Lab ID: 60175525003 Collected: 08/11/14 10:07 Received: 08/12/14 01:30 Matrix: Solid  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		16.7	8.4	1		08/12/14 12:58	67-64-1	
Benzene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	71-43-2	
Bromodichloromethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-27-4	
Bromoform	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-25-2	
Bromomethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.4	4.2	1		08/12/14 12:58	78-93-3	
Carbon disulfide	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-15-0	
Carbon tetrachloride	ND ug/kg		4.2	2.1	1		08/12/14 12:58	56-23-5	
Chlorobenzene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	108-90-7	
Chloroethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-00-3	
Chloroform	ND ug/kg		4.2	2.1	1		08/12/14 12:58	67-66-3	
Chloromethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	74-87-3	
Dibromochloromethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	10061-02-6	
Ethylbenzene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	100-41-4	
2-Hexanone	ND ug/kg		16.7	8.4	1		08/12/14 12:58	591-78-6	
Methylene chloride	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.4	4.2	1		08/12/14 12:58	108-10-1	
Styrene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	79-34-5	
Tetrachloroethene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	127-18-4	
Toluene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.2	2.1	1		08/12/14 12:58	79-00-5	
Trichloroethene	ND ug/kg		4.2	2.1	1		08/12/14 12:58	79-01-6	
Vinyl chloride	ND ug/kg		4.2	2.1	1		08/12/14 12:58	75-01-4	
Xylene (Total)	ND ug/kg		4.2	2.1	1		08/12/14 12:58	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 12:58	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		08/12/14 12:58	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		75-129		1		08/12/14 12:58	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	12.9 %		0.50	0.50	1		08/12/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-44-SL (4.0 FT) - Lab ID: 60175525004 Collected: 08/11/14 11:09 Received: 08/12/14 01:30 Matrix: Solid  
20140811

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>	Analytical Method: EPA 8260								
Acetone	ND ug/kg		23.3	11.7	1		08/12/14 13:13	67-64-1	
Benzene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	71-43-2	
Bromodichloromethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-27-4	
Bromoform	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-25-2	
Bromomethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	74-83-9	
2-Butanone (MEK)	ND ug/kg		11.7	5.8	1		08/12/14 13:13	78-93-3	
Carbon disulfide	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-15-0	
Carbon tetrachloride	ND ug/kg		5.8	2.9	1		08/12/14 13:13	56-23-5	
Chlorobenzene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	108-90-7	
Chloroethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-00-3	
Chloroform	ND ug/kg		5.8	2.9	1		08/12/14 13:13	67-66-3	
Chloromethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	74-87-3	
Dibromochloromethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	10061-02-6	
Ethylbenzene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	100-41-4	
2-Hexanone	ND ug/kg		23.3	11.7	1		08/12/14 13:13	591-78-6	
Methylene chloride	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		11.7	5.8	1		08/12/14 13:13	108-10-1	
Styrene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	79-34-5	
Tetrachloroethene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	127-18-4	
Toluene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.8	2.9	1		08/12/14 13:13	79-00-5	
Trichloroethene	ND ug/kg		5.8	2.9	1		08/12/14 13:13	79-01-6	
Vinyl chloride	ND ug/kg		5.8	2.9	1		08/12/14 13:13	75-01-4	
Xylene (Total)	ND ug/kg		5.8	2.9	1		08/12/14 13:13	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 13:13	2037-26-5	
4-Bromofluorobenzene (S)	103 %		76-123		1		08/12/14 13:13	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		75-129		1		08/12/14 13:13	17060-07-0	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974								
Percent Moisture	<b>22.1</b> %		0.50	0.50	1		08/12/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175525

Sample: DP-44-SL (11.0 FT) - Lab ID: 60175525005 Collected: 08/11/14 11:28 Received: 08/12/14 01:30 Matrix: Solid  
20140811

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		18.4	9.2	1		08/12/14 13:29	67-64-1	
Benzene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	71-43-2	
Bromodichloromethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-27-4	
Bromoform	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-25-2	
Bromomethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.2	4.6	1		08/12/14 13:29	78-93-3	
Carbon disulfide	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-15-0	
Carbon tetrachloride	ND ug/kg		4.6	2.3	1		08/12/14 13:29	56-23-5	
Chlorobenzene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	108-90-7	
Chloroethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-00-3	
Chloroform	ND ug/kg		4.6	2.3	1		08/12/14 13:29	67-66-3	
Chloromethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	74-87-3	
Dibromochloromethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	10061-02-6	
Ethylbenzene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	100-41-4	
2-Hexanone	ND ug/kg		18.4	9.2	1		08/12/14 13:29	591-78-6	
Methylene chloride	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.2	4.6	1		08/12/14 13:29	108-10-1	
Styrene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	79-34-5	
Tetrachloroethene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	127-18-4	
Toluene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.6	2.3	1		08/12/14 13:29	79-00-5	
Trichloroethene	ND ug/kg		4.6	2.3	1		08/12/14 13:29	79-01-6	
Vinyl chloride	ND ug/kg		4.6	2.3	1		08/12/14 13:29	75-01-4	
Xylene (Total)	ND ug/kg		4.6	2.3	1		08/12/14 13:29	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		80-120		1		08/12/14 13:29	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/12/14 13:29	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		75-129		1		08/12/14 13:29	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>18.3 %</b>		0.50	0.50	1		08/12/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-44-SL (18.0 FT) - Lab ID: 60175525006 Collected: 08/11/14 11:41 Received: 08/12/14 01:30 Matrix: Solid  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		19.6	9.8	1		08/12/14 13:44	67-64-1	
Benzene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	71-43-2	
Bromodichloromethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-27-4	
Bromoform	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-25-2	
Bromomethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.8	4.9	1		08/12/14 13:44	78-93-3	
Carbon disulfide	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-15-0	
Carbon tetrachloride	ND ug/kg		4.9	2.4	1		08/12/14 13:44	56-23-5	
Chlorobenzene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	108-90-7	
Chloroethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-00-3	
Chloroform	ND ug/kg		4.9	2.4	1		08/12/14 13:44	67-66-3	
Chloromethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	74-87-3	
Dibromochloromethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	10061-02-6	
Ethylbenzene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	100-41-4	
2-Hexanone	ND ug/kg		19.6	9.8	1		08/12/14 13:44	591-78-6	
Methylene chloride	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.8	4.9	1		08/12/14 13:44	108-10-1	
Styrene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	79-34-5	
Tetrachloroethene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	127-18-4	
Toluene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.9	2.4	1		08/12/14 13:44	79-00-5	
Trichloroethene	ND ug/kg		4.9	2.4	1		08/12/14 13:44	79-01-6	
Vinyl chloride	ND ug/kg		4.9	2.4	1		08/12/14 13:44	75-01-4	
Xylene (Total)	ND ug/kg		4.9	2.4	1		08/12/14 13:44	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 13:44	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		08/12/14 13:44	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		75-129		1		08/12/14 13:44	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	8.4 %		0.50	0.50	1		08/12/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-44-SL (21.5 FT) - Lab ID: 60175525007 Collected: 08/11/14 12:07 Received: 08/12/14 01:30 Matrix: Solid  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.4	10.2	1		08/12/14 14:00	67-64-1	
Benzene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	71-43-2	
Bromodichloromethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-27-4	
Bromoform	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-25-2	
Bromomethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.2	5.1	1		08/12/14 14:00	78-93-3	
Carbon disulfide	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-15-0	
Carbon tetrachloride	ND ug/kg		5.1	2.6	1		08/12/14 14:00	56-23-5	
Chlorobenzene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	108-90-7	
Chloroethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-00-3	
Chloroform	ND ug/kg		5.1	2.6	1		08/12/14 14:00	67-66-3	
Chloromethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	74-87-3	
Dibromochloromethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	10061-02-6	
Ethylbenzene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	100-41-4	
2-Hexanone	ND ug/kg		20.4	10.2	1		08/12/14 14:00	591-78-6	
Methylene chloride	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.2	5.1	1		08/12/14 14:00	108-10-1	
Styrene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	79-34-5	
Tetrachloroethene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	127-18-4	
Toluene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.1	2.6	1		08/12/14 14:00	79-00-5	
Trichloroethene	ND ug/kg		5.1	2.6	1		08/12/14 14:00	79-01-6	
Vinyl chloride	ND ug/kg		5.1	2.6	1		08/12/14 14:00	75-01-4	
Xylene (Total)	ND ug/kg		5.1	2.6	1		08/12/14 14:00	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/12/14 14:00	2037-26-5	
4-Bromofluorobenzene (S)	97 %		76-123		1		08/12/14 14:00	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/12/14 14:00	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	11.4 %		0.50	0.50	1		08/12/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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**Sample: DP-45-SL (4.0 FT) - Lab ID: 60175525008 Collected: 08/11/14 14:49 Received: 08/12/14 01:30 Matrix: Solid**  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	37.1 ug/kg		17.7	8.9	1		08/12/14 14:15	67-64-1	
Benzene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	71-43-2	
Bromodichloromethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-27-4	
Bromoform	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-25-2	
Bromomethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.9	4.4	1		08/12/14 14:15	78-93-3	
Carbon disulfide	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-15-0	
Carbon tetrachloride	ND ug/kg		4.4	2.2	1		08/12/14 14:15	56-23-5	
Chlorobenzene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	108-90-7	
Chloroethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-00-3	
Chloroform	ND ug/kg		4.4	2.2	1		08/12/14 14:15	67-66-3	
Chloromethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	74-87-3	
Dibromochloromethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	10061-02-6	
Ethylbenzene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	100-41-4	
2-Hexanone	ND ug/kg		17.7	8.9	1		08/12/14 14:15	591-78-6	
Methylene chloride	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.9	4.4	1		08/12/14 14:15	108-10-1	
Styrene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	127-18-4	
Toluene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	2.2	1		08/12/14 14:15	79-00-5	
Trichloroethene	ND ug/kg		4.4	2.2	1		08/12/14 14:15	79-01-6	
Vinyl chloride	ND ug/kg		4.4	2.2	1		08/12/14 14:15	75-01-4	
Xylene (Total)	ND ug/kg		4.4	2.2	1		08/12/14 14:15	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 14:15	2037-26-5	
4-Bromofluorobenzene (S)	102 %		76-123		1		08/12/14 14:15	460-00-4	
1,2-Dichloroethane-d4 (S)	110 %		75-129		1		08/12/14 14:15	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	14.3 %		0.50	0.50	1		08/12/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-45-SL (12.0 FT) - Lab ID: 60175525009 Collected: 08/11/14 15:10 Received: 08/12/14 01:30 Matrix: Solid  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		19.7	9.8	1		08/12/14 14:31	67-64-1	
Benzene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	71-43-2	
Bromodichloromethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-27-4	
Bromoform	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-25-2	
Bromomethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.8	4.9	1		08/12/14 14:31	78-93-3	
Carbon disulfide	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-15-0	
Carbon tetrachloride	ND ug/kg		4.9	2.5	1		08/12/14 14:31	56-23-5	
Chlorobenzene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	108-90-7	
Chloroethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-00-3	
Chloroform	ND ug/kg		4.9	2.5	1		08/12/14 14:31	67-66-3	
Chloromethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	74-87-3	
Dibromochloromethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	10061-02-6	
Ethylbenzene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	100-41-4	
2-Hexanone	ND ug/kg		19.7	9.8	1		08/12/14 14:31	591-78-6	
Methylene chloride	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.8	4.9	1		08/12/14 14:31	108-10-1	
Styrene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	79-34-5	
Tetrachloroethene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	127-18-4	
Toluene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.9	2.5	1		08/12/14 14:31	79-00-5	
Trichloroethene	ND ug/kg		4.9	2.5	1		08/12/14 14:31	79-01-6	
Vinyl chloride	ND ug/kg		4.9	2.5	1		08/12/14 14:31	75-01-4	
Xylene (Total)	ND ug/kg		4.9	2.5	1		08/12/14 14:31	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	102 %		80-120		1		08/12/14 14:31	2037-26-5	
4-Bromofluorobenzene (S)	98 %		76-123		1		08/12/14 14:31	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/12/14 14:31	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	16.4 %		0.50	0.50	1		08/12/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR

Pace Project No.: 60175525

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Sample: DP-45-SL (18.0 FT) - Lab ID: 60175525010 Collected: 08/11/14 15:25 Received: 08/12/14 01:30 Matrix: Solid  
20140811

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		18.0	9.0	1		08/12/14 14:46	67-64-1	
Benzene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	71-43-2	
Bromodichloromethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-27-4	
Bromoform	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-25-2	
Bromomethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.0	4.5	1		08/12/14 14:46	78-93-3	
Carbon disulfide	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-15-0	
Carbon tetrachloride	ND ug/kg		4.5	2.3	1		08/12/14 14:46	56-23-5	
Chlorobenzene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	108-90-7	
Chloroethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-00-3	
Chloroform	ND ug/kg		4.5	2.3	1		08/12/14 14:46	67-66-3	
Chloromethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	74-87-3	
Dibromochloromethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	10061-01-5	L2
trans-1,3-Dichloropropene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	10061-02-6	
Ethylbenzene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	100-41-4	
2-Hexanone	ND ug/kg		18.0	9.0	1		08/12/14 14:46	591-78-6	
Methylene chloride	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.0	4.5	1		08/12/14 14:46	108-10-1	
Styrene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	79-34-5	
Tetrachloroethene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	127-18-4	
Toluene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.5	2.3	1		08/12/14 14:46	79-00-5	
Trichloroethene	ND ug/kg		4.5	2.3	1		08/12/14 14:46	79-01-6	
Vinyl chloride	ND ug/kg		4.5	2.3	1		08/12/14 14:46	75-01-4	
Xylene (Total)	ND ug/kg		4.5	2.3	1		08/12/14 14:46	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/12/14 14:46	2037-26-5	
4-Bromofluorobenzene (S)	102 %		76-123		1		08/12/14 14:46	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		75-129		1		08/12/14 14:46	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	12.5 %		0.50	0.50	1		08/12/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60175525

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QC Batch:	MSV/63498	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60175525001, 60175525002, 60175525003, 60175525004, 60175525005, 60175525006, 60175525007, 60175525008, 60175525009, 60175525010		

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METHOD BLANK:	1424041	Matrix:	Solid
Associated Lab Samples:	60175525001, 60175525002, 60175525003, 60175525004, 60175525005, 60175525006, 60175525007, 60175525008, 60175525009, 60175525010		

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1,2-Tetrachloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1-Dichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,1-Dichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
1,2-Dichloroethane	ug/kg	ND	5.0	08/12/14 09:37	
1,2-Dichloropropane	ug/kg	ND	5.0	08/12/14 09:37	
2-Butanone (MEK)	ug/kg	ND	10.0	08/12/14 09:37	
2-Hexanone	ug/kg	ND	20.0	08/12/14 09:37	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	08/12/14 09:37	
Acetone	ug/kg	ND	20.0	08/12/14 09:37	
Benzene	ug/kg	ND	5.0	08/12/14 09:37	
Bromodichloromethane	ug/kg	ND	5.0	08/12/14 09:37	
Bromoform	ug/kg	ND	5.0	08/12/14 09:37	
Bromomethane	ug/kg	ND	5.0	08/12/14 09:37	
Carbon disulfide	ug/kg	ND	5.0	08/12/14 09:37	
Carbon tetrachloride	ug/kg	ND	5.0	08/12/14 09:37	
Chlorobenzene	ug/kg	ND	5.0	08/12/14 09:37	
Chloroethane	ug/kg	ND	5.0	08/12/14 09:37	
Chloroform	ug/kg	ND	5.0	08/12/14 09:37	
Chloromethane	ug/kg	ND	5.0	08/12/14 09:37	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/12/14 09:37	
Dibromochloromethane	ug/kg	ND	5.0	08/12/14 09:37	
Ethylbenzene	ug/kg	ND	5.0	08/12/14 09:37	
Methylene chloride	ug/kg	ND	5.0	08/12/14 09:37	
Styrene	ug/kg	ND	5.0	08/12/14 09:37	
Tetrachloroethene	ug/kg	ND	5.0	08/12/14 09:37	
Toluene	ug/kg	ND	5.0	08/12/14 09:37	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/12/14 09:37	
Trichloroethene	ug/kg	ND	5.0	08/12/14 09:37	
Vinyl chloride	ug/kg	ND	5.0	08/12/14 09:37	
Xylene (Total)	ug/kg	ND	5.0	08/12/14 09:37	
1,2-Dichloroethane-d4 (S)	%	95	75-129	08/12/14 09:37	
4-Bromofluorobenzene (S)	%	98	76-123	08/12/14 09:37	
Toluene-d8 (S)	%	101	80-120	08/12/14 09:37	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60175525

