

## TRANSMITTAL LETTER

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<b>To:</b> Michael Schmoller Project Manager Wisconsin Department of Natural Resources South Central Region 3911 Fish Hatchery Road Fitchburg, WI 53711	<b>Date:</b> March 7, 2019 <b>Project No:</b> 323372 Phase 2, Task 4 <b>Project Name:</b> Madison-Kipp Corporation Groundwater and Soil Vapor Extraction and Treatment Systems BRRTS No. 02-13-558625 & 02-13-578015 Facility ID No. 113125320
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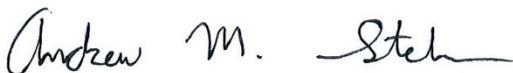
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Enclosed is a hard copy of the Operations, Monitoring, and Maintenance Annual Report for the period of January 1, 2018 through December 31, 2018 for the Madison-Kipp Corporation. The file has been uploaded to the WDNR FTP site.

Please contact me at 608-826-3665 if you have any questions.

Sincerely,



Andrew Stehn  
Project Engineer

cc: Tony Koblinski – Madison-Kipp Corporation (electronic)



**Operations, Monitoring, and Maintenance  
Annual Report**

January 1, 2018 – December 31, 2018

Madison-Kipp Corporation  
Groundwater, Soil Vapor, and Treatment Systems  
Facility ID No. 113125320, BRRTS Nos. 02-13-558625 & 02-13-578015

**March 2019**



# Operations, Monitoring, and Maintenance Annual Report

January 1, 2018 – December 31, 2018

*Madison-Kipp Corporation*  
*Groundwater, Soil Vapor, and Treatment Systems*  
*Facility ID No. 113125320, BRRTS Nos. 02-13-558625 & 02-13-578015*

**March 2019**

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Andrew Stehn, P.E.  
Project Engineer

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Katherine A. Vater, P.E.  
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# Section 1

## Introduction

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TRC Environmental Corp. (TRC), on behalf of Madison-Kipp Corp. (MKC), is reporting on the operation, monitoring, and maintenance (OM&M) of the groundwater and soil vapor extraction treatment system operations at MKC's facility at 201 Waubesa Street, Madison, Wisconsin (Site).

### 1.1 Site Description

The Site is located in the southwest quarter of Section 5, Township 7 North, Range 10 East in Dane County, Wisconsin. The Site Location Map is shown on Figure 1. The Site is approximately 7.5 acres in area, with a 130,000 square foot building occupying much of the Site. The building has a basement and a second floor over part of the footprint. There is a second 6,000 square foot building in the northeast corner of the property, housing the Groundwater Extraction Treatment System (GETS) and storage. The remainder of the Site is predominately paved in asphalt for driveways and parking lots. The Site is zoned M-1 (industrial/manufacturing), and is currently operated as a metal die casting facility.

The Site is surrounded by a mix of commercial, industrial, and residential land use. The Site is bounded by the Capital City Bike Trail to the north, residences to the east, Atwood Avenue to the south, and Waubesa Street to the west. The Goodman Community Center is located to the north across the Capital City Bike Trail. Residences are located adjacent to the east and west sides of the Site. Commercial properties are located to the south.

The Site is located on the northeastern end of the Madison Isthmus, which is a narrow strip of land separating Lake Mendota and Lake Monona. The Site is approximately 1,500 feet north of Lake Monona and approximately 6,800 feet east of Lake Mendota. These two lakes are the hydrologic boundaries for the Site. The topography of the Site is flat, with an elevation ranging from approximately 870 to 880 feet above mean sea level. The Site and surrounding areas are serviced by municipal water supply and sewer systems.

### 1.2 Site Background

Environmental investigation and remediation activities have been on-going at the Site since 1994. Investigation activities included defining the extent of tetrachloroethene (PCE) and, beginning in 2012, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and Resource Conservation and Recovery Act metals (RCRA Metals). A complete summary of the project background, including the on-site and off-site investigations is included in the 2015

Annual Report submitted to the Wisconsin Department of Natural Resources (WDNR) on April 12, 2016 by Arcadis U.S., Inc. (Arcadis, 2016) and in previous reports referenced therein.

The Site active remediation systems include a Soil Vapor Extraction System (SVE) and a Groundwater Extraction Treatment System (GETS). The SVE system began permanent continuous operation in May 2013 and operated continuously until October 2018, when a scheduled shutdown for the SVE began as discussed in this report. In 2015, Arcadis completed the installation of the GETS at the Site, and conducted testing from July 2015 start-up through December 2015. During the start-up period, the system was operated at its 45 gallon per minute (gpm) capacity, but was occasionally offline for system optimization and equipment repairs/modification. The GETS has operated full-time since January 2016.

### **1.3 Offsite Sub-slab Depressurization System Inspections**

MKC currently completes annual inspections of off-site sub-slab depressurization systems installed at five properties along Marquette Street. Annual inspections were completed at the five properties during the 2018 calendar year.

### **1.4 Purpose and Scope**

On-going OM&M activities are completed to monitor the status of soil gas and groundwater conditions at the Site and to ensure the treatment systems are operating as designed and in compliance with regulatory standards. OM&M activities include: GETS operation and monthly Discharge Monitoring Reports, SVE operation, semi-annual Site groundwater monitoring, and annual Site soil gas monitoring. The purpose of this Annual Report is to provide documentation of OM&M activities performed during January 1 through December 31, 2018.

This Annual Report describes:

- GETS OM&M,
- SVE OM&M,
- Groundwater Monitoring,
- Site Soil Gas Monitoring, and
- Conclusions and Recommendations.

# Section 2

## GETS OM&M

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MKC is operating a GETS system for extraction and treatment of PCE-impacted groundwater. The system was installed in 2015 and is described in detail in Groundwater Extraction and Treatment System (GETS) Construction Documentation Report (Arcadis, 2015b).

### 2.1 System Operation

Over the period of January 1 through October 25, 2018, the GETS was generally operated at 45 gpm. After October 25, 2018, the GETS was generally operated at 40 gpm. The reduction in flow was due to the SVE shutdown. The vapors extracted from the SVE system are combined with vapors generated from the air stripper for the GETS operation and treated by two 2,000-pound activated carbon vessels installed in series. To ensure proper operation of the air stripper, a booster blower is installed downstream of the stripper to overcome back pressure from the SVE system. When the SVE system shuts down, the water level in the air stripper increases due to lack of back pressure downstream of the blower. While the GETS runs at 45 gpm, the booster blower during this time can pull water from the top portion of the air stripper into the vapor phase carbon vessels. Therefore, while the SVE system is in the on-going shutdown, the GETS is generally being operated at 40 gpm.

Prior to the scheduled SVE shutdown, the GETS extraction pump was occasionally operated at 40 gpm when maintenance or repairs to the SVE system were required. In addition, the extraction and transfer pumps for the GETS have variable speed frequency drives that fluctuate flow rate based on liquid levels in the equalization and mixing tank along with the air stripper liquid level. At times the flow will fluctuate above and below the design rate over a few days' time, however, the overall weekly to monthly flow rate is generally consistent.

The GETS system was occasionally shutdown for routine maintenance and required repairs. During this reporting period the following GETS repairs and maintenance tasks were completed:

- GETS extraction well pump and pump motor were replaced;
- Transfer pump (P-103) between the mixing tank and air stripper was replaced;
- Transfer pump (P-200) between the air stripper and effluent discharge was replaced;
- Low-level float within the equalization tank was replaced;
- Peroxide metering pump diaphragm was replaced to improve operation;

- Sequestrate metering pump diaphragm was replaced to improve operation;
- Minor shutdowns occurred due to system faults related to air bubbles in the peroxide feed line, the pump was primed and the system was restarted; and
- Air stripper unit and select piping sections were cleaned.

The location of the extraction well (GWE-1) for the GETS is identified on Figure 2. MKC personnel complete weekly monitoring of the GETS and an operations summary table is included in Table 1.

A total of approximately 18,436,366 gallons of groundwater were treated between January 1, 2018 and December 31, 2018. During the 2018 calendar year, approximately 306 pounds of VOCs were removed. From the start of the system through the end of December 2018, approximately 960 pounds of VOCs have been removed through operation of the GETS. A trend plot depicting the cumulative VOCs removed over time since the start-up of the GETS system is included in Trend Plot A.1 of Appendix A. In addition, the trend plot showing PCE concentration verses time for the groundwater extraction well (GWE-1) is included in Trend Plot A.2 of Appendix A. Additional system operation information is noted in the attached Remediation Site Operation, Maintenance, Monitoring, and Optimization Report Form 4400-194 in Appendix B.

## 2.2 Monthly Discharge Monitoring Reports

MKC completes monthly performance monitoring and submits monthly Discharge Monitoring Reports (DMRs) required for the system operation and discharge permit (Wisconsin Pollution Discharge Elimination System (WPDES) Permit number WI-0046566-6).

For 2018 performance monitoring and permit compliance, TRC on behalf of MKC collected samples of the extracted groundwater (GETS influent) and treated groundwater (GETS effluent) on a monthly basis. Table 2 provides the influent and effluent laboratory analytical results for the 2018 reporting period. The 2018 sampling frequency and monitoring parameters collected were completed as approved by the WDNR in June 2017. Parameters included monthly monitoring of volatile organic compounds along with visual monitoring for sodium permanganate neutralization and quarterly monitoring of oil and grease, biological oxygen demand, total suspended solids, chloride, and select polycyclic aromatic hydrocarbons.

The DMRs for January through June 2018 were submitted in the September 17, 2018 Operations, Monitoring, and Maintenance Semi-Annual Report for the period January 1, 2018 – June 30, 2018 Submittal (TRC, 2018). The July through December 2018 DMR submittals were submitted electronically to the WDNR through the Web Access Management System Switchboard. A copy

of the last submittal from the December 2018 monitoring event and laboratory reports for samples collected between July and December 2018 are included in Appendix C.

Based on review of the new WPDES permit issued in July 2018 and data from monthly sampling completed from the GETS influent and effluent, an adjustment to the GETS sampling frequency and parameters was requested by TRC on behalf of MKC. On December 13, 2018, the WDNR provided concurrence on the revised monitoring plan for the GETS. The request letter and concurrence from the WDNR are included in Appendix D. In summary, starting in 2019 the GETS monitoring plan will include:

- Daily monitoring of system flow;
- Monthly visual monitoring of permanganate neutralization;
- Quarterly monitoring of select volatile organic compounds;
- Quarterly monitoring of select polycyclic aromatic hydrocarbons; and
- Periodic monitoring of total suspended solids based on equipment cleaning events.

## 2.3 Monthly Vapor Sampling

The SVE system and GETS produce gases which are combined and treated with granular activated carbon (GAC) for removal of vapor-phase volatile organic compounds (VOCs). The GAC influent and GAC effluent gas were sampled on a monthly basis for performance and compliance monitoring. Note that the November and December results are representative of the GETS only as the SVE system was shutdown in October 2018. An analytical summary table with influent and effluent results are included in Table 3 and the laboratory analytical reports are included in Appendix E. An emission rate was calculated based on the effluent analytical results and combined system flow rate; and results were compared to NR 445 and NR 406. No regulatory standards for effluent emissions from the combined systems were exceeded. Tables 4 through 8 include a summary of the monthly emission rates for total VOCs, PCE, trichloroethene (TCE), cis-1,2, dichloroethene (cis-1,2-DCE), and vinyl chloride (VC) for the 2018 calendar year.

TRC continues to assess the influent and effluent concentrations of VOCs to evaluate the GAC component of the treatment system. The evaluation thus far has concluded that the activated carbon is approaching the end of its life as PCE continues to be reduced but breakdown products (e.g. TCE, cis-1,2-DCE, and VC) are not being reduced as effectively, although they still remain below applicable standards. During the 2018 calendar year's evaluation, loading rates for total VOCs, PCE, TCE, cis-1,2-DCE, and VC were calculated based on the influent results (pre-carbon treatment). Currently, with the GETS and SVE systems in operation together through October 2018, the gas concentrations measured pre-carbon treatment are

below the established NR 445 and NR 406 regulatory standards. A summary of these calculations are included in Table 9 through 13.

In addition, between November and December 2018, the gases generated from the GETS only were monitored as the SVE system was temporarily shutdown. Overall, the monitoring data shows that gases generated from the air stripper system only do not generate an emissions rate resulting in an exceedances of the NR 445 and 406 emission standards for total VOCs, PCE, TCE, cis-1,2-DCE, or VC.

# Section 3

## SVE OM&M

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MKC is operating an SVE system for extraction and treatment of shallow soil vapor on the east-northeast portion of the Site. The system began permanent operation in May 2013 and continued operation through October 2018. On October 25, 2018, the SVE system was temporarily shutdown as approved by the WDNR, to evaluate its effectiveness at the Site. A summary of the shutdown and soil gas monitoring completed was included in the Soil Vapor Extraction System Shut Down and Soil Gas Analytical Results discussion letter submitted to the WDNR on February 8, 2019 (TRC, 2019). The below sections discuss the system operation data between July and October 2018. SVE system operational data for between January and June 2018 was discussed in the September 17, 2018 Operations, Monitoring, and Maintenance Semi-Annual Report for the period January 1, 2018 – June 30, 2018 (TRC, 2018b).

### 3.1 System Operation

The SVE system was operated on a continuous basis through October 2018, with the exception of occasional maintenance shutdowns to complete general maintenance and repairs. Weekly system operation readings were obtained by MKC personnel and a summary of the operational parameters are included in Table 14. VOCs were monitored in the gas removed from each soil vapor extraction well on a monthly basis using a Photoionization Detector (PID). Readings for the nine extraction wells were generally reported below or around two parts per million (ppm) during this reporting period. Extraction well SVE 4 showed higher concentrations with readings ranging above 2.2 ppm to 5.6 ppm.

### 3.2 Monthly Vapor Sampling

The treatment and sampling of the gases removed from the SVE system are combined with the GETS and treated as described in Section 2.3.

Additional system operation information is noted in the attached Remediation Site Operation, Maintenance, Monitoring, and Optimization Report Form 4400-194 in Appendix B. Laboratory analytical results for vapor sampling completed during this reporting period are included in Appendix E.

# Section 4

## Groundwater Monitoring

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The 2018 groundwater monitoring program at the Site, which included water level gauging and sampling, was conducted as summarized in Table 15.

The Site contains 40 monitoring wells, 4 multi-port wells, and one operational extraction well (GWE-1). The wells are installed in unconsolidated units and/or bedrock and their locations are shown on Figure 2. The Site's near-surface geology consists of two unconsolidated units consisting of fill material and glacially-derived deposits, which overlie three bedrock formations (Lone Rock, Wonewoc, and Eau Claire). Further information on the site geology is included in the 2014 Annual Report (Arcadis, 2015a) and in previous reports referenced therein.

### 4.1 Groundwater Flow Conditions

Water levels at 40 Site monitoring wells and 20 multi-port well intervals were gauged on October 8, 2018. The groundwater elevations are summarized in Table 16, and the October 2018 water table map and potentiometric surface maps are shown on Figures 3 through 7. Overall, the groundwater elevations and the direction of groundwater flow in October 2018 are generally consistent with historical observations. Groundwater flow at the water table converges toward the site from the north, south, and west (Figure 3). Groundwater flow in the Upper Lone Rock formation is generally to the north-northeast (Figure 4). The extraction well (GWE-1) has a local influence on flow within the Lower Lone Rock, Upper Wonewoc, and Lower Wonewoc formations, causing flow to generally converge toward the extraction well (Figures 5 through 7).

### 4.2 Monitoring Well Network and Sampling Program

Groundwater sampling was conducted in wells within the unconsolidated units, Lone Rock formation, and the Wonewoc formation for geochemical field parameters and chemical analyses for VOCs. These monitoring wells were sampled to evaluate the effectiveness of the GETS operation—which was installed to remove VOCs from the groundwater and provide hydraulic containment to minimize off-site migration—and to evaluate the overall site-wide water quality. A summary of the wells monitored during the April and October 2018 sampling events is included in Table 15.

In addition, eight of the site wells were monitored for polychlorinated biphenyls (PCBs), total suspended solids (TSS), total dissolved solids (TDS), and geochemical field parameters during the April 2018 monitoring event and fourteen during the October 2018 event. Select wells were

based on the November 22, 2017 Stipulation and Order for Judgement and coordination with the United States Environmental Protection Agency. The wells sampled are located in the unconsolidated or Lone Rock unit/formation and a summary is included in Table 15.

### **4.3 Groundwater Sampling Results**

The results from the groundwater sampling to date are included in Table 17, and the laboratory analytical reports for the October 2018 monitoring event are included in Appendix F. Laboratory reports for the April 2018 event were included in the Operations, Monitoring, and Maintenance Semi-Annual Report for the period January 1, 2018 – June 30, 2018 Letter (TRC, 2018b). Table 15 includes the 2018 groundwater monitoring plan and Table 18 includes the 2019 groundwater monitoring plan.

Multiple NR 140 preventative action limit (PAL) and enforcement standard (ES) exceedances for VOCs were reported for the October 2018 sampling event. The laboratory analytical results from the October 2018 monitoring event are generally consistent with historical results. The overall concentration of PCE over time was reviewed for each Site well sampled during the second half of 2018, and a brief description for each unit/formation is included in the sub-sections below. Appendix A includes a trend plot (A.3) indicating PCE concentrations over time for multi-port MP-13 Port 2 (135-139) which contained the highest concentration of PCE during the October 2018 monitoring event.

Isoconcentration maps for PCE for the Water Table (Unconsolidated), Upper Lone Rock, Lower Lone Rock, Upper Wonewoc, and Lower Wonewoc are shown in Figures 8 through 12, respectively. The contours are based on the October 2018 monitoring event.

Figure 13 includes two cross-sections (A-A' and B-B') displaying the vertical PCE concentration extents based on the October 2018 groundwater monitoring. Figure 2 shows the location of the wells and the cross-sections.

#### **4.3.1 Water Table (Unconsolidated) VOC Monitoring Results**

Results for wells monitored within the unconsolidated unit or just below indicate that PCE concentrations generally show decreasing trends or are comparable to historical results. Concentrations of PCE were reported above the ES for monitoring wells MW-3S and MW-28, above the PAL for monitoring well MW-1, and below the PAL for monitoring well MW-6S.

### **4.3.2 Lone Rock Formation VOC Monitoring Results**

Results for wells monitored within the Lone Rock formation indicate that PCE concentrations generally show decreasing trends or are comparable to historical results. PCE concentrations in MW-9D2 are highly variable with the highest and lowest concentrations in this well detected in the period since the GETS began operation. A trend plot for MW-9D2 (A.4 in Appendix A) suggests PCE concentrations in this well may have an overall increasing trend. Continued semi-annual sampling is warranted to monitor PCE concentrations at MW-9D2. Concentrations of PCE were reported above the ES for monitoring wells MW-2D, MW-3D, MW-3D2, MW-5S, MW-5D, MW-9D2, and MP-13 [port 5 (81-85), port 6 (67-71), and port 7 (44-48)], and below the PAL for monitoring well MW-4D2. PCE was not detected at MW-6D and MW-9D.

### **4.3.3 Wonewoc Formation VOC Monitoring Results**

Results for wells monitored within the Wonewoc formation indicate that PCE concentrations generally show decreasing trends or are comparable to historical results at most wells. Concentrations are increasing at MP-14 [port 1 (170-178)] and MP-15 [port 2 (142-146)], see trend plots A.5 and A.6 (Appendix A). Continued semi-annual sampling is warranted to monitor trends. Concentrations of PCE were reported above the ES for monitoring wells MW-5D2, MW-17, MW-27D2, MP-13 [port 1 (163-167), port 2 (135-139), port 3 (121-125), and port 4 (102-106)], MP-14 [port 1 (170-178), port 2 (135-140)], MP-15 [port 1 (177-187), port 2 (142-146), port 3 (120-125), port 4 (100-105), and port 5 (88-92)], and MP-16 [port 2 (140-144), and port 3 (106-116)], above the PAL for monitoring well MP-16 [port 1 (175-179)], equal to the PAL at MW-3D3, and below the PAL for monitoring wells MW-5D3, MW-25D, MW-25D2, MW-27D, and MP-14 [port 3 (100-105)].

### **4.3.4 PCB Monitoring Results**

The eight monitoring wells monitored for PCBs in the April 2018 and the fourteen monitored in October 2018 had no detections above the method detection limits and therefore no exceedance of the NR 140 ES or PAL were reported.

## Section 5

# Soil Gas Monitoring

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The 2018 annual soil gas monitoring program at the Site was adjusted based on the temporary shutdown of the SVE system. The annual sampling program was conducted as described in the Soil Vapor Extraction Shut Down & Monitoring Well Network Modification Work Plan (TRC, 2018a) that was approved by WDNR on September 19, 2018. One round of sampling was completed prior to shutdown of the SVE system (October 2019) and two events were completed following the shutdown process (November and December 2018). Details of the shutdown and soil gas monitoring results were included in the Soil Vapor Extraction System Shut Down and Soil Gas Analytical Results discussion letter submitted to the WDNR on February 8, 2019 (TRC, 2019) and included in Appendix G.

# Section 6

## Conclusions and Recommendations

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### 6.1 Conclusions

The OM&M activities for the SVE and GETS were completed as required at the Site during the 2018 calendar year. System operation data and details for the first part of the year (January 2018 to June 2018) were included in the Operations, Monitoring, and Maintenance Semi-annual Report – January 1, 2018 – June 30, 2018, Groundwater and Soil Vapor Extraction Treatment Systems Madison-Kipp Corporation, 201 Waubesa Street, Madison, Wisconsin (TRC, 2018b) The GETS operated continuously throughout this reporting period, with the exception of repairs and routine maintenance as noted. The SVE was operated until October 25, 2018 when the system was shutdown for evaluation.

Site groundwater monitoring was completed in April and October 2018. As additional monitoring events are completed, further data and concentration verses time analyses will be completed to continue to evaluate the effectiveness of the GETS. As of December 2018, the GETS has been in operation for approximately three and half years. The GETS is influencing local groundwater flow within the Lower Lone Rock, Upper Wonewoc, and Lower Wonewoc formations.

Overall groundwater monitoring indicates that the groundwater quality at the Site is generally consistent with historical results, and groundwater quality is stable or improving at most site monitoring wells. The influence of the GETS operation is seen on the PCE concentration trends at wells such as MW-1, MW-2D, and MP-13. Groundwater monitoring will continue and results will be evaluated to determine the effectiveness of the GETS and if there are impacts to groundwater not being addressed by the remediation system.

### 6.2 Recommendations

Based on the results of the 2018 OM&M, no immediate actions are required and OM&M is planned to continue in 2019. Work planned for 2019 includes the following:

- GETS operation;
- SVE system will remain shutdown until the 2019 annual soil gas sampling is completed;
- Compliance monitoring;
- Groundwater monitoring (as outlined in Table 18);
- Soil gas monitoring (July 2019); and
- Semi-annual reporting.