**LABORATORY CONTROL SAMPLE: 1424042**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	87.9	88	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	90.1	90	73-120	
1,1,2-Trichloroethane	ug/kg	100	91.4	91	76-120	
1,1-Dichloroethane	ug/kg	100	99.4	99	71-120	
1,1-Dichloroethene	ug/kg	100	102	102	76-130	
1,2-Dichloroethane	ug/kg	100	81.6	82	78-120	
1,2-Dichloropropane	ug/kg	100	86.5	87	80-120	
2-Butanone (MEK)	ug/kg	500	393	79	55-135	
2-Hexanone	ug/kg	500	447	89	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	436	87	71-128	
Acetone	ug/kg	500	495	99	43-144	
Benzene	ug/kg	100	85.4	85	80-120	
Bromodichloromethane	ug/kg	100	88.4	88	80-120	
Bromoform	ug/kg	100	90.4	90	75-124	
Bromomethane	ug/kg	100	74.7	75	38-150	
Carbon disulfide	ug/kg	100	95.0	95	58-137	
Carbon tetrachloride	ug/kg	100	84.2	84	75-140	
Chlorobenzene	ug/kg	100	89.1	89	80-120	
Chloroethane	ug/kg	100	76.9	77	65-127	
Chloroform	ug/kg	100	77.8	78	74-120	
Chloromethane	ug/kg	100	41.1	41	39-138	
cis-1,2-Dichloroethene	ug/kg	100	88.7	89	76-124	
cis-1,3-Dichloropropene	ug/kg	100	80.7	81	82-120 L0	
Dibromochloromethane	ug/kg	100	89.1	89	80-124	
Ethylbenzene	ug/kg	100	88.2	88	80-120	
Methylene chloride	ug/kg	100	83.5	83	70-123	
Styrene	ug/kg	100	89.3	89	79-120	
Tetrachloroethene	ug/kg	100	87.9	88	78-128	
Toluene	ug/kg	100	84.7	85	79-120	
trans-1,2-Dichloroethene	ug/kg	100	98.2	98	76-124	
trans-1,3-Dichloropropene	ug/kg	100	85.2	85	80-124	
Trichloroethene	ug/kg	100	88.5	88	80-120	
Vinyl chloride	ug/kg	100	72.5	72	57-132	
Xylene (Total)	ug/kg	300	264	88	79-120	
1,2-Dichloroethane-d4 (S)	%			91	75-129	
4-Bromofluorobenzene (S)	%			97	76-123	
Toluene-d8 (S)	%			100	80-120	

**MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1424051      1424052**

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max		
		60175350001	Spike Conc.	Spike Conc.	MS Result				RPD	RPD	Qual
1,1,1-Trichloroethane	ug/kg	ND	5950	5950	5940	5590	100	94	21-144	6	43
1,1,2,2-Tetrachloroethane	ug/kg	636	5950	5950	6600	6190	100	93	10-151	6	46
1,1,2-Trichloroethane	ug/kg	595	5950	5950	6340	6180	97	94	10-140	2	46

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
Pace Project No.: 60175525

Parameter	Units	60175350001		MS Spike		MSD Spike		1424051		1424052		% Rec	Limits	Max RPD	Max Qual
		Result	Conc.	Conc.	Result	MSD	MS	Result	% Rec	MSD	% Rec				
1,1-Dichloroethane	ug/kg	ND	5950	5950	6900	6240	116	105	19-137	10	43				
1,1-Dichloroethene	ug/kg	ND	5950	5950	6550	6170	110	104	27-143	6	41				
1,2-Dichloroethane	ug/kg	312	5950	5950	5490	5290	87	84	21-147	4	38				
1,2-Dichloropropane	ug/kg	347	5950	5950	5640	5520	89	87	15-145	2	43				
2-Butanone (MEK)	ug/kg	ND	29700	29700	25300	25400	85	85	10-160	1	50				
2-Hexanone	ug/kg	17600	29700	29700	48300	48300	103	103	10-160	0	50				
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	29700	29700	32300	32500	107	108	10-152	0	47				
Acetone	ug/kg	ND	29700	29700	32100	25600	108	86	10-160	23	49				
Benzene	ug/kg	ND	5950	5950	5710	5440	94	90	22-144	5	38				
Bromodichloromethane	ug/kg	ND	5950	5950	5730	5580	95	93	10-143	3	42				
Bromoform	ug/kg	ND	5950	5950	5680	5590	92	90	10-145	2	44				
Bromomethane	ug/kg	ND	5950	5950	4580	4360	72	69	10-137	5	47				
Carbon disulfide	ug/kg	ND	5950	5950	7040	5250	118	88	10-142	29	44				
Carbon tetrachloride	ug/kg	ND	5950	5950	5710	5190	96	87	15-153	10	45				
Chlorobenzene	ug/kg	ND	5950	5950	5690	5400	94	89	10-145	5	46				
Chloroethane	ug/kg	ND	5950	5950	5140	4700	86	79	17-134	9	42				
Chloroform	ug/kg	ND	5950	5950	5180	4980	87	84	17-138	4	44				
Chloromethane	ug/kg	ND	5950	5950	4170	3970	70	67	10-128	5	39				
cis-1,2-Dichloroethene	ug/kg	ND	5950	5950	5770	5590	97	94	17-140	3	46				
cis-1,3-Dichloropropene	ug/kg	ND	5950	5950	5410	5220	91	88	10-142	4	43				
Dibromochloromethane	ug/kg	ND	5950	5950	5700	5360	94	88	10-149	6	42				
Ethylbenzene	ug/kg	2940	5950	5950	8760	8350	98	91	10-154	5	42				
Methylene chloride	ug/kg	ND	5950	5950	5560	4150	91	68	15-140	29	46				
Styrene	ug/kg	ND	5950	5950	6020	5810	97	94	10-142	4	44				
Tetrachloroethene	ug/kg	ND	5950	5950	5840	5590	98	94	10-150	4	48				
Toluene	ug/kg	2250	5950	5950	7970	7760	96	93	11-150	3	40				
trans-1,2-Dichloroethene	ug/kg	ND	5950	5950	6420	5160	108	87	20-140	22	42				
trans-1,3-Dichloropropene	ug/kg	ND	5950	5950	5390	5040	91	85	10-149	7	41				
Trichloroethene	ug/kg	ND	5950	5950	5890	5650	99	95	14-146	4	45				
Vinyl chloride	ug/kg	ND	5950	5950	4960	4650	83	78	19-131	6	37				
Xylene (Total)	ug/kg	52800	17800	17800	69800	67600	95	83	10-154	3	41				
1,2-Dichloroethane-d4 (S)	%						95	98	75-129						
4-Bromofluorobenzene (S)	%						102	100	76-123						
Toluene-d8 (S)	%						104	105	80-120						

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR  
 Pace Project No.: 60175525

---

QC Batch:	PMST/9905	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60175525001, 60175525002, 60175525003, 60175525004, 60175525005, 60175525006, 60175525007, 60175525008, 60175525009, 60175525010		

---

METHOD BLANK:	1424567	Matrix:	Solid
Associated Lab Samples:	60175525001, 60175525002, 60175525003, 60175525004, 60175525005, 60175525006, 60175525007, 60175525008, 60175525009, 60175525010		

---

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	08/12/14 00:00	

---

SAMPLE DUPLICATE: 1424568

Parameter	Units	60175525001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.1	21.2	4	20	

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

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## QUALIFIERS

Project: FORT SMITH, AR  
Pace Project No.: 60175525

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR  
 Pace Project No.: 60175525

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60175525001	DP-43-SL (4.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525002	DP-43-SL (10.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525003	DP-43-SL (19.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525004	DP-44-SL (4.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525005	DP-44-SL (11.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525006	DP-44-SL (18.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525007	DP-44-SL (21.5 FT) - 20140811	EPA 8260	MSV/63498		
60175525008	DP-45-SL (4.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525009	DP-45-SL (12.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525010	DP-45-SL (18.0 FT) - 20140811	EPA 8260	MSV/63498		
60175525001	DP-43-SL (4.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525002	DP-43-SL (10.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525003	DP-43-SL (19.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525004	DP-44-SL (4.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525005	DP-44-SL (11.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525006	DP-44-SL (18.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525007	DP-44-SL (21.5 FT) - 20140811	ASTM D2974	PMST/9905		
60175525008	DP-45-SL (4.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525009	DP-45-SL (12.0 FT) - 20140811	ASTM D2974	PMST/9905		
60175525010	DP-45-SL (18.0 FT) - 20140811	ASTM D2974	PMST/9905		

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## Sample Condition Upon Receipt

WO# : 60175525



60175525

Client Name: EnvironCourier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xroad

Tracking #: \_\_\_\_\_

Pace Shipping Label Used? Yes  No 

Optional
Proj Due Date:
Proj Name:

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZIPICThermometer Used: T-239 / T-194Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 2-6Date and initials of person examining contents: M. O. 12/14

Temperature should be above freezing to 6°C

Chain of Custody present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody filled out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler name & signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples arrived within holding time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>K+T</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>1 Day</u>	
Sufficient volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
Containers intact:	<input 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 type="checkbox"/> N/A	11. <u>No</u>	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
Sample labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Includes date/time/ID/analyses	Matrix: <u>WT/SL</u>	13.	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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 type="checkbox"/> N/A	14.	
Exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): <u>020314-3</u>	<u>WGL</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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>AR</u>	

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: On fileDate: 8/12

**Section A**  
Required Client Information:

Company:	EnviroN		
Address:	7500 College Blvd., Ste. 925 Overland Park, KS 66210		
Email To:	wstonestreet@environcorp.com		
Phone:	913-553-5926	Fax:	Project Name: Fort Smith, AR
Requested Due Date/TAT:	<u>84 HR</u>		

**Section B**  
Required Project Information:

Report To:	Wendy Stonestreet		
Copy To:	Tamara Gleason		
Purchase Order No.:	tgleason@environcorp.com		
Project Number:	7444, line 1		

Page: 1 of 2
**Section C**  
Invoice Information:

Company Name:			
Address:			
Pace Quote Reference:			
Pace Project Manager:	M.J. Walls		
Pace Profile #:	7444, line 1		
Site Location:	AR		
STATE:			

**REGULATORY AGENCY**

<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Residual Chlorine (Y/N)		

6017-5555

**Requested Analysis Filtered (Y/N)**

6260 Client specific list
Analyses Test
Preservatives
Sample Temp At Collection
# Of Contaminers
Unterminated
H <sub>2</sub> SO <sub>4</sub>
HNO <sub>3</sub>
HCl
NaOH
Na <sub>2</sub> SO <sub>3</sub>
Methanol
Other

**Section D**  
Valid Matrix Codes

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	DATE COLLECTED	TIME COLLECTED	DATE	TIME	DATE	TIME	DATE	TIME
1	DP-43-SL(4.0 ft) - 20140811	SL (5	COMPOSITE START	0945	8/1/14	0945	5	8	11/14	1045
2	DP-43-SL(10.0 ft) - 20140811	SL (5	COMPOSITE ENDS	0940	8/1/14	0940	5	3	11/14	1040
3	DP-43-SL(19.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1007	8/1/14	1007	5	3	11/14	1007
4	DP-44-SL(4.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1049	8/1/14	1049	5	3	11/14	1049
5	DP-44-SL(11.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1128	8/1/14	1128	5	3	11/14	1128
6	DP-44-SL(18.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1141	8/1/14	1141	5	2	11/14	1141
7	DP-44-SL(21.5 ft) - 20140811	SL (5	COMPOSITE ENDS	1267	8/1/14	1267	5	3	11/14	1267
8	DP-45-SL(4.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1449	8/1/14	1449	5	3	11/14	1449
9	DP-45-SL(12.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1510	8/1/14	1510	5	3	11/14	1510
10	DP-45-SL(19.0 ft) - 20140811	SL (5	COMPOSITE ENDS	1525	8/1/14	1525	5	3	11/14	1525
11										
12										

**ADDITIONAL COMMENTS**

RELINQUISHED BY / AFFILIATION	DATE	ACCEPTED BY / AFFILIATION	DATE	TIME	TIME	SAMPLE CONDITIONS
May in EnviroN	8/11/14	1730	8/11/14	0130	28	X Y Y Y

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER:	<u>Michael E. Boling</u>
SIGNATURE of SAMPLER:	<u>Michael E. Boling</u>
DATE Signed:	8/11/14
(MM/DD/YY):	

Temp in °C  
Received on Ice (Y/N)  
Custody Sealed (Y/N)

Samples intact (Y/N)

August 13, 2014

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

RE: Project: FORT SMITH, AR  
Pace Project No.: 60175526

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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.: 60175526

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60175526001	DP-41 - 082014	Water	08/11/14 11:50	08/12/14 01:30
60175526002	DP-40 - 082014	Water	08/11/14 11:30	08/12/14 01:30
60175526003	DP-42 - 082014	Water	08/11/14 13:05	08/12/14 01:30
60175526004	DP-43 - 082014	Water	08/11/14 15:35	08/12/14 01:30
60175526005	DP-44 - 082014	Water	08/11/14 14:20	08/12/14 01:30
60175526006	DP-45 - 082014	Water	08/11/14 17:00	08/12/14 01:30
60175526007	TB7-20140811	Water	08/11/14 17:00	08/12/14 01:30

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## SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60175526001	DP-41 - 082014	EPA 5030B/8260	PRG	38
60175526002	DP-40 - 082014	EPA 5030B/8260	PRG	38
60175526003	DP-42 - 082014	EPA 5030B/8260	PRG	38
60175526004	DP-43 - 082014	EPA 5030B/8260	PRG	38
60175526005	DP-44 - 082014	EPA 5030B/8260	PRG	38
60175526006	DP-45 - 082014	EPA 5030B/8260	PRG	38
60175526007	TB7-20140811	EPA 5030B/8260	PRG	38

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## PROJECT NARRATIVE

Project: FORT SMITH, AR  
Pace Project No.: 60175526

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** Environ\_AR

**Date:** August 13, 2014

### **General Information:**

7 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

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

### **Initial Calibrations (including MS Tune as applicable):**

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

### **Continuing Calibration:**

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

### **Internal Standards:**

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

### **Surrogates:**

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

### **Method Blank:**

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

QC Batch: MSV/63499

B: Analyte was detected in the associated method blank.

- BLANK for HBN 350147 [MSV/6349 (Lab ID: 1424053)]
- Methylene chloride

### **Laboratory Control Spike:**

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

### **Matrix Spikes:**

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

QC Batch: MSV/63499

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

### **Additional Comments:**

Analyte Comments:

QC Batch: MSV/63499

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

- DP-44 - 082014 (Lab ID: 60175526005)
- 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.: 60175526

Sample: DP-41 - 082014	Lab ID: 60175526001	Collected: 08/11/14 11:50	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	5.9J	ug/L	10.0	5.0	1		08/12/14 12:33	67-64-1	
Benzene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.50	1		08/12/14 12:33	75-27-4	
Bromoform	ND	ug/L	5.0	0.50	1		08/12/14 12:33	75-25-2	
Bromomethane	ND	ug/L	7.0	2.5	1		08/12/14 12:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	5.0	1		08/12/14 12:33	78-93-3	
Carbon disulfide	ND	ug/L	10.0	2.5	1		08/12/14 12:33	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.50	1		08/12/14 12:33	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	108-90-7	
Chloroethane	ND	ug/L	10.0	0.50	1		08/12/14 12:33	75-00-3	
Chloroform	ND	ug/L	5.0	0.50	1		08/12/14 12:33	67-66-3	
Chloromethane	ND	ug/L	10.0	0.50	1		08/12/14 12:33	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	0.50	1		08/12/14 12:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	2.4	0.50	1		08/12/14 12:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 12:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.50	1		08/12/14 12:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.50	1		08/12/14 12:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.50	1		08/12/14 12:33	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	5.0	1		08/12/14 12:33	591-78-6	
Methylene chloride	ND	ug/L	5.0	0.50	1		08/12/14 12:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	2.5	1		08/12/14 12:33	108-10-1	
Styrene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		08/12/14 12:33	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	127-18-4	
Toluene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 12:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 12:33	79-00-5	
Trichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:33	79-01-6	
Vinyl chloride	ND	ug/L	2.0	0.50	1		08/12/14 12:33	75-01-4	
Xylene (Total)	ND	ug/L	5.0	1.5	1		08/12/14 12:33	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103 %		80-120		1		08/12/14 12:33	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		80-120		1		08/12/14 12:33	17060-07-0	
Toluene-d8 (S)	99 %		80-120		1		08/12/14 12:33	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		08/12/14 12:33		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Sample: DP-40 - 082014	Lab ID: 60175526002	Collected: 08/11/14 11:30	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	7.5J	ug/L	10.0	5.0	1		08/12/14 12:47	67-64-1	
Benzene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.50	1		08/12/14 12:47	75-27-4	
Bromoform	ND	ug/L	5.0	0.50	1		08/12/14 12:47	75-25-2	
Bromomethane	ND	ug/L	7.0	2.5	1		08/12/14 12:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	5.0	1		08/12/14 12:47	78-93-3	
Carbon disulfide	ND	ug/L	10.0	2.5	1		08/12/14 12:47	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.50	1		08/12/14 12:47	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	108-90-7	
Chloroethane	ND	ug/L	10.0	0.50	1		08/12/14 12:47	75-00-3	
Chloroform	ND	ug/L	5.0	0.50	1		08/12/14 12:47	67-66-3	
Chloromethane	ND	ug/L	10.0	0.50	1		08/12/14 12:47	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	0.50	1		08/12/14 12:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	2.4	0.50	1		08/12/14 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 12:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	75-35-4	
cis-1,2-Dichloroethene	0.55J	ug/L	5.0	0.50	1		08/12/14 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.50	1		08/12/14 12:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.50	1		08/12/14 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.50	1		08/12/14 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	5.0	1		08/12/14 12:47	591-78-6	
Methylene chloride	ND	ug/L	5.0	0.50	1		08/12/14 12:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	2.5	1		08/12/14 12:47	108-10-1	
Styrene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		08/12/14 12:47	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	127-18-4	
Toluene	ND	ug/L	5.0	0.50	1		08/12/14 12:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 12:47	79-00-5	
Trichloroethene	3.2J	ug/L	5.0	0.50	1		08/12/14 12:47	79-01-6	
Vinyl chloride	ND	ug/L	2.0	0.50	1		08/12/14 12:47	75-01-4	
Xylene (Total)	ND	ug/L	5.0	1.5	1		08/12/14 12:47	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		80-120		1		08/12/14 12:47	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		80-120		1		08/12/14 12:47	17060-07-0	
Toluene-d8 (S)	103 %		80-120		1		08/12/14 12:47	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		08/12/14 12:47		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Sample: DP-42 - 082014	Lab ID: 60175526003	Collected: 08/11/14 13:05	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	<b>6.4J</b> ug/L		10.0	5.0	1		08/12/14 13:01	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		08/12/14 13:01	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/12/14 13:01	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		08/12/14 13:01	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		08/12/14 13:01	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		08/12/14 13:01	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		08/12/14 13:01	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/12/14 13:01	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/12/14 13:01	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/12/14 13:01	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/12/14 13:01	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/12/14 13:01	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/12/14 13:01	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/12/14 13:01	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/12/14 13:01	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:01	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:01	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:01	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/12/14 13:01	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/12/14 13:01	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/12/14 13:01	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		08/12/14 13:01	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		08/12/14 13:01	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/12/14 13:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		08/12/14 13:01	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		08/12/14 13:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/12/14 13:01	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:01	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		08/12/14 13:01	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/12/14 13:01	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/12/14 13:01	79-00-5	
Trichloroethene	<b>6.4</b> ug/L		5.0	0.50	1		08/12/14 13:01	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/12/14 13:01	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		08/12/14 13:01	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		80-120		1		08/12/14 13:01	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		80-120		1		08/12/14 13:01	17060-07-0	
Toluene-d8 (S)	99 %		80-120		1		08/12/14 13:01	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/12/14 13:01		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Sample: DP-43 - 082014	Lab ID: 60175526004	Collected: 08/11/14 15:35	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	6.9J	ug/L	10.0	5.0	1		08/12/14 13:16	67-64-1	
Benzene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.50	1		08/12/14 13:16	75-27-4	
Bromoform	ND	ug/L	5.0	0.50	1		08/12/14 13:16	75-25-2	
Bromomethane	ND	ug/L	7.0	2.5	1		08/12/14 13:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	5.0	1		08/12/14 13:16	78-93-3	
Carbon disulfide	ND	ug/L	10.0	2.5	1		08/12/14 13:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.50	1		08/12/14 13:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	108-90-7	
Chloroethane	ND	ug/L	10.0	0.50	1		08/12/14 13:16	75-00-3	
Chloroform	ND	ug/L	5.0	0.50	1		08/12/14 13:16	67-66-3	
Chloromethane	ND	ug/L	10.0	0.50	1		08/12/14 13:16	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	0.50	1		08/12/14 13:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	2.4	0.50	1		08/12/14 13:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 13:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.50	1		08/12/14 13:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.50	1		08/12/14 13:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.50	1		08/12/14 13:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	5.0	1		08/12/14 13:16	591-78-6	
Methylene chloride	ND	ug/L	5.0	0.50	1		08/12/14 13:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	2.5	1		08/12/14 13:16	108-10-1	
Styrene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		08/12/14 13:16	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	127-18-4	
Toluene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 13:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.50	1		08/12/14 13:16	79-00-5	
Trichloroethene	ND	ug/L	5.0	0.50	1		08/12/14 13:16	79-01-6	
Vinyl chloride	ND	ug/L	2.0	0.50	1		08/12/14 13:16	75-01-4	
Xylene (Total)	ND	ug/L	5.0	1.5	1		08/12/14 13:16	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102 %		80-120		1		08/12/14 13:16	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		80-120		1		08/12/14 13:16	17060-07-0	
Toluene-d8 (S)	101 %		80-120		1		08/12/14 13:16	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		08/12/14 13:16		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Sample: DP-44 - 082014	Lab ID: 60175526005	Collected: 08/11/14 14:20	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		50.0	25.0	5		08/12/14 13:30	67-64-1	
Benzene	ND ug/L		25.0	2.5	5		08/12/14 13:30	71-43-2	
Bromodichloromethane	ND ug/L		25.0	2.5	5		08/12/14 13:30	75-27-4	
Bromoform	ND ug/L		25.0	2.5	5		08/12/14 13:30	75-25-2	
Bromomethane	ND ug/L		35.0	12.5	5		08/12/14 13:30	74-83-9	
2-Butanone (MEK)	ND ug/L		50.0	25.0	5		08/12/14 13:30	78-93-3	
Carbon disulfide	ND ug/L		50.0	12.5	5		08/12/14 13:30	75-15-0	
Carbon tetrachloride	ND ug/L		25.0	2.5	5		08/12/14 13:30	56-23-5	
Chlorobenzene	ND ug/L		25.0	2.5	5		08/12/14 13:30	108-90-7	
Chloroethane	ND ug/L		50.0	2.5	5		08/12/14 13:30	75-00-3	
Chloroform	ND ug/L		25.0	2.5	5		08/12/14 13:30	67-66-3	
Chloromethane	ND ug/L		50.0	2.5	5		08/12/14 13:30	74-87-3	
Dibromochloromethane	ND ug/L		25.0	2.5	5		08/12/14 13:30	124-48-1	
1,1-Dichloroethane	ND ug/L		12.0	2.5	5		08/12/14 13:30	75-34-3	
1,2-Dichloroethane	ND ug/L		25.0	2.5	5		08/12/14 13:30	107-06-2	
1,1-Dichloroethene	ND ug/L		25.0	2.5	5		08/12/14 13:30	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		25.0	2.5	5		08/12/14 13:30	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		25.0	2.5	5		08/12/14 13:30	156-60-5	
1,2-Dichloropropane	ND ug/L		25.0	2.5	5		08/12/14 13:30	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		5.0	2.5	5		08/12/14 13:30	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	2.5	5		08/12/14 13:30	10061-02-6	
Ethylbenzene	ND ug/L		25.0	2.5	5		08/12/14 13:30	100-41-4	
2-Hexanone	ND ug/L		50.0	25.0	5		08/12/14 13:30	591-78-6	
Methylene chloride	<b>3.4J</b> ug/L		25.0	2.5	5		08/12/14 13:30	75-09-2	B
4-Methyl-2-pentanone (MIBK)	ND ug/L		50.0	12.5	5		08/12/14 13:30	108-10-1	
Styrene	ND ug/L		25.0	2.5	5		08/12/14 13:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		5.0	2.5	5		08/12/14 13:30	79-34-5	
Tetrachloroethene	ND ug/L		25.0	2.5	5		08/12/14 13:30	127-18-4	
Toluene	ND ug/L		25.0	2.5	5		08/12/14 13:30	108-88-3	
1,1,1-Trichloroethane	ND ug/L		25.0	2.5	5		08/12/14 13:30	71-55-6	
1,1,2-Trichloroethane	ND ug/L		25.0	2.5	5		08/12/14 13:30	79-00-5	
Trichloroethene	ND ug/L		25.0	2.5	5		08/12/14 13:30	79-01-6	
Vinyl chloride	ND ug/L		10.0	2.5	5		08/12/14 13:30	75-01-4	
Xylene (Total)	ND ug/L		25.0	7.5	5		08/12/14 13:30	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		80-120		5		08/12/14 13:30	460-00-4	1e
1,2-Dichloroethane-d4 (S)	95 %		80-120		5		08/12/14 13:30	17060-07-0	
Toluene-d8 (S)	98 %		80-120		5		08/12/14 13:30	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	5		08/12/14 13:30		

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Sample: DP-45 - 082014	Lab ID: 60175526006	Collected: 08/11/14 17:00	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		08/12/14 13:44	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		08/12/14 13:44	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/12/14 13:44	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		08/12/14 13:44	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		08/12/14 13:44	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		08/12/14 13:44	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		08/12/14 13:44	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/12/14 13:44	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/12/14 13:44	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/12/14 13:44	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/12/14 13:44	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/12/14 13:44	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/12/14 13:44	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/12/14 13:44	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/12/14 13:44	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:44	75-35-4	
cis-1,2-Dichloroethene	<b>1.3J</b> ug/L		5.0	0.50	1		08/12/14 13:44	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:44	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/12/14 13:44	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/12/14 13:44	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/12/14 13:44	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		08/12/14 13:44	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		08/12/14 13:44	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/12/14 13:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		08/12/14 13:44	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		08/12/14 13:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/12/14 13:44	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/12/14 13:44	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		08/12/14 13:44	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/12/14 13:44	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/12/14 13:44	79-00-5	
Trichloroethene	<b>6.8</b> ug/L		5.0	0.50	1		08/12/14 13:44	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/12/14 13:44	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		08/12/14 13:44	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		80-120		1		08/12/14 13:44	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		80-120		1		08/12/14 13:44	17060-07-0	
Toluene-d8 (S)	104 %		80-120		1		08/12/14 13:44	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/12/14 13:44		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Sample: TB7-20140811	Lab ID: 60175526007	Collected: 08/11/14 17:00	Received: 08/12/14 01:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		08/12/14 11:50	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		08/12/14 11:50	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/12/14 11:50	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		08/12/14 11:50	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		08/12/14 11:50	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		08/12/14 11:50	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		08/12/14 11:50	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/12/14 11:50	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/12/14 11:50	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/12/14 11:50	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/12/14 11:50	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/12/14 11:50	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/12/14 11:50	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/12/14 11:50	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/12/14 11:50	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 11:50	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 11:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/12/14 11:50	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/12/14 11:50	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/12/14 11:50	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/12/14 11:50	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		08/12/14 11:50	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		08/12/14 11:50	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/12/14 11:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		08/12/14 11:50	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		08/12/14 11:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/12/14 11:50	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/12/14 11:50	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		08/12/14 11:50	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/12/14 11:50	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/12/14 11:50	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		08/12/14 11:50	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/12/14 11:50	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		08/12/14 11:50	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		80-120		1		08/12/14 11:50	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		80-120		1		08/12/14 11:50	17060-07-0	
Toluene-d8 (S)	101 %		80-120		1		08/12/14 11:50	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/12/14 11:50		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60175526

QC Batch: MSV/63499 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60175526001, 60175526002, 60175526003, 60175526004, 60175526005, 60175526006, 60175526007

METHOD BLANK: 1424053 Matrix: Water

Associated Lab Samples: 60175526001, 60175526002, 60175526003, 60175526004, 60175526005, 60175526006, 60175526007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	08/12/14 11:17	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/12/14 11:17	
1,1,2-Trichloroethane	ug/L	ND	5.0	08/12/14 11:17	
1,1-Dichloroethane	ug/L	ND	2.4	08/12/14 11:17	
1,1-Dichloroethene	ug/L	ND	5.0	08/12/14 11:17	
1,2-Dichloroethane	ug/L	ND	5.0	08/12/14 11:17	
1,2-Dichloropropane	ug/L	ND	5.0	08/12/14 11:17	
2-Butanone (MEK)	ug/L	ND	10.0	08/12/14 11:17	
2-Hexanone	ug/L	ND	10.0	08/12/14 11:17	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	08/12/14 11:17	
Acetone	ug/L	ND	10.0	08/12/14 11:17	
Benzene	ug/L	ND	5.0	08/12/14 11:17	
Bromodichloromethane	ug/L	ND	5.0	08/12/14 11:17	
Bromoform	ug/L	ND	5.0	08/12/14 11:17	
Bromomethane	ug/L	ND	7.0	08/12/14 11:17	
Carbon disulfide	ug/L	ND	10.0	08/12/14 11:17	
Carbon tetrachloride	ug/L	ND	5.0	08/12/14 11:17	
Chlorobenzene	ug/L	ND	5.0	08/12/14 11:17	
Chloroethane	ug/L	ND	10.0	08/12/14 11:17	
Chloroform	ug/L	ND	5.0	08/12/14 11:17	
Chloromethane	ug/L	ND	10.0	08/12/14 11:17	
cis-1,2-Dichloroethene	ug/L	ND	5.0	08/12/14 11:17	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/12/14 11:17	
Dibromochloromethane	ug/L	ND	5.0	08/12/14 11:17	
Ethylbenzene	ug/L	ND	5.0	08/12/14 11:17	
Methylene chloride	ug/L	0.53J	5.0	08/12/14 11:17	
Styrene	ug/L	ND	5.0	08/12/14 11:17	
Tetrachloroethene	ug/L	ND	5.0	08/12/14 11:17	
Toluene	ug/L	ND	5.0	08/12/14 11:17	
trans-1,2-Dichloroethene	ug/L	ND	5.0	08/12/14 11:17	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/12/14 11:17	
Trichloroethene	ug/L	ND	5.0	08/12/14 11:17	
Vinyl chloride	ug/L	ND	2.0	08/12/14 11:17	
Xylene (Total)	ug/L	ND	5.0	08/12/14 11:17	
1,2-Dichloroethane-d4 (S)	%	100	80-120	08/12/14 11:17	
4-Bromofluorobenzene (S)	%	99	80-120	08/12/14 11:17	
Toluene-d8 (S)	%	104	80-120	08/12/14 11:17	

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## QUALITY CONTROL DATA

Project: FORT SMITH, AR

Pace Project No.: 60175526

LABORATORY CONTROL SAMPLE: 1424054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.3	96	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	94	73-124	
1,1,2-Trichloroethane	ug/L	20	19.7	98	80-120	
1,1-Dichloroethane	ug/L	20	19.4	97	77-120	
1,1-Dichloroethene	ug/L	20	20.0	100	78-126	
1,2-Dichloroethane	ug/L	20	19.1	96	77-123	
1,2-Dichloropropane	ug/L	20	19.6	98	80-121	
2-Butanone (MEK)	ug/L	100	100	100	52-145	
2-Hexanone	ug/L	100	103	103	57-139	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	71-131	
Acetone	ug/L	100	104	104	32-155	
Benzene	ug/L	20	19.0	95	80-120	
Bromodichloromethane	ug/L	20	18.9	94	80-120	
Bromoform	ug/L	20	19.1	95	73-124	
Bromomethane	ug/L	20	20.1	101	31-144	
Carbon disulfide	ug/L	20	21.8	109	65-125	
Carbon tetrachloride	ug/L	20	19.3	97	78-128	
Chlorobenzene	ug/L	20	19.4	97	80-120	
Chloroethane	ug/L	20	17.8	89	55-137	
Chloroform	ug/L	20	19.3	96	79-120	
Chloromethane	ug/L	20	19.9	100	22-138	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.0	95	80-120	
Dibromochloromethane	ug/L	20	20.0	100	80-120	
Ethylbenzene	ug/L	20	19.2	96	80-121	
Methylene chloride	ug/L	20	19.2	96	73-126	
Styrene	ug/L	20	20.1	101	80-120	
Tetrachloroethene	ug/L	20	19.3	96	80-121	
Toluene	ug/L	20	19.2	96	80-122	
trans-1,2-Dichloroethene	ug/L	20	18.9	94	79-121	
trans-1,3-Dichloropropene	ug/L	20	19.1	96	80-127	
Trichloroethene	ug/L	20	19.9	100	80-120	
Vinyl chloride	ug/L	20	18.7	94	59-120	
Xylene (Total)	ug/L	60	59.5	99	80-121	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			99	80-120	

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## QUALIFIERS

Project: FORT SMITH, AR  
Pace Project No.: 60175526

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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/63499

[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 vial.