## Section 7

# References

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- Arcadis U.S., Inc. 2015a. *2014 Annual Report, Madison-Kipp Corporation, 201 Waubesa Street, Madison, Wisconsin*. March 2015.
- Arcadis U.S., Inc. 2015b. *Groundwater Extraction and Treatment System (GETS) Construction Documentation Report, Madison-Kipp Corporation, 201 Waubesa Street, Madison, Wisconsin*. November 19, 2015.
- Arcadis U.S., Inc. 2016. *2015 Annual Report, Madison-Kipp Corporation, 201 Waubesa Street, Madison, Wisconsin*. April 12, 2016.
- TRC Environmental Corporation. 2018a. *Soil Vapor Extraction Shut Down & Monitoring Well Network Modification Work Plan, Madison, Wisconsin*. August 22, 2018.
- TRC Environmental Corporation. 2018b. *Operations, Monitoring, and Maintenance Semi-annual Report – January 1, 2018 – June 30, 2018, Groundwater and Soil Vapor Extraction Treatment Systems Madison-Kipp Corporation, 201 Waubesa Street, Madison, Wisconsin*. September 17, 2018.
- TRC Environmental Corporation. 2019. *Update on Soil Vapor Extraction System Shut Down and Soil Gas Analytical Results, Madison-Kipp Corporation, Madison, Wisconsin*. February 9, 2019.

**Table 1**  
**Summary of Groundwater Extraction System Operation and Mass Removal**  
**Madison Kipp Corporation**  
**201 Waubesa Street**  
**Madison, Wisconsin**

DATE		GROUNDWATER DISCHARGED THIS PERIOD (gal)	CUMULATIVE GROUNDWATER DISCHARGED (gal) <sup>(1)</sup>	AVERAGE DISCHARGE FLOW RATE <sup>(2),(5)</sup> (gpd)	AVERAGE DISCHARGE FLOW RATE <sup>(2),(5),(6),(7)</sup> (gpm)	INFLUENT SAMPLE RESULTS <sup>(3)</sup>	EFFLUENT SAMPLE RESULTS <sup>(3)</sup>	CUMULATIVE VOCs REMOVED <sup>(1),(4)</sup> (pounds)	COMMENTS
						VOCs (µg/L)	VOCs (µg/L)		
1/2/2018	1/2/2018 8:30	382,660	--	--	--	NS	NS	660	Readings were taken from two different displays causing inaccurate flow rate calculation
1/8/2018	1/8/2018 12:30	356,319	46,748,474	57,781	40	2180	52.8	670	
1/10/2018	1/10/2018 8:26	118,697	46,867,171	64,842	45	NS	NS	670	
1/17/2018	1/17/2018 10:27	458,671	47,325,842	64,747	45	NS	NS	680	
1/23/2018	1/23/2018 13:45	397,288	47,723,130	64,731	45	NS	NS	680	
2/6/2018	2/6/2018 10:26	897,392	48,620,522	64,738	45	2010	41.3	700	
2/13/2018	2/13/2018 11:53	457,302	49,077,824	64,770	45	NS	NS	710	
2/21/2018	2/21/2018 13:08	516,077	49,593,901	64,092	45	NS	NS	710	
2/28/2018	2/28/2018 8:40	416,461	50,010,362	61,119	42	NS	NS	720	
3/5/2018	3/5/2018 13:50	299,836	50,310,198	57,492	40	NS	NS	730	
3/7/2018	3/7/2018 8:13	101,613	50,411,811	57,539	40	NS	NS	730	Pre-shutdown
3/8/2018	3/8/2018 14:50	4,961	50,416,772	3,889	3	2200	49.16	730	Post-start up
3/13/2018	3/13/2018 11:24	311,713	50,728,485	64,179	45	NS	NS	730	
3/19/2018	3/19/2018 12:16	390,787	51,119,272	64,742	45	NS	NS	740	
3/26/2018	3/26/2018 12:16	453,012	51,572,284	64,716	45	NS	NS	750	
4/3/2018	4/3/2018 8:41	508,148	52,080,432	64,727	45	1970	40.4	760	MKC recorded data on 4/4. Data not included due to misreading.
4/10/2018	4/10/2018 12:20	166,029	52,246,461	23,214	16	NS	NS	760	
4/17/2018	4/17/2018 12:38	916,297	52,996,729	64,689	45	NS	NS	770	Readings were taken from two different displays causing inaccurate flow rate calculation
4/26/2018	4/26/2018 13:31	550,021	53,546,750	60,865	42	NS	NS	780	Original reading was 53000644
4/27/2018	4/27/2018 13:25	60,185	53,606,935	60,437	42	NS	NS	780	
5/8/2018	5/8/2018 10:39	391,953	53,998,888	36,009	25	2629.4	50.3	790	GETS compliance samples were collected on 5/1/2018. System was shut down for maintenance for a few days.
5/9/2018	5/9/2018 11:16	--	--	--	--	NS	NS	790	
5/17/2018	5/17/2018 10:09	516,309	54,515,197	57,501	40	NS	NS	800	
5/25/2018	5/25/2018 11:14	124,917	54,640,114	15,527	11	NS	NS	810	
5/31/2018	5/31/2018 8:29	--	--	--	--	NS	NS	810	Readings were recorded incorrectly.
6/6/2018	6/6/2018 12:46	693,517	55,333,631	57,487	40	1990	30.2	820	
6/12/2018	6/12/2018 14:00	347,876	55,681,507	57,487	40	NS	NS	820	
6/15/2018	6/15/2018 17:37	181,182	55,862,689	57,505	40	NS	NS	830	
6/27/2018	6/27/2018 13:30	--	--	--	--	NS	NS	830	Readings were taken from two different displays causing inaccurate flow rate calculation. GETS was shut down for multiple days between June 20-25.
7/1/2018	7/1/2018 10:40	--	--	--	--	NS	NS	830	Readings were taken from two different displays causing inaccurate flow rate calculation.
7/9/2018	7/9/2018 8:30	1,179,776	57,042,465	49,948	35	2200	45.7	850	
7/26/2018	7/26/2018 14:23	158,954	57,201,419	9,217	6	NS	NS	850	The GETS shutdown on 7/11/2018 due to issues with the extraction well pump/motor. A new pump/motor was installed on 7/20/2018 and system maintenance was completed following. The system was restarted on 7/26/2018.
7/31/2018	7/31/2018 12:56	319,465	57,520,884	64,674	45	NS	NS	860	
8/20/2018	8/20/2018 8:56	57,612	57,578,496	2,905	2	2263.5	54.7	860	The GETS shutdown again on 8/5/2018 due to issues with the extraction well pump/motor. Issues with the new pump motor were found and a replacement was installed on 8/15/2018. The system was restarted on 8/20/2018 following repair work.
9/4/2018	9/4/2018 15:02	614,834	58,193,330	40,306	28	2050.1	58.6	870	The GETS was shutdown due to level float failures between 8/27/2018 and 9/4/2018. Floats were replaced/repared and the system was restarted on 9/4/2018.
9/5/2018	9/5/2018 12:43	58,242	58,251,572	64,465	45	NS	NS	870	
9/19/2018	9/19/2018 8:55	429,949	58,681,521	31,062	22	NS	NS	880	The GETS shutdown periodically due to pressure issues with a metering pump. The pump was primed and the system was restarted.
9/21/2018	9/21/2018 9:51	95,427	58,776,948	46,803	33	NS	NS	880	The GETS shutdown periodically due to pressure issues with a metering pump. The pump was primed and the system was restarted.
9/25/2018	9/25/2018 9:11	257,067	59,034,015	64,716	45	NS	NS	880	
10/3/2018	10/3/2018 8:37	503,791	59,537,806	63,160	44	NS	NS	890	
10/8/2018	10/8/2018 12:44	298,988	59,836,794	57,814	40	2240	61.2	900	
10/12/2018	10/12/2018 12:42	258,586	60,095,380	64,669	45	NS	NS	900	
10/17/2018	10/17/2018 11:00	319,303	60,414,683	64,778	45	NS	NS	910	
10/25/2018	10/25/2018 12:46	445,408	60,860,091	55,168	38	NS	NS	910	
10/26/2018	10/26/2018 9:27	49,525	60,909,616	57,467	40	NS	NS	910	

**Table 1**  
**Summary of Groundwater Extraction System Operation and Mass Removal**  
**Madison Kipp Corporation**  
**201 Waubesa Street**  
**Madison, Wisconsin**

DATE		GROUNDWATER DISCHARGED THIS PERIOD (gal)	CUMULATIVE GROUNDWATER DISCHARGED (gal) <sup>(1)</sup>	AVERAGE DISCHARGE FLOW RATE <sup>(2),(5)</sup> (gpd)	AVERAGE DISCHARGE FLOW RATE <sup>(2),(5),(6),(7)</sup> (gpm)	INFLUENT SAMPLE RESULTS <sup>(3)</sup>	EFFLUENT SAMPLE RESULTS <sup>(3)</sup>	CUMULATIVE VOCs REMOVED <sup>(1),(4)</sup> (pounds)	COMMENTS
						VOCs (µg/L)	VOCs (µg/L)		
11/1/2018	11/1/2018 10:44	348,407	61,258,023	57,555	40	NS	NS	920	
11/6/2018	11/6/2018 11:09	291,010	61,549,033	58,001	40	1910	24.45	930	Samples collected on 11/5/2018, meter reading not collected on same day.
11/13/2018	11/13/2018 10:15	400,817	61,949,850	57,568	40	NS	NS	930	
11/16/2018	11/16/2018 10:58	174,543	62,124,393	57,608	40	NS	NS	930	
11/29/2018	11/29/2018 11:50	743,564	62,867,957	57,039	40	NS	NS	950	
11/30/2018	11/30/2018 9:25	51,812	62,919,769	57,613	40	NS	NS	950	
12/5/2018	12/5/2018 10:41	290,767	63,210,536	57,546	40	NS	NS	950	
12/11/2018	12/11/2018 15:32	293,824	63,504,360	47,375	33	1831.7	33.9	960	System shutdown for maintenance. Samples taken immediately after scheduled system maintenance and cleaning.
12/12/2018	12/12/2018 11:09	46,951	63,551,311	57,442	40	NS	NS	960	
12/14/2018	12/14/2018 11:03	114,979	63,666,290	57,610	40	NS	NS	960	
12/17/2018	12/17/2018 12:35	--	--	--	--	NS	NS	960	Readings were recorded incorrectly, however system was operated at 40 gpm between 12/14/2018 and 12/17/2018.

**Notes:**

The total gallons treated and VOCs removed by the GETS prior to January 2016 is further discussed in the 2015 Annual Report (ARCADIS, April, 2016).  
 -- = Field reading recorded is not consistent with previous collected data and not used for calculations or system issues did not allow a reading to be obtained.  
 VOCs = Volatile Organic Compounds  
 WDNR = Wisconsin Department of Natural Resources  
 WPDES = Wisconsin Pollution Discharge Elimination System  
 DMR = Discharge Monitoring Report  
 GETS - Groundwater Extraction and Treatment System

Updated By: B. Wachholz 12/20/2018  
 Checked By: A. Stehn & A. Enright 02/14/2019

**Footnotes:**

1. The cumulative groundwater treated through December 31, 2015 was 4,683,600 gallons and cumulative VOCs removed through December 31, 2015 was 61 pounds, as reported in the 2015 Annual Report (ARCADIS, April 2016).
2. The GETS standard operation is 45 gpm. The average discharge flow rate calculations noted take into account system down time and are based on volume of groundwater extracted and time elapsed between monitoring events.
3. Analytical laboratory reports are included in the Operations, Monitoring, and Maintenance Annual Report - January 1, 2018 - December 31, 2018.
4. Compliance sampling is completed on a monthly basis. For weeks where samples were not collected the previously obtained sampling data was used for cumulative VOCs calculations.
5. The extraction and transfer pumps for the GETS contain variable speed frequency drives that fluctuate based on liquid levels in the equalization and mixing tank along with the air stripper liquid level. At times the flow will fluctuate and readings collected over a few days time may reflect bias results for the overall system operation.
6. The soil vapor extraction system periodically shuts down. When repairs are required, the GETS flowrate is adjusted to 40 gpm to ensure proper operation.
7. The soil vapor extraction system was temporarily shutdown on October 25, 2018 for evaluation purposes. Based on the shutdown, the GETS operation flow rate was adjusted to 40 GPM.

Table 2  
GETS WPDES Compliance Sample Results  
Madison-Kipp Corporation Site  
201 Waubesa Street, Madison, Wisconsin

PARAMETER <sup>(3)</sup>	PERMIT DISCHARGE LIMITS	UNIT	LOCATION SAMPLE DATE																							
			INFLUENT 1/8/2018	EFFLUENT 1/8/2018	INFLUENT 2/6/2018	EFFLUENT 2/6/2018	INFLUENT 3/8/2018	EFFLUENT 3/8/2018	INFLUENT 4/3/2018	EFFLUENT 4/3/2018	INFLUENT 5/1/2018	EFFLUENT 5/1/2018	INFLUENT 6/6/2018	EFFLUENT 6/6/2018	INFLUENT 7/9/2018	EFFLUENT 7/9/2018	INFLUENT 8/20/2018	EFFLUENT 8/20/2018	INFLUENT 9/4/2018	EFFLUENT 9/4/2018	INFLUENT 10/8/2018	EFFLUENT 10/8/2018	INFLUENT 11/5/2018	EFFLUENT 11/5/2018	INFLUENT 12/11/2018	EFFLUENT 12/11/2018
<b>Miscellaneous</b>																										
Oil & Grease	10	mg/L	--	--	--	--	<1.4	<1.4	--	--	--	--	<1.3	2.5 J B	--	--	--	--	<1.4	<1.4	--	--	--	--	2.2 J	1.9 J
Chloride	395	mg/L	--	--	--	--	130	160	--	--	--	--	130	120	--	--	--	--	260	260	--	--	--	--	140	230
Total Suspended Solids	40	mg/L	--	--	--	--	<1.9	<1.9	--	--	<1.9	<1.9	2.0 J	3.5 J	--	<1.9 <sup>(4)</sup>	--	--	2.0 J	2.5 J	--	--	--	--	<1.9	2.0 J
Biological Oxygen Demand	20	mg/L	--	--	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0
<b>VOCs</b>																										
1,1,1-Trichloroethane	50	µg/L	<1.9	<0.38	<0.76	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38
1,1,2,2-Tetrachloroethane	50	µg/L	<2.0	<0.40	<0.80	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40
1,1,2-Trichloroethane	50	µg/L	<1.8	<0.35	<0.70	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35
1,1-Dichloroethene	50	µg/L	<2.0	<0.39	<0.78	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39
1,2-Dichloroethane	180	µg/L	<2.0	<0.39	<0.78	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39
Benzene	50	µg/L	<0.73	<0.15	<0.29	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	<0.15
Bromodichloromethane	120	µg/L	<1.9	<0.37	<0.74	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37
Bromoform	120	µg/L	<2.2	<0.45	<0.89	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45
Bromomethane	NE	µg/L	<3.2	<0.65	<1.3	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65
Carbon Tetrachloride	150	µg/L	<1.9	<0.38	<0.77	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38
cis-1,2-Dichloroethene	NE	µg/L	170	17	130	15	120	18	110	15	450	25	120	11	190	17	450	29	450	31	220	22	210	11	170	16
Chloromethane	NE	µg/L	<1.6	<0.32	<0.64	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32
Ethylbenzene	NE	µg/L	<0.92	<0.18	<0.37	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18
Tetrachloroethene	50	µg/L	1800	29	1700	21	1900	24	1700	20	1800	18	1700	15	1800	23	1500	18	1300	20	1800	31	1500	9.8	1500	14
Toluene	NE	µg/L	<0.76	<0.15	<0.30	<0.15	<0.30	0.16 J	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.30	<0.15	2.3 J	0.28 J	<0.76	<0.15	<0.30	<0.15	<0.76	<0.15	<0.76	<0.15
Total Xylenes	NE	µg/L	<2.0	<0.40	<0.80	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	0.50 J	<2.0	0.65 J	<2.0	<0.40
trans-1,2-Dichloroethene	NE	µg/L	<1.7	<0.35	<0.70	<0.35	<0.70	<0.35	<1.7	<0.35	5.8	<0.35	<1.7	<0.35	<0.70	<0.35	7.2	<0.35	<1.7	<0.35	<0.70	<0.35	<1.7	<0.35	<1.7	<0.35
Trichloroethene	50	µg/L	210	6.8	180	5.3	180	7.0	160	5.4	370	7.3	170	4.2	210	5.7	300	7.4	290	7.6	220	7.7	200	3.0	160	3.9
Vinyl chloride	10	µg/L	<1.0	<0.20	<0.41	<0.20	<0.41	<0.20	<1.0	<0.20	3.6 J	<0.20	<1.0	<0.20	<0.41	<0.20	4.0 J	<0.20	2.9 J	<0.20	<0.41	<0.20	<1.0	<0.20	<1.0	<0.20
Total BTEX <sup>(1)</sup>	750	µg/L	<2.0	<0.40	<0.80	<0.40	<0.80	0.16 J	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	2.3 J	0.28 J	<2.0	<0.40	<0.80	0.50 J	<2.0	0.65 J	<2.0	<0.40
Total VOCs (includes BTEX)	NE	µg/L	2180	52.8	2010	41.3	2200	49.16	1970	40.4	2629.4	50.3	1990	30.2	2200	45.7	2263.5	54.7	2050.1	58.6	2240	61.2	1910	24.45	1831.7	33.9
<b>PAHs</b>																										
Benzo(a)anthracene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--	--	--	<0.024	<0.024
Benzo(a)pyrene	0.1	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--	--	--	<0.024	<0.024
Benzo(b)fluoranthene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--	--	--	<0.024	<0.024
Benzo(g,h,i)perylene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--	--	--	<0.047	<0.048
Benzo(k)fluoranthene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--	--	--	<0.047	<0.048
Chrysene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--	--	--	<0.047	<0.048
Dibenzo(a,h)anthracene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--	--	--	<0.024	<0.024
Fluoranthene	NE	µg/L	<0.028	<0.030	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--	--	--	<0.047	<0.048
Indeno(1,2,3-cd)pyrene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--	--	--	<0.024	<0.024
Naphthalene	70	µg/L	<0.019	<0.020	--	--	<0.046	0.15	--	--	--	--	0.045 J	0.067 J	--	--	--	--	<0.047	<0.049	--	--	--	--	<0.047	<0.048
Phenanthrene	NE	µg/L	<0.028	<0.030	--	--	<0.046	<0.052	--	--	--	--	0.12	0.20	--	--	--	--	0.092 J B	0.075 J B	--	--	--	--	<0.047	<0.048
Pyrene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--	--	--	<0.047	<0.048
PAHs Group of 10 Total <sup>(2)</sup>	0.1	µg/L	<0.028	<0.030	--	--	<0.046	<0.052	--	--	--	--	0.12	0.20	--	--	--	--	0.092	0.075	--	--	--	--	<0.047	<0.048

Notes:  
 < = Less than  
 µg/L = Micrograms per liter  
 mg/L = Milligrams per liter  
 B = Compound was found in the blank and in the sample.  
 J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.  
 F1 = MS and/or MSD Recovery is outside acceptance limits.  
 \* = ISTD response or retention time outside of acceptable limits.  
 ND = Not Detected  
 NE = Not Established  
 -- = Not analyzed  
 PAHs = Polynuclear Aromatic Hydrocarbons  
 VOCs = Volatile Organic Compounds

Updated by: B. Wachholz 12/20/2018  
 Checked by: C. Olson 1/4/2019

Footnotes:  
<sup>(1)</sup> Total BTEX is the sum of the benzene, toluene, ethylbenzene and xylene concentrations. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the BTEX compounds was noted.  
<sup>(2)</sup> PAH group of 10 (Polynuclear Aromatic Hydrocarbons) include the sum of the following individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the PAH group compounds was noted.  
<sup>(3)</sup> The WDNR approved a modification to the GETS monitoring program for select constituents on April 27, 2017 and June 23, 2017. Following the approval, VOCs will be monitored on a monthly basis and all other constituents previously monitored will be completed on a quarterly basis.  
<sup>(4)</sup> Effluent sample was collected on 7/26/2018 after groundwater extraction well was replaced.

Table 3  
 Combined SVE and GETS Gas Analytical Data - January 2016 - December 2018  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

SAMPLE DATE	1/18/2016		2/8/2016		3/7/2016		4/6/2016		5/4/2016		6/7/2016		7/20/2016		8/8/2016		9/9/2016		10/10/2016		11/7/2016		12/7/2016	
	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
Vinyl Chloride	<7.2	<b>1.9</b>	<3.7	<2.2	<2.2	<b>2.2</b>	<16	<b>3.4</b>	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0
1,1-Dichloroethene	<7.2	<1.6	<3.7	<2.2	<2.2	<1.3	<16	<b>1.8</b>	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0
cis-1,2-Dichloroethene	<b>640</b>	<b>220</b>	<b>220</b>	<b>130</b>	<b>150</b>	<b>460</b>	<b>480</b>	<b>360</b>	<b>530</b>	<b>430</b>	<b>440</b>	<b>450</b>	<b>530</b>	<b>1900</b>	<b>600</b>	<b>1100</b>	<b>350</b>	<b>1300</b>	<b>230</b>	<b>160</b>	<b>570</b>	<b>710</b>	<b>640</b>	<b>500</b>
Benzene	<7.2	<b>1.8</b>	<3.7	<2.2	<2.2	<1.3	<16	<1.3	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0
Trichloroethene	<b>370</b>	<b>20</b>	<b>130</b>	<b>23</b>	<b>78</b>	<b>13</b>	<b>400</b>	<b>15</b>	<b>340</b>	<b>16</b>	<b>400</b>	<b>17</b>	<b>440</b>	<b>48</b>	<b>550</b>	<b>39</b>	<b>390</b>	<b>32</b>	<b>130</b>	<b>35</b>	<b>470</b>	<b>110</b>	<b>460</b>	<b>130</b>
Toluene	<7.2	<1.6	<b>25</b>	<2.2	<2.2	<1.3	<16	<b>3</b>	<14	<2.0	<16	<b>18</b>	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<b>4.0</b>	<b>13</b>	<b>6.5</b>	<5.7	<b>3.5</b>
Tetrachloroethene	<b>2400</b>	<b>340</b>	<b>1100</b>	<b>340</b>	<b>690</b>	<b>140</b>	<b>4100</b>	<b>200</b>	<b>3100</b>	<b>180</b>	<b>3700</b>	<b>180</b>	<b>3500</b>	<b>130</b>	<b>3900</b>	<b>160</b>	<b>2000</b>	<b>140</b>	<b>1000</b>	<b>350</b>	<b>3100</b>	<b>150</b>	<b>1800</b>	<b>230</b>
Ethyl Benzene	<7.2	<1.6	<3.7	<2.2	<2.2	<1.3	<16	<b>15</b>	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0
m,p-Xylene	<7.2	<1.6	<3.7	<2.2	<2.2	<1.3	<b>28</b>	<b>72</b>	<14	<b>2.2</b>	<16	<b>2.4</b>	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<b>1.8</b>	<12	<b>6.8</b>	<5.7	<b>2.0 J</b>
o-Xylene	<7.2	<1.6	<3.7	<2.2	<2.2	<1.3	<16	<b>32</b>	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0
1,3,5-Trimethylbenzene	<7.2	<1.6	<3.7	<2.2	<b>8.9</b>	<1.3	<16	<b>3.8</b>	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0
1,2,4-Trimethylbenzene	<7.2	<1.6	<3.7	<2.2	<b>42</b>	<b>7.8</b>	<16	<b>9.1</b>	<14	<2.0	<16	<2.2	<20	<7.8	<16	<3.3	<7.2	<5.2	<2.7	<1.3	<12	<2.4	<5.7	<2.0

**Notes:**

All concentrations in this table are reported in ppbv unless otherwise noted.