B Analyte was detected in the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR  
Pace Project No.: 60175526

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60175526001	DP-41 - 082014	EPA 5030B/8260	MSV/63499		
60175526002	DP-40 - 082014	EPA 5030B/8260	MSV/63499		
60175526003	DP-42 - 082014	EPA 5030B/8260	MSV/63499		
60175526004	DP-43 - 082014	EPA 5030B/8260	MSV/63499		
60175526005	DP-44 - 082014	EPA 5030B/8260	MSV/63499		
60175526006	DP-45 - 082014	EPA 5030B/8260	MSV/63499		
60175526007	TB7-20140811	EPA 5030B/8260	MSV/63499		

### REPORT OF LABORATORY ANALYSIS

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WO# : 60175526



60175526



## Sample Condition Upon Receipt

Client Name: EnvironCourier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xroad

Tracking #: \_\_\_\_\_

Pace Shipping Label Used? Yes  No 

Optional
Proj Due Date:
Proj Name:

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PVCThermometer Used: T-239 / T-194Type of Ice:  Blue  None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 2.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PC 01/21/14

Chain of Custody present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>KITS for 8/12</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>1 Day</u>
Sufficient volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input 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 type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	<u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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 type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>020314-3</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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>AR</u>

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: a fr Date: 8/12

**Section A**  
Required Client Information:

<b>Section B</b> Required Project Information:		Invoice Information:																																																																																																																																																																																																							
Company: Environ	Report To: Wendy Stonestreet	Attention: Tamara Gleason	Company Name:																																																																																																																																																																																																						
Address: 7500 College Blvd., Ste. 925 Overland Park, KS 66210	Copy To: Tamara Gleason tgleason@environcorp.com	Address:	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER																																																																																																																																																																																																						
Email To: wstonestreet@environcorp.com	Purchase Order No.:	Reference:																																																																																																																																																																																																							
Phone: 913-553-5926	Project Name: Fort Smith, AR	Pace Project Manager:																																																																																																																																																																																																							
Requested Due Date/TAT: <u>24 hr</u>	Project Number:	Pace Profile #: 7444, line 1	Site Location: AR State: AR																																																																																																																																																																																																						
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August 14, 2014

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

RE: Project: FORT SMITH AR  
Pace Project No.: 60175646

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 13, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORT SMITH AR  
Pace Project No.: 60175646

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: FORT SMITH AR  
 Pace Project No.: 60175646

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60175646001	DP-46-SL (4.5 FT) - 20140812	Solid	08/12/14 08:00	08/13/14 08:30
60175646002	DP-46-SL (13.5 FT) - 20140812	Solid	08/12/14 08:30	08/13/14 08:30
60175646003	DP-46-SL (18.0 FT) - 20140812	Solid	08/12/14 08:50	08/13/14 08:30
60175646004	DP-47-SL (5.0 FT) - 20140812	Solid	08/12/14 13:50	08/13/14 08:30
60175646005	DP-47-SL (22.0 FT) - 20140812	Solid	08/12/14 14:40	08/13/14 08:30
60175646006	TB15-20140812	Solid	08/12/14 08:00	08/13/14 08:30

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## SAMPLE ANALYTE COUNT

Project: FORT SMITH AR  
Pace Project No.: 60175646

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60175646001	DP-46-SL (4.5 FT) - 20140812	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175646002	DP-46-SL (13.5 FT) - 20140812	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175646003	DP-46-SL (18.0 FT) - 20140812	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175646004	DP-47-SL (5.0 FT) - 20140812	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175646005	DP-47-SL (22.0 FT) - 20140812	EPA 8260	TJT	37
		ASTM D2974	DWC	1
60175646006	TB15-20140812	EPA 8260	TJT	37

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: FORT SMITH AR  
Pace Project No.: 60175646

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**Method:** EPA 8260  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** August 14, 2014

### **General Information:**

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### **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/63525

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.: 60175646

Sample: DP-46-SL (4.5 FT) - Lab ID: 60175646001 Collected: 08/12/14 08:00 Received: 08/13/14 08:30 Matrix: Solid  
20140812

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		21.0	10.5	1		08/13/14 15:28	67-64-1	
Benzene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	71-43-2	
Bromodichloromethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-27-4	
Bromoform	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-25-2	
Bromomethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.5	5.2	1		08/13/14 15:28	78-93-3	
Carbon disulfide	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-15-0	
Carbon tetrachloride	ND ug/kg		5.2	2.6	1		08/13/14 15:28	56-23-5	
Chlorobenzene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	108-90-7	
Chloroethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-00-3	
Chloroform	ND ug/kg		5.2	2.6	1		08/13/14 15:28	67-66-3	
Chloromethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	74-87-3	
Dibromochloromethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	10061-02-6	
Ethylbenzene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	100-41-4	
2-Hexanone	ND ug/kg		21.0	10.5	1		08/13/14 15:28	591-78-6	
Methylene chloride	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.5	5.2	1		08/13/14 15:28	108-10-1	
Styrene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	79-34-5	
Tetrachloroethene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	127-18-4	
Toluene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.2	2.6	1		08/13/14 15:28	79-00-5	
Trichloroethene	ND ug/kg		5.2	2.6	1		08/13/14 15:28	79-01-6	
Vinyl chloride	ND ug/kg		5.2	2.6	1		08/13/14 15:28	75-01-4	
Xylene (Total)	ND ug/kg		5.2	2.6	1		08/13/14 15:28	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/13/14 15:28	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/13/14 15:28	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		75-129		1		08/13/14 15:28	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	14.5 %		0.50	0.50	1		08/13/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORT SMITH AR  
Pace Project No.: 60175646

Sample: DP-46-SL (13.5 FT) - Lab ID: 60175646002 Collected: 08/12/14 08:30 Received: 08/13/14 08:30 Matrix: Solid  
20140812

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		16.6	8.3	1		08/13/14 15:43	67-64-1	
Benzene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	71-43-2	
Bromodichloromethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-27-4	
Bromoform	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-25-2	
Bromomethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.3	4.2	1		08/13/14 15:43	78-93-3	
Carbon disulfide	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-15-0	
Carbon tetrachloride	ND ug/kg		4.2	2.1	1		08/13/14 15:43	56-23-5	
Chlorobenzene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	108-90-7	
Chloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-00-3	
Chloroform	ND ug/kg		4.2	2.1	1		08/13/14 15:43	67-66-3	
Chloromethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	74-87-3	
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1,1-Dichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	10061-02-6	
Ethylbenzene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	100-41-4	
2-Hexanone	ND ug/kg		16.6	8.3	1		08/13/14 15:43	591-78-6	
Methylene chloride	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.3	4.2	1		08/13/14 15:43	108-10-1	
Styrene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	79-34-5	
Tetrachloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	127-18-4	
Toluene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:43	79-00-5	
Trichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:43	79-01-6	
Vinyl chloride	ND ug/kg		4.2	2.1	1		08/13/14 15:43	75-01-4	
Xylene (Total)	ND ug/kg		4.2	2.1	1		08/13/14 15:43	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	102 %		80-120		1		08/13/14 15:43	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		08/13/14 15:43	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		75-129		1		08/13/14 15:43	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	14.2 %		0.50	0.50	1		08/13/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH AR  
Pace Project No.: 60175646

Sample: DP-46-SL (18.0 FT) - Lab ID: 60175646003 Collected: 08/12/14 08:50 Received: 08/13/14 08:30 Matrix: Solid  
20140812

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		16.7	8.3	1		08/13/14 15:58	67-64-1	
Benzene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	71-43-2	
Bromodichloromethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-27-4	
Bromoform	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-25-2	
Bromomethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.3	4.2	1		08/13/14 15:58	78-93-3	
Carbon disulfide	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-15-0	
Carbon tetrachloride	ND ug/kg		4.2	2.1	1		08/13/14 15:58	56-23-5	
Chlorobenzene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	108-90-7	
Chloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-00-3	
Chloroform	ND ug/kg		4.2	2.1	1		08/13/14 15:58	67-66-3	
Chloromethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	74-87-3	
Dibromochloromethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	10061-02-6	
Ethylbenzene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	100-41-4	
2-Hexanone	ND ug/kg		16.7	8.3	1		08/13/14 15:58	591-78-6	
Methylene chloride	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.3	4.2	1		08/13/14 15:58	108-10-1	
Styrene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	79-34-5	
Tetrachloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	127-18-4	
Toluene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.2	2.1	1		08/13/14 15:58	79-00-5	
Trichloroethene	ND ug/kg		4.2	2.1	1		08/13/14 15:58	79-01-6	
Vinyl chloride	ND ug/kg		4.2	2.1	1		08/13/14 15:58	75-01-4	
Xylene (Total)	ND ug/kg		4.2	2.1	1		08/13/14 15:58	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	103 %		80-120		1		08/13/14 15:58	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		08/13/14 15:58	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		75-129		1		08/13/14 15:58	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	12.2 %		0.50	0.50	1		08/13/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH AR  
Pace Project No.: 60175646

Sample: DP-47-SL (5.0 FT) - Lab ID: 60175646004 Collected: 08/12/14 13:50 Received: 08/13/14 08:30 Matrix: Solid  
20140812

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.2	10.1	1		08/13/14 16:14	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.1	5.0	1		08/13/14 16:14	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		08/13/14 16:14	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		08/13/14 16:14	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	74-87-3	
Dibromochloromethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	100-41-4	
2-Hexanone	ND ug/kg		20.2	10.1	1		08/13/14 16:14	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.1	5.0	1		08/13/14 16:14	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 16:14	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 16:14	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		08/13/14 16:14	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		08/13/14 16:14	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	103 %		80-120		1		08/13/14 16:14	2037-26-5	
4-Bromofluorobenzene (S)	104 %		76-123		1		08/13/14 16:14	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		75-129		1		08/13/14 16:14	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	17.4 %		0.50	0.50	1		08/13/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH AR  
Pace Project No.: 60175646

Sample: DP-47-SL (22.0 FT) - Lab ID: 60175646005 Collected: 08/12/14 14:40 Received: 08/13/14 08:30 Matrix: Solid  
20140812

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		17.3	8.7	1		08/13/14 16:29	67-64-1	
Benzene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	71-43-2	
Bromodichloromethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-27-4	
Bromoform	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-25-2	
Bromomethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	74-83-9	
2-Butanone (MEK)	ND ug/kg		8.7	4.3	1		08/13/14 16:29	78-93-3	
Carbon disulfide	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-15-0	
Carbon tetrachloride	ND ug/kg		4.3	2.2	1		08/13/14 16:29	56-23-5	
Chlorobenzene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	108-90-7	
Chloroethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-00-3	
Chloroform	ND ug/kg		4.3	2.2	1		08/13/14 16:29	67-66-3	
Chloromethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	74-87-3	
Dibromochloromethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	10061-02-6	
Ethylbenzene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	100-41-4	
2-Hexanone	ND ug/kg		17.3	8.7	1		08/13/14 16:29	591-78-6	
Methylene chloride	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		8.7	4.3	1		08/13/14 16:29	108-10-1	
Styrene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	79-34-5	
Tetrachloroethene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	127-18-4	
Toluene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.3	2.2	1		08/13/14 16:29	79-00-5	
Trichloroethene	ND ug/kg		4.3	2.2	1		08/13/14 16:29	79-01-6	
Vinyl chloride	ND ug/kg		4.3	2.2	1		08/13/14 16:29	75-01-4	
Xylene (Total)	ND ug/kg		4.3	2.2	1		08/13/14 16:29	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	102 %		80-120		1		08/13/14 16:29	2037-26-5	
4-Bromofluorobenzene (S)	98 %		76-123		1		08/13/14 16:29	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		75-129		1		08/13/14 16:29	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>10.8 %</b>		0.50	0.50	1		08/13/14 00:00		

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## ANALYTICAL RESULTS

Project: FORT SMITH AR  
Pace Project No.: 60175646

Sample: TB15-20140812 Lab ID: 60175646006 Collected: 08/12/14 08:00 Received: 08/13/14 08:30 Matrix: Solid

**Results reported on a "wet-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.0	10.0	1		08/13/14 12:54	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.0	5.0	1		08/13/14 12:54	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		08/13/14 12:54	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		08/13/14 12:54	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	74-87-3	
Dibromochloromethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	100-41-4	
2-Hexanone	ND ug/kg		20.0	10.0	1		08/13/14 12:54	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.0	5.0	1		08/13/14 12:54	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		08/13/14 12:54	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		08/13/14 12:54	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		08/13/14 12:54	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		08/13/14 12:54	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	102 %		80-120		1		08/13/14 12:54	2037-26-5	
4-Bromofluorobenzene (S)	96 %		76-123		1		08/13/14 12:54	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		75-129		1		08/13/14 12:54	17060-07-0	

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## QUALITY CONTROL DATA

Project: FORT SMITH AR

Pace Project No.: 60175646

QC Batch:	MSV/63525	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60175646001, 60175646002, 60175646003, 60175646004, 60175646005, 60175646006		

METHOD BLANK: 1424585	Matrix: Solid
Associated Lab Samples:	60175646001, 60175646002, 60175646003, 60175646004, 60175646005, 60175646006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/13/14 12:17	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	08/13/14 12:17	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/13/14 12:17	
1,1-Dichloroethane	ug/kg	ND	5.0	08/13/14 12:17	
1,1-Dichloroethene	ug/kg	ND	5.0	08/13/14 12:17	
1,2-Dichloroethane	ug/kg	ND	5.0	08/13/14 12:17	
1,2-Dichloropropane	ug/kg	ND	5.0	08/13/14 12:17	
2-Butanone (MEK)	ug/kg	ND	10.0	08/13/14 12:17	
2-Hexanone	ug/kg	ND	20.0	08/13/14 12:17	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	08/13/14 12:17	
Acetone	ug/kg	ND	20.0	08/13/14 12:17	
Benzene	ug/kg	ND	5.0	08/13/14 12:17	
Bromodichloromethane	ug/kg	ND	5.0	08/13/14 12:17	
Bromoform	ug/kg	ND	5.0	08/13/14 12:17	
Bromomethane	ug/kg	3.8J	5.0	08/13/14 12:17	
Carbon disulfide	ug/kg	ND	5.0	08/13/14 12:17	
Carbon tetrachloride	ug/kg	ND	5.0	08/13/14 12:17	
Chlorobenzene	ug/kg	ND	5.0	08/13/14 12:17	
Chloroethane	ug/kg	ND	5.0	08/13/14 12:17	
Chloroform	ug/kg	ND	5.0	08/13/14 12:17	
Chloromethane	ug/kg	ND	5.0	08/13/14 12:17	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/13/14 12:17	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/13/14 12:17	
Dibromochloromethane	ug/kg	ND	5.0	08/13/14 12:17	
Ethylbenzene	ug/kg	ND	5.0	08/13/14 12:17	
Methylene chloride	ug/kg	ND	5.0	08/13/14 12:17	
Styrene	ug/kg	ND	5.0	08/13/14 12:17	
Tetrachloroethene	ug/kg	ND	5.0	08/13/14 12:17	
Toluene	ug/kg	ND	5.0	08/13/14 12:17	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/13/14 12:17	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/13/14 12:17	
Trichloroethene	ug/kg	ND	5.0	08/13/14 12:17	
Vinyl chloride	ug/kg	ND	5.0	08/13/14 12:17	
Xylene (Total)	ug/kg	ND	5.0	08/13/14 12:17	
1,2-Dichloroethane-d4 (S)	%	93	75-129	08/13/14 12:17	
4-Bromofluorobenzene (S)	%	98	76-123	08/13/14 12:17	
Toluene-d8 (S)	%	99	80-120	08/13/14 12:17	

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.: 60175646

LABORATORY CONTROL SAMPLE: 1424586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	91.1	91	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	95.2	95	73-120	
1,1,2-Trichloroethane	ug/kg	100	91.0	91	76-120	
1,1-Dichloroethane	ug/kg	100	96.6	97	71-120	
1,1-Dichloroethene	ug/kg	100	92.3	92	76-130	
1,2-Dichloroethane	ug/kg	100	86.4	86	78-120	
1,2-Dichloropropane	ug/kg	100	88.1	88	80-120	
2-Butanone (MEK)	ug/kg	500	415	83	55-135	
2-Hexanone	ug/kg	500	451	90	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	451	90	71-128	
Acetone	ug/kg	500	485	97	43-144	
Benzene	ug/kg	100	86.7	87	80-120	
Bromodichloromethane	ug/kg	100	89.3	89	80-120	
Bromoform	ug/kg	100	85.6	86	75-124	
Bromomethane	ug/kg	100	69.0	69	38-150	
Carbon disulfide	ug/kg	100	95.8	96	58-137	
Carbon tetrachloride	ug/kg	100	87.8	88	75-140	
Chlorobenzene	ug/kg	100	84.8	85	80-120	
Chloroethane	ug/kg	100	79.0	79	65-127	
Chloroform	ug/kg	100	80.2	80	74-120	
Chloromethane	ug/kg	100	70.5	70	39-138	
cis-1,2-Dichloroethene	ug/kg	100	90.2	90	76-124	
cis-1,3-Dichloropropene	ug/kg	100	84.1	84	82-120	
Dibromochloromethane	ug/kg	100	86.7	87	80-124	
Ethylbenzene	ug/kg	100	88.9	89	80-120	
Methylene chloride	ug/kg	100	76.5	76	70-123	
Styrene	ug/kg	100	89.2	89	79-120	
Tetrachloroethene	ug/kg	100	87.1	87	78-128	
Toluene	ug/kg	100	89.5	90	79-120	
trans-1,2-Dichloroethene	ug/kg	100	90.2	90	76-124	
trans-1,3-Dichloropropene	ug/kg	100	80.6	81	80-124	
Trichloroethene	ug/kg	100	87.3	87	80-120	
Vinyl chloride	ug/kg	100	66.5	67	57-132	
Xylene (Total)	ug/kg	300	259	86	79-120	
1,2-Dichloroethane-d4 (S)	%			95	75-129	
4-Bromofluorobenzene (S)	%			93	76-123	
Toluene-d8 (S)	%			103	80-120	

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## QUALITY CONTROL DATA

Project: FORT SMITH AR

Pace Project No.: 60175646

QC Batch: PMST/9907 Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60175646001, 60175646002, 60175646003, 60175646004, 60175646005

METHOD BLANK: 1424864 Matrix: Solid

Associated Lab Samples: 60175646001, 60175646002, 60175646003, 60175646004, 60175646005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	08/13/14 00:00	

SAMPLE DUPLICATE: 1424865

Parameter	Units	60175645001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.6	16.6	0	20	

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## QUALIFIERS

Project: FORT SMITH AR  
Pace Project No.: 60175646

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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/63525

[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.: 60175646

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60175646001	DP-46-SL (4.5 FT) - 20140812	EPA 8260	MSV/63525		
60175646002	DP-46-SL (13.5 FT) - 20140812	EPA 8260	MSV/63525		
60175646003	DP-46-SL (18.0 FT) - 20140812	EPA 8260	MSV/63525		
60175646004	DP-47-SL (5.0 FT) - 20140812	EPA 8260	MSV/63525		
60175646005	DP-47-SL (22.0 FT) - 20140812	EPA 8260	MSV/63525		
60175646006	TB15-20140812	EPA 8260	MSV/63525		
60175646001	DP-46-SL (4.5 FT) - 20140812	ASTM D2974	PMST/9907		
60175646002	DP-46-SL (13.5 FT) - 20140812	ASTM D2974	PMST/9907		
60175646003	DP-46-SL (18.0 FT) - 20140812	ASTM D2974	PMST/9907		
60175646004	DP-47-SL (5.0 FT) - 20140812	ASTM D2974	PMST/9907		
60175646005	DP-47-SL (22.0 FT) - 20140812	ASTM D2974	PMST/9907		

**REPORT OF LABORATORY ANALYSIS**

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## Sample Condition Upon Receipt

WO# : 60175646



Client Name: Enviro

Optional

Proj Due Date:

Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other 

Tracking #: 6013 5277 3520

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  ziploc

Thermometer Used: T-239 / T-194

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

Cooler Temperature: 4.6

Date and initials of person examining  
contents: att 8/13

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <i>Kids</i>
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. 24 hrs
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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: <i>x</i>	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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed      Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <i>AR</i>

Client Notification/ Resolution:

Copy COC to Client? Y / N      Field Data Required? Y / N

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: *as for mru*Date: *8/13*

**Section A** Required Client Information:

tion:

## **Section B**

Section C  
Invoice Information:

Page:

10

of

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			tgleason@environcorp.com	Address:	
email To:	wstonestreet@environcorp.com	Purchase Order No.:		Face Quote Reference:	
Phone:	913-553-5926	Project Name:	Fort Smith, AR	Face Project Manager:	MJ Walls
Fax:		Project Number:		Face Profile #:	7444, line 1
Requested Due Date/TAT:	24 hr.	Site Location:	AR	STATE:	
Documented Annually. Ellwood (IVAN)					

Page: / of /

100

of

Section D Required Client Information		SAMPLE ID (A-Z, 0-9, -,.)		Valid Matrix Codes MATRIX CODE		COLLECTED		Preservatives		Pace Project No/Lab I.D.	
ITEM #	Sample IDs MUST BE UNIQUE	1	DP-46-SL (4.5 FT)-20140812	SL 6	SAMPLE TYPE (G=GRAB C=COMP) COMPOSITE	DATE	TIME	DATE	TIME	DATE	TIME
		2	DP-46-SL (13.5 FT)-20140812	1	ENDGRAB						
		3	DP-46-SL (18.0 FT)-20140812	2							
		4	DP-47-SL (5.0 FT)-20140812	1							
		5	DP-47-SL (20.0 FT)-20140812	2							
		6	Trip Blank 07 - 201408	W1							
		7									
		8									
		9									
		10									
		11									
		12									
Additional Comments		Relinquished By / Affiliation		Accepted By / Affiliation		Date		Time		Sample Conditions	
		Nick Zurek/Enviro		John French/PAH		8/13		8:30		Y Y Y Y	
Temp in °C		Residual Chlorine (Y/N)									
Received on		Samples intact (Y/N)									
Custom Seal		Cooler (Y/N)									
Samples intact (Y/N)											

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

August 19, 2014

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

RE: Project: Fort Smith, AR  
Pace Project No.: 60175927

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 16, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Fort Smith, AR  
Pace Project No.: 60175927

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Fort Smith, AR  
Pace Project No.: 60175927

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60175927001	DP-48-SL (4.0 FT)-20140814	Solid	08/14/14 10:35	08/16/14 02:35
60175927002	DP-48-SL (11.5 FT)-20140814	Solid	08/14/14 10:50	08/16/14 02:35
60175927003	DP-49-SL (4.0 FT)-20140814	Solid	08/14/14 12:35	08/16/14 02:35
60175927004	DP-49-SL (10.0 FT)-20140814	Solid	08/14/14 12:40	08/16/14 02:35
60175927005	DP-49-SL (13.0 FT)-20140814	Solid	08/14/14 12:55	08/16/14 02:35
60175927006	DP-50-SL (4.0 FT)-20140814	Solid	08/14/14 14:30	08/16/14 02:35
60175927007	DP-50-SL (10.0 FT)-20140814	Solid	08/14/14 14:45	08/16/14 02:35
60175927008	TB17-20140814	Solid	08/14/14 10:35	08/16/14 02:35

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## SAMPLE ANALYTE COUNT

Project: Fort Smith, AR  
Pace Project No.: 60175927

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60175927001	DP-48-SL (4.0 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927002	DP-48-SL (11.5 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927003	DP-49-SL (4.0 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927004	DP-49-SL (10.0 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927005	DP-49-SL (13.0 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927006	DP-50-SL (4.0 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927007	DP-50-SL (10.0 FT)-20140814	EPA 8260	JKL	37
		ASTM D2974	DWC	1
60175927008	TB17-20140814	EPA 8260	JKL	37

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## PROJECT NARRATIVE

Project: Fort Smith, AR  
Pace Project No.: 60175927

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**Method:** **EPA 8260**  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** August 19, 2014

### **General Information:**

8 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

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

### **Initial Calibrations (including MS Tune as applicable):**

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

### **Continuing Calibration:**

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

### **Internal Standards:**

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

### **Surrogates:**

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

### **Method Blank:**

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

### **Laboratory Control Spike:**

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

### **Matrix Spikes:**

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

### **Additional Comments:**

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

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-48-SL (4.0 FT)-  
20140814 Lab ID: 60175927001 Collected: 08/14/14 10:35 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	15.3J	ug/kg	18.5	9.2	1		08/18/14 15:25	67-64-1	
Benzene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	71-43-2	
Bromodichloromethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-27-4	
Bromoform	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-25-2	
Bromomethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.2	4.6	1		08/18/14 15:25	78-93-3	
Carbon disulfide	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	56-23-5	
Chlorobenzene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	108-90-7	
Chloroethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-00-3	
Chloroform	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	67-66-3	
Chloromethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	74-87-3	
Dibromochloromethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	124-48-1	
1,1-Dichloroethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	10061-02-6	
Ethylbenzene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	100-41-4	
2-Hexanone	ND	ug/kg	18.5	9.2	1		08/18/14 15:25	591-78-6	
Methylene chloride	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.2	4.6	1		08/18/14 15:25	108-10-1	
Styrene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	79-34-5	
Tetrachloroethene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	127-18-4	
Toluene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	79-00-5	
Trichloroethene	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	79-01-6	
Vinyl chloride	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	75-01-4	
Xylene (Total)	ND	ug/kg	4.6	2.3	1		08/18/14 15:25	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		80-120		1		08/18/14 15:25	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/18/14 15:25	460-00-4	
1,2-Dichloroethane-d4 (S)	111 %		75-129		1		08/18/14 15:25	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	13.0 %		0.50	0.50	1		08/18/14 00:00		

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-48-SL (11.5 FT)-  
20140814 Lab ID: 60175927002 Collected: 08/14/14 10:50 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	9.3J	ug/kg	17.2	8.6	1		08/18/14 15:40	67-64-1	
Benzene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	71-43-2	
Bromodichloromethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-27-4	
Bromoform	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-25-2	
Bromomethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	74-83-9	
2-Butanone (MEK)	ND	ug/kg	8.6	4.3	1		08/18/14 15:40	78-93-3	
Carbon disulfide	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	56-23-5	
Chlorobenzene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	108-90-7	
Chloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-00-3	
Chloroform	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	67-66-3	
Chloromethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	74-87-3	
Dibromochloromethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	124-48-1	
1,1-Dichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	10061-02-6	
Ethylbenzene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	100-41-4	
2-Hexanone	ND	ug/kg	17.2	8.6	1		08/18/14 15:40	591-78-6	
Methylene chloride	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.6	4.3	1		08/18/14 15:40	108-10-1	
Styrene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	79-34-5	
Tetrachloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	127-18-4	
Toluene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	79-00-5	
Trichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	79-01-6	
Vinyl chloride	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	75-01-4	
Xylene (Total)	ND	ug/kg	4.3	2.2	1		08/18/14 15:40	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/18/14 15:40	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/18/14 15:40	460-00-4	
1,2-Dichloroethane-d4 (S)	110 %		75-129		1		08/18/14 15:40	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	10.8 %		0.50	0.50	1		08/18/14 00:00		

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-49-SL (4.0 FT)-  
20140814 Lab ID: 60175927003 Collected: 08/14/14 12:35 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	15.4J	ug/kg	19.4	9.7	1		08/18/14 15:56	67-64-1	
Benzene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	71-43-2	
Bromodichloromethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-27-4	
Bromoform	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-25-2	
Bromomethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	74-83-9	
2-Butanone (MEK)	ND	ug/kg	9.7	4.8	1		08/18/14 15:56	78-93-3	
Carbon disulfide	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	56-23-5	
Chlorobenzene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	108-90-7	
Chloroethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-00-3	
Chloroform	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	67-66-3	
Chloromethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	74-87-3	
Dibromochloromethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	124-48-1	
1,1-Dichloroethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	10061-02-6	
Ethylbenzene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	100-41-4	
2-Hexanone	ND	ug/kg	19.4	9.7	1		08/18/14 15:56	591-78-6	
Methylene chloride	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	9.7	4.8	1		08/18/14 15:56	108-10-1	
Styrene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	79-34-5	
Tetrachloroethene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	127-18-4	
Toluene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	79-00-5	
Trichloroethene	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	79-01-6	
Vinyl chloride	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	75-01-4	
Xylene (Total)	ND	ug/kg	4.8	2.4	1		08/18/14 15:56	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/18/14 15:56	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/18/14 15:56	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/18/14 15:56	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	15.5 %		0.50	0.50	1		08/18/14 00:00		

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-49-SL (10.0 FT)-  
20140814 Lab ID: 60175927004 Collected: 08/14/14 12:40 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	12.3J	ug/kg	17.4	8.7	1		08/18/14 16:11	67-64-1	
Benzene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	71-43-2	
Bromodichloromethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-27-4	
Bromoform	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-25-2	
Bromomethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	74-83-9	
2-Butanone (MEK)	ND	ug/kg	8.7	4.3	1		08/18/14 16:11	78-93-3	
Carbon disulfide	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	56-23-5	
Chlorobenzene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	108-90-7	
Chloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-00-3	
Chloroform	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	67-66-3	
Chloromethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	74-87-3	
Dibromochloromethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	124-48-1	
1,1-Dichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	10061-02-6	
Ethylbenzene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	100-41-4	
2-Hexanone	ND	ug/kg	17.4	8.7	1		08/18/14 16:11	591-78-6	
Methylene chloride	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	8.7	4.3	1		08/18/14 16:11	108-10-1	
Styrene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	79-34-5	
Tetrachloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	127-18-4	
Toluene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	79-00-5	
Trichloroethene	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	79-01-6	
Vinyl chloride	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	75-01-4	
Xylene (Total)	ND	ug/kg	4.3	2.2	1		08/18/14 16:11	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	101 %		80-120		1		08/18/14 16:11	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/18/14 16:11	460-00-4	
1,2-Dichloroethane-d4 (S)	113 %		75-129		1		08/18/14 16:11	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	11.3 %		0.50	0.50	1		08/18/14 00:00		

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-49-SL (13.0 FT)-  
20140814 Lab ID: 60175927005 Collected: 08/14/14 12:55 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	14.2J	ug/kg	22.6	11.3	1		08/18/14 16:26	67-64-1	
Benzene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	71-43-2	
Bromodichloromethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-27-4	
Bromoform	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-25-2	
Bromomethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.3	5.6	1		08/18/14 16:26	78-93-3	
Carbon disulfide	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	56-23-5	
Chlorobenzene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	108-90-7	
Chloroethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-00-3	
Chloroform	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	67-66-3	
Chloromethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	74-87-3	
Dibromochloromethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	124-48-1	
1,1-Dichloroethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	10061-02-6	
Ethylbenzene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	100-41-4	
2-Hexanone	ND	ug/kg	22.6	11.3	1		08/18/14 16:26	591-78-6	
Methylene chloride	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.3	5.6	1		08/18/14 16:26	108-10-1	
Styrene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	79-34-5	
Tetrachloroethene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	127-18-4	
Toluene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	79-00-5	
Trichloroethene	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	79-01-6	
Vinyl chloride	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	75-01-4	
Xylene (Total)	ND	ug/kg	5.6	2.8	1		08/18/14 16:26	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/18/14 16:26	2037-26-5	
4-Bromofluorobenzene (S)	98 %		76-123		1		08/18/14 16:26	460-00-4	
1,2-Dichloroethane-d4 (S)	110 %		75-129		1		08/18/14 16:26	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	18.9 %		0.50	0.50	1		08/18/14 00:00		

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-50-SL (4.0 FT)-  
20140814 Lab ID: 60175927006 Collected: 08/14/14 14:30 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		18.4	9.2	1		08/18/14 16:42	67-64-1	
Benzene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	71-43-2	
Bromodichloromethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-27-4	
Bromoform	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-25-2	
Bromomethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	74-83-9	
2-Butanone (MEK)	ND ug/kg		9.2	4.6	1		08/18/14 16:42	78-93-3	
Carbon disulfide	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-15-0	
Carbon tetrachloride	ND ug/kg		4.6	2.3	1		08/18/14 16:42	56-23-5	
Chlorobenzene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	108-90-7	
Chloroethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-00-3	
Chloroform	ND ug/kg		4.6	2.3	1		08/18/14 16:42	67-66-3	
Chloromethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	74-87-3	
Dibromochloromethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	10061-02-6	
Ethylbenzene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	100-41-4	
2-Hexanone	ND ug/kg		18.4	9.2	1		08/18/14 16:42	591-78-6	
Methylene chloride	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		9.2	4.6	1		08/18/14 16:42	108-10-1	
Styrene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	79-34-5	
Tetrachloroethene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	127-18-4	
Toluene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.6	2.3	1		08/18/14 16:42	79-00-5	
Trichloroethene	ND ug/kg		4.6	2.3	1		08/18/14 16:42	79-01-6	
Vinyl chloride	ND ug/kg		4.6	2.3	1		08/18/14 16:42	75-01-4	
Xylene (Total)	ND ug/kg		4.6	2.3	1		08/18/14 16:42	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/18/14 16:42	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/18/14 16:42	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/18/14 16:42	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	15.8 %		0.50	0.50	1		08/18/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: DP-50-SL (10.0 FT)-  
20140814 Lab ID: 60175927007 Collected: 08/14/14 14:45 Received: 08/16/14 02:35 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		15.9	7.9	1		08/18/14 16:57	67-64-1	
Benzene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	71-43-2	
Bromodichloromethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-27-4	
Bromoform	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-25-2	
Bromomethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	74-83-9	
2-Butanone (MEK)	ND ug/kg		7.9	4.0	1		08/18/14 16:57	78-93-3	
Carbon disulfide	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-15-0	
Carbon tetrachloride	ND ug/kg		4.0	2.0	1		08/18/14 16:57	56-23-5	
Chlorobenzene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	108-90-7	
Chloroethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-00-3	
Chloroform	ND ug/kg		4.0	2.0	1		08/18/14 16:57	67-66-3	
Chloromethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	74-87-3	
Dibromochloromethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	10061-02-6	
Ethylbenzene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	100-41-4	
2-Hexanone	ND ug/kg		15.9	7.9	1		08/18/14 16:57	591-78-6	
Methylene chloride	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		7.9	4.0	1		08/18/14 16:57	108-10-1	
Styrene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	79-34-5	
Tetrachloroethene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	127-18-4	
Toluene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.0	2.0	1		08/18/14 16:57	79-00-5	
Trichloroethene	ND ug/kg		4.0	2.0	1		08/18/14 16:57	79-01-6	
Vinyl chloride	ND ug/kg		4.0	2.0	1		08/18/14 16:57	75-01-4	
Xylene (Total)	ND ug/kg		4.0	2.0	1		08/18/14 16:57	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	102 %		80-120		1		08/18/14 16:57	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/18/14 16:57	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		75-129		1		08/18/14 16:57	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974							
Percent Moisture	<b>10.6 %</b>		0.50	0.50	1		08/18/14 00:00		