All samples were analyzed using Method TO-15 and the analytes shown in the table are from the VOC analyte list. Only analytes that were detected in at least one sample are shown in the table. A complete list of constituents analyzed are included in the laboratory analytical reports.

< = Constituent not detected above noted laboratory method detection limit.

**Bold** = Constituent detected above laboratory detection limit.

SVE = Soil vapor extraction

GETS = Groundwater extraction and treatment system

ppbv = parts per billion by volume

VOCs = Volatile Organic Compounds

Table 3  
 Combined SVE and GETS Gas Analytical Data - January 2016 - December 2018  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

SAMPLE DATE	1/17/2017		2/8/2017		3/7/2017		4/6/2017		5/5/2017		6/7/2017		7/11/2017		8/7/2017		9/14/2017		10/5/2017		11/30/2017		12/8/2017	
	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
Vinyl Chloride	<11	<b>3.8</b>	<23	<b>2.8</b>	<6.0	<b>3.3</b>	<8.4	<b>2.9</b>	<2.5	<2.4	<13	<b>3.0</b>	<10	<b>2.9</b>	<12	<b>4.5</b>	<15	<b>5.3</b>	<4.7	<b>6.8</b>	<b>7.0</b>	<b>3.9</b>	<b>10</b>	<b>8.5</b>
1,1-Dichloroethene	<11	<1.7	<23	<1.1	<6.0	<1.6	<8.4	<1.2	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6
cis-1,2-Dichloroethene	<b>1100</b>	<b>670</b>	<b>1100</b>	<b>460</b>	<b>700</b>	<b>510</b>	<b>680</b>	<b>500</b>	<b>260</b>	<b>420</b>	<b>610</b>	<b>240</b>	<b>870</b>	<b>770</b>	<b>730</b>	<b>470</b>	<b>440</b>	<b>450</b>	<b>280</b>	<b>720</b>	<b>430</b>	<b>110</b>	<b>720</b>	<b>270</b>
Benzene	<11	<1.7	<23	<1.1	<6.0	<1.6	<8.4	<1.2	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6
Trichloroethene	<b>880</b>	<b>300</b>	<b>1000</b>	<b>340</b>	<b>440</b>	<b>210</b>	<b>420</b>	<b>410</b>	<b>240</b>	<b>400</b>	<b>520</b>	<b>200</b>	<b>530</b>	<b>430</b>	<b>570</b>	<b>700</b>	<b>490</b>	<b>1500</b>	<b>270</b>	<b>1000</b>	<b>380</b>	<b>360</b>	<b>540</b>	<b>750</b>
Toluene	<11	<b>14</b>	<23	<b>3.9</b>	<6.0	<b>8.8</b>	<8.4	<b>6.6</b>	<b>4.5</b>	<b>5.9</b>	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<b>17</b>	<1.2	<6.4	<2.6
Tetrachloroethene	<b>3200</b>	<b>210</b>	<b>5300</b>	<b>300</b>	<b>1400</b>	<b>280</b>	<b>2200</b>	<b>140</b>	<b>810</b>	<b>230</b>	<b>2500</b>	<b>240</b>	<b>2300</b>	<b>280</b>	<b>2700</b>	<b>260</b>	<b>2900</b>	<b>230</b>	<b>1300</b>	<b>200</b>	<b>1600</b>	<b>360</b>	<b>2400</b>	<b>730</b>
Ethyl Benzene	<11	<1.7	<23	<1.1	<6.0	<1.6	<8.4	<1.2	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6
m,p-Xylene	<11	<b>2.4</b>	<23	<b>2.2</b>	<6.0	<b>4.2</b>	<8.4	<b>2.2</b>	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6
o-Xylene	<11	<1.7	<23	<1.1	<6.0	<1.6	<8.4	<1.2	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6
1,3,5-Trimethylbenzene	<11	<1.7	<23	<1.1	<6.0	<1.6	<8.4	<1.2	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6
1,2,4-Trimethylbenzene	<11	<1.7	<23	<1.1	<6.0	<1.6	<8.4	<1.2	<2.5	<2.4	<13	<1.6	<10	<2.7	<12	<4.2	<15	<4.6	<4.7	<2.6	<5.4	<1.2	<6.4	<2.6

**Notes:**  
 All concentrations in this table are reported in ppbv unless otherwise noted.  
 All samples were analyzed using Method TO-15 and the analytes shown in the table are from the VOC analyte list. Only analytes that were detected in at least one sample are shown in the table. A complete list of constituents analyzed are included in the laboratory analytical reports.  
 < = Constituent not detected above noted laboratory method detection limit.  
**Bold** = Constituent detected above laboratory detection limit.  
 SVE = Soil vapor extraction  
 GETS = Groundwater extraction and treatment system  
 ppbv = parts per billion by volume  
 VOCs = Volatile Organic Compounds

Table 3  
 Combined SVE and GETS Gas Analytical Data - January 2016 - December 2018  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

SAMPLE DATE	1/8/2018		2/6/2018		3/8/2018		4/3/2018		5/8/2018		6/6/2018		7/9/2018		8/20/2018		9/4/2018		10/8/2018		11/5/2018		12/10/2018	
	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT												
Vinyl Chloride	23	20	10	11	10	4.3	8.8	9.2	7.2	7.5	8.4	8.1	8.5	8.6	7.3	<2.6	12	<3.4	14	11	17	15	12	12
1,1-Dichloroethene	<6.2	<6.7	<2.7	<1.2	<4.8	<1.2	<6.5	<2.8	<2.8	<3.1	<3.4	<1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
cis-1,2-Dichloroethene	700	740	600	240	780	200	670	430	600	1100	590	170	630	350	860	450	1200	850	650	360	920	430	910	530
Benzene	<6.2	<6.7	<2.7	1.7	<4.8	2.4	<6.5	<2.8	<2.8	<3.1	<3.4	1.5	<6.8	<2.8	<4.1	<2.6	<3.3	4.5	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
Trichloroethene	440	440	370	74	440	66	470	120	400	240	330	220	500	360	340	290	530	740	420	320	540	250	610	220
Toluene	<6.2	<6.7	<2.7	<1.2	<4.8	1.9	<6.5	<2.8	<2.8	<3.1	<3.4	<1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
Tetrachloroethene	1400	1600	860	440	1100	220	1700	610	1100	820	990	500	1600	640	520	380	880	1400	1300	880	1400	680	3500	1600
Ethyl Benzene	<6.2	<6.7	<2.7	<1.2	<4.8	<1.2	<6.5	<2.8	<2.8	<3.1	<3.4	<1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
m,p-Xylene	<6.2	<6.7	<2.7	<1.2	<4.8	<1.2	<6.5	<2.8	<2.8	<3.1	<3.4	1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
o-Xylene	<6.2	<6.7	<2.7	<1.2	<4.8	<1.2	<6.5	<2.8	<2.8	<3.1	<3.4	<1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
1,3,5-Trimethylbenzene	<6.2	<6.7	<2.7	<1.2	<4.8	<1.2	<6.5	<2.8	<2.8	<3.1	<3.4	<1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1
1,2,4-Trimethylbenzene	<6.2	<6.7	<2.7	<1.2	<4.8	1.3	<6.5	<2.8	<2.8	<3.1	<3.4	<1.4	<6.8	<2.8	<4.1	<2.6	<3.3	<3.4	<8.3	<3.1	<5.5	<3.1	<9.4	<5.1

**Notes:**

All concentrations in this table are reported in ppbv unless otherwise noted.

All samples were analyzed using Method TO-15 and the analytes shown in the table are from the VOC analyte list. Only analytes that were detected in at least one sample are shown in the table. A complete list of constituents analyzed are included in the laboratory analytical reports.

< = Constituent not detected above noted laboratory method detection limit.

**Bold** = Constituent detected above laboratory detection limit.

SVE = Soil vapor extraction

GETS = Groundwater extraction and treatment system

ppbv = parts per billion by volume

VOCs = Volatile Organic Compounds

Updated by: B. Wachholz 1/2/2019

Checked by: C. Olson 1/4/2019

Table 4  
 Estimate of GAC Effluent Emissions - Total Volatile Organic Compounds  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	TOTAL VOC CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	3500	389.4	5.2E-03
2/8/2016	3300	362.2	4.5E-03
3/7/2016	3100	364.1	4.2E-03
4/6/2016	3700	363.8	5.0E-03
5/4/2016	3300	361.0	4.5E-03
6/7/2016	3500	354.9	4.7E-03
7/20/2016	9900	359.6	1.3E-02
8/8/2016	6400	354.1	8.5E-03
9/9/2016	7100	346.9	9.2E-03
10/10/2016	3500	361.1	4.7E-03
11/7/2016	4900	357.8	6.5E-03
12/7/2016	4600	366.9	6.3E-03
1/17/2017	6000	376.7	8.4E-03
2/8/2017	5800	375.3	8.2E-03
3/7/2017	5400	355.8	7.2E-03
4/6/2017	5400	352.6	7.1E-03
5/5/2017	5800	353.8	7.7E-03
6/7/2017	3900	358.1	5.3E-03
7/11/2017	7700	346.0	9.9E-03
8/7/2017	8100	355.8	1.1E-02
9/14/2017	12200	368.0	1.7E-02
10/5/2017	10300	367.5	1.4E-02
11/30/2017	5000	375.2	7.1E-03
12/8/2017	10600	384.0	1.5E-02
1/8/2018	17400	390.1	2.5E-02
2/6/2018	4600	395.0	6.8E-03
3/8/2018	2900	381.9	4.1E-03
4/3/2018	7000	367.9	9.6E-03
5/8/2018	11700	349.6	1.5E-02
6/6/2018	5500	347.8	7.2E-03
7/9/2018	8300	345.2	1.1E-02
8/20/2018	6400	352.2	8.5E-03
9/4/2018	17200	336.8	2.2E-02
10/8/2018	9700	355.9	1.3E-02
11/5/2018	3300	194.6	2.4E-03
12/10/2018	15200	230.1	1.3E-02
<b>Average Emission Rate<sup>(5)</sup> =</b>			<b>9.2E-03</b>
<b>NR 406 Emission Threshold =</b>			<b>5.7</b>

**Notes:**

VOCs = Volatile Organic Compounds  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019

Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The total VOC concentration listed is representative of the effluent sample collected post treatment of the SVE and GETS operations.
- Total VOC concentrations were calculated based on analytes reported above and below the method reporting limit. For detected analytes, the reported concentrations were used. For all other analytes detected below the method reporting limit, half of the reporting limit was used.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between January 2016 and December 2017.

Table 5  
 Estimate of GAC Effluent Gas Emissions for Tetrachloroethene  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	TOTAL PCE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	2300	389.4	3.4E-03
2/8/2016	2300	362.2	3.1E-03
3/7/2016	980	364.1	1.3E-03
4/6/2016	1400	363.8	1.9E-03
5/4/2016	1200	361.0	1.6E-03
6/7/2016	1200	354.9	1.6E-03
7/20/2016	890	359.6	1.2E-03
8/8/2016	1100	354.1	1.5E-03
9/9/2016	950	346.9	1.2E-03
10/10/2016	2400	361.1	3.2E-03
11/7/2016	1000	357.8	1.3E-03
12/7/2016	1500	366.9	2.1E-03
1/17/2017	1400	376.7	2.0E-03
2/8/2017	2000	375.3	2.8E-03
3/7/2017	1900	355.8	2.5E-03
4/6/2017	930	352.6	1.2E-03
5/5/2017	1600	353.8	2.1E-03
6/7/2017	1600	358.1	2.1E-03
7/11/2017	1900	346.0	2.5E-03
8/7/2017	1800	355.8	2.4E-03
9/14/2017	1600	368.0	2.2E-03
10/5/2017	1400	367.5	1.9E-03
11/30/2017	2400	375.2	3.4E-03
12/8/2017	5000	384.0	7.2E-03
1/8/2018	11000	390.1	1.6E-02
2/6/2018	3000	395.0	4.4E-03
3/8/2018	1500	381.9	2.1E-03
4/3/2018	4100	367.9	5.6E-03
5/8/2018	5500	349.6	7.2E-03
6/6/2018	3400	347.8	4.4E-03
7/9/2018	4400	345.2	5.7E-03
8/20/2018	2600	352.2	3.4E-03
9/4/2018	9200	336.8	1.2E-02
10/8/2018	6000	355.9	8.0E-03
11/5/2018	4600	194.6	3.4E-03
12/10/2018	11000	230.1	9.5E-03
<b>Average Emission Rate<sup>(5)</sup> =</b>		<b>4.9E-03</b>	<b>lb/hr</b>
<b>NR 445 Emission Threshold =</b>		<b>35.4</b>	<b>lb/hr</b>

**Notes:**

PCE = Tetrachloroethene  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The PCE concentration listed is representative of the effluent sample collected post treatment of the SVE and GETS operations.
- The PCE concentration reported in the effluent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between January 2016 and December 2017.

Table 6  
 Estimate of GAC Effluent Gas Emissions for Trichloroethene  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	TCE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	110	389.4	1.6E-04
2/8/2016	120	362.2	1.6E-04
3/7/2016	71	364.1	9.7E-05
4/6/2016	81	363.8	1.1E-04
5/4/2016	85	361.0	1.1E-04
6/7/2016	91	354.9	1.2E-04
7/20/2016	260	359.6	3.5E-04
8/8/2016	210	354.1	2.8E-04
9/9/2016	170	346.9	2.2E-04
10/10/2016	190	361.1	2.6E-04
11/7/2016	600	357.8	8.0E-04
12/7/2016	700	366.9	9.6E-04
1/17/2017	1600	376.7	2.3E-03
2/8/2017	1800	375.3	2.5E-03
3/7/2017	1200	355.8	1.6E-03
4/6/2017	2200	352.6	2.9E-03
5/5/2017	2100	353.8	2.8E-03
6/7/2017	1100	358.1	1.5E-03
7/11/2017	2300	346.0	3.0E-03
8/7/2017	3700	355.8	4.9E-03
9/14/2017	8000	368.0	1.1E-02
10/5/2017	5500	367.5	7.6E-03
11/30/2017	2000	375.2	2.8E-03
12/8/2017	4000	384.0	5.8E-03
1/8/2018	2300	390.1	3.4E-03
2/6/2018	400	395.0	5.9E-04
3/8/2018	350	381.9	5.0E-04
4/3/2018	660	367.9	9.1E-04
5/8/2018	1300	349.6	1.7E-03
6/6/2018	1200	347.8	1.6E-03
7/9/2018	2000	345.2	2.6E-03
8/20/2018	1600	352.2	2.1E-03
9/4/2018	4000	336.8	5.0E-03
10/8/2018	1700	355.9	2.3E-03
11/5/2018	1300	194.6	9.5E-04
12/10/2018	1200	230.1	1.0E-03
<b>Average Emission Rate<sup>(5)</sup> =</b>		<b>2.1E-03</b>	<b>lb/hr</b>
<b>NR 445 Emission Threshold =</b>		<b>56.1</b>	<b>lb/hr</b>

**Notes:**

TCE = Trichloroethene  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019

Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The TCE concentration listed is representative of the effluent sample collected post treatment of the SVE and GETS operations.
- The TCE concentration reported in the effluent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between January 2016 and December 2017.

Table 7  
 Estimate of GAC Effluent Gas Emissions for cis-1,2-Dichloroethene  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	CIS-1,2-DCE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	860	389.4	1.3E-03
2/8/2016	530	362.2	7.2E-04
3/7/2016	1800	364.1	2.5E-03
4/6/2016	1400	363.8	1.9E-03
5/4/2016	1700	361.0	2.3E-03
6/7/2016	1800	354.9	2.4E-03
7/20/2016	7400	359.6	1.0E-02
8/8/2016	4500	354.1	6.0E-03
9/9/2016	5100	346.9	6.6E-03
10/10/2016	620	361.1	8.4E-04
11/7/2016	2800	357.8	3.8E-03
12/7/2016	2000	366.9	2.7E-03
1/17/2017	2600	376.7	3.7E-03
2/8/2017	1800	375.3	2.5E-03
3/7/2017	2000	355.8	2.7E-03
4/6/2017	2000	352.6	2.6E-03
5/5/2017	1700	353.8	2.3E-03
6/7/2017	960	358.1	1.3E-03
7/11/2017	3000	346.0	3.9E-03
8/7/2017	1900	355.8	2.5E-03
9/14/2017	1800	368.0	2.5E-03
10/5/2017	2900	367.5	4.0E-03
11/30/2017	420	375.2	5.9E-04
12/8/2017	1100	384.0	1.6E-03
1/8/2018	2900	390.1	4.2E-03
2/6/2018	950	395.0	1.4E-03
3/8/2018	780	381.9	1.1E-03
4/3/2018	1700	367.9	2.3E-03
5/8/2018	4300	349.6	5.6E-03
6/6/2018	680	347.8	8.9E-04
7/9/2018	1400	345.2	1.8E-03
8/20/2018	1800	352.2	2.4E-03
9/4/2018	3400	336.8	4.3E-03
10/8/2018	1400	355.9	1.9E-03
11/5/2018	1700	194.6	1.2E-03
12/10/2018	2100	230.1	1.8E-03
<b>Average Emission Rate<sup>(5)</sup> =</b>		<b>2.8E-03</b>	<b>lb/hr</b>
<b>NR 445 Emission Threshold =</b>		<b>166</b>	<b>lb/hr</b>

**Notes:**

cis-1,2-DCE = cis-1,2-Dichloroethene  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The Cis, 1,2-DCE concentration listed is representative of the effluent sample collected post treatment of the SVE and GETS operations.
- The cis-1,2-DCE concentration reported in the effluent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between January 2016 and December 2017.

Table 8  
 Estimate of GAC Effluent Gas Emissions for Vinyl Chloride  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	VINYL CHLORIDE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr	lb/yr
1/18/2016	5.0	389.4	7.3E-06	6.4E-02
2/8/2016	2.9	362.2	3.9E-06	3.4E-02
3/7/2016	5.7	364.1	7.8E-06	6.8E-02
4/6/2016	8.8	363.8	1.2E-05	1.1E-01
5/4/2016	2.6	361	3.5E-06	3.1E-02
6/7/2016	2.85	354.9	3.79E-06	3.32E-02
7/20/2016	10.0	359.6	1.35E-05	1.18E-01
8/8/2016	4.20	354.1	5.57E-06	4.88E-02
9/9/2016	6.50	346.9	8.45E-06	7.40E-02
10/10/2016	1.65	361.1	2.23E-06	1.95E-02
11/7/2016	3.05	357.8	4.09E-06	3.58E-02
12/7/2016	2.6	366.9	3.57E-06	3.13E-02
1/17/2017	9.8	376.7	1.38E-05	1.21E-01
2/8/2017	7.2	375.3	1.01E-05	8.87E-02
3/7/2017	8.4	355.8	1.12E-05	9.81E-02
4/6/2017	7.3	352.6	9.64E-06	8.45E-02
5/5/2017	3.1	353.8	4.11E-06	3.60E-02
6/7/2017	7.6	358.1	1.02E-05	8.93E-02
7/11/2017	7.5	346.0	9.72E-06	8.51E-02
8/7/2017	11	355.8	1.47E-05	1.28E-01
9/14/2017	13	368.0	1.79E-05	1.57E-01
10/5/2017	17	367.5	2.34E-05	2.05E-01
11/30/2017	10	375.2	1.41E-05	1.23E-01
12/8/2017	22	384.0	3.16E-05	2.77E-01
1/8/2018	51	390.1	7.45E-05	6.53E-01
2/6/2018	28	395.0	4.14E-05	3.63E-01
3/8/2018	11	381.9	1.57E-05	1.38E-01
4/3/2018	24	367.9	3.31E-05	2.90E-01
5/8/2018	19	349.6	2.49E-05	2.18E-01
6/6/2018	21	347.8	2.74E-05	2.40E-01
7/9/2018	22	345.2	2.84E-05	2.49E-01
8/20/2018	3.3	352.2	4.35E-06	3.81E-02
9/4/2018	4.3	336.8	5.42E-06	4.75E-02
10/8/2018	29	355.9	3.87E-05	3.39E-01
11/5/2018	38	194.6	2.77E-05	2.43E-01
12/10/2018	29	230.1	2.50E-05	2.19E-01
<b>Average Emission Rate<sup>(5)</sup> =</b>			<b>1.4E-01</b>	<b>lb/yr</b>
<b>NR 445 Emission Threshold =</b>			<b>830</b>	<b>lb/yr</b>

**Notes:**

VC = Vinyl Chloride  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour  
 lb/yr = pounds per year

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The VC concentration listed is representative of the effluent sample collected post treatment of the SVE and GETS operations.
- The VC concentration reported in the effluent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between January 2016 and December 2017.

Table 9  
 Estimate of GAC Influent Gas Rate - Total Volatile Organic Compounds  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	TOTAL VOC CONCENTRATION <sup>(4)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	21700	389.4	3.2E-02
2/8/2016	9600	362.2	1.3E-02
3/7/2016	6300	364.1	8.6E-03
4/6/2016	34800	363.8	4.7E-02
5/4/2016	27300	361.0	3.7E-02
6/7/2016	31700	354.9	4.2E-02
7/20/2016	32000	359.6	4.3E-02
8/8/2016	34200	354.1	4.5E-02
9/9/2016	17700	346.9	2.3E-02
10/10/2016	9100	361.1	1.2E-02
11/7/2016	27900	357.8	3.7E-02
12/7/2016	18000	366.9	2.5E-02
1/17/2017	33100	376.7	4.7E-02
2/8/2017	50300	375.3	7.1E-02
3/7/2017	15400	355.8	2.1E-02
4/6/2017	21400	352.6	2.8E-02
5/5/2017	8200	353.8	1.1E-02
6/7/2017	24400	358.1	3.3E-02
7/11/2017	24000	346.0	3.1E-02
8/7/2017	26100	355.8	3.5E-02
9/14/2017	27000	368.0	3.7E-02
10/5/2017	12400	367.5	1.7E-02
11/30/2017	15800	375.2	2.2E-02
12/8/2017	22900	384.0	3.3E-02
1/8/2018	16100	390.1	2.4E-02
2/6/2018	10800	395.0	1.6E-02
3/8/2018	13800	381.9	2.0E-02
4/3/2018	17300	367.9	2.4E-02
5/8/2018	12700	349.6	1.7E-02
6/6/2018	11400	347.8	1.5E-02
7/9/2018	17400	345.2	2.2E-02
8/20/2018	9500	352.2	1.3E-02
9/4/2018	14000	336.8	1.8E-02
10/8/2018	15200	355.9	2.0E-02
11/5/2018	16800	194.6	1.2E-02
12/10/2018	32500	230.1	2.8E-02
<b>Average Emission Rate<sup>(5)</sup> =</b>			<b>2.7E-02</b>
<b>NR 406 Emission Threshold =</b>			<b>5.7</b>
			<b>lb/hr</b>
			<b>lb/hr</b>

**Notes:**

VOCs = Volatile Organic Compounds  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The total VOC concentration listed is representative of the influent sample collected pre treatment of the SVE and GETS operations.
- Total VOC concentrations were calculated based on analytes reported above and below the method reporting limit. For detected analytes, the reported concentrations were used. For all other analytes detected below the method reporting limit, half of the reporting limit was used.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between July 2017 and December 2017.