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## ANALYTICAL RESULTS

Project: Fort Smith, AR  
Pace Project No.: 60175927

Sample: TB17-20140814      Lab ID: 60175927008      Collected: 08/14/14 10:35      Received: 08/16/14 02:35      Matrix: Solid

**Results reported on a "wet-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Acetone	ND ug/kg		20.0	10.0	1		08/18/14 17:12	67-64-1	
Benzene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	71-43-2	
Bromodichloromethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-27-4	
Bromoform	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-25-2	
Bromomethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	74-83-9	
2-Butanone (MEK)	ND ug/kg		10.0	5.0	1		08/18/14 17:12	78-93-3	
Carbon disulfide	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-15-0	
Carbon tetrachloride	ND ug/kg		5.0	2.5	1		08/18/14 17:12	56-23-5	
Chlorobenzene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	108-90-7	
Chloroethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-00-3	
Chloroform	ND ug/kg		5.0	2.5	1		08/18/14 17:12	67-66-3	
Chloromethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	74-87-3	
Dibromochloromethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	10061-02-6	
Ethylbenzene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	100-41-4	
2-Hexanone	ND ug/kg		20.0	10.0	1		08/18/14 17:12	591-78-6	
Methylene chloride	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		10.0	5.0	1		08/18/14 17:12	108-10-1	
Styrene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	79-34-5	
Tetrachloroethene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	127-18-4	
Toluene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	108-88-3	
1,1,1-Trichloroethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.0	2.5	1		08/18/14 17:12	79-00-5	
Trichloroethene	ND ug/kg		5.0	2.5	1		08/18/14 17:12	79-01-6	
Vinyl chloride	ND ug/kg		5.0	2.5	1		08/18/14 17:12	75-01-4	
Xylene (Total)	ND ug/kg		5.0	2.5	1		08/18/14 17:12	1330-20-7	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/18/14 17:12	2037-26-5	
4-Bromofluorobenzene (S)	98 %		76-123		1		08/18/14 17:12	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		75-129		1		08/18/14 17:12	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Fort Smith, AR  
Pace Project No.: 60175927

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QC Batch:	MSV/63624	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60175927001, 60175927002, 60175927003, 60175927004, 60175927005, 60175927006, 60175927007, 60175927008		

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METHOD BLANK: 1426686	Matrix: Solid
Associated Lab Samples:	60175927001, 60175927002, 60175927003, 60175927004, 60175927005, 60175927006, 60175927007, 60175927008

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/18/14 15:10	
1,1,2-Tetrachloroethane	ug/kg	ND	5.0	08/18/14 15:10	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/18/14 15:10	
1,1-Dichloroethane	ug/kg	ND	5.0	08/18/14 15:10	
1,1-Dichloroethene	ug/kg	ND	5.0	08/18/14 15:10	
1,2-Dichloroethane	ug/kg	ND	5.0	08/18/14 15:10	
1,2-Dichloropropane	ug/kg	ND	5.0	08/18/14 15:10	
2-Butanone (MEK)	ug/kg	ND	10.0	08/18/14 15:10	
2-Hexanone	ug/kg	ND	20.0	08/18/14 15:10	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	08/18/14 15:10	
Acetone	ug/kg	ND	20.0	08/18/14 15:10	
Benzene	ug/kg	ND	5.0	08/18/14 15:10	
Bromodichloromethane	ug/kg	ND	5.0	08/18/14 15:10	
Bromoform	ug/kg	ND	5.0	08/18/14 15:10	
Bromomethane	ug/kg	ND	5.0	08/18/14 15:10	
Carbon disulfide	ug/kg	ND	5.0	08/18/14 15:10	
Carbon tetrachloride	ug/kg	ND	5.0	08/18/14 15:10	
Chlorobenzene	ug/kg	ND	5.0	08/18/14 15:10	
Chloroethane	ug/kg	ND	5.0	08/18/14 15:10	
Chloroform	ug/kg	ND	5.0	08/18/14 15:10	
Chloromethane	ug/kg	ND	5.0	08/18/14 15:10	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/18/14 15:10	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/18/14 15:10	
Dibromochloromethane	ug/kg	ND	5.0	08/18/14 15:10	
Ethylbenzene	ug/kg	ND	5.0	08/18/14 15:10	
Methylene chloride	ug/kg	ND	5.0	08/18/14 15:10	
Styrene	ug/kg	ND	5.0	08/18/14 15:10	
Tetrachloroethene	ug/kg	ND	5.0	08/18/14 15:10	
Toluene	ug/kg	ND	5.0	08/18/14 15:10	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/18/14 15:10	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/18/14 15:10	
Trichloroethene	ug/kg	ND	5.0	08/18/14 15:10	
Vinyl chloride	ug/kg	ND	5.0	08/18/14 15:10	
Xylene (Total)	ug/kg	ND	5.0	08/18/14 15:10	
1,2-Dichloroethane-d4 (S)	%	94	75-129	08/18/14 15:10	
4-Bromofluorobenzene (S)	%	94	76-123	08/18/14 15:10	
Toluene-d8 (S)	%	101	80-120	08/18/14 15:10	

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## QUALITY CONTROL DATA

Project: Fort Smith, AR

Pace Project No.: 60175927

**LABORATORY CONTROL SAMPLE: 1426687**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	92.1	92	77-126	
1,1,2,2-Tetrachloroethane	ug/kg	100	90.6	91	73-120	
1,1,2-Trichloroethane	ug/kg	100	86.1	86	76-120	
1,1-Dichloroethane	ug/kg	100	89.9	90	71-120	
1,1-Dichloroethene	ug/kg	100	90.1	90	76-130	
1,2-Dichloroethane	ug/kg	100	92.8	93	78-120	
1,2-Dichloropropane	ug/kg	100	90.3	90	80-120	
2-Butanone (MEK)	ug/kg	500	527	105	55-135	
2-Hexanone	ug/kg	500	458	92	57-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	475	95	71-128	
Acetone	ug/kg	500	460	92	43-144	
Benzene	ug/kg	100	89.2	89	80-120	
Bromodichloromethane	ug/kg	100	93.8	94	80-120	
Bromoform	ug/kg	100	95.0	95	75-124	
Bromomethane	ug/kg	100	113	113	38-150	
Carbon disulfide	ug/kg	100	102	102	58-137	
Carbon tetrachloride	ug/kg	100	92.0	92	75-140	
Chlorobenzene	ug/kg	100	89.6	90	80-120	
Chloroethane	ug/kg	100	97.4	97	65-127	
Chloroform	ug/kg	100	93.6	94	74-120	
Chloromethane	ug/kg	100	111	111	39-138	
cis-1,2-Dichloroethene	ug/kg	100	91.4	91	76-124	
cis-1,3-Dichloropropene	ug/kg	100	91.4	91	82-120	
Dibromochloromethane	ug/kg	100	93.0	93	80-124	
Ethylbenzene	ug/kg	100	88.1	88	80-120	
Methylene chloride	ug/kg	100	99.2	99	70-123	
Styrene	ug/kg	100	89.2	89	79-120	
Tetrachloroethene	ug/kg	100	85.0	85	78-128	
Toluene	ug/kg	100	89.4	89	79-120	
trans-1,2-Dichloroethene	ug/kg	100	85.8	86	76-124	
trans-1,3-Dichloropropene	ug/kg	100	86.6	87	80-124	
Trichloroethene	ug/kg	100	88.5	89	80-120	
Vinyl chloride	ug/kg	100	99.6	100	57-132	
Xylene (Total)	ug/kg	300	261	87	79-120	
1,2-Dichloroethane-d4 (S)	%			105	75-129	
4-Bromofluorobenzene (S)	%			99	76-123	
Toluene-d8 (S)	%			102	80-120	

**MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1426688      1426689**

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60175405007	Result	Spike Conc.	Spike Conc.						
1,1,1-Trichloroethane	ug/kg	ND	117	119	84.2	93.9	72	79	21-144	11	43
1,1,2,2-Tetrachloroethane	ug/kg	ND	117	119	92.9	106	79	88	10-151	13	46
1,1,2-Trichloroethane	ug/kg	ND	117	119	91.6	97.3	78	82	10-140	6	46

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## QUALITY CONTROL DATA

Project: Fort Smith, AR  
Pace Project No.: 60175927

Parameter	Units	60175405007		MS		MSD		MS		MSD		% Rec	Limits	Max RPD	Max Qual
		Result	Conc.	Spike	Conc.	Spike	Result	MSD	Result	% Rec	MSD				
1,1-Dichloroethane	ug/kg	ND	117	119	90.0	99.5	77	83	19-137	10	43				
1,1-Dichloroethene	ug/kg	ND	117	119	86.1	95.2	73	80	27-143	10	41				
1,2-Dichloroethane	ug/kg	ND	117	119	89.4	99.7	76	84	21-147	11	38				
1,2-Dichloropropane	ug/kg	ND	117	119	87.4	93.0	74	78	15-145	6	43				
2-Butanone (MEK)	ug/kg	0.032	587	597	501	548	80	86	10-160	9	50				
2-Hexanone	ug/kg	ND	587	597	448	502	76	84	10-160	11	50				
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	587	597	476	516	81	86	10-152	8	47				
Acetone	ug/kg	0.18	587	597	554	608	63	71	10-160	9	49				
Benzene	ug/kg	ND	117	119	81.7	91.5	70	77	22-144	11	38				
Bromodichloromethane	ug/kg	ND	117	119	85.3	91.9	73	77	10-143	7	42				
Bromoform	ug/kg	ND	117	119	68.5	73.6	58	62	10-145	7	44				
Bromomethane	ug/kg	ND	117	119	89.2	114	76	96	10-137	25	47				
Carbon disulfide	ug/kg	ND	117	119	87.4	99.5	73	82	10-142	13	44				
Carbon tetrachloride	ug/kg	ND	117	119	76.6	86.5	65	72	15-153	12	45				
Chlorobenzene	ug/kg	ND	117	119	65.6	70.6	56	59	10-145	7	46				
Chloroethane	ug/kg	ND	117	119	98.5	110	84	92	17-134	11	42				
Chloroform	ug/kg	ND	117	119	89.5	92.9	76	78	17-138	4	44				
Chloromethane	ug/kg	ND	117	119	113	122	96	102	10-128	8	39				
cis-1,2-Dichloroethene	ug/kg	ND	117	119	88.7	96.8	75	81	17-140	9	46				
cis-1,3-Dichloropropene	ug/kg	ND	117	119	70.3	76.8	60	64	10-142	9	43				
Dibromochloromethane	ug/kg	ND	117	119	78.8	85.0	67	71	10-149	8	42				
Ethylbenzene	ug/kg	ND	117	119	67.4	71.0	57	59	10-154	5	42				
Methylene chloride	ug/kg	ND	117	119	104	119	86	97	15-140	13	46				
Styrene	ug/kg	ND	117	119	53.5	55.2	46	46	10-142	3	44				
Tetrachloroethene	ug/kg	ND	117	119	64.5	70.5	55	59	10-150	9	48				
Toluene	ug/kg	ND	117	119	72.8	79.8	62	67	11-150	9	40				
trans-1,2-Dichloroethene	ug/kg	ND	117	119	78.9	90.7	67	76	20-140	14	42				
trans-1,3-Dichloropropene	ug/kg	ND	117	119	67.8	72.8	58	61	10-149	7	41				
Trichloroethene	ug/kg	ND	117	119	75.1	83.0	64	70	14-146	10	45				
Vinyl chloride	ug/kg	ND	117	119	95.4	105	81	88	19-131	10	37				
Xylene (Total)	ug/kg	ND	352	358	189	194	54	54	10-154	3	41				
1,2-Dichloroethane-d4 (S)	%						101	102	75-129						
4-Bromofluorobenzene (S)	%						98	96	76-123						
Toluene-d8 (S)	%						100	100	80-120						

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

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## QUALITY CONTROL DATA

Project: Fort Smith, AR  
 Pace Project No.: 60175927

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QC Batch:	PMST/9917	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture

Associated Lab Samples: 60175927001, 60175927002, 60175927003, 60175927004, 60175927005, 60175927006, 60175927007

---

METHOD BLANK: 1427485 Matrix: Solid

Associated Lab Samples: 60175927001, 60175927002, 60175927003, 60175927004, 60175927005, 60175927006, 60175927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	08/18/14 00:00	

---

SAMPLE DUPLICATE: 1427486

Parameter	Units	60175925001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	30.7	30.6	0	20	

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

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## QUALIFIERS

Project: Fort Smith, AR  
Pace Project No.: 60175927

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Fort Smith, AR  
 Pace Project No.: 60175927

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60175927001	DP-48-SL (4.0 FT)-20140814	EPA 8260	MSV/63624		
60175927002	DP-48-SL (11.5 FT)-20140814	EPA 8260	MSV/63624		
60175927003	DP-49-SL (4.0 FT)-20140814	EPA 8260	MSV/63624		
60175927004	DP-49-SL (10.0 FT)-20140814	EPA 8260	MSV/63624		
60175927005	DP-49-SL (13.0 FT)-20140814	EPA 8260	MSV/63624		
60175927006	DP-50-SL (4.0 FT)-20140814	EPA 8260	MSV/63624		
60175927007	DP-50-SL (10.0 FT)-20140814	EPA 8260	MSV/63624		
60175927008	TB17-20140814	EPA 8260	MSV/63624		
60175927001	DP-48-SL (4.0 FT)-20140814	ASTM D2974	PMST/9917		
60175927002	DP-48-SL (11.5 FT)-20140814	ASTM D2974	PMST/9917		
60175927003	DP-49-SL (4.0 FT)-20140814	ASTM D2974	PMST/9917		
60175927004	DP-49-SL (10.0 FT)-20140814	ASTM D2974	PMST/9917		
60175927005	DP-49-SL (13.0 FT)-20140814	ASTM D2974	PMST/9917		
60175927006	DP-50-SL (4.0 FT)-20140814	ASTM D2974	PMST/9917		
60175927007	DP-50-SL (10.0 FT)-20140814	ASTM D2974	PMST/9917		

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## Sample Condition Upon Receipt

WO# : 60175927



60175927

Client Name: Enviro

Optional

Proj Due Date:

Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  via  
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  epic

Thermometer Used: 1-239 Y T-194

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

Cooler Temperature: 3.2

Date and initials of person examining  
contents: AH RIC

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. kits
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. 24 hrs
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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	<i>at 8116</i> <input type="checkbox"/> SL	13.
All containers needing preservation have been checked	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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 type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): 070113-3		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: AR

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: *mwn*

Date: 8/18/14



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

Section A  
Required Client

**Section B**  
Required Project Information:

Company: Enviro		Report To: Wendy Stonestreet	Attention: Tamara Gleason	REGULATORY AGENCY		
Address: 7500 College Blvd., Ste. 925 Overland Park, KS 66210		Copy To: Tamara Gleason	Company Name:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
Email To: <a href="mailto:wstonestreet@environtcorp.com">wstonestreet@environtcorp.com</a>		Purchase Order No.:	Address:	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Phone: 913-553-5926		Fax:	Project Name: Fort Smith, AR	Pace Quate Reference:	MJ Walls	Site Location:
			Project Number:	Pace Project Manager:	AR	STATE:
				Pace Profile #:	7444 water, 7709 soil	
					Requested Due Date/TAT: 2/14/14.	