Table 10  
 Estimate of GAC Influent Gas Rate for Tetrachloroethene  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	TOTAL PCE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	16000	389.4	2.3E-02
2/8/2016	7300	362.2	9.9E-03
3/7/2016	4700	364.1	6.4E-03
4/6/2016	28000	363.8	3.8E-02
5/4/2016	21000	361.0	2.8E-02
6/7/2016	25000	354.9	3.3E-02
7/20/2016	24000	359.6	3.2E-02
8/8/2016	26000	354.1	3.4E-02
9/9/2016	13000	346.9	1.7E-02
10/10/2016	7000	361.1	9.5E-03
11/7/2016	21000	357.8	2.8E-02
12/7/2016	12000	366.9	1.6E-02
1/17/2017	22000	376.7	3.1E-02
2/8/2017	36000	375.3	5.1E-02
3/7/2017	9300	355.8	1.2E-02
4/6/2017	15000	352.6	2.0E-02
5/5/2017	5500	353.8	7.3E-03
6/7/2017	17000	358.1	2.3E-02
7/11/2017	16000	346.0	2.1E-02
8/7/2017	18000	355.8	2.4E-02
9/14/2017	20000	368.0	2.8E-02
10/5/2017	9100	367.5	1.3E-02
11/30/2017	11000	375.2	1.5E-02
12/8/2017	16000	384.0	2.3E-02
1/8/2018	9800	390.1	1.4E-02
2/6/2018	5900	395.0	8.7E-03
3/8/2018	7400	381.9	1.1E-02
4/3/2018	11000	367.9	1.5E-02
5/8/2018	7600	349.6	1.0E-02
6/6/2018	6700	347.8	8.7E-03
7/9/2018	11000	345.2	1.4E-02
8/20/2018	3600	352.2	4.7E-03
9/4/2018	6000	336.8	7.6E-03
10/8/2018	8900	355.9	1.2E-02
11/5/2018	9300	194.6	6.8E-03
12/10/2018	24000	230.1	2.1E-02
<b>Average Emission Rate<sup>(5)</sup> =</b>		<b>1.9E-02</b>	<b>lb/hr</b>
<b>NR 445 Emission Threshold =</b>		<b>35.4</b>	<b>lb/hr</b>

**Notes:**

PCE = Tetrachloroethene  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The PCE concentration listed is representative of the influent sample collected pre treatment of the SVE and GETS operations.
- The PCE concentration reported in the influent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between July 2017 and December 2017.

Table 11  
 Estimate of GAC Influent Gas Rate for Trichloroethene  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	TCE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	2000	389.4	2.9E-03
2/8/2016	710	362.2	9.6E-04
3/7/2016	420	364.1	5.7E-04
4/6/2016	2200	363.8	3.0E-03
5/4/2016	1800	361.0	2.4E-03
6/7/2016	2200	354.9	2.9E-03
7/20/2016	2400	359.6	3.2E-03
8/8/2016	3000	354.1	4.0E-03
9/9/2016	2100	346.9	2.7E-03
10/10/2016	720	361.1	9.7E-04
11/7/2016	2500	357.8	3.4E-03
12/7/2016	2400	366.9	3.3E-03
1/17/2017	4700	376.7	6.6E-03
2/8/2017	5700	375.3	8.0E-03
3/7/2017	2300	355.8	3.1E-03
4/6/2017	2300	352.6	3.0E-03
5/5/2017	1300	353.8	1.7E-03
6/7/2017	2800	358.1	3.8E-03
7/11/2017	2800	346.0	3.6E-03
8/7/2017	3100	355.8	4.1E-03
9/14/2017	2600	368.0	3.6E-03
10/5/2017	1400	367.5	1.9E-03
11/30/2017	2100	375.2	3.0E-03
12/8/2017	2900	384.0	4.2E-03
1/8/2018	2400	390.1	3.5E-03
2/6/2018	2000	395.0	3.0E-03
3/8/2018	2400	381.9	3.4E-03
4/3/2018	2500	367.9	3.4E-03
5/8/2018	2200	349.6	2.9E-03
6/6/2018	1800	347.8	2.3E-03
7/9/2018	2700	345.2	3.5E-03
8/20/2018	1800	352.2	2.4E-03
9/4/2018	2800	336.8	3.5E-03
10/8/2018	2200	355.9	2.9E-03
11/5/2018	2900	194.6	2.1E-03
12/10/2018	3300	230.1	2.8E-03
<b>Average Emission Rate<sup>(5)</sup> =</b>		<b>3.1E-03</b>	<b>lb/hr</b>
<b>NR 445 Emission Threshold =</b>		<b>56.1</b>	<b>lb/hr</b>

**Notes:**

TCE = Trichloroethene  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019

Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The TCE concentration listed is representative of the influent sample collected pre treatment of the SVE and GETS operations.
- The TCE concentration reported in the influent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between July 2017 and December 2017.

Table 12  
 Estimate of GAC Influent Gas Rate for cis-1,2-Dichloroethene  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	CIS-1,2-DCE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>
	µg/m <sup>3</sup>	CFM	lb/hr
1/18/2016	2500	389.4	3.6E-03
2/8/2016	880	362.2	1.2E-03
3/7/2016	610	364.1	8.3E-04
4/6/2016	1900	363.8	2.6E-03
5/4/2016	2100	361.0	2.8E-03
6/7/2016	1800	354.9	2.4E-03
7/20/2016	2100	359.6	2.8E-03
8/8/2016	2400	354.1	3.2E-03
9/9/2016	1400	346.9	1.8E-03
10/10/2016	910	361.1	1.2E-03
11/7/2016	2300	357.8	3.1E-03
12/7/2016	2600	366.9	3.6E-03
1/17/2017	4500	376.7	6.3E-03
2/8/2017	4600	375.3	6.5E-03
3/7/2017	2800	355.8	3.7E-03
4/6/2017	2700	352.6	3.6E-03
5/5/2017	1000	353.8	1.3E-03
6/7/2017	2400	358.1	3.2E-03
7/11/2017	3400	346.0	4.4E-03
8/7/2017	2900	355.8	3.9E-03
9/14/2017	1700	368.0	2.3E-03
10/5/2017	1100	367.5	1.5E-03
11/30/2017	1700	375.2	2.4E-03
12/8/2017	2900	384.0	4.2E-03
1/8/2018	2800	390.1	4.1E-03
2/6/2018	2400	395.0	3.6E-03
3/8/2018	3100	381.9	4.4E-03
4/3/2018	2700	367.9	3.7E-03
5/8/2018	2400	349.6	3.1E-03
6/6/2018	2300	347.8	3.0E-03
7/9/2018	2500	345.2	3.2E-03
8/20/2018	3400	352.2	4.5E-03
9/4/2018	4600	336.8	5.8E-03
10/8/2018	2600	355.9	3.5E-03
11/5/2018	3600	194.6	2.6E-03
12/10/2018	3600	230.1	3.1E-03
<b>Average Emission Rate<sup>(5)</sup> =</b>		<b>2.7E-03</b>	<b>lb/hr</b>
<b>NR 445 Emission Threshold =</b>		<b>166</b>	<b>lb/hr</b>

**Notes:**

cis-1,2-DCE = cis-1,2-Dichloroethene  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The Cis,1,2-DCE concentration listed is representative of the influent sample collected pre treatment of the SVE and GETS operations.
- The cis-1,2-DCE concentration reported in the influent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between July 2017 and December 2017.

Table 13  
 Estimate of GAC Influent Gas Rate for Vinyl Chloride  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

DATE	VINYL CHLORIDE CONCENTRATION <sup>(1)(2)</sup>	SYSTEM FLOW RATE <sup>(3)</sup>	EMISSION RATE <sup>(4)</sup>	
	µg/m <sup>3</sup>	CFM	lb/hr	lb/yr
1/18/2016	9.0	389.4	1.3E-05	1.1E-01
2/8/2016	4.7	362.2	6.4E-06	5.6E-02
3/7/2016	2.8	364.1	3.8E-06	3.3E-02
4/6/2016	20.0	363.8	2.7E-05	2.4E-01
5/4/2016	18.0	361	2.4E-05	2.1E-01
6/7/2016	20.5	354.9	2.7E-05	2.39E-01
7/20/2016	26.0	359.6	3.5E-05	3.07E-01
8/8/2016	20.5	354.1	2.7E-05	2.38E-01
9/9/2016	9.0	346.9	1.2E-05	1.02E-01
10/10/2016	3.4	361.1	4.6E-06	4.03E-02
11/7/2016	15.5	357.8	2.1E-05	1.82E-01
12/7/2016	7.0	366.9	9.6E-06	8.43E-02
1/17/2017	14.0	376.7	2.0E-05	1.73E-01
2/8/2017	30.0	375.3	4.2E-05	3.69E-01
3/7/2017	7.5	355.8	1.0E-05	8.76E-02
4/6/2017	10.5	352.6	1.4E-05	1.21E-01
5/5/2017	3.2	353.8	4.2E-06	3.71E-02
6/7/2017	16.5	358.1	2.2E-05	1.94E-01
7/11/2017	13.0	346.0	1.7E-05	1.48E-01
8/7/2017	16.0	355.8	2.1E-05	1.87E-01
9/14/2017	19.5	368.0	2.7E-05	2.35E-01
10/5/2017	6.0	367.5	8.3E-06	7.24E-02
11/30/2017	18.0	375.2	2.5E-05	2.22E-01
12/8/2017	26.0	384.0	3.7E-05	3.28E-01
1/8/2018	58.0	390.1	8.5E-05	7.42E-01
2/6/2018	26.0	395.0	3.8E-05	3.37E-01
3/8/2018	26.0	381.9	3.7E-05	3.26E-01
4/3/2018	22	367.9	3.0E-05	2.66E-01
5/8/2018	18	349.6	2.4E-05	2.06E-01
6/6/2018	21	347.8	2.7E-05	2.40E-01
7/9/2018	22	345.2	2.8E-05	2.49E-01
8/20/2018	19	352.2	2.5E-05	2.20E-01
9/4/2018	32	336.8	4.0E-05	3.54E-01
10/8/2018	37	355.9	4.9E-05	4.32E-01
11/5/2018	44	194.6	3.2E-05	2.81E-01
12/10/2018	31	230.1	2.7E-05	2.34E-01
<b>Average Emission Rate<sup>(5)</sup> = NR 445 Emission Threshold =</b>			<b>1.4E-01 830</b>	<b>lb/yr lb/yr</b>

**Notes:**

VC = Vinyl Chloride  
 SVE = Soil Vapor Extraction  
 GETS = Groundwater extraction and treatment system.  
 CFM = cubic feet per minute  
 µg/m<sup>3</sup> = micrograms per cubic meters  
 lb/hr = pounds per hour  
 lb/yr = pounds per year

Updated by: B. Wachholz 1/2/2019  
 Checked by: C. Olson 1/4/2019

**Footnotes:**

- As of 7/14/2015 the vapors recovered from the SVE system and the GETS operation were combined and are treated through a vapor-phase activated carbon system. An influent and effluent vapor sample is collected each month and analyzed using Method TO-15. The VC concentration listed is representative of the influent sample collected pre treatment of the SVE and GETS operations.
- The VC concentration reported in the influent sample was used for emission calculations. If the concentration was reported below the method reporting limit, half of the reporting limit was used for calculations.
- The system flow rate is a combined air flow rate from both the GETS and SVE system and is measured using flow meter FIT-201 which measures total flow from the activated carbon system.
- Emission rates were calculated based on the product of the monthly concentration and monthly system flow rate.
- Average Emission Rate is an average based on samples collected between July 2017 and December 2017.

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-1	1/4/2018	-81.6	29.5	--
SVE-1	1/8/2018	-68.0	41.2	0.0
SVE-1	1/11/2018	-81.6	14.7	--
SVE-1	1/17/2018	-81.6	14.7	--
SVE-1	1/24/2018	-68.0	15.0	--
SVE-1	2/6/2018	-81.6	10.4	0.3
SVE-1	2/7/2018	-68.0	15.0	--
SVE-1	2/13/2018	-68.0	15.0	--
SVE-1	2/21/2018	-68.0	15.0	--
SVE-1	2/28/2018	-81.6	14.7	--
SVE-1	3/6/2018	-81.6	14.7	--
SVE-1	3/8/2018	-81.6	18.1	0.2
SVE-1	3/13/2018	-68.0	15.0	--
SVE-1	3/19/2018	-68.0	15.0	--
SVE-1	3/26/2018	-68.0	15.0	--
SVE-1	4/3/2018	-81.6	14.7	0.4
SVE-1	4/4/2018	-68.0	15.0	--
SVE-1	4/10/2018	-68.0	15.0	--
SVE-1	4/17/2018	-74.8	14.9	--
SVE-1	4/27/2018	-102.0	14.3	--
SVE-1	5/8/2018	-95.2	14.4	0.4
SVE-1	5/9/2018	-74.8	14.9	--
SVE-1	5/17/2018	-68.0	15.0	--
SVE-1	5/25/2018	-81.6	14.7	--
SVE-1	5/31/2018	-61.2	15.2	--
SVE-1	6/6/2018	-95.2	14.4	0.2
SVE-1	6/12/2018	-61.2	15.2	--
SVE-1	6/19/2018	-65.3	15.1	--
SVE-1	6/27/2018	-66.6	15.1	--
SVE-1	7/1/2018	-61.2	15.2	--
SVE-1	7/9/2018	-95.2	45.6	0.8
SVE-1	7/27/2018	-88.4	17.9	--
SVE-1	7/31/2018	-68.0	15.0	--
SVE-1	8/7/2018	-61.2	15.2	--
SVE-1	8/8/2018	-95.2	17.7	0.8
SVE-1	8/22/2018	-81.6	14.7	--
SVE-1	9/5/2018	-66.6	15.1	--
SVE-1	9/10/2018	-102.0	20.2	1.2
SVE-1	9/19/2018	-95.2	17.7	--
SVE-1	9/25/2018	-61.2	15.2	--
SVE-1	10/4/2018	-95.2	14.4	--
SVE-1	10/8/2018	-95.2	14.4	0.4
SVE-1	10/12/2018	-54.4	15.3	--
SVE-1	10/17/2018	-68.0	15.0	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-2	1/4/2018	-70.7	32.8	--
SVE-2	1/8/2018	-54.4	37.6	0.0
SVE-2	1/11/2018	-54.4	36.0	--
SVE-2	1/17/2018	-54.4	36.0	--
SVE-2	1/24/2018	-54.4	36.0	--
SVE-2	2/6/2018	-68.0	33.6	2.8
SVE-2	2/7/2018	-68.0	35.3	--
SVE-2	2/13/2018	-66.6	35.3	--
SVE-2	2/21/2018	-68.0	35.3	--
SVE-2	2/28/2018	-68.0	--	--
SVE-2	3/6/2018	-68.0	35.3	--
SVE-2	3/8/2018	-68.0	23.8	0.3
SVE-2	3/13/2018	-68.0	35.3	--
SVE-2	3/19/2018	-68.0	35.3	--
SVE-2	3/26/2018	-68.0	35.3	--
SVE-2	4/3/2018	-68.0	26.1	1.4
SVE-2	4/4/2018	-68.0	35.3	--
SVE-2	4/10/2018	-68.0	35.3	--
SVE-2	4/17/2018	-68.0	35.3	--
SVE-2	4/27/2018	-88.4	20.6	--
SVE-2	5/8/2018	-88.4	--	0.9
SVE-2	5/9/2018	-74.8	--	--
SVE-2	5/17/2018	-54.4	--	--
SVE-2	5/25/2018	-68.0	--	--
SVE-2	5/31/2018	-54.4	36.0	--
SVE-2	6/6/2018	-81.6	18.1	0.6
SVE-2	6/12/2018	-68.0	35.3	--
SVE-2	6/19/2018	-54.4	34.3	--
SVE-2	6/27/2018	-66.6	32.0	--
SVE-2	7/1/2018	-61.2	32.2	--
SVE-2	7/9/2018	-88.4	14.6	1.5
SVE-2	7/27/2018	-68.0	15.0	--
SVE-2	7/31/2018	-68.0	35.3	--
SVE-2	8/7/2018	-68.0	35.3	--
SVE-2	8/8/2018	-74.8	14.9	1.3
SVE-2	8/22/2018	-61.2	24.0	--
SVE-2	9/5/2018	-57.1	35.8	--
SVE-2	9/10/2018	-81.6	18.1	0.8
SVE-2	9/19/2018	-74.8	21.1	--
SVE-2	9/25/2018	-54.4	32.5	--
SVE-2	10/4/2018	-81.6	10.4	--
SVE-2	10/8/2018	-81.6	33.0	0.9
SVE-2	10/12/2018	-68.0	35.3	--
SVE-2	10/17/2018	-68.0	0.0	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-3	1/4/2018	-95.2	31.3	--
SVE-3	1/8/2018	-61.2	48.0	0.0
SVE-3	1/11/2018	-81.6	14.7	--
SVE-3	1/17/2018	54.4	17.5	--
SVE-3	1/24/2018	-68.0	15.0	--
SVE-3	2/6/2018	-74.8	14.9	1.8
SVE-3	2/7/2018	-68.0	15.0	--
SVE-3	2/13/2018	-68.0	15.0	--
SVE-3	2/21/2018	-68.0	15.0	--
SVE-3	2/28/2018	-74.8	14.9	--
SVE-3	3/6/2018	-68.0	15.0	--
SVE-3	3/8/2018	-81.6	14.7	2.1
SVE-3	3/13/2018	-68.0	15.0	--
SVE-3	3/19/2018	-68.0	15.0	--
SVE-3	3/26/2018	-68.0	15.0	--
SVE-3	4/3/2018	-81.6	14.7	2.1
SVE-3	4/4/2018	-68.0	15.0	--
SVE-3	4/10/2018	-68.0	15.0	--
SVE-3	4/17/2018	-68.0	15.0	--
SVE-3	4/27/2018	-95.2	10.2	--
SVE-3	5/8/2018	-95.2	32.3	1.3
SVE-3	5/9/2018	-74.8	14.9	--
SVE-3	5/17/2018	-54.4	24.3	--
SVE-3	5/25/2018	-68.0	15.0	--
SVE-3	5/31/2018	-68.0	15.0	--
SVE-3	6/6/2018	-88.4	20.6	1.9
SVE-3	6/12/2018	-63.9	15.1	--
SVE-3	6/19/2018	-61.2	15.2	--
SVE-3	6/27/2018	-66.6	0.0	--
SVE-3	7/1/2018	-61.2	15.2	--
SVE-3	7/9/2018	-102.0	45.1	2.7
SVE-3	7/27/2018	-81.6	10.4	--
SVE-3	7/31/2018	-68.0	15.0	--
SVE-3	8/7/2018	-68.0	--	--
SVE-3	8/8/2018	-88.4	10.3	3.3
SVE-3	8/22/2018	-61.2	15.2	--
SVE-3	9/5/2018	-57.1	15.3	--
SVE-3	9/10/2018	-95.2	14.4	2.2
SVE-3	9/19/2018	-81.6	10.4	--
SVE-3	9/25/2018	-61.2	15.2	--
SVE-3	10/4/2018	-81.6	10.4	--
SVE-3	10/8/2018	-88.4	10.3	0.3
SVE-3	10/12/2018	-68.0	0.0	--
SVE-3	10/17/2018	-68.0	0.0	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-4	1/4/2018	-95.2	31.9	--
SVE-4	1/8/2018	-54.4	18.8	0.0
SVE-4	1/11/2018	-61.2	21.5	--
SVE-4	1/17/2018	-68.0	21.3	--
SVE-4	1/24/2018	-68.0	21.3	--
SVE-4	2/6/2018	-68.0	21.3	1.2
SVE-4	2/7/2018	-68.0	21.3	--
SVE-4	2/13/2018	-68.0	21.3	--
SVE-4	2/21/2018	-68.0	21.3	--
SVE-4	2/28/2018	-68.0	21.3	--
SVE-4	3/6/2018	-68.0	21.3	--
SVE-4	3/8/2018	-68.0	23.8	1.1
SVE-4	3/13/2018	-68.0	21.3	--
SVE-4	3/19/2018	-68.0	21.3	--
SVE-4	3/26/2018	-68.0	21.3	--
SVE-4	4/3/2018	-74.8	23.5	1.4
SVE-4	4/4/2018	-68.0	21.3	--
SVE-4	4/10/2018	-68.0	21.3	--
SVE-4	4/17/2018	-68.0	21.3	--
SVE-4	4/27/2018	-88.4	23.1	--
SVE-4	5/8/2018	-88.4	23.1	1.1
SVE-4	5/9/2018	-74.8	21.1	--
SVE-4	5/17/2018	-61.2	24.0	--
SVE-4	5/25/2018	-61.2	21.5	--
SVE-4	5/31/2018	-61.2	24.0	--
SVE-4	6/6/2018	-81.6	20.8	1.8
SVE-4	6/12/2018	-61.2	24.0	--
SVE-4	6/19/2018	-63.9	21.4	--
SVE-4	6/27/2018	-66.6	23.8	--
SVE-4	7/1/2018	-61.2	24.0	--
SVE-4	7/9/2018	-88.4	23.1	3.9
SVE-4	7/27/2018	-81.6	23.3	--
SVE-4	7/31/2018	-68.0	23.8	--
SVE-4	8/7/2018	-61.2	15.2	--
SVE-4	8/8/2018	-81.6	23.3	3.8
SVE-4	8/22/2018	-81.6	23.3	--
SVE-4	9/5/2018	-57.1	24.2	--
SVE-4	9/10/2018	-95.2	22.8	5.6
SVE-4	9/19/2018	-81.6	20.8	--
SVE-4	9/25/2018	-61.2	24.0	--
SVE-4	10/4/2018	-81.6	18.1	--
SVE-4	10/8/2018	-81.6	14.7	2.2
SVE-4	10/12/2018	-68.0	15.0	--
SVE-4	10/17/2018	-68.0	21.3	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-5	1/4/2018	-34.0	34.2	--
SVE-5	1/8/2018	-64.6	26.2	0.0
SVE-5	1/11/2018	-34.0	24.9	--
SVE-5	1/17/2018	-74.8	23.5	--
SVE-5	1/24/2018	-68.0	23.8	--
SVE-5	2/6/2018	-68.0	26.1	0.3
SVE-5	2/7/2018	-68.0	23.8	--
SVE-5	2/13/2018	-68.0	23.8	--
SVE-5	2/21/2018	-68.0	23.8	--
SVE-5	2/28/2018	-74.8	23.5	--
SVE-5	3/6/2018	-74.8	23.5	--
SVE-5	3/8/2018	-81.6	27.6	0.3
SVE-5	3/13/2018	-68.0	23.8	--
SVE-5	3/19/2018	-68.0	23.8	--
SVE-5	3/26/2018	-68.0	23.8	--
SVE-5	4/3/2018	-81.6	23.3	0.6
SVE-5	4/4/2018	-68.0	23.8	--
SVE-5	4/10/2018	-74.8	23.5	--
SVE-5	4/17/2018	-74.8	23.5	--
SVE-5	4/27/2018	-95.2	25.0	--
SVE-5	5/8/2018	-95.2	22.8	0.5
SVE-5	5/9/2018	-74.8	23.5	--
SVE-5	5/17/2018	-54.4	24.3	--
SVE-5	5/25/2018	-61.2	24.0	--
SVE-5	5/31/2018	-61.2	24.0	--
SVE-5	6/6/2018	-95.2	25.0	0.5
SVE-5	6/12/2018	-61.2	24.0	--
SVE-5	6/19/2018	-61.2	24.0	--
SVE-5	6/27/2018	-61.2	25.0	--
SVE-5	7/1/2018	-61.2	25.0	--
SVE-5	7/9/2018	-95.2	25.0	1.6
SVE-5	7/27/2018	-88.4	23.1	--
SVE-5	7/31/2018	-68.0	23.8	--
SVE-5	8/7/2018	-61.2	24.0	--
SVE-5	8/8/2018	-95.2	25.0	1.4
SVE-5	8/22/2018	-74.8	25.4	--
SVE-5	9/5/2018	-57.1	34.2	--
SVE-5	9/10/2018	-95.2	28.9	2.8
SVE-5	9/19/2018	-91.8	27.1	--
SVE-5	9/25/2018	-61.2	24.0	--
SVE-5	10/4/2018	-81.6	23.3	--
SVE-5	10/8/2018	-91.8	17.8	1.1
SVE-5	10/12/2018	-68.0	23.8	--
SVE-5	10/17/2018	-68.0	23.8	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-6	1/4/2018	-34.0	18.7	--
SVE-6	1/8/2018	-54.4	24.3	0.0
SVE-6	1/11/2018	-54.4	18.8	--
SVE-6	1/17/2018	-68.0	18.4	--
SVE-6	1/24/2018	-68.0	18.4	--
SVE-6	2/6/2018	-68.0	33.6	0.1
SVE-6	2/7/2018	-68.0	18.4	--
SVE-6	2/13/2018	-68.0	18.4	--
SVE-6	2/21/2018	-68.0	18.4	--
SVE-6	2/28/2018	-68.0	18.4	--
SVE-6	3/6/2018	-68.0	18.4	--
SVE-6	3/8/2018	-68.0	26.1	0.4
SVE-6	3/13/2018	-68.0	18.4	--
SVE-6	3/19/2018	-68.0	18.4	--
SVE-6	3/26/2018	-68.0	18.4	--
SVE-6	4/3/2018	-74.8	27.9	0.5
SVE-6	4/4/2018	-68.0	18.4	--
SVE-6	4/10/2018	-68.0	18.4	--
SVE-6	4/17/2018	-68.0	18.4	--
SVE-6	4/27/2018	-88.4	32.6	--
SVE-6	5/8/2018	-88.4	27.3	0.4
SVE-6	5/9/2018	-74.8	23.5	--
SVE-6	5/17/2018	-54.4	30.7	--
SVE-6	5/25/2018	-54.4	18.8	--
SVE-6	5/31/2018	-61.2	18.6	--
SVE-6	6/6/2018	-81.6	27.6	0.2
SVE-6	6/12/2018	-61.2	26.3	--
SVE-6	6/19/2018	-61.2	18.6	--
SVE-6	6/27/2018	-66.6	26.1	--
SVE-6	7/1/2018	-61.2	25.4	--
SVE-6	7/9/2018	-81.6	31.3	0.7
SVE-6	7/27/2018	-68.0	31.9	--
SVE-6	7/31/2018	-68.0	33.6	--
SVE-6	8/7/2018	-66.6	33.7	--
SVE-6	8/8/2018	-81.6	31.3	0.7
SVE-6	8/22/2018	-74.8	23.5	--
SVE-6	9/5/2018	-57.1	24.2	--
SVE-6	9/10/2018	-88.4	38.6	1.4
SVE-6	9/19/2018	-81.6	36.1	--
SVE-6	9/25/2018	-61.2	34.0	--
SVE-6	10/4/2018	-81.6	25.5	--
SVE-6	10/8/2018	-81.6	25.5	0.7
SVE-6	10/12/2018	-54.4	24.3	--
SVE-6	10/17/2018	-68.0	23.8	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-7	1/4/2018	-74.8	18.2	--
SVE-7	1/8/2018	-61.2	18.6	0.0
SVE-7	1/11/2018	-61.2	21.5	--
SVE-7	1/17/2018	-74.8	21.1	--
SVE-7	1/24/2018	-74.8	21.1	--
SVE-7	2/6/2018	-68.0	18.4	0.0
SVE-7	2/7/2018	-68.0	21.3	--
SVE-7	2/13/2018	-68.0	21.3	--
SVE-7	2/21/2018	-68.0	21.3	--
SVE-7	2/28/2018	-74.8	21.1	--
SVE-7	3/6/2018	-74.8	21.1	--
SVE-7	3/8/2018	-68.0	21.3	0.0
SVE-7	3/13/2018	-68.0	18.4	--
SVE-7	3/19/2018	-68.0	18.4	--
SVE-7	3/26/2018	-68.0	18.4	--
SVE-7	4/3/2018	-74.8	18.2	0.2
SVE-7	4/4/2018	-68.0	18.4	--
SVE-7	4/10/2018	-68.0	21.3	--
SVE-7	4/17/2018	-74.8	18.2	--
SVE-7	4/27/2018	-95.2	17.7	--
SVE-7	5/8/2018	-95.2	17.7	0.2
SVE-7	5/9/2018	-74.8	31.6	--
SVE-7	5/17/2018	-61.2	18.6	--
SVE-7	5/25/2018	-61.2	21.5	--
SVE-7	5/31/2018	-61.2	18.6	--
SVE-7	6/6/2018	-81.6	18.1	0.0
SVE-7	6/12/2018	-61.2	18.6	--
SVE-7	6/19/2018	-61.2	18.6	--
SVE-7	6/27/2018	-61.2	20.4	--
SVE-7	7/1/2018	-61.2	18.6	--
SVE-7	7/9/2018	-88.4	20.6	0.4
SVE-7	7/27/2018	-81.6	20.8	--
SVE-7	7/31/2018	-68.0	21.3	--
SVE-7	8/7/2018	-61.2	24.0	--
SVE-7	8/8/2018	-81.6	20.8	0.3
SVE-7	8/22/2018	-74.8	23.5	--
SVE-7	9/5/2018	-61.2	24.0	--
SVE-7	9/10/2018	-95.2	22.8	1.4
SVE-7	9/19/2018	-81.6	20.8	--
SVE-7	9/25/2018	-61.2	24.0	--
SVE-7	10/4/2018	-81.6	18.1	--
SVE-7	10/8/2018	-81.6	18.1	0.2
SVE-7	10/12/2018	-54.4	21.7	--
SVE-7	10/17/2018	-68.0	18.4	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H2O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-8	1/4/2018	-36.7	31.4	--
SVE-8	1/8/2018	-61.2	30.4	0.0
SVE-8	1/11/2018	-68.0	26.1	--
SVE-8	1/17/2018	-68.0	26.1	--
SVE-8	1/24/2018	-68.0	26.1	--
SVE-8	2/6/2018	-68.0	26.1	0.0
SVE-8	2/7/2018	-68.0	26.1	--
SVE-8	2/13/2018	-68.0	26.1	--
SVE-8	2/21/2018	-68.0	26.1	--
SVE-8	2/28/2018	-74.8	27.9	--
SVE-8	3/6/2018	-68.0	26.1	--
SVE-8	3/8/2018	-74.8	23.5	0.1
SVE-8	3/13/2018	-68.0	28.1	--
SVE-8	3/19/2018	-68.0	28.1	--
SVE-8	3/26/2018	-61.2	28.4	--
SVE-8	4/3/2018	-74.8	27.9	0.2
SVE-8	4/4/2018	-68.0	28.1	--
SVE-8	4/10/2018	-68.0	26.1	--
SVE-8	4/17/2018	-68.0	28.1	--
SVE-8	4/27/2018	-95.2	30.6	--
SVE-8	5/8/2018	-95.2	28.9	0.2
SVE-8	5/9/2018	-74.8	27.9	--
SVE-8	5/17/2018	-61.2	28.4	--
SVE-8	5/25/2018	-68.0	26.1	--
SVE-8	5/31/2018	-61.2	28.4	--
SVE-8	6/6/2018	-88.4	27.3	0.0
SVE-8	6/12/2018	-61.2	28.4	--
SVE-8	6/19/2018	-61.2	28.4	--
SVE-8	6/27/2018	-61.2	28.4	--
SVE-8	7/1/2018	-61.2	30.4	--
SVE-8	7/9/2018	-88.4	20.6	0.2
SVE-8	7/27/2018	-81.6	27.6	--
SVE-8	7/31/2018	-68.0	26.1	--
SVE-8	8/7/2018	-61.2	28.4	--
SVE-8	8/8/2018	-88.4	27.3	0.3
SVE-8	8/22/2018	-74.8	33.3	--
SVE-8	9/5/2018	-57.1	34.2	--
SVE-8	9/10/2018	-95.2	32.3	1.1
SVE-8	9/19/2018	-81.6	29.5	--
SVE-8	9/25/2018	-61.2	28.4	--
SVE-8	10/4/2018	-81.6	23.3	--
SVE-8	10/8/2018	-81.6	20.8	0.1
SVE-8	10/12/2018	-54.4	28.7	--
SVE-8	10/17/2018	-68.0	23.8	--

Table 14  
 Summary of SVE Operations - January 1, 2018 - December 31, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL ID	DATE	VACUUM (in H <sub>2</sub> O)	FLOW RATE (cfm)	VOCs (ppm)
SVE-9	1/4/2018	-38.1	0.0	--
SVE-9	1/8/2018	-54.4	23.3	0.0
SVE-9	1/11/2018	-54.4	18.8	--
SVE-9	1/17/2018	-54.4	18.8	--
SVE-9	1/24/2018	-54.4	18.8	--
SVE-9	2/6/2018	-47.6	24.5	0.4
SVE-9	2/7/2018	-54.4	18.8	--
SVE-9	2/13/2018	-54.4	18.8	--
SVE-9	2/21/2018	-54.4	18.8	--
SVE-9	2/28/2018	-68.0	18.4	--
SVE-9	3/6/2018	-54.4	18.8	--
SVE-9	3/8/2018	-54.4	18.8	1.5
SVE-9	3/13/2018	-68.0	18.4	--
SVE-9	3/19/2018	-54.4	18.8	--
SVE-9	3/26/2018	-54.4	18.8	--
SVE-9	4/3/2018	-61.2	18.6	1.3
SVE-9	4/4/2018	-54.4	18.8	--
SVE-9	4/10/2018	-54.4	18.8	--
SVE-9	4/17/2018	-54.4	18.8	--
SVE-9	4/27/2018	-68.0	15.0	--
SVE-9	5/8/2018	-95.2	17.7	0.7
SVE-9	5/9/2018	-68.0	18.4	--
SVE-9	5/17/2018	-54.4	18.8	--
SVE-9	5/25/2018	-54.4	18.8	--
SVE-9	5/31/2018	-68.0	18.4	--
SVE-9	6/6/2018	-68.0	18.4	0.8
SVE-9	6/12/2018	-54.4	18.8	--
SVE-9	6/19/2018	-61.2	18.6	--
SVE-9	6/27/2018	-54.4	18.8	--
SVE-9	7/1/2018	-68.0	18.4	--
SVE-9	7/9/2018	-68.0	58.3	2.1
SVE-9	7/27/2018	-68.0	18.4	--
SVE-9	7/31/2018	-54.4	18.8	--
SVE-9	8/7/2018	-54.4	18.8	--
SVE-9	8/8/2018	-54.4	18.8	0.9
SVE-9	8/22/2018	-54.4	18.8	--
SVE-9	9/5/2018	-54.4	18.8	--
SVE-9	9/10/2018	-68.0	21.3	2.0
SVE-9	9/19/2018	-34.0	15.8	--
SVE-9	9/25/2018	-68.0	18.4	--
SVE-9	10/4/2018	-27.2	11.3	--
SVE-9	10/8/2018	-61.2	10.7	0.4
SVE-9	10/12/2018	-54.4	18.8	--
SVE-9	10/17/2018	-54.4	18.8	--

**Notes:**

System operation data before January 2016 was previously reported.

Photoionization Detector (PID) did not calibrate on April 6, 2016.

NR = No reading recorded during system inspection.

- = data not collected due to operational issues

-- = not monitored

cfm = cubic feet per minute

GETS = Groundwater Extraction System

in H<sub>2</sub>O = Inches of water column

ppm = parts per million

SVE = Soil Vapor Extraction

VOCs = Volatile Organic Compounds

**Footnotes:**

<sup>(1)</sup> SVE-2 differential pressure gauge not working during 8/15/16 sampling event.

<sup>(2)</sup> The differential pressure was not recorded during the November 7, 2017 monitoring event.

Table 15  
Groundwater Monitoring Plan - 2018  
Madison-Kipp Corporation  
201 Waubesa Street  
Madison, Wisconsin

WELL/ POINT ID	BEDROCK UNIT	SCREENED INTERVAL (ft bgs)	APRIL & OCTOBER GAUGING	APRIL VOC SAMPLING	APRIL PCB SAMPLING	OCTOBER VOC SAMPLING	OCTOBER PCB SAMPLING	PUMP TYPE
GWE-1*	Lone Rock/ Wonewoc	55-175	x	x		x		NA
MW-1	Unconsolidated	14-24	x			x		Peristaltic
MW-2S	Unconsolidated	19-29	x				x	NA
MW-2D	Upper Lone Rock	39-44	x	x		x	x	Peristaltic
MW-3S	Unconsolidated	19-29	x			x		Peristaltic
MW-3D	Upper Lone Rock	48-53	x	x		x	x	Peristaltic
MW-3D2	Lower Lone Rock	76-81	x	x		x		Peristaltic
MW-3D3	Lower Wonewoc	214-224	x			x		GeoSub
MW-4S	Unconsolidated/ Upper Lone Rock	35-50	x		x		x	NA
MW-4D	Lower Lone Rock	65-70	x		x		x	NA
MW-4D2	Lower Lone Rock	91-96	x	x		x		Bladder
MW-5S	Upper Lone Rock	34-44	x			x	x	Peristaltic
MW-5D	Lower Lone Rock	75-80	x	x		x	x	Peristaltic
MW-5D2	Lower Wonewoc	166-171	x	x		x		Bladder
MW-5D3	Lower Wonewoc	225-235	x	x		x		GeoSub
MW-6S	Unconsolidated/ Upper Lone Rock	32-42	x		x	x	x	Bladder
MW-6D	Lower Lone Rock	66-71	x	x		x	x	Bladder
MW-7	Unconsolidated	25-35	x					NA
MW-8	Unconsolidated	24-34	x					NA
MW-9D	Upper Lone Rock	44-49	x			x		Peristaltic
MW-9D2	Lower Lone Rock	64-69	x	x		x		Peristaltic
MW-10S	Unconsolidated	11-21	x					NA
MW-11S	Unconsolidated	24-34	x		x		x	NA
MW-12S	Unconsolidated	3-13	x					NA
MW-17	Lower Wonewoc	160-170	x	x		x		Bladder
MW-18S	Unconsolidated	20-30	x					NA
MW-21D2	Upper/Lower Wonewoc	110-170	x					NA
MW-22S	Unconsolidated	25-35						Well Abandoned on January 16, 2018
MW-22D	Upper Lone Rock	45-50						Well Abandoned on January 16, 2018
MW-23S	Unconsolidated	25-35						Well Abandoned on January 16, 2018
MW-23D	Upper Lone Rock	45-50						Well Abandoned on January 16, 2018
MW-24	Upper Lone Rock	30-40	x		x		x	NA
MW-25D	Upper Wonewoc	120-130	x			x		Bladder
MW-25D2	Upper Wonewoc	160-170	x	x		x		Bladder
MW-26S	Unconsolidated	6.8-16.8	x					NA
MW-27D	Upper Wonewoc	130-140	x	x		x		Bladder
MW-27D2	Lower Wonewoc	170-180	x			x		Bladder
MW-28	Unconsolidated	28-38	x		x	x	x	Peristaltic
MW-29S	Unconsolidated	24-34	x		x		x	Peristaltic
MW-29D	Upper Lone Rock	45-50	x		x		x	Bladder
MP-13 Port 1	Lower Wonewoc	163-167	x			x		Westbay
MP-13 Port 2	Upper Wonewoc	135-139	x			x		Westbay
MP-13 Port 3	Upper Wonewoc	121-125	x			x		Westbay
MP-13 Port 4	Upper Wonewoc	102-106	x			x		Westbay
MP-13 Port 5	Lower Lone Rock	81-85	x			x		Westbay
MP-13 Port 6	Lower Lone Rock	67-71	x			x		Westbay
MP-13 Port 7	Upper Lone Rock	44-48	x			x		Westbay
MP-14 Port 1	Lower Wonewoc	170-178	x			x		Westbay
MP-14 Port 2	Upper Wonewoc	135-140	x	x		x		Westbay
MP-14 Port 3	Upper Wonewoc	100-105	x			x		Westbay
MP-14 Port 4	Lower Lone Rock	70-75	x					NA

Table 15  
 Groundwater Monitoring Plan - 2018  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL/ POINT ID	BEDROCK UNIT	SCREENED INTERVAL (ft bgs)	APRIL & OCTOBER GAUGING	APRIL VOC SAMPLING	APRIL PCB SAMPLING	OCTOBER VOC SAMPLING	OCTOBER PCB SAMPLING	PUMP TYPE
MP-15 Port 1	Lower Wonewoc	177-187	x			x		Westbay
MP-15 Port 2	Lower Wonewoc	142-146	x			x		Westbay
MP-15 Port 3	Upper Wonewoc	120-125	x			x		Westbay
MP-15 Port 4	Upper Wonewoc	100-105	x			x		Westbay
MP-15 Port 5	Upper Wonewoc	88-92	x			x		Westbay
MP-16 Port 1	Lower Wonewoc	175-179	x			x		Westbay
MP-16 Port 2	Upper Wonewoc	140-144	x	x		x		Westbay
MP-16 Port 3	Upper Wonewoc	106-116	x			x		Westbay
MP-16 Port 4	Lower Lone Rock	80-84	x					NA
<b>Total Sample Points:</b>			<b>56</b>	<b>15</b>	<b>8</b>	<b>40</b>	<b>14</b>	

Notes:

\* = The GWE-1 influent sample results from the month of the sampling event will be used.

Update By: A. Stehn 2/15/2019

Checked By: W. Braga 2/15/2019

Table 16  
Summary of Groundwater Elevations - October 8, 2018  
Madison Kipp Corporation  
201 Waubesa Street  
Madison, Wisconsin

WELL/BORING	LITHOLOGY	SCREEN INTERVAL (feet bls)	GROUND ELEVATION (feet amsl)	TOP OF CASING ELEVATION (feet amsl)	DATE	DEPTH TO WATER (feet btoc)	GROUNDWATER ELEVATION (feet amsl)
MW-01	Unconsolidated	14-24	861.71	861.08	10/8/2018	8.97	852.11
MW-02D	Upper Lone Rock	39-44	866.50	868.74	10/8/2018	16.76	851.98
MW-02S	Unconsolidated	19-29	866.34	868.94	10/8/2018	16.01	852.93
MW-03D	Upper Lone Rock	48-53	867.68	867.25	10/8/2018	16.60	850.65
MW-03D2	Lower Lone Rock	76-81	867.58	867.39	10/8/2018	18.44	848.95
MW-03D3	Lower Wonewoc/Upper Eau Claire	214-224	867.61	867.35	10/8/2018	20.03	847.32
MW-03S	Unconsolidated	19-29	867.87	867.41	10/8/2018	15.52	851.89
MW-04D	Lower Lone Rock	65-70	881.18	880.38	10/8/2018	28.30	852.08
MW-04D2	Lower Lone Rock	91-96	880.36	880.20	10/8/2018	28.63	851.57
MW-04S	Unconsolidated/ Upper Lone Rock	35-50	880.81	880.31	10/8/2018	26.25	854.06
MW-05D	Lower Lone Rock	75-80	872.58	872.10	10/8/2018	21.09	851.01
MW-05D2	Lower Wonewoc	165.8-170.8	872.59	872.20	10/8/2018	24.73	847.47
MW-05D3	Lower Wonewoc/Upper Eau Claire	225-235	872.34	871.89	10/8/2018	24.29	847.60
MW-05S	Upper Lone Rock	34-44	872.56	872.14	10/8/2018	20.50	851.64
MW-06D	Lower Lone Rock	65.5-70.5	877.11	876.69	10/8/2018	25.35	851.34
MW-06S	Unconsolidated/ Upper Lone Rock	31.4-41.4	877.20	876.69	10/8/2018	24.81	851.88
MW-07	Unconsolidated	25-35	870.91	870.42	10/8/2018	18.19	852.23
MW-08	Unconsolidated	24-34	867.69	866.78	10/8/2018	14.20	852.58
MW-09D	Upper Lone Rock	44-49	855.80	855.47	10/8/2018	5.44	850.03
MW-09D2	Lower Lone Rock	64-69	855.89	855.48	10/8/2018	5.68	849.80
MW-10S	Unconsolidated	11-21	864.88	864.42	10/8/2018	11.91	852.51
MW-11S	Unconsolidated	24-34	874.10	873.47	10/8/2018	21.65	851.82
MW-12S	Unconsolidated	3-13	859.78	859.41	10/8/2018	1.05	858.36
MW-17	Upper Wonewoc	160-170	877.26	876.65	10/8/2018	29.00	847.65
MW-18S	Unconsolidated	20-30	867.89	867.23	10/8/2018	15.28	851.95
MW-19D	Lower Lone Rock	60-90	867.44	866.75	10/8/2018	17.51	849.24
MW-19D2	Upper Wonewoc	110-140	867.44	866.70	10/8/2018	19.86	846.84
MW-20D	Lower Lone Rock	60-90	867.36	866.96	10/8/2018	17.38	849.58
MW-20D2	Lower Lone Rock	110-140	867.36	867.04	10/8/2018	20.11	846.93
MW-21D	Lower Lone Rock	60-90	867.77	867.49	10/8/2018	17.48	850.01
MW-21D2	Upper Wonewoc	110-170	867.77	867.45	10/8/2018	20.23	847.22
MW-24	Upper Lone Rock	30-40	876.66	876.41	10/8/2018	24.45	851.96