### **Section C**

Section C Invoice Information:	
Attention:	Tamara Gleason
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	MJ Walls
Page Profile #: 7444 water, 7709 soil	
Page: / of /	
<b>REGULATORY AGENCY</b>	
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
<b>Site Location</b>	<b>STATE:</b> AR

Preservatives      N/A

Requested Analysis Filtered (Y/N)													
Section D Required Client Information:		Valid Matrix Codes		COLLECTED		Preservatives		Pace Project No./ Lab I.D.		Samples In tact			
SAMPLE ID (A-Z-0-9/-)		MATRIX CODE DRINKING WATER DW WATER WWT WASTE WATER WW PRODUCT P SOLID S OIL O WIFE WP AIR AR OTHER CT Tissue TS		COMPOSITE START		COMPOSITE END/GRAB		B260 Client specific list		Customer Sealed Container (Y/N)			
ITEM #		MATRIX CODE (see valid codes to left)		DATE		TIME		TIME		Temp in °C			
1	DP-48-SL (4.0 FT) - 20140814	SL	G	2014/08/14	1035	5	X			Received on			
2	DP-48-SL (11.5 FT) - 20140814				1050	1				Coupler (Y/N)			
3	DP-49-SL (4.0 FT) - 20140814				1235					Sealed			
4	DP-49-SL (10.0 FT) - 20140814				1240								
5	DP-49-SL (13.0 FT) - 20140814				1255								
6	DP-50-SL (4.0 FT) - 20140814				1430								
7	DP-50-SL (10.0 FT) - 20140814				1445	V							
8	Trip Blank 09-082014		WT			2							
9	Temp Blank		WT			1							
10													
11													
12													
ADDITIONAL COMMENTS				RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE	
24 Hr. TAT!				NICHOLAS ENVIRON		8/14/14		1730		NICHOLAS ENVIRON		8/15/14	
				HANNAH		8/15/14		1745					
PRINT Name of SAMPLER: <u>Nicholas Environ</u>													
SIGNATURE of SAMPLER: <u>Nicholas Environ</u>													
DATE Signed (MM/DD/YY): <u>8/14/14</u>													

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

August 21, 2014

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

RE: Project: Ft. Smith AR  
Pace Project No.: 60176049

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 19, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Ft. Smith AR  
Pace Project No.: 60176049

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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: Ft. Smith AR  
Pace Project No.: 60176049

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60176049001	DP-49-GW-20140817	Water	08/17/14 08:54	08/19/14 02:00
60176049002	NE-MANHOLE-SW-20140818	Water	08/18/14 17:15	08/19/14 02:00
60176049003	WEST-SW-20140818	Water	08/18/14 17:15	08/19/14 02:00
60176049004	TB20-20140818	Water	08/17/14 08:54	08/19/14 02:00

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## SAMPLE ANALYTE COUNT

Project: Ft. Smith AR  
Pace Project No.: 60176049

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60176049001	DP-49-GW-20140817	EPA 5030B/8260	PRG	38
60176049002	NE-MANHOLE-SW-20140818	EPA 5030B/8260	PRG	26
60176049003	WEST-SW-20140818	EPA 5030B/8260	PRG	26
60176049004	TB20-20140818	EPA 5030B/8260	PRG	38

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Ft. Smith AR  
Pace Project No.: 60176049

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**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** Environ\_AR

**Date:** August 21, 2014

### **General Information:**

4 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **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/63778

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: Ft. Smith AR  
Pace Project No.: 60176049

Sample: DP-49-GW-20140817 Lab ID: 60176049001 Collected: 08/17/14 08:54 Received: 08/19/14 02:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		08/20/14 22:36	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		08/20/14 22:36	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/20/14 22:36	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		08/20/14 22:36	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		08/20/14 22:36	74-83-9	
2-Butanone (MEK)	<b>16.4</b> ug/L		10.0	5.0	1		08/20/14 22:36	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		08/20/14 22:36	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/20/14 22:36	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/20/14 22:36	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/20/14 22:36	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/20/14 22:36	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/20/14 22:36	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/20/14 22:36	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/20/14 22:36	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:36	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:36	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:36	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:36	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/20/14 22:36	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 22:36	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 22:36	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		08/20/14 22:36	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		08/20/14 22:36	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/20/14 22:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		08/20/14 22:36	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		08/20/14 22:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/20/14 22:36	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:36	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		08/20/14 22:36	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:36	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:36	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:36	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/20/14 22:36	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		08/20/14 22:36	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102 %		80-120		1		08/20/14 22:36	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		80-120		1		08/20/14 22:36	17060-07-0	
Toluene-d8 (S)	98 %		80-120		1		08/20/14 22:36	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/20/14 22:36		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith AR  
Pace Project No.: 60176049

Sample: NE-MANHOLE-SW-  
20140818      Lab ID: 60176049002      Collected: 08/18/14 17:15      Received: 08/19/14 02:00      Matrix: Water

Parameters	Results	Units	Report				Analyzed	CAS No.	Qual
			Limit	MDL	DF	Prepared			
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/20/14 22:50	75-27-4	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/20/14 22:50	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/20/14 22:50	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/20/14 22:50	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/20/14 22:50	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/20/14 22:50	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/20/14 22:50	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/20/14 22:50	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:50	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:50	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:50	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/20/14 22:50	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 22:50	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 22:50	10061-02-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/20/14 22:50	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/20/14 22:50	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:50	127-18-4	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:50	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:50	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:50	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/20/14 22:50	75-01-4	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		80-120		1		08/20/14 22:50	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		80-120		1		08/20/14 22:50	17060-07-0	
Toluene-d8 (S)	97 %		80-120		1		08/20/14 22:50	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/20/14 22:50		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith AR  
Pace Project No.: 60176049

Sample: WEST-SW-20140818 Lab ID: 60176049003 Collected: 08/18/14 17:15 Received: 08/19/14 02:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/20/14 23:04	75-27-4	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/20/14 23:04	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/20/14 23:04	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/20/14 23:04	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/20/14 23:04	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/20/14 23:04	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/20/14 23:04	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/20/14 23:04	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/20/14 23:04	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 23:04	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 23:04	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 23:04	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/20/14 23:04	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 23:04	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 23:04	10061-02-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/20/14 23:04	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/20/14 23:04	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/20/14 23:04	127-18-4	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 23:04	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 23:04	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		08/20/14 23:04	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/20/14 23:04	75-01-4	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		80-120		1		08/20/14 23:04	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		80-120		1		08/20/14 23:04	17060-07-0	
Toluene-d8 (S)	92 %		80-120		1		08/20/14 23:04	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/20/14 23:04		

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## ANALYTICAL RESULTS

Project: Ft. Smith AR  
Pace Project No.: 60176049

Sample: TB20-20140818	Lab ID: 60176049004	Collected: 08/17/14 08:54	Received: 08/19/14 02:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		10.0	5.0	1		08/20/14 22:07	67-64-1	
Benzene	ND ug/L		5.0	0.50	1		08/20/14 22:07	71-43-2	
Bromodichloromethane	ND ug/L		5.0	0.50	1		08/20/14 22:07	75-27-4	
Bromoform	ND ug/L		5.0	0.50	1		08/20/14 22:07	75-25-2	
Bromomethane	ND ug/L		7.0	2.5	1		08/20/14 22:07	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	5.0	1		08/20/14 22:07	78-93-3	
Carbon disulfide	ND ug/L		10.0	2.5	1		08/20/14 22:07	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	0.50	1		08/20/14 22:07	56-23-5	
Chlorobenzene	ND ug/L		5.0	0.50	1		08/20/14 22:07	108-90-7	
Chloroethane	ND ug/L		10.0	0.50	1		08/20/14 22:07	75-00-3	
Chloroform	ND ug/L		5.0	0.50	1		08/20/14 22:07	67-66-3	
Chloromethane	ND ug/L		10.0	0.50	1		08/20/14 22:07	74-87-3	
Dibromochloromethane	ND ug/L		5.0	0.50	1		08/20/14 22:07	124-48-1	
1,1-Dichloroethane	ND ug/L		2.4	0.50	1		08/20/14 22:07	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:07	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:07	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:07	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:07	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	0.50	1		08/20/14 22:07	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 22:07	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.50	1		08/20/14 22:07	10061-02-6	
Ethylbenzene	ND ug/L		5.0	0.50	1		08/20/14 22:07	100-41-4	
2-Hexanone	ND ug/L		10.0	5.0	1		08/20/14 22:07	591-78-6	
Methylene chloride	ND ug/L		5.0	0.50	1		08/20/14 22:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	2.5	1		08/20/14 22:07	108-10-1	
Styrene	ND ug/L		5.0	0.50	1		08/20/14 22:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	0.50	1		08/20/14 22:07	79-34-5	
Tetrachloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:07	127-18-4	
Toluene	ND ug/L		5.0	0.50	1		08/20/14 22:07	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:07	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	0.50	1		08/20/14 22:07	79-00-5	
Trichloroethene	ND ug/L		5.0	0.50	1		08/20/14 22:07	79-01-6	
Vinyl chloride	ND ug/L		2.0	0.50	1		08/20/14 22:07	75-01-4	
Xylene (Total)	ND ug/L		5.0	1.5	1		08/20/14 22:07	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		80-120		1		08/20/14 22:07	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120		1		08/20/14 22:07	17060-07-0	
Toluene-d8 (S)	94 %		80-120		1		08/20/14 22:07	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	0.10	1		08/20/14 22:07		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Ft. Smith AR

Pace Project No.: 60176049

QC Batch:	MSV/63778	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	60176049001, 60176049002, 60176049003, 60176049004		

METHOD BLANK: 1428967                          Matrix: Water

Associated Lab Samples: 60176049001, 60176049002, 60176049003, 60176049004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	08/20/14 21:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/20/14 21:39	
1,1,2-Trichloroethane	ug/L	ND	5.0	08/20/14 21:39	
1,1-Dichloroethane	ug/L	ND	2.4	08/20/14 21:39	
1,1-Dichloroethene	ug/L	ND	5.0	08/20/14 21:39	
1,2-Dichloroethane	ug/L	ND	5.0	08/20/14 21:39	
1,2-Dichloropropane	ug/L	ND	5.0	08/20/14 21:39	
2-Butanone (MEK)	ug/L	ND	10.0	08/20/14 21:39	
2-Hexanone	ug/L	ND	10.0	08/20/14 21:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	08/20/14 21:39	
Acetone	ug/L	ND	10.0	08/20/14 21:39	
Benzene	ug/L	ND	5.0	08/20/14 21:39	
Bromodichloromethane	ug/L	ND	5.0	08/20/14 21:39	
Bromoform	ug/L	ND	5.0	08/20/14 21:39	
Bromomethane	ug/L	ND	7.0	08/20/14 21:39	
Carbon disulfide	ug/L	ND	10.0	08/20/14 21:39	
Carbon tetrachloride	ug/L	ND	5.0	08/20/14 21:39	
Chlorobenzene	ug/L	ND	5.0	08/20/14 21:39	
Chloroethane	ug/L	ND	10.0	08/20/14 21:39	
Chloroform	ug/L	ND	5.0	08/20/14 21:39	
Chloromethane	ug/L	ND	10.0	08/20/14 21:39	
cis-1,2-Dichloroethene	ug/L	ND	5.0	08/20/14 21:39	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/20/14 21:39	
Dibromochloromethane	ug/L	ND	5.0	08/20/14 21:39	
Ethylbenzene	ug/L	ND	5.0	08/20/14 21:39	
Methylene chloride	ug/L	ND	5.0	08/20/14 21:39	
Styrene	ug/L	ND	5.0	08/20/14 21:39	
Tetrachloroethene	ug/L	ND	5.0	08/20/14 21:39	
Toluene	ug/L	ND	5.0	08/20/14 21:39	
trans-1,2-Dichloroethene	ug/L	ND	5.0	08/20/14 21:39	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/20/14 21:39	
Trichloroethene	ug/L	ND	5.0	08/20/14 21:39	
Vinyl chloride	ug/L	ND	2.0	08/20/14 21:39	
Xylene (Total)	ug/L	ND	5.0	08/20/14 21:39	
1,2-Dichloroethane-d4 (S)	%	96	80-120	08/20/14 21:39	
4-Bromofluorobenzene (S)	%	94	80-120	08/20/14 21:39	
Toluene-d8 (S)	%	93	80-120	08/20/14 21:39	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Ft. Smith AR  
Pace Project No.: 60176049

LABORATORY CONTROL SAMPLE: 1428968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.6	98	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	17.9	89	73-124	
1,1,2-Trichloroethane	ug/L	20	20.3	102	80-120	
1,1-Dichloroethane	ug/L	20	19.0	95	77-120	
1,1-Dichloroethene	ug/L	20	17.4	87	78-126	
1,2-Dichloroethane	ug/L	20	20.2	101	77-123	
1,2-Dichloropropane	ug/L	20	18.7	94	80-121	
2-Butanone (MEK)	ug/L	100	94.8	95	52-145	
2-Hexanone	ug/L	100	91.1	91	57-139	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.8	96	71-131	
Acetone	ug/L	100	98.2	98	32-155	
Benzene	ug/L	20	18.4	92	80-120	
Bromodichloromethane	ug/L	20	21.6	108	80-120	
Bromoform	ug/L	20	19.8	99	73-124	
Bromomethane	ug/L	20	16.1	80	31-144	
Carbon disulfide	ug/L	20	19.0	95	65-125	
Carbon tetrachloride	ug/L	20	19.4	97	78-128	
Chlorobenzene	ug/L	20	20.7	104	80-120	
Chloroethane	ug/L	20	18.1	91	55-137	
Chloroform	ug/L	20	19.5	97	79-120	
Chloromethane	ug/L	20	14.2	71	22-138	
cis-1,2-Dichloroethene	ug/L	20	19.1	95	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.1	96	80-120	
Dibromochloromethane	ug/L	20	21.0	105	80-120	
Ethylbenzene	ug/L	20	20.7	103	80-121	
Methylene chloride	ug/L	20	19.4	97	73-126	
Styrene	ug/L	20	21.1	105	80-120	
Tetrachloroethene	ug/L	20	20.4	102	80-121	
Toluene	ug/L	20	19.4	97	80-122	
trans-1,2-Dichloroethene	ug/L	20	18.6	93	79-121	
trans-1,3-Dichloropropene	ug/L	20	19.7	98	80-127	
Trichloroethene	ug/L	20	19.0	95	80-120	
Vinyl chloride	ug/L	20	15.7	78	59-120	
Xylene (Total)	ug/L	60	58.9	98	80-121	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			94	80-120	
Toluene-d8 (S)	%			100	80-120	

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## QUALIFIERS

Project: Ft. Smith AR  
Pace Project No.: 60176049

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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/63778

[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: Ft. Smith AR  
 Pace Project No.: 60176049

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60176049001	DP-49-GW-20140817	EPA 5030B/8260	MSV/63778		
60176049002	NE-MANHOLE-SW-20140818	EPA 5030B/8260	MSV/63778		
60176049003	WEST-SW-20140818	EPA 5030B/8260	MSV/63778		
60176049004	TB20-20140818	EPA 5030B/8260	MSV/63778		

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## Sample Condition Upon Receipt

WO# : 60176049



60176049

Client Name: Enviro

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  via

Tracking #: \_\_\_\_\_

Pace Shipping Label Used? Yes  No 

Optional
Proj Due Date:
Proj Name:

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  *plastic*Thermometer Used: 1-239 / T-194Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 2.6Date and initials of person examining  
contents: art 8/11

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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
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>U1</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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): <u>061114-20ED</u>		15.	
Headspace in VOA vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>1/2 TB headspace</u>	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:	

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: MWDate: 8/11/14

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:																																																																																																																																																																																																																									
Company: Environ	Address: 7500 College Blvd., Ste. 925 Overland Park, KS 66210	Report To: Wendy Stonestreet	Copy To: Tamara Gleason	Attention: Tamara Gleason																																																																																																																																																																																																																									
Email To: wstonestreet@environtcorp.com	Purchase Order No.:	Project Name: Fort Smith, AR	Project Number: 3434446A	Project Profile #: 7444 Water, 7709 soil																																																																																																																																																																																																																									
Phone: 913-553-5926	Fax:	Requested Due Date/TAT:																																																																																																																																																																																																																											
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\*Important Note. By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

August 22, 2014

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

RE: Project: Ft. Smith Soil  
Pace Project No.: 60176262

Dear Wendy Stonestreet:

Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2014. 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,



Mary Jane Walls  
maryjane.walls@pacelabs.com  
PM Lab Management

Enclosures

cc: EDD, Environ\_AR  
Tamara Gleason, ENVIRON International Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Ft. Smith Soil  
Pace Project No.: 60176262

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Ft. Smith Soil  
 Pace Project No.: 60176262

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60176262001	<b>SED-01-SL-20140820</b>	Solid	08/20/14 12:45	08/21/14 01:30
60176262002	<b>SED-02-SL-20140820</b>	Solid	08/20/14 13:00	08/21/14 01:30
60176262003	<b>SED-03-SL-20140820</b>	Solid	08/20/14 13:15	08/21/14 01:30
60176262004	<b>SED-04-SL-20140820</b>	Solid	08/20/14 14:10	08/21/14 01:30
60176262005	<b>SED-05-SL-20140820</b>	Solid	08/20/14 14:50	08/21/14 01:30
60176262006	<b>SED-06-SL-20140820</b>	Solid	08/20/14 15:00	08/21/14 01:30
60176262007	<b>SED-07-SL-20140820</b>	Solid	08/20/14 15:10	08/21/14 01:30
60176262008	<b>SED-08-SL-20140820</b>	Solid	08/20/14 15:20	08/21/14 01:30