Table 16  
 Summary of Groundwater Elevations - October 8, 2018  
 Madison Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

WELL/BORING	LITHOLOGY	SCREEN INTERVAL (feet bls)	GROUND ELEVATION (feet amsl)	TOP OF CASING ELEVATION (feet amsl)	DATE	DEPTH TO WATER (feet btoc)	GROUNDWATER ELEVATION (feet amsl)
MW-25D	Upper Wonewoc	120-130	886.97	886.69	10/8/2018	39.00	847.69
MW-25D2	Upper Wonewoc	160-170	886.97	886.68	10/8/2018	39.28	847.40
MW-26S	Unconsolidated	6.85-16.85	857.51	856.61	10/8/2018	2.22	854.39
MW-27D	Lower Wonewoc	130-140	862.96	862.65	10/8/2018	14.09	848.56
MW-27D2	Lower Wonewoc	170-180	862.96	862.59	10/8/2018	14.04	848.55
MW-28	Lower Lone Rock	28-38	874.30	874.05	10/8/2018	22.05	852.00
MW-29D	Upper Lone Rock	45-50	875.86	877.61	10/8/2018	25.70	851.91
MW-29S	Unconsolidated	24-34	875.97	877.80	10/8/2018	23.56	854.24
MP-13	Upper Lone Rock	44-48	864.49	863.98	10/8/2018	12.88	851.10
MP-13	Lower Lone Rock	67-71	864.49	863.98	10/8/2018	15.03	848.95
MP-13	Lower Lone Rock	81-85	864.49	863.98	10/8/2018	15.72	848.26
MP-13	Upper Wonewoc	102-106	864.49	863.98	10/8/2018	16.81	847.17
MP-13	Upper Wonewoc	121-125	864.49	863.98	10/8/2018	16.87	847.11
MP-13	Lower Wonewoc	135-139	864.49	863.98	10/8/2018	16.96	847.02
MP-13	Lower Wonewoc	163-167	864.49	863.98	10/8/2018	16.75	847.23
MP-14	Lower Lone Rock	70-75	866.88	867.27	10/8/2018	14.44	852.83
MP-14	Upper Wonewoc	100-105	866.88	867.27	10/8/2018	17.96	849.31
MP-14	Lower Wonewoc	135-140	866.88	867.27	10/8/2018	18.49	848.78
MP-14	Lower Wonewoc	170-178	866.88	867.27	10/8/2018	18.84	848.43
MP-15	Upper Wonewoc	88-92	855.98	855.49	10/8/2018	6.92	848.58
MP-15	Upper Wonewoc	100-105	855.98	855.49	10/8/2018	6.86	848.63
MP-15	Lower Wonewoc	120-125	855.98	855.49	10/8/2018	6.93	848.56
MP-15	Lower Wonewoc	142-146	855.98	855.49	10/8/2018	7.15	848.35
MP-15	Lower Wonewoc	177-187	855.98	855.49	10/8/2018	7.23	848.27
MP-16	Lower Lone Rock	80-84	870.68	870.17	10/8/2018	19.24	850.93
MP-16	Upper Wonewoc	106-116	870.68	870.17	10/8/2018	21.83	848.34
MP-16	Lower Wonewoc	140-144	870.68	870.17	10/8/2018	22.08	848.09
MP-16	Lower Wonewoc	175-179	870.68	870.17	10/8/2018	22.48	847.69

Created By: Peggy Popp 12/3/2018

Checked/Updated By: B. Wachholz 12/20/2018

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-1 14 - 24 ft													
SAMPLE DATE				04/08/2010	03/29/2011	04/11/2012	01/15/2013	04/21/2013	07/18/2013	10/09/2013	04/22/2014	10/23/2014	04/14/2015	10/21/2015	10/13/2016	10/04/2017	10/16/2018
<b>VOCS</b>																	
1,1,1,2-Tetrachloroethane	7	70		< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11
1,1,1-Trichloroethane	40	200		< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.10
1,1,2-Trichloroethane	0.5	5		< 0.25	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.10
1,1-Dichloroethene	0.7	7		1.1	0.95	0.94 J	0.84 J	< 0.31	< 0.31	0.62 J	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14
1,2,4-Trimethylbenzene	96	480		< 0.2	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.060
1,2-Dibromoethane	0.005	0.05		< 0.2	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13
1,2-Dichlorobenzene	60	600		< 0.2	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076
1,2-Dichloropropane	0.5	5		< 0.5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.10
1,2,3-Trichlorobenzene	NE	NE		< 0.25	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045
1,2,4-Trichlorobenzene	14	70		< 0.25	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077
1,3,5-Trimethylbenzene	96	480		< 0.2	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075 J-
2-Butanone	800	4000		NA	< 3.0	< 3	< 3.0 J										
2-Hexanone	NE	NE		NA	< 0.95	< 0.95	< 0.95 J										
4-Methyl-2-pentanone	50	500		NA	< 0.77	< 0.77	< 0.77 J										
Acetone	1800	9000		NA	< 3.4	7.5 BJ	< 3.4 J										
Benzene	0.5	5		< 0.2	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.089	< 0.089
Bromodichloromethane	0.06	0.6		< 0.2	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077
Bromoform	0.44	4.4		< 0.2	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088
Bromomethane	1	10		< 0.5	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59
Carbon disulfide	200	1000		NA	< 0.053	< 0.053	< 0.053										
Carbon tetrachloride	0.5	5		< 0.8	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038
Chloroform	0.6	6		< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062
Chloromethane	3	30		< 0.3	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	0.75 BJ	2.2 < 0.25 U
cis-1,2-Dichloroethene	7	70		51	58	38	41	23	25	27	25	22	20	8	3.6	2.8	4.0
Dichlorodifluoromethane	200	1000		< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11
Ethylbenzene	140	700		< 0.5	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054
Isopropylbenzene	NE	NE		< 0.2	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081 J-
m,p-Xylene	400	2000		NA	< 0.057	< 0.057	< 0.057										
Methyl tert-butyl ether	12	60		< 0.5	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14
Methylene chloride	0.5	5		< 1	< 1	8.5	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.14	< 0.14
Naphthalene	10	100		< 0.25	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088
n-Butylbenzene	NE	NE		< 0.2	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14
n-Hexane	120	600		NA	< 0.21	< 0.21	< 0.21										
n-Propylbenzene	NE	NE		< 0.5	< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.10
o-Xylene	400	2000		NA	< 0.058	< 0.058	< 0.058										
p-Isopropyltoluene	NE	NE		< 0.2	< 0.2	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 0.085 J-
sec-Butylbenzene	NE	NE		< 0.25	< 0.25	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 0.13
Styrene	10	100		< 0.5	< 0.5	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.39	< 0.065	0.07 BJ < 0.065
tert-Butylbenzene	NE	NE		< 0.2	< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 0.12
Tetrachloroethene	0.5	5		32	9	23	22	10	11	18	19	16	16	4.4	5.5	4	3.8
Toluene	160	800		< 0.5	< 0.5	< 0.15	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	< 0.053	< 0.053
trans-1,2-Dichloroethene	20	100		0.97	0.93	0.77 J	0.78 J	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	0.22 J	0.16 J 0.13 J
Trichloroethene	0.5	5		33	20	24	25	23	18	23	28	19	21	6.2	3.8	2	2.2
Trichlorofluoromethane	698	3490		< 2	< 2	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.5
Vinyl chloride	0.02	0.2		1.5	1.1	0.86	0.63	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.16	< 0.16
Xylenes, Total	400	2000		< 0.5	< 0.5	< 0.3	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.22	< 0.058	< 0.12
<b>Total PCBs</b>																	
Aroclor-1016	0.003	0.03		NA	NA	NA	< 0.17	NA									
Aroclor-1232	0.003	0.03		NA	NA	NA	< 0.091	NA									
Aroclor-1242	0.003	0.03		NA	NA	NA	< 0.13	NA									
Aroclor-1248	0.003	0.03		NA	NA	NA	< 0.11	NA									
Total Detected PCBs	0.003	0.03		NA	NA	NA	ND	NA									
<b>Dissolved PCBs</b>																	
Aroclor-1016	0.003	0.03		NA													
Aroclor-1232	0.003	0.03		NA													
Aroclor-1242	0.003	0.03		NA													
Aroclor-1248	0.003	0.03		NA													
Total Detected PCBs	0.003	0.03		NA													
<b>Solids</b>																	
Total Dissolved Solids	NE	NE		NA													
Total Suspended Solids (TSS)	NE	NE		NA													

Notes on Page 55.

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-2S 19 - 29 ft 04/08/2010	MW-2S 19 - 29 ft 03/30/2011	MW-2S 19 - 29 ft 04/11/2012	MW-2S 19 - 29 ft 01/14/2013	MW-2S 19 - 29 ft 04/20/2013	MW-2S 19 - 29 ft 07/18/2013	MW-2S 19 - 29 ft 10/10/2013	MW-2S 19 - 29 ft 04/17/2014	MW-2S 19 - 29 ft 10/16/2014	MW-2S 19 - 29 ft 10/16/2018
<b>VOCs</b>													
	1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA
	1,1,1-Trichloroethane	40	200	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA
	1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA
	1,1-Dichloroethene	0.7	7	< 0.5	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA
	1,2,4-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA
	1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	NA
	1,2-Dichlorobenzene	60	600	< 0.2	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	NA
	1,2-Dichloropropane	0.5	5	< 0.5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA
	1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	NA
	1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA
	1,3,5-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA
	2-Butanone	800	4000	NA									
	2-Hexanone	NE	NE	NA									
	4-Methyl-2-pentanone	50	500	NA									
	Acetone	1800	9000	NA									
	Benzene	0.5	5	< 0.2	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	NA
	Bromodichloromethane	0.06	0.6	< 0.2	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA
	Bromoform	0.44	4.4	< 0.2	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA
	Bromomethane	1	10	< 0.5	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA
	Carbon disulfide	200	1000	NA									
	Carbon tetrachloride	0.5	5	< 0.8	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	NA
	Chloroform	0.6	6	< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA
	Chloromethane	3	30	< 0.3	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA
	cis-1,2-Dichloroethene	7	70	< 0.5	< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	NA
	Dichlorodifluoromethane	200	1000	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA
	Ethylbenzene	140	700	< 0.5	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA
	Isopropylbenzene	NE	NE	< 0.2	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA
	m,p-Xylene	400	2000	NA									
	Methyl tert-butyl ether	12	60	< 0.5	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	NA
	Methylene chloride	0.5	5	< 1	< 1	<b>8.6</b>	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	NA
	Naphthalene	10	100	< 0.25	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	NA
	n-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA
	n-Hexane	120	600	NA									
	n-Propylbenzene	NE	NE	< 0.5	< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA
	o-Xylene	400	2000	NA									
	p-Isopropyltoluene	NE	NE	< 0.2	< 0.2	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA
	sec-Butylbenzene	NE	NE	< 0.25	< 0.25	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	NA
	Styrene	10	100	< 0.5	< 0.5	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	NA
	tert-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA
	Tetrachloroethene	0.5	5	<b>1.6</b>	<b>1.3</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>	<b>0.81 J</b>	<b>1.1</b>	<b>1.3</b>	<b>1</b>	NA
	Toluene	160	800	< 0.5	< 0.5	< 0.15	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	NA
	trans-1,2-Dichloroethene	20	100	< 0.5	< 0.5	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA
	Trichloroethene	0.5	5	< 0.2	< 0.2	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	NA
	Trichlorofluoromethane	698	3490	< 2	< 2	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	NA
	Vinyl chloride	0.02	0.2	< 0.2	< 0.2	< 0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	NA
	Xylenes, Total	400	2000	< 0.5	< 0.5	< 0.3	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	NA
<b>Total PCBs</b>													
	Aroclor-1016	0.003	0.03	NA	NA	NA	< 0.17	NA	NA	NA	NA	NA	< 0.0072
	Aroclor-1232	0.003	0.03	NA	NA	NA	< 0.091	NA	NA	NA	NA	NA	< 0.0042
	Aroclor-1242	0.003	0.03	NA	NA	NA	< 0.13	NA	NA	NA	NA	NA	< 0.013
	Aroclor-1248	0.003	0.03	NA	NA	NA	< 0.11	NA	NA	NA	NA	NA	< 0.011
	Total Detected PCBs	0.003	0.03	NA	NA	NA	ND	NA	NA	NA	NA	NA	ND
<b>Dissolved PCBs</b>													
	Aroclor-1016	0.003	0.03	NA									
	Aroclor-1232	0.003	0.03	NA									
	Aroclor-1242	0.003	0.03	NA									
	Aroclor-1248	0.003	0.03	NA									
	Total Detected PCBs	0.003	0.03	NA									
<b>Solids</b>													
	Total Dissolved Solids	NE	NE	NA	376								
	Total Suspended Solids (TSS)	NE	NE	NA	< 1.4								
Notes on Page 55.													

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-2D 39 - 44 ft 04/08/2010	MW-2D 39 - 44 ft 10/01/2010	MW-2D 39 - 44 ft 03/30/2011	MW-2D 39 - 44 ft 04/11/2012	MW-2D 39 - 44 ft 01/15/2013	MW-2D 39 - 44 ft 04/20/2013	MW-2D 39 - 44 ft 07/18/2013	MW-2D 39 - 44 ft 10/10/2013	MW-2D 39 - 44 ft 04/17/2014	MW-2D 39 - 44 ft 10/16/2014	MW-2D 39 - 44 ft 04/14/2015	MW-2D 39 - 44 ft 10/21/2015	MW-2D 39 - 44 ft 01/25/2016	MW-2D 39 - 44 ft 04/21/2016	MW-2D 39 - 44 ft 07/19/2016	MW-2D 39 - 44 ft 10/13/2016	MW-2D 39 - 44 ft 1/19/2017	MW-2D 39 - 44 ft 04/12/2017	MW-2D 39 - 44 ft 10/04/2017	MW-2D 39 - 44 ft 04/05/2018	MW-2D 39 - 44 ft 10/16/2018	MW-2D <sup>3</sup> 39 - 44 ft 10/16/2018	
<b>VOCs</b>																										
1,1,1,2-Tetrachloroethane	7	70		< 8	< 0.25	< 4	< 0.31	< 0.5	< 0.5	< 0.25	< 0.25	< 0.25	< 0.50	< 0.25	< 0.46	< 0.55	< 1.1	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
1,1,1-Trichloroethane	40	200		< 16	< 0.5	< 8	< 0.26	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.40	< 0.20	< 0.38	< 0.50	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,1,2-Trichloroethane	0.5	5		< 8	< 0.25	< 4	< 0.3	< 0.56	< 0.56	< 0.28	< 0.28	< 0.28	< 0.56	< 0.28	< 0.35	< 0.50	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,1-Dichloroethene	0.7	7		< 16	< 0.5	< 8	< 0.29	< 0.62	< 0.62	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.39	< 0.70	< 1.4	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
1,2,4-Trimethylbenzene	96	480		< 6.4	< 0.2	< 3.2	< 0.22	< 0.28	< 0.28	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.36	< 0.30	< 0.60	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060
1,2-Dibromoethane	0.005	0.05		< 6.4	< 0.2	< 3.2	< 0.45	< 0.72	< 0.72	< 0.36	< 0.36	< 0.36	< 0.72	< 0.36	< 0.39	< 0.65	< 1.3	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
1,2-Dichlorobenzene	60	600		< 6.4	< 0.2	< 3.2	< 0.21	< 0.54	< 0.54	< 0.27	< 0.27	< 0.27	< 0.54	< 0.27	< 0.33	< 0.45 J	< 0.76	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076
1,2-Dichloropropane	0.5	5		< 16	< 0.5	< 8	< 0.36	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.40	< 0.20	< 0.43	< 0.50	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,2,3-Trichlorobenzene	NE	NE		< 8	< 0.25	< 4	< 0.36	< 0.48	< 0.48	< 0.24	< 0.24	< 0.24	< 0.48	< 0.24	< 0.46	< 0.23	< 0.45	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	0.050 J	< 0.045	< 0.045
1,2,4-Trichlorobenzene	14	70		< 8	< 0.25	< 4	< 0.22	< 0.62	< 0.62	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.34	< 0.85 J	< 0.77	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077
1,3,5-Trimethylbenzene	96	480		< 6.4	< 0.2	< 3.2	< 0.23	< 0.36	< 0.36	< 0.18	< 0.18	< 0.18	< 0.36	< 0.18	< 0.25	< 0.38	< 0.75	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
2-Butanone	800	4000		NA	< 15	< 30	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0											
2-Hexanone	NE	NE		NA	< 4.8	< 9.5	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95											
4-Methyl-2-pentanone	50	500		NA	< 3.9	< 7.7	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77											
Acetone	1800	9000		NA	< 17	< 34	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4											
Benzene	0.5	5		< 6.4	< 0.2	< 3.2	< 0.12	< 0.15	< 0.15	< 0.074	< 0.074	< 0.074	< 0.15	< 0.074	< 0.15	< 0.45	< 0.89	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089
Bromodichloromethane	0.06	0.6		< 6.4	< 0.2	< 3.2	< 0.23	< 0.34	< 0.34	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.37	< 0.39	< 0.77	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077
Bromoform	0.44	4.4		< 6.4	< 0.2	< 3.2	< 0.45	< 0.56	< 0.56	< 0.28	< 0.28	< 0.28	< 0.56	< 0.28	< 0.48	< 0.44	< 0.88	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088
Bromomethane	1	10		< 16	< 0.5	< 8	< 0.49	< 0.62	< 0.62	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.80	< 3.0	< 5.9	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59
Carbon disulfide	200	1000		NA	< 0.27	< 0.53	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053											
Carbon tetrachloride	0.5	5		< 26	< 0.8	< 13	< 0.28	< 0.52	< 0.52	< 0.26	< 0.26	< 0.26	< 0.52	< 0.26	< 0.38	< 0.19	< 0.38	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038
Chloroform	0.6	6		< 6.4	< 0.2	< 3.2	< 0.25	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.40	< 0.20	< 0.37	< 0.31	< 0.62	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062
Chloromethane	3	30		< 9.6	< 0.3	< 4.8	< 0.24	< 0.36	< 0.36	< 0.18	< 0.18	< 0.18	< 0.36	< 0.18	< 0.32	< 0.80	< 1.6	0.20 J	0.81 BJ	0.33 BJ	0.30 J+	1.4 J	0.28 J+	< 0.31 U	< 0.25 U	
cis-1,2-Dichloroethene	7	70		< 16	0.67	< 8	< 0.22	< 0.24	< 0.24	< 0.12	< 0.12	< 0.12	< 0.24	< 0.12	< 0.41	< 0.55	< 1.1	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Dichlorodifluoromethane	200	1000		< 16	< 0.5	< 8	< 0.26	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.40	< 0.20	< 0.54	< 0.55	< 1.1	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	
Ethylbenzene	140	700		< 16	< 0.5	< 8	< 0.14	< 0.26	< 0.26	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.18	< 0.27	< 0.54	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054
Isopropylbenzene	NE	NE		< 6.4	< 0.2	< 3.2	< 0.21	< 0.28	< 0.28	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.39	< 0.41	< 0.81	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
m,p-Xylene	400	2000		NA	< 0.29	< 0.57	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057											
Methyl tert-butyl ether	12	60		< 16	< 0.5	< 8	< 0.28	< 0.48	< 0.48	< 0.24	< 0.24	< 0.24	< 0.48	< 0.24	< 0.39	< 0.70	< 1.4	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
Methylene chloride	0.5	5		< 32	< 1	< 16	8.1	< 1.4	< 1.4	< 0.68	< 0.68	< 0.68	< 1.4	< 0.68	< 1.6	< 0.70	< 1.4	< 0.14	0.82 BJ	< 0.14	< 0.14	< 0.14	< 0.14	< 0.27 U	< 0.27 U	
Naphthalene	10	100		< 8	< 0.25	< 4	< 0.24	< 0.32	< 0.32	< 0.16	< 0.16	< 0.16	< 0.32	< 0.16	< 0.34	< 0.44	< 0.88	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	0.33 J	< 0.088	< 0.088	
n-Butylbenzene	NE	NE		< 6.4	< 0.2	< 3.2	< 0.21	< 0.26	< 0.26	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.39	< 0.70	< 1.4	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	
n-Hexane	120	600		NA	< 1.1	< 2.1	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21											
n-Propylbenzene	NE	NE		< 16	< 0.5	< 8	< 0.19	< 0.26	< 0.26	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.41	< 0.50	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
o-Xylene	400	2000		NA	< 0.29	< 0.58	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058											
p-Isopropyltoluene	NE	NE		< 6.4	< 0.2	< 3.2	< 0.24	< 0.34	< 0.34	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.36	< 0.43	< 0.85	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085
sec-Butylbenzene	NE	NE		&lt																						