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## SAMPLE ANALYTE COUNT

Project: Ft. Smith Soil  
Pace Project No.: 60176262

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60176262001	SED-01-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262002	SED-02-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262003	SED-03-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262004	SED-04-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262005	SED-05-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262006	SED-06-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262007	SED-07-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1
60176262008	SED-08-SL-20140820	EPA 8260	JKL	25
		ASTM D2974	DWC	1

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Ft. Smith Soil  
Pace Project No.: 60176262

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**Method:** **EPA 8260**  
**Description:** 8260 MSV 5035A VOA  
**Client:** Environ\_AR  
**Date:** August 22, 2014

### **General Information:**

8 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

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

### **Initial Calibrations (including MS Tune as applicable):**

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

### **Continuing Calibration:**

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

### **Internal Standards:**

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

### **Surrogates:**

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

### **Method Blank:**

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

### **Laboratory Control Spike:**

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

### **Matrix Spikes:**

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

### **Additional Comments:**

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

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Soil  
Pace Project No.: 60176262

Sample: SED-01-SL-20140820 Lab ID: 60176262001 Collected: 08/20/14 12:45 Received: 08/21/14 01:30 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>	Analytical Method: EPA 8260								
Bromodichloromethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	75-27-4	
Carbon tetrachloride	ND ug/kg		5.5	2.7	1		08/21/14 17:02	56-23-5	
Chlorobenzene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	108-90-7	
Chloroethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	75-00-3	
Chloroform	ND ug/kg		5.5	2.7	1		08/21/14 17:02	67-66-3	
Chloromethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	74-87-3	
Dibromochloromethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	124-48-1	
1,1-Dichloroethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	10061-02-6	
Methylene chloride	ND ug/kg		5.5	2.7	1		08/21/14 17:02	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	79-34-5	
Tetrachloroethene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	127-18-4	
1,1,1-Trichloroethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.5	2.7	1		08/21/14 17:02	79-00-5	
Trichloroethene	ND ug/kg		5.5	2.7	1		08/21/14 17:02	79-01-6	
Vinyl chloride	ND ug/kg		5.5	2.7	1		08/21/14 17:02	75-01-4	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		80-120		1		08/21/14 17:02	2037-26-5	
4-Bromofluorobenzene (S)	99 %		76-123		1		08/21/14 17:02	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		75-129		1		08/21/14 17:02	17060-07-0	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974								
Percent Moisture	17.7 %		0.50	0.50	1		08/21/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Soil  
Pace Project No.: 60176262

Sample: SED-02-SL-20140820 Lab ID: 60176262002 Collected: 08/20/14 13:00 Received: 08/21/14 01:30 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260							
Bromodichloromethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	75-27-4	
Carbon tetrachloride	ND ug/kg		6.5	3.3	1		08/21/14 17:17	56-23-5	
Chlorobenzene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	108-90-7	
Chloroethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	75-00-3	
Chloroform	ND ug/kg		6.5	3.3	1		08/21/14 17:17	67-66-3	
Chloromethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	74-87-3	
Dibromochloromethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	124-48-1	
1,1-Dichloroethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	75-34-3	
1,2-Dichloroethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	107-06-2	
1,1-Dichloroethene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	156-60-5	
1,2-Dichloropropane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	10061-02-6	
Methylene chloride	ND ug/kg		6.5	3.3	1		08/21/14 17:17	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	79-34-5	
Tetrachloroethene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	127-18-4	
1,1,1-Trichloroethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		6.5	3.3	1		08/21/14 17:17	79-00-5	
Trichloroethene	ND ug/kg		6.5	3.3	1		08/21/14 17:17	79-01-6	
Vinyl chloride	ND ug/kg		6.5	3.3	1		08/21/14 17:17	75-01-4	
<b>Surrogates</b>									
Toluene-d8 (S)	100 %		80-120		1		08/21/14 17:17	2037-26-5	
4-Bromofluorobenzene (S)	101 %		76-123		1		08/21/14 17:17	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		75-129		1		08/21/14 17:17	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974									
Percent Moisture	<b>21.1 %</b>		0.50	0.50	1		08/21/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Ft. Smith Soil  
Pace Project No.: 60176262

Sample: SED-03-SL-20140820 Lab ID: 60176262003 Collected: 08/20/14 13:15 Received: 08/21/14 01:30 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>	Analytical Method: EPA 8260								
Bromodichloromethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	75-27-4	
Carbon tetrachloride	ND ug/kg		4.5	2.3	1		08/21/14 17:32	56-23-5	
Chlorobenzene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	108-90-7	
Chloroethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	75-00-3	
Chloroform	ND ug/kg		4.5	2.3	1		08/21/14 17:32	67-66-3	
Chloromethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	74-87-3	
Dibromochloromethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	124-48-1	
1,1-Dichloroethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	78-87-5	
cis-1,3-Dichloropropene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	10061-02-6	
Methylene chloride	ND ug/kg		4.5	2.3	1		08/21/14 17:32	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	79-34-5	
Tetrachloroethene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	127-18-4	
1,1,1-Trichloroethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.5	2.3	1		08/21/14 17:32	79-00-5	
Trichloroethene	ND ug/kg		4.5	2.3	1		08/21/14 17:32	79-01-6	
Vinyl chloride	ND ug/kg		4.5	2.3	1		08/21/14 17:32	75-01-4	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		80-120		1		08/21/14 17:32	2037-26-5	
4-Bromofluorobenzene (S)	100 %		76-123		1		08/21/14 17:32	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		75-129		1		08/21/14 17:32	17060-07-0	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974								
Percent Moisture	<b>16.1 %</b>		0.50	0.50	1		08/21/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Ft. Smith Soil  
Pace Project No.: 60176262

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QC Batch:	MSV/63820	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60176262001, 60176262002, 60176262003, 60176262004, 60176262005, 60176262006, 60176262007, 60176262008		

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METHOD BLANK:	1429862	Matrix:	Solid
Associated Lab Samples:	60176262001, 60176262002, 60176262003, 60176262004, 60176262005, 60176262006, 60176262007, 60176262008		

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.0	08/21/14 16:16	
1,1,2-Tetrachloroethane	ug/kg	ND	5.0	08/21/14 16:16	
1,1,2-Trichloroethane	ug/kg	ND	5.0	08/21/14 16:16	
1,1-Dichloroethane	ug/kg	ND	5.0	08/21/14 16:16	
1,1-Dichloroethene	ug/kg	ND	5.0	08/21/14 16:16	
1,2-Dichloroethane	ug/kg	ND	5.0	08/21/14 16:16	
1,2-Dichloropropane	ug/kg	ND	5.0	08/21/14 16:16	
Bromodichloromethane	ug/kg	ND	5.0	08/21/14 16:16	
Carbon tetrachloride	ug/kg	ND	5.0	08/21/14 16:16	
Chlorobenzene	ug/kg	ND	5.0	08/21/14 16:16	
Chloroethane	ug/kg	ND	5.0	08/21/14 16:16	
Chloroform	ug/kg	ND	5.0	08/21/14 16:16	
Chloromethane	ug/kg	ND	5.0	08/21/14 16:16	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	08/21/14 16:16	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	08/21/14 16:16	
Dibromochloromethane	ug/kg	ND	5.0	08/21/14 16:16	
Methylene chloride	ug/kg	32.8	5.0	08/21/14 16:16	
Tetrachloroethene	ug/kg	ND	5.0	08/21/14 16:16	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	08/21/14 16:16	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	08/21/14 16:16	
Trichloroethene	ug/kg	ND	5.0	08/21/14 16:16	
Vinyl chloride	ug/kg	ND	5.0	08/21/14 16:16	
1,2-Dichloroethane-d4 (S)	%	92	75-129	08/21/14 16:16	
4-Bromofluorobenzene (S)	%	99	76-123	08/21/14 16:16	
Toluene-d8 (S)	%	100	80-120	08/21/14 16:16	

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LABORATORY CONTROL SAMPLE: 1429863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	100	93.9	94	77-126	
1,1,2-Tetrachloroethane	ug/kg	100	91.7	92	73-120	
1,1,2-Trichloroethane	ug/kg	100	91.2	91	76-120	
1,1-Dichloroethane	ug/kg	100	95.0	95	71-120	
1,1-Dichloroethene	ug/kg	100	101	101	76-130	
1,2-Dichloroethane	ug/kg	100	98.7	99	78-120	
1,2-Dichloropropane	ug/kg	100	95.7	96	80-120	
Bromodichloromethane	ug/kg	100	101	101	80-120	
Carbon tetrachloride	ug/kg	100	94.8	95	75-140	

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## REPORT OF LABORATORY ANALYSIS

## QUALITY CONTROL DATA

Project: Ft. Smith Soil  
Pace Project No.: 60176262

LABORATORY CONTROL SAMPLE: 1429863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	ug/kg	100	97.6	98	80-120	
Chloroethane	ug/kg	100	104	104	65-127	
Chloroform	ug/kg	100	93.5	94	74-120	
Chloromethane	ug/kg	100	123	123	39-138	
cis-1,2-Dichloroethene	ug/kg	100	101	101	76-124	
cis-1,3-Dichloropropene	ug/kg	100	95.4	95	82-120	
Dibromochloromethane	ug/kg	100	103	103	80-124	
Methylene chloride	ug/kg	100	106	106	70-123	
Tetrachloroethene	ug/kg	100	94.5	95	78-128	
trans-1,2-Dichloroethene	ug/kg	100	89.5	90	76-124	
trans-1,3-Dichloropropene	ug/kg	100	98.5	98	80-124	
Trichloroethene	ug/kg	100	92.0	92	80-120	
Vinyl chloride	ug/kg	100	106	106	57-132	
1,2-Dichloroethane-d4 (S)	%			101	75-129	
4-Bromofluorobenzene (S)	%			102	76-123	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1429864 1429865

Parameter	Units	MS 60176101001		MSD		MS Result	% Rec	MSD % Rec	% Rec Limits	Max RPD RPD Qual	
		Spike Result	Conc.	Spike Conc.	MS Result					RPD	RPD
1,1,1-Trichloroethane	ug/kg	ND	112	112	97.9	87.5	88	78	21-144	11	43
1,1,2,2-Tetrachloroethane	ug/kg	ND	112	112	85.6	73.6	77	66	10-151	15	46
1,1,2-Trichloroethane	ug/kg	ND	112	112	97.6	85.9	87	77	10-140	13	46
1,1-Dichloroethane	ug/kg	ND	112	112	98.9	89.1	89	80	19-137	10	43
1,1-Dichloroethene	ug/kg	ND	112	112	95.2	82.8	85	74	27-143	14	41
1,2-Dichloroethane	ug/kg	ND	112	112	104	93.3	93	84	21-147	11	38
1,2-Dichloropropane	ug/kg	ND	112	112	102	90.2	91	81	15-145	12	43
Bromodichloromethane	ug/kg	ND	112	112	106	95.1	95	85	10-143	11	42
Carbon tetrachloride	ug/kg	ND	112	112	100	88.8	90	80	15-153	12	45
Chlorobenzene	ug/kg	ND	112	112	95.6	85.5	86	77	10-145	11	46
Chloroethane	ug/kg	ND	112	112	119	106	107	95	17-134	11	42
Chloroform	ug/kg	ND	112	112	100	87.1	90	78	17-138	14	44
Chloromethane	ug/kg	ND	112	112	71.5	70.7	64	63	10-128	1	39
cis-1,2-Dichloroethene	ug/kg	ND	112	112	101	92.5	90	83	17-140	9	46
cis-1,3-Dichloropropene	ug/kg	ND	112	112	95.8	84.6	86	76	10-142	12	43
Dibromochloromethane	ug/kg	ND	112	112	104	93.7	93	84	10-149	10	42
Methylene chloride	ug/kg	ND	112	112	110	98.5	95	84	15-140	11	46
Tetrachloroethene	ug/kg	ND	112	112	89.4	81.7	80	73	10-150	9	48
trans-1,2-Dichloroethene	ug/kg	ND	112	112	87.6	76.4	79	68	20-140	14	42
trans-1,3-Dichloropropene	ug/kg	ND	112	112	96.5	85.9	86	77	10-149	12	41
Trichloroethene	ug/kg	ND	112	112	101	89.5	90	80	14-146	12	45
Vinyl chloride	ug/kg	ND	112	112	76.4	70.9	68	64	19-131	7	37
1,2-Dichloroethane-d4 (S)	%						101	101	75-129		
4-Bromofluorobenzene (S)	%						102	102	76-123		

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Ft. Smith Soil  
 Pace Project No.: 60176262

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			1429864	1429865								
Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD RPD	Max Qual	
Toluene-d8 (S)	%	60176101001					101	100	80-120			

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## QUALITY CONTROL DATA

Project: Ft. Smith Soil  
Pace Project No.: 60176262

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QC Batch:	PMST/9930	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60176262001, 60176262002, 60176262003, 60176262004, 60176262005, 60176262006, 60176262007, 60176262008		

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METHOD BLANK:	1429859	Matrix:	Solid
Associated Lab Samples:	60176262001, 60176262002, 60176262003, 60176262004, 60176262005, 60176262006, 60176262007, 60176262008		

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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	08/21/14 00:00	

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SAMPLE DUPLICATE: 1429860

Parameter	Units	60176101001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.4	10.0	4	20	

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## QUALIFIERS

Project: Ft. Smith Soil  
Pace Project No.: 60176262

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Ft. Smith Soil  
Pace Project No.: 60176262

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60176262001	SED-01-SL-20140820	EPA 8260	MSV/63820		
60176262002	SED-02-SL-20140820	EPA 8260	MSV/63820		
60176262003	SED-03-SL-20140820	EPA 8260	MSV/63820		
60176262004	SED-04-SL-20140820	EPA 8260	MSV/63820		
60176262005	SED-05-SL-20140820	EPA 8260	MSV/63820		
60176262006	SED-06-SL-20140820	EPA 8260	MSV/63820		
60176262007	SED-07-SL-20140820	EPA 8260	MSV/63820		
60176262008	SED-08-SL-20140820	EPA 8260	MSV/63820		
60176262001	SED-01-SL-20140820	ASTM D2974	PMST/9930		
60176262002	SED-02-SL-20140820	ASTM D2974	PMST/9930		
60176262003	SED-03-SL-20140820	ASTM D2974	PMST/9930		
60176262004	SED-04-SL-20140820	ASTM D2974	PMST/9930		
60176262005	SED-05-SL-20140820	ASTM D2974	PMST/9930		
60176262006	SED-06-SL-20140820	ASTM D2974	PMST/9930		
60176262007	SED-07-SL-20140820	ASTM D2974	PMST/9930		
60176262008	SED-08-SL-20140820	ASTM D2974	PMST/9930		

### REPORT OF LABORATORY ANALYSIS

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## Sample Condition Upon Receipt

WO# : 60176262



60176262

Client Name: EnvironCourier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  VCA

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  ZIPICThermometer Used: T-239 / T-194Type of Ice:  Wet  Blue  None  Samples received on ice, cooling process has begun.  
(circle one)Cooler Temperature: 0.8

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 type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>KITS</u>
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 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 type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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>SL</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, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed      Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased):	<u>208/2114</u>	15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>AR</u>

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: MWDate: 8/21/14

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Environ	Report To: Wendy Stonestreet	Copy To: Tamara Gleason	Attention: Tamara Gleason		
Address: 7500 College Blvd., Ste. 925 Overland Park, KS 66210	Purchase Order No.: wstonestreet@environcorp.com	Project Name: Fort Smith, AR	Company Name: tgleason@environcorp.com		
Email To: phone: 913-553-5926	Fax: Requested Due Date/TAT: 24 hr TAT	Project Number:	Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: 7444 water, 7709 soil		
Section D Required Client Information					
SAMPLE ID: (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE ITEM #	Valid Matrix Codes	Matrix CODE	COLLECTED	Preservatives	
	DRINKING WATER	DW	COMPOSITE	Preservative	
	WATER	WW	ENDGRAB		
	WASTE WATER	WW			
	PRODUCT	P			
	SOLID	Si			
	OIL	OL			
	WIPE	WP			
	AIR	AR			
	OTHER	OT			
# OF CONTAINERS : SAMPLE TEMP AT COLLECTION					
# OF CONTAINERS : SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)					
MATRIX CODE (see valid codes to left)					
SAMPLE CODE					
TIME DATE DATE TIME TIME					
COMPOSITE START					
COMPOSITE ENDGRAB					
Pace Project No./Lab ID.					
Residual Chlorine (Y/N)					
8260 Chlorinated 8260 client specific list					
Analysis Test					
Requested Analysis Filtered (Y/N)					
60146262					

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

Temp in °C	Reviewed on _____	Revised (Y/N)	Custody Sealed Color (Y/N)	Samples intact (Y/N)