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-3S 19 - 29 ft																											
SAMPLE DATE				04/07/2010	03/29/2011	04/12/2012	11/30/2012	12/18/2012	12/19/2012	12/28/2012	01/03/2013	01/15/2013	01/15/2013	01/31/2013	02/12/2013	02/12/2013	02/12/2013	02/12/2013	02/28/2013	03/12/2013	04/16/2013	07/16/2013	10/10/2013	04/16/2014	10/22/2014	04/13/2015	10/21/2015	10/13/2016	10/05/2017	10/12/2018	
<b>VOCs</b>																															
1,1,1,2-Tetrachloroethane	7	70		< 8	< 6.3	< 1.6	< 1.3	NA	NA	NA	NA	NA	< 0.25	NA	NA	NA	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.5	< 0.5	< 1.3	< 0.25	< 1.3	< 0.92	< 2.2	< 2.8	< 5.5	
1,1,1-Trichloroethane	40	200		< 16	< 13	< 1.3	< 1	NA	NA	NA	NA	NA	< 0.2	NA	NA	NA	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.4	< 0.4	< 1.0	< 0.20	< 1.0	< 0.76	< 2.0	< 2.5	< 5.0	
1,1,2-Trichloroethane	0.5	5		< 8	< 6.3	< 1.5	< 1.4	NA	NA	NA	NA	NA	< 0.28	NA	NA	NA	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.56	< 0.56	< 1.4	< 0.28	< 1.4	< 0.70	< 2.0	< 2.5	< 5.0	
1,1-Dichloroethane	0.7	7		< 16	< 13	< 1.5	< 1.6	NA	NA	NA	NA	NA	< 0.31	NA	NA	NA	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.62	< 0.62	< 1.6	< 0.31	< 1.6	< 0.78	< 2.8	< 3.5	< 7.0	
1,2,4-Trimethylbenzene	96	480		< 6.4	< 5	< 1.1	< 0.7	NA	NA	NA	NA	NA	< 0.14	NA	NA	NA	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.28	< 0.28	< 0.70	< 0.14	< 0.70	< 0.72	< 1.2	< 1.5	< 3.0	
1,2-Dibromoethane	0.005	0.05		< 6.4	< 5	< 2.3	< 1.8	NA	NA	NA	NA	NA	< 0.36	NA	NA	NA	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.72	< 0.72	< 1.8	< 0.36	< 1.8	< 0.77	< 2.6	< 3.3	< 6.5	
1,2-Dichlorobenzene	60	600		< 6.4	< 5	< 1.1	< 1.4	NA	NA	NA	NA	NA	< 0.27	NA	NA	NA	< 0.27	< 0.27	NA	< 0.27	< 0.27	< 0.54	< 0.54	< 1.4	< 0.27	< 1.4	< 0.67	< 1.5	< 1.9	< 3.8	
1,2-Dichloropropane	0.5	5		< 16	< 13	< 1.8	< 1	NA	NA	NA	NA	NA	< 0.2	NA	NA	NA	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.4	< 0.4	< 1.0	< 0.20	< 1.0	< 0.86	< 2.0	< 2.5	< 5.0	
1,2,3-Trichlorobenzene	NE	NE		< 8	< 6.3	< 1.8	< 1.2	NA	NA	NA	NA	NA	< 0.24	NA	NA	NA	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.48	< 0.48	< 1.2	< 0.24	< 1.2	< 0.92	< 0.90	< 1.1	< 2.3	
1,2,4-Trichlorobenzene	14	70		< 8	< 6.3	< 1.1	< 1.6	NA	NA	NA	NA	NA	< 0.31	NA	NA	NA	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.62	< 0.62	< 1.6	< 0.31	< 1.6	< 0.68	< 1.5	< 1.9	< 3.9	
1,3,5-Trimethylbenzene	96	480		< 6.4	< 5	< 1.2	< 0.9	NA	NA	NA	NA	NA	< 0.18	NA	NA	NA	< 0.18	< 0.18	NA	< 0.18	< 0.18	< 0.36	< 0.36	< 0.90	< 0.18	< 0.90	< 0.51	< 1.5	< 1.9	< 3.8	
2-Butanone	800	4000		NA	< 60	< 75	< 150																								
2-Hexanone	NE	NE		NA	< 19	< 24	< 48																								
4-Methyl-2-pentanone	50	500		NA	< 15	< 19	< 39																								
Acetone	1800	9000		NA	< 68	< 85	< 170																								
Benzene	0.5	5		< 6.4	< 5	< 0.6	1.5 J	NA	NA	NA	NA	NA	0.42 J	NA	NA	NA	0.88	0.9	NA	1	0.6	0.70 J	1	< 0.37	0.67	< 0.37	< 0.29	< 1.8	< 2.2	< 4.5	
Bromodichloromethane	0.06	0.6		< 6.4	< 5	< 1.2	< 0.85	NA	NA	NA	NA	NA	< 0.17	NA	NA	NA	< 0.17	< 0.17	NA	< 0.17	< 0.17	< 0.34	< 0.34	< 0.85	< 0.17	< 0.85	< 0.74	< 1.5	< 1.9	< 3.9	
Bromoform	0.44	4.4		< 6.4	< 5	< 2.3	< 1.4	NA	NA	NA	NA	NA	< 0.28	NA	NA	NA	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.56	< 0.56	< 1.4	< 0.28	< 1.4	< 0.97	< 1.8	< 2.2	< 4.4	
Bromomethane	1	10		< 16	< 13	< 2.5	< 1.6	NA	NA	NA	NA	NA	< 0.31	NA	NA	NA	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.62	< 0.62	< 1.6	< 0.31	< 1.6	< 1.6	< 1.2	< 1.5	< 3.0	
Carbon disulfide	200	1000		NA	< 1.1	< 1.3	< 2.7																								
Carbon tetrachloride	0.5	5		< 26	< 20	< 1.4	< 1.3	NA	NA	NA	NA	NA	< 0.26	NA	NA	NA	< 0.26	< 0.26	NA	< 0.26	< 0.26	< 0.52	< 0.52	< 1.3	< 0.26	< 1.3	< 0.77	< 0.76	< 0.95	< 1.9	
Chloroform	0.6	6		< 6.4	< 5	3.7 J	5	NA	NA	NA	NA	NA	1.6	NA	NA	NA	3	3.2	NA	4.1	2.7	2.8	3.7	3.4 J	2.4	< 1.0	3	< 1.2	< 1.6	< 3.1	
Chloromethane	3	30		< 9.6	< 7.5	< 1.2	< 0.9	NA	NA	NA	NA	NA	< 0.18	NA	NA	NA	< 0.18	< 0.18	NA	< 0.18	< 0.18	< 0.36	< 0.36	< 0.90	< 0.18	< 0.90	< 0.64	11 BJ	< 4	< 17 U	
cis-1,2-Dichloroethene	7	70		83	37	89	98	NA	NA	NA	NA	NA	< 0.12	NA	NA	NA	1.6	1.8	NA	5.0	< 0.12	14	58	< 0.60	35	54	36	29	20	21 J	
Dichlorodifluoromethane	200	1000		< 16	< 13	< 1.3	< 1	NA	NA	NA	NA	NA	< 0.2	NA	NA	NA	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.4	< 0.4	< 1.0	< 0.20	< 1.0	< 1.1	< 2.2	< 2.8	< 5.5	
Ethylbenzene	140	700		< 16	< 13	< 0.7	< 0.65	NA	NA	NA	NA	NA	0.36 J	NA	NA	NA	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.26	< 0.26	< 0.65	< 0.13	< 0.65	< 0.37	< 1.1	< 1.4	< 2.7	
Isopropylbenzene	NE	NE		< 6.4	< 5	< 1.1	< 0.7	NA	NA	NA	NA	NA	< 0.14	NA	NA	NA	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.28	< 0.28	< 0.70	< 0.14	< 0.70	< 0.77	< 1.6	< 2	< 4.1	
m,p-Xylene	400	2000		NA	< 1.1	< 1.4	< 2.9																								
Methyl tert-butyl ether	12	60		< 16	< 13	< 1.4	< 1.2	NA	NA	NA	NA	NA	< 0.24	NA	NA	NA	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.48	< 0.48	< 1.2	< 0.24	< 1.2	< 0.79	< 2.8	< 3.5	< 7.0	
Methylene chloride	0.5	5		< 32	< 25	< 3.2	< 3.4	NA	NA	NA	NA	NA	< 0.68	NA	NA	NA	< 0.68	< 0.68	NA	< 0.68	< 0.68	< 1.4	< 1.4	< 3.4	< 0.68	< 3.4	17	< 2.8	< 3.5	< 7.0	
Naphthalene	10	100		< 8	< 6.3	< 1.2	< 0.8	NA	NA	NA	NA	NA	< 0.16	NA	NA	NA	< 0.16	< 0.16	NA	< 0.16	< 0.16	< 0.32	< 0.32	< 0.80	< 0.16	< 0.80	< 0.67	< 1.8	< 2.2	< 4.4	
n-Butylbenzene	NE	NE		< 6.4	< 5	< 1.1	< 0.65	NA	NA	NA	NA	NA	< 0.13	NA	NA	NA	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.26	< 0.26	< 0.65	< 0.13	< 0.65	< 0.78	< 2.8	< 3.5	< 7.0	
n-Hexane	120	600		NA	< 4.2	< 5.3	< 11																								
n-Propylbenzene	NE	NE		< 16	< 13	< 0.95	< 0.65	NA	NA	NA	NA	NA	< 0.13	NA	NA	NA	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.26	< 0.26	< 0.65	< 0.13	< 0.65	< 0.83	< 2.0	< 2.5	< 5.0	
o-Xylene	400	2000		NA	< 1.2	< 1.5	< 2.9																								
p-Isopropyltoluene	NE	NE		< 6.4	< 5	< 1.2	< 0.85	NA	NA	NA	NA	NA	< 0.17	NA	NA	NA	< 0.17	< 0.17	NA	< 0.17	< 0.17	< 0.34	< 0.34	< 0.85	< 0.17	< 0.85	< 0.72	< 1.7	< 2.1	< 4.3	
sec-Butylbenzene	NE	NE		< 8	< 6.3	< 0.95	< 0.75	NA	NA	NA	NA	NA	< 0.15	NA	NA	NA	< 0.15	< 0.15	NA	< 0.15	< 0.15	< 0.3	< 0.3	< 0.75	< 0.15	< 0.75	< 0.80	< 2.6	< 3.3	< 6.5	
Styrene	10	100																													

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-3D 48 - 53 ft 04/07/2010	MW-3D 48 - 53 ft 10/01/2010	MW-3D 48 - 53 ft 03/30/2011	MW-3D 48 - 53 ft 04/12/2012	MW-3D 48 - 53 ft 11/30/2012	MW-3D 48 - 53 ft 12/19/2012	MW-3D 48 - 53 ft 12/28/2012	MW-3D 48 - 53 ft 01/03/2013	MW-3D 48 - 53 ft 01/16/2013	MW-3D 48 - 53 ft 01/31/2013	MW-3D 48 - 53 ft 02/12/2013	MW-3D 48 - 53 ft 02/12/2013	MW-3D 48 - 53 ft 02/28/2013	MW-3D 48 - 53 ft 03/13/2013	MW-3D 48 - 53 ft 04/16/2013
<b>VOCs</b>																		
1,1,1,2-Tetrachloroethane	7	70		< 8	< 0.25	< 5	< 0.31	< 1.3	NA	NA	NA	< 0.25	NA	NA	< 0.25	NA	< 0.25	< 0.25
1,1,1-Trichloroethane	40	200		< 16	< 0.5	< 10	< 0.26	< 1	NA	NA	NA	< 0.2	NA	NA	< 0.2	NA	< 0.2	< 0.2
1,1,2-Trichloroethane	0.5	5		< 8	< 0.25	< 5	< 0.3	< 1.4	NA	NA	NA	< 0.28	NA	NA	< 0.28	NA	< 0.28	< 0.28
1,1-Dichloroethene	0.7	7		< 16	< 0.5	< 10	< 0.29	< 1.6	NA	NA	NA	< 0.31	NA	NA	< 0.31	NA	< 0.31	< 0.31
1,2,4-Trimethylbenzene	96	480		< 6.4	< 0.2	< 4	< 0.22	< 0.7	NA	NA	NA	< 0.14	NA	NA	< 0.14	NA	< 0.14	< 0.14
1,2-Dibromoethane	0.005	0.05		< 6.4	< 0.2	< 4	< 0.45	< 1.8	NA	NA	NA	< 0.36	NA	NA	< 0.36	NA	< 0.36	< 0.36
1,2-Dichlorobenzene	60	600		< 6.4	< 0.2	< 4	< 0.21	< 1.4	NA	NA	NA	< 0.27	NA	NA	< 0.27	NA	< 0.27	< 0.27
1,2-Dichloropropane	0.5	5		< 16	< 0.5	< 10	< 0.36	< 1	NA	NA	NA	< 0.2	NA	NA	< 0.2	NA	< 0.2	< 0.2
1,2,3-Trichlorobenzene	NE	NE		< 8	< 0.25	< 5	< 0.36	< 1.2	NA	NA	NA	< 0.24	NA	NA	< 0.24	NA	< 0.24	< 0.24
1,2,4-Trichlorobenzene	14	70		< 8	< 0.25	< 5	< 0.22	< 1.6	NA	NA	NA	< 0.31	NA	NA	< 0.31	NA	< 0.31	< 0.31
1,3,5-Trimethylbenzene	96	480		< 6.4	< 0.2	< 4	< 0.23	< 0.9	NA	NA	NA	< 0.18	NA	NA	< 0.18	NA	< 0.18	< 0.18
2-Butanone	800	4000		NA														
2-Hexanone	NE	NE		NA														
4-Methyl-2-pentanone	50	500		NA														
Acetone	1800	9000		NA														
Benzene	0.5	5		< 6.4	0.31	< 4	0.39 J	< 0.37	NA	NA	NA	0.32 J	NA	NA	0.29 J	NA	< 0.074	0.27 J
Bromodichloromethane	0.06	0.6		< 6.4	< 0.2	< 4	< 0.23	< 0.85	NA	NA	NA	< 0.17	NA	NA	< 0.17	NA	< 0.17	< 0.17
Bromoform	0.44	4.4		< 6.4	< 0.2	< 4	< 0.45	< 1.4	NA	NA	NA	< 0.28	NA	NA	< 0.28	NA	< 0.28	< 0.28
Bromomethane	1	10		< 16	< 0.5	< 10	< 0.49	< 1.6	NA	NA	NA	< 0.31	NA	NA	< 0.31	NA	< 0.31	< 0.31
Carbon disulfide	200	1000		NA														
Carbon tetrachloride	0.5	5		< 26	< 0.8	< 16	< 0.28	< 1.3	NA	NA	NA	< 0.26	NA	NA	< 0.26	NA	< 0.26	< 0.26
Chloroform	0.6	6		< 6.4	0.78	< 4	0.93 J	< 1	NA	NA	NA	0.89 J	NA	NA	< 0.2	NA	< 0.2	< 0.2
Chloromethane	3	30		< 9.6	< 0.3	< 6	< 0.24	< 0.9	NA	NA	NA	< 0.18	NA	NA	< 0.18	NA	< 0.18	< 0.18
cis-1,2-Dichloroethene	7	70		510	310	300	350	520	NA	NA	NA	290	NA	NA	200	NA	54	210
Dichlorodifluoromethane	200	1000		< 16	< 0.5	< 10	< 0.26	< 1	NA	NA	NA	< 0.2	NA	NA	< 0.2	NA	< 0.2	< 0.2
Ethylbenzene	140	700		< 16	< 0.5	< 10	< 0.14	< 0.65	NA	NA	NA	< 0.13	NA	NA	< 0.13	NA	< 0.13	< 0.13
Isopropylbenzene	NE	NE		< 6.4	< 0.2	< 4	< 0.21	< 0.7	NA	NA	NA	< 0.14	NA	NA	< 0.14	NA	< 0.14	< 0.14
m,p-Xylene	400	2000		NA														
Methyl tert-butyl ether	12	60		< 16	< 0.5	< 10	< 0.28	< 1.2	NA	NA	NA	< 0.24	NA	NA	< 0.24	NA	< 0.24	< 0.24
Methylene chloride	0.5	5		< 32	< 1	< 20	< 0.63	< 3.4	NA	NA	NA	< 0.68	NA	NA	< 0.68	NA	< 0.68	< 0.68
Naphthalene	10	100		< 8	< 0.25	< 5	< 0.24	< 0.8	NA	NA	NA	< 0.16	NA	NA	< 0.16	NA	< 0.16	< 0.16
n-Butylbenzene	NE	NE		< 6.4	< 0.2	< 4	< 0.21	< 0.65	NA	NA	NA	< 0.13	NA	NA	< 0.13	NA	< 0.13	< 0.13
n-Hexane	120	600		NA														
n-Propylbenzene	NE	NE		< 16	< 0.5	< 10	< 0.19	< 0.65	NA	NA	NA	< 0.13	NA	NA	< 0.13	NA	< 0.13	< 0.13
o-Xylene	400	2000		NA														
p-Isopropyltoluene	NE	NE		< 6.4	< 0.2	< 4	< 0.24	< 0.85	NA	NA	NA	< 0.17	NA	NA	< 0.17	NA	< 0.17	< 0.17
sec-Butylbenzene	NE	NE		< 8	< 0.25	< 5	< 0.19	< 0.75	NA	NA	NA	< 0.15	NA	NA	< 0.15	NA	< 0.15	< 0.15
Styrene	10	100		< 16	< 0.5	< 10	< 0.26	< 0.5	NA	NA	NA	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1
tert-Butylbenzene	NE	NE		< 6.4	< 0.2	< 4	< 0.24	< 0.7	NA	NA	NA	< 0.14	NA	NA	< 0.14	NA	< 0.14	< 0.14
Tetrachloroethene	0.5	5		1700	1500	1200	1100	1800	NA	NA	NA	660	NA	NA	760	NA	150	740
Toluene	160	800		< 16	< 0.5	< 10	< 0.15	< 0.55	NA	NA	NA	< 0.11	NA	NA	< 0.11	NA	< 0.11	< 0.11
trans-1,2-Dichloroethene	20	100		< 16	6.6	< 10	5.9	7.7	NA	NA	NA	6.0	NA	NA	4.0	NA	1.1	4.2
Trichloroethene	0.5	5		270	200	170	160	250	NA	NA	NA	140	NA	NA	130	NA	30	120
Trichlorofluoromethane	698	3490		< 64	< 2	< 40	< 0.22	< 0.95	NA	NA	NA	< 0.19	NA	NA	< 0.19	NA	< 0.19	< 0.19
Vinyl chloride	0.02	0.2		< 6.4	< 0.2	< 4	< 0.13	< 0.5	NA	NA	NA	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1
Xylenes, Total	400	2000		< 16	< 0.5	< 10	< 0.3	< 0.34	NA	NA	NA	< 0.068	NA	NA	< 0.068	NA	< 0.068	< 0.068
<b>Total PCBs</b>																		
Aroclor-1016	0.003	0.03		NA	< 0.18	NA	NA	NA	NA	NA	NA							
Aroclor-1232	0.003	0.03		NA	< 0.096	NA	NA	NA	NA	NA	NA							
Aroclor-1242	0.003	0.03		NA	< 0.14	NA	NA	NA	NA	NA	NA							
Aroclor-1248	0.003	0.03		NA	< 0.11	NA	NA	NA	NA	NA	NA							
Total Detected PCBs	0.003	0.03		NA	ND	NA	NA	NA	NA	NA	NA							
<b>Dissolved PCBs</b>																		
Aroclor-1016	0.003	0.03		NA														
Aroclor-1232	0.003	0.03		NA														
Aroclor-1242	0.003	0.03		NA														
Aroclor-1248	0.003	0.03		NA														
Total Detected PCBs	0.003	0.03		NA														
<b>Solids</b>																		
Total Dissolved Solids	NE	NE		NA	NA	NA	NA	1700	2100	2400	2200	2000	480	4400	4200	5200	NA	NA
Total Suspended Solids (TSS)	NE	NE		NA														
Notes on Page 55.																		



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-3D2 76 - 81 ft 12/31/2009	MW-3D2 76 - 81 ft 04/07/2010	MW-3D2 76 - 81 ft 07/01/2010	MW-3D2 76 - 81 ft 10/01/2010	MW-3D2 76 - 81 ft 03/30/2011	MW-3D2 76 - 81 ft 04/12/2012	MW-3D2 <sup>3</sup> 76 - 81 ft 04/12/2012	MW-3D2 76 - 81 ft 11/30/2012	MW-3D2 <sup>3</sup> 76 - 81 ft 11/30/2012	MW-3D2 76 - 81 ft 12/19/2012	MW-3D2 76 - 81 ft 12/28/2012	MW-3D2 76 - 81 ft 01/03/2013	MW-3D2 76 - 81 ft 01/16/2013	MW-3D2 <sup>3</sup> 76 - 81 ft 01/16/2013	MW-3D2 76 - 81 ft 01/31/2013	MW-3D2 76 - 81 ft 02/12/2013	MW-3D2 <sup>3</sup> 76 - 81 ft 02/12/2013	MW-3D2 76 - 81 ft 02/28/2013	MW-3D2 <sup>1</sup> 76 - 81 ft 03/13/2013	MW-3D2 <sup>2</sup> 76 - 81 ft 04/16/2013	MW-3D2 <sup>3</sup> 76 - 81 ft 04/16/2013	MW-3D2 76 - 81 ft 07/16/2013		
<b>VOCS</b>																										
1,1,1,2-Tetrachloroethane	7	70	< 6.3	< 13	< 13	< 0.25	< 13	< 1.6	< 1.6	< 1.3	< 1.3	NA	NA	NA	< 0.5	< 0.5	NA	< 0.25	< 0.5	NA	< 0.25	< 0.25	< 0.5	< 0.25		
1,1,1-Trichloroethane	40	200	< 13	< 25	< 25	< 0.5	< 25	< 1.3	< 1.3	< 1	< 1	NA	NA	NA	< 0.4	< 0.4	NA	< 0.2	< 0.4	NA	< 0.2	< 0.2	< 0.4	< 0.2		
1,1,2-Trichloroethane	0.5	5	< 6.3	< 13	< 13	< 0.25	< 13	< 1.5	< 1.5	< 1.4	< 1.4	NA	NA	NA	< 0.56	< 0.56	NA	< 0.28	< 0.56	NA	< 0.28	< 0.28	< 0.56	< 0.28		
1,1-Dichloroethane	0.7	7	< 13	< 25	< 25	< 0.5	< 25	< 1.5	< 1.5	< 1.6	< 1.6	NA	NA	NA	< 0.62	< 0.62	NA	< 0.31	< 0.62	NA	< 0.31	< 0.31	< 0.62	< 0.31		
1,2,4-Trimethylbenzene	96	480	< 5	< 10	< 10	< 0.2	< 10	< 1.1	< 1.1	< 0.7	< 0.7	NA	NA	NA	< 0.28	< 0.28	NA	< 0.14	< 0.28	NA	< 0.14	< 0.14	< 0.28	< 0.14		
1,2-Dibromoethane	0.005	0.05	< 5	< 10	< 10	< 0.2	< 10	< 2.3	< 2.3	< 1.8	< 1.8	NA	NA	NA	< 0.72	< 0.72	NA	< 0.36	< 0.72	NA	< 0.36	< 0.36	< 0.72	< 0.36		
1,2-Dichlorobenzene	60	600	< 5	< 10	< 10	< 0.2	< 10	< 1.1	< 1.1	< 1.4	< 1.4	NA	NA	NA	< 0.54	< 0.54	NA	< 0.27	< 0.54	NA	< 0.27	< 0.27	< 0.54	< 0.27		
1,2-Dichloropropane	0.5	5	< 13	< 25	< 25	< 0.5	< 25	< 1.8	< 1.8	< 1	< 1	NA	NA	NA	< 0.4	< 0.4	NA	< 0.2	< 0.4	NA	< 0.2	< 0.2	< 0.4	< 0.2		
1,2,3-Trichlorobenzene	NE	NE	< 6.3	< 13	< 13	< 0.25	< 13	< 1.8	< 1.8	< 1.2	< 1.2	NA	NA	NA	< 0.48	< 0.48	NA	< 0.24	< 0.48	NA	< 0.24	< 0.24	< 0.48	< 0.24		
1,2,4-Trichlorobenzene	14	70	< 6.3	< 13	< 13	< 0.25	< 13	< 1.1	< 1.1	< 1.6	< 1.6	NA	NA	NA	< 0.62	< 0.62	NA	< 0.31	< 0.62	NA	< 0.31	< 0.31	< 0.62	< 0.31		
1,3,5-Trimethylbenzene	96	480	< 5	< 10	< 10	< 0.2	< 10	< 1.2	< 1.2	< 0.9	< 0.9	NA	NA	NA	< 0.36	< 0.36	NA	< 0.18	< 0.36	NA	< 0.18	< 0.18	< 0.36	< 0.18		
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Benzene	0.5	5	< 5	< 10	< 10	< 0.2	< 10	< 0.6	< 0.6	< 0.37	< 0.37	NA	NA	NA	< 0.15	< 0.15	NA	< 0.074	< 0.15	NA	< 0.074	< 0.074	< 0.15	< 0.074		
Bromodichloromethane	0.06	0.6	< 5	< 10	< 10	< 0.2	< 10	< 1.2	< 1.2	< 0.85	< 0.85	NA	NA	NA	< 0.34	< 0.34	NA	< 0.17	< 0.34	NA	< 0.17	< 0.17	< 0.34	< 0.17		
Bromoform	0.44	4.4	< 5	< 10	< 10	< 0.2	< 10	< 2.3	< 2.3	< 1.4	< 1.4	NA	NA	NA	< 0.56	< 0.56	NA	< 0.28	< 0.56	NA	< 0.28	< 0.28	< 0.56	< 0.28		
Bromomethane	1	10	< 13	< 25	< 25	< 0.5	< 25	< 2.5	< 2.5	< 1.6	< 1.6	NA	NA	NA	< 0.62	< 0.62	NA	< 0.31	< 0.62	NA	< 0.31	< 0.31	< 0.62	< 0.31		
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Carbon tetrachloride	0.5	5	< 20	< 40	< 40	< 0.8	< 40	< 1.4	< 1.4	< 1.3	< 1.3	NA	NA	NA	< 0.52	< 0.52	NA	< 0.26	< 0.52	NA	< 0.26	< 0.26	< 0.52	< 0.26		
Chloroform	0.6	6	< 5	< 10	< 10	0.37	< 10	< 1.3	< 1.3	< 1	< 1	NA	NA	NA	< 0.4	< 0.4	NA	< 0.2	< 0.4	NA	< 0.2	< 0.2	< 0.4	< 0.2		
Chloromethane	3	30	< 7.5	< 15	< 15	< 0.3	< 15	< 1.2	< 1.2	< 0.9	< 0.9	NA	NA	NA	< 0.36	< 0.36	NA	< 0.18	< 0.36	NA	< 0.18	< 0.18	< 0.36	< 0.18		
cis-1,2-Dichloroethene	7	70	<b>520</b>	<b>510</b>	<b>460</b>	<b>400</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>420</b>	<b>400</b>	NA	NA	NA	<b>320</b>	<b>300</b>	NA	<b>250</b>	<b>260</b>	NA	<b>100</b>	<b>45</b>	< 0.24	<b>10</b>		
Dichlorodifluoromethane	200	1000	< 13	< 25	< 25	< 0.5	< 25	< 1.3	< 1.3	< 1	< 1	NA	NA	NA	< 0.4	< 0.4	NA	< 0.2	< 0.4	NA	< 0.2	< 0.2	< 0.4	< 0.2		
Ethylbenzene	140	700	< 13	< 25	< 25	< 0.5	< 25	< 0.7	< 0.7	< 0.65	< 0.65	NA	NA	NA	< 0.26	< 0.26	NA	< 0.13	< 0.26	NA	< 0.13	< 0.13	< 0.26	< 0.13		
Isopropylbenzene	NE	NE	< 5	< 10	< 10	< 0.2	< 10	< 1.1	< 1.1	< 0.7	< 0.7	NA	NA	NA	< 0.28	< 0.28	NA	< 0.14	< 0.28	NA	< 0.14	< 0.14	< 0.28	< 0.14		
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
Methyl tert-butyl ether	12	60	< 13	< 25	< 25	< 0.5	< 25	< 1.4	< 1.4	< 1.2	< 1.2	NA	NA	NA	< 0.48	< 0.48	NA	< 0.24	< 0.48	NA	< 0.24	< 0.24	< 0.48	< 0.24		
Methylene chloride	0.5	5	< 25	< 50	< 50	< 1	< 50	< 3.2	< 3.2	< 3.4	< 3.4	NA	NA	NA	< 1.4	< 1.4	NA	<b>7.3</b>	< 1.4	NA	< 0.68	< 0.68	< 1.4	< 0.68		
Naphthalene	10	100	< 6.3	< 13	<b>240</b>	< 0.25	<b>13</b>	< 1.2	< 1.2	< 0.8	< 0.8	NA	NA	NA	< 0.32	< 0.32	NA	< 0.16	< 0.32	NA	< 0.16	< 0.16	< 0.32	< 0.16		
n-Butylbenzene	NE	NE	< 5	< 10	< 10	< 0.2	< 10	< 1.1	< 1.1	< 0.65	< 0.65	NA	NA	NA	< 0.26	< 0.26	NA	< 0.13	< 0.26	NA	< 0.13	< 0.13	< 0.26	< 0.13		
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
n-Propylbenzene	NE	NE	< 13	< 25	< 25	< 0.5	< 25	< 0.95	< 0.95	< 0.65	< 0.65	NA	NA	NA	< 0.26	< 0.26	NA	< 0.13	< 0.26	NA	< 0.13	< 0.13	< 0.26	< 0.13		
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
p-Isopropyltoluene	NE	NE	< 5	< 10	< 10	< 0.2	< 10	< 1.2	< 1.2	< 0.85	< 0.85	NA	NA	NA	< 0.34	< 0.34	NA	< 0.17	< 0.34	NA	< 0.17	< 0.17	< 0.34	< 0.17		
sec-Butylbenzene	NE	NE	< 6.3	< 13	< 13	< 0.25	< 13	< 0.95	< 0.95	< 0.75	< 0.75	NA	NA	NA	< 0.3	< 0.3	NA	< 0.15	< 0.3	NA	< 0.15	< 0.15	< 0.3	< 0.15		
Styrene	10	100	< 13	< 25	< 25	< 0.5	< 25	< 1.3	< 1.3	< 0.5	< 0.5	NA	NA	NA	< 0.2	< 0.2	NA	< 0.1	< 0.2	NA	< 0.1	< 0.1	< 0.2	< 0.1		
tert-Butylbenzene	NE	NE	< 5	< 10	< 10	< 0.2	< 10	< 1.2	< 1.2	< 0.7	< 0.7	NA	NA	NA	< 0.28	< 0.28	NA	< 0.14	< 0.28	NA	< 0.14	< 0.14	< 0.28	< 0.14		
Tetrachloroethene	0.5	5	<b>4900</b>	<b>4400</b>	<b>3900</b>	<b>3900</b>	<b>3800</b>	<b>2600</b>	<b>2600</b>	<b>2800</b>	<b>2800</b>	NA	NA	NA	<b>1200</b>	<b>1100</b>	NA	<b>1700</b>	<b>1700</b>	NA	<b>800</b>	<b>850</b>	<b>710</b>	<b>440</b>		
Toluene	160	800	< 13	< 25	< 25	< 0.5	< 25	< 0.75	< 0.75	< 0.55	< 0.55	NA	NA	NA	< 0.22	< 0.22	NA	< 0.11	< 0.22	NA	< 0.11	< 0.11	< 0.22	< 0.11		
trans-1,2-Dichloroethene	20	100	< 13	< 25	< 25	7.0	< 25	6.4	5.8	5.6	5.6	NA	NA	NA	4.9	4.5	NA	3.2	3.5	NA	0.62 J	< 0.25	< 0.5	< 0.25		
Trichloroethene	0.5	5	<b>280</b>	<b>240</b>	<b>240</b>	<b>240</b>	<b>230</b>	<b>190</b>	<b>190</b>	<b>190</b>	<b>180</b>	NA	NA	NA	<b>110</b>	<b>120</b>	NA	<b>120</b>	<b>120</b>	NA	<b>50</b>	<b>24</b>	< 0.38	<b>8.7</b>		
Trichlorofluoromethane	698	3490	< 43	< 100	< 100	< 2	< 100	< 1.1	< 1.1	< 0.95	< 0.95	NA														





Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-4S 35 - 50 ft	MW-4S <sup>3</sup> 35 - 50 ft	MW-4S 35 - 50 ft	MW-4S <sup>3</sup> 35 - 50 ft	MW-4S 35 - 50 ft									
SAMPLE DATE				04/08/2010	04/08/2010	03/30/2011	04/10/2012	01/15/2013	04/18/2013	07/18/2013	10/08/2013	04/17/2014	10/17/2014	10/05/2017	04/04/2018	04/04/2018	10/11/2018
<b>VOCS</b>																	
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA	NA	NA
1,1,1-Trichloroethane	40	200	< 0.5	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA	NA	NA
1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.25	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA	NA	NA
1,1-Dichloroethene	0.7	7	< 0.5	< 0.5	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA	NA
1,2,4-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA	NA
1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.2	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	NA	NA	NA
1,2-Dichlorobenzene	60	600	< 0.2	< 0.2	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	NA	NA	NA
1,2-Dichloropropane	0.5	5	< 0.5	< 0.5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA
1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.25	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	NA	NA	NA
1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.25	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA	NA
1,3,5-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA	NA
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	< 0.2	< 0.2	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	NA	NA	NA
Bromodichloromethane	0.06	0.6	< 0.2	< 0.2	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA	NA
Bromoform	0.44	4.4	< 0.2	< 0.2	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA	NA	NA
Bromomethane	1	10	< 0.5	< 0.5	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31 *	NA	NA	NA
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	0.5	5	< 0.8	< 0.8	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	NA	NA	NA
Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA
Chloromethane	3	30	< 0.3	< 0.3	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA	NA
cis-1,2-Dichloroethene	7	70	< 0.5	< 0.5	< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	NA	NA	NA
Dichlorodifluoromethane	200	1000	< 0.5	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA
Ethylbenzene	140	700	< 0.5	< 0.5	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA	NA
Isopropylbenzene	NE	NE	< 0.2	< 0.2	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA	NA
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	12	60	< 0.5	< 0.5	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24 *	< 0.24 *	NA	NA	NA
Methylene chloride	0.5	5	< 1	< 1	< 1	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	NA	NA	NA
Naphthalene	10	100	1.4	1.4	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	NA	NA	NA
n-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA	NA
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NE	NE	< 0.5	< 0.5	< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA	NA
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NE	NE	< 0.2	< 0.2	< 0.2	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA	NA
sec-Butylbenzene	NE	NE	< 0.25	< 0.25	< 0.25	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	NA	NA	NA
Styrene	10	100	< 0.5	< 0.5	< 0.5	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	NA	NA	NA
tert-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA	NA
Tetrachloroethene	0.5	5	1.5	1.7	1.6	0.96 J	1.4	1.8	0.90 J	1.2	1.9	1.4	1.4	1.4	NA	NA	NA
Toluene	160	800	< 0.5	< 0.5	< 0.5	0.20 J	< 0.11	< 0.11	0.26 J	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	NA	NA	NA
trans-1,2-Dichloroethene	20	100	< 0.5	< 0.5	< 0.5	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA	NA
Trichloroethene	0.5	5	< 0.2	< 0.2	< 0.2	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	NA	NA	NA
Trichlorofluoromethane	698	3490	< 2	< 2	< 2	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	NA	NA	NA
Vinyl chloride	0.02	0.2	< 0.2	< 0.2	< 0.2	< 0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	NA	NA	NA
Xylenes, Total	400	2000	< 0.5	< 0.5	< 0.5	< 0.3	< 0.068	< 0.068	0.28 J	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	NA	NA	NA
<b>Total PCBs</b>																	
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	< 0.17	NA	NA	NA	NA	NA	NA	< 0.035	< 0.035	< 0.035	< 0.0072
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	< 0.091	NA	NA	NA	NA	NA	NA	< 0.037	< 0.037	< 0.037	< 0.0042
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	< 0.13	NA	NA	NA	NA	NA	NA	< 0.038	< 0.038	< 0.038	< 0.013
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	< 0.11	NA	NA	NA	NA	NA	NA	< 0.02	< 0.020	< 0.020	< 0.011
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
<b>Dissolved PCBs</b>																	
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Solids</b>																	
Total Dissolved Solids	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3750	2960	2910	1750
Total Suspended Solids (TSS)	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.95	< 0.95	1.0 J	< 2.0
Notes on Page 55.																	

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-4D 65 - 70 ft 04/08/2010	MW-4D 65 - 70 ft 03/30/2011	MW-4D 65 - 70 ft 04/10/2012	MW-4D 65 - 70 ft 01/16/2013	MW-4D 65 - 70 ft 04/18/2013	MW-4D 65 - 70 ft 07/17/2013	MW-4D 65 - 70 ft 10/08/2013	MW-4D 65 - 70 ft 04/17/2014	MW-4D 65 - 70 ft 10/17/2014	MW-4D 65 - 70 ft 10/12/2017	MW-4D 65 - 70 ft 04/04/2018	MW-4D 65 - 70 ft 10/11/2018
<b>VOCs</b>															
	1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA	NA
	1,1,1-Trichloroethane	40	200	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA	NA
	1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA	NA
	1,1-Dichloroethene	0.7	7	< 0.5	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA
	1,2,4-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA
	1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	NA	NA
	1,2-Dichlorobenzene	60	600	< 0.2	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	NA	NA
	1,2-Dichloropropane	0.5	5	< 0.5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA
	1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	NA	NA
	1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA
	1,3,5-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA
	2-Butanone	800	4000	NA											
	2-Hexanone	NE	NE	NA											
	4-Methyl-2-pentanone	50	500	NA											
	Acetone	1800	9000	NA											
	Benzene	0.5	5	< 0.2	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	NA	NA
	Bromodichloromethane	0.06	0.6	< 0.2	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA
	Bromoform	0.44	4.4	< 0.2	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA	NA
	Bromomethane	1	10	< 0.5	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31 *	< 0.31 *	NA	NA
	Carbon disulfide	200	1000	NA											
	Carbon tetrachloride	0.5	5	< 0.8	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	NA	NA
	Chloroform	0.6	6	< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	NA	NA
	Chloromethane	3	30	< 0.3	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA
	cis-1,2-Dichloroethene	7	70	< 0.5	< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	NA	NA
	Dichlorodifluoromethane	200	1000	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA
	Ethylbenzene	140	700	< 0.5	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA
	Isopropylbenzene	NE	NE	< 0.2	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA
	m,p-Xylene	400	2000	NA											
	Methyl tert-butyl ether	12	60	< 0.5	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24 *	< 0.24 *	NA	NA
	Methylene chloride	0.5	5	< 1	< 1	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	NA	NA
	Naphthalene	10	100	< 0.25	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	NA	NA
	n-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA
	n-Hexane	120	600	NA											
	n-Propylbenzene	NE	NE	< 0.5	< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA
	o-Xylene	400	2000	NA											
	p-Isopropyltoluene	NE	NE	< 0.2	< 0.2	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA
	sec-Butylbenzene	NE	NE	< 0.25	< 0.25	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	NA	NA
	Styrene	10	100	< 0.5	< 0.5	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	NA	NA
	tert-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA
	Tetrachloroethene	0.5	5	0.9	0.7	< 0.22	< 0.17	0.51 J	< 0.17	< 0.17	0.58 J	< 0.17	< 0.17	NA	NA
	Toluene	160	800	< 0.5	< 0.5	< 0.15	< 0.11	< 0.11	0.36 J	< 0.11	< 0.11	< 0.11	< 0.11	NA	NA
	trans-1,2-Dichloroethene	20	100	< 0.5	< 0.5	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA
	Trichloroethene	0.5	5	< 0.2	< 0.2	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	NA	NA
	Trichlorofluoromethane	698	3490	< 2	< 2	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	NA	NA
	Vinyl chloride	0.02	0.2	< 0.2	< 0.2	< 0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	NA	NA
	Xylenes, Total	400	2000	< 0.5	< 0.5	< 0.3	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	NA	NA
<b>Total PCBs</b>															
	Aroclor-1016	0.003	0.03	NA	NA	NA	< 0.17	NA	NA	NA	NA	NA	< 0.035	< 0.035	< 0.0072
	Aroclor-1232	0.003	0.03	NA	NA	NA	< 0.093	NA	NA	NA	NA	NA	< 0.037	< 0.037	< 0.0042
	Aroclor-1242	0.003	0.03	NA	NA	NA	< 0.13	NA	NA	NA	NA	NA	< 0.038	< 0.038	< 0.013
	Aroclor-1248	0.003	0.03	NA	NA	NA	< 0.11	NA	NA	NA	NA	NA	< 0.02	< 0.020	< 0.011
	Total Detected PCBs	0.003	0.03	NA	NA	NA	ND	NA	NA	NA	NA	NA	ND	ND	ND
<b>Dissolved PCBs</b>															
	Aroclor-1016	0.003	0.03	NA											
	Aroclor-1232	0.003	0.03	NA											
	Aroclor-1242	0.003	0.03	NA											
	Aroclor-1248	0.003	0.03	NA											
	Total Detected PCBs	0.003	0.03	NA											
<b>Solids</b>															
	Total Dissolved Solids	NE	NE	NA	672	714	600								
	Total Suspended Solids (TSS)	NE	NE	NA	5.6	1.2 J	< 2.0								
Notes on Page 55.															

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-4D2																			
				91 - 96 ft																			
SAMPLE DATE				03/30/2011	04/10/2012	01/16/2013	04/18/2013	07/18/2013	10/07/2013	04/17/2014	10/17/2014	10/21/2015	01/22/2016	04/20/2016	07/19/2016	07/19/2016	10/12/2016	1/19/2017	04/11/2017	10/05/2017	04/04/2018	10/11/2018	
<b>VOCs</b>																							
1,1,1,2-Tetrachloroethane	7	70		< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	
1,1,1-Trichloroethane	40	200		< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.38	< 0.10	0.13 J	0.17 J	0.18 J	0.27 J	0.24 J	0.30 J	< 0.1	0.38 J	< 0.10	
1,1,2-Trichloroethane	0.5	5		< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	
1,1-Dichloroethene	0.7	7		< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	0.17 J	< 0.14
1,2,4-Trimethylbenzene	96	480		< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060
1,2-Dibromoethane	0.005	0.05		< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
1,2-Dichlorobenzene	60	600		< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076
1,2-Dichloropropane	0.5	5		< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.43	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	
1,2,3-Trichlorobenzene	NE	NE		< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045
1,2,4-Trichlorobenzene	14	70		< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077
1,3,5-Trimethylbenzene	96	480		< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075
2-Butanone	800	4000		NA	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3	< 3.0	< 3.0									
2-Hexanone	NE	NE		NA	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95								
4-Methyl-2-pentanone	50	500		NA	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77								
Acetone	1800	9000		NA	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4								
Benzene	0.5	5		< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.089	< 0.089	< 0.089	< 0.089	0.34 J	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089
Bromodichloromethane	0.06	0.6		< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077
Bromoform	0.44	4.4		< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088
Bromomethane	1	10		< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31 *	< 0.80	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 1.1 U
Carbon disulfide	200	1000		NA	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053								
Carbon tetrachloride	0.5	5		< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038
Chloroform	0.6	6		< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062
Chloromethane	3	30		< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	< 0.16	< 0.16	0.20 J	0.18 J	0.52 BJ	0.26 BJ	< 0.16	0.93 J	< 0.16	< 0.67 U	
cis-1,2-Dichloroethene	7	70		< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.41	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Dichlorodifluoromethane	200	1000		< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Ethylbenzene	140	700		< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	0.40 J	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054
Isopropylbenzene	NE	NE		< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
m,p-Xylene	400	2000		NA	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057								
Methyl tert-butyl ether	12	60		< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24 *	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
Methylene chloride	0.5	5		< 1	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.35 U
Naphthalene	10	100		< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	0.13 BJ	< 0.088	< 0.088
n-Butylbenzene	NE	NE		< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
n-Hexane	120	600		NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21								
n-Propylbenzene	NE	NE		< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
o-Xylene	400	2000		NA	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058								
p-Isopropyltoluene	NE	NE		< 0.2	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085
sec-Butylbenzene	NE	NE		< 0.25	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Styrene	10	100		< 0.5	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.39	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065
tert-Butylbenzene	NE	NE		< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Tetrachloroethene	0.5	5		1.9	0.73 J																		

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-5S 34 - 44 ft	MW-5S 34 - 44 ft	MW-5S 34 - 44 ft	MW-5S <sup>2</sup> 34 - 44 ft	MW-5S 34 - 44 ft													
SCREEN INTERVAL (feet bgs)			04/07/2010	10/01/2010	04/12/2012	04/12/2012	11/28/2012	01/17/2013	02/13/2013	04/19/2013	07/18/2013	10/04/2013	04/15/2014	10/21/2014	04/13/2015	10/21/2015	10/12/2016	10/04/2017	10/12/2018	
SAMPLE DATE																				
<b>VOCS</b>																				
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.31	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,1,1-Trichloroethane	40	200	< 0.5	< 0.5	< 0.26	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.25	< 0.3	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
1,1-Dichloroethane	0.7	7	< 0.5	< 0.5	< 0.29	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
1,2,4-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.22	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.2	< 0.45	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
1,2-Dichlorobenzene	60	600	< 0.2	< 0.2	< 0.21	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
1,2-Dichloropropane	0.5	5	< 0.5	< 0.5	< 0.36	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.25	< 0.36	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.25	< 0.22	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
1,3,5-Trimethylbenzene	96	480	< 0.2	< 0.2	< 0.23	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	< 0.2	< 0.2	< 0.12	0.40 J	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074
Bromodichloromethane	0.06	0.6	< 0.2	< 0.2	< 0.23	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
Bromoform	0.44	4.4	< 0.2	< 0.2	< 0.45	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
Bromomethane	1	10	< 0.5	< 0.5	< 0.49	< 0.49	< 0.31	0.73 J	< 0.31 *	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	0.5	5	< 0.8	< 0.8	<b>1.2</b>	< 0.28	<b>1.1</b>	< 0.26	<b>1.4</b>	<b>1.1</b>	<b>1.3</b>	< 0.26	<b>0.79 J</b>	< 0.26	<b>1</b>	< 0.076	<b>0.81</b>	< 0.076	<b>0.81</b>	< 0.076
Chloroform	0.6	6	< 0.2	0.55	<b>0.84 J</b>	<b>0.88 J</b>	<b>0.79 J</b>	<b>0.79 J</b>	< 0.2	< 0.2	< 0.2	<b>0.61 J</b>	< 0.20	< 0.20	< 0.20	< 0.37	< 0.12	< 0.062	< 0.12	< 0.062
Chloromethane	3	30	< 0.3	< 0.3	< 0.24	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
cis-1,2-Dichloroethane	7	70	1.4	<b>10</b>	<b>13</b>	<b>14</b>	4.2	3.8	2.7	2.0	2.9	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Dichlorodifluoromethane	200	1000	< 0.5	< 0.5	< 0.26	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Ethylbenzene	140	700	< 0.5	< 0.5	< 0.14	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Isopropylbenzene	NE	NE	< 0.2	< 0.2	< 0.21	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	12	60	< 0.5	< 0.5	< 0.28	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Methylene chloride	0.5	5	< 1	< 1	< 0.63	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68
Naphthalene	10	100	1.4	< 0.25	< 0.24	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
n-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.21	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NE	NE	< 0.5	< 0.5	< 0.19	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NE	NE	< 0.2	< 0.2	< 0.24	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
sec-Butylbenzene	NE	NE	< 0.25	< 0.25	< 0.19	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Styrene	10	100	< 0.5	< 0.5	< 0.26	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
tert-Butylbenzene	NE	NE	< 0.2	< 0.2	< 0.24	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
Tetrachloroethene	0.5	5	<b>41</b>	<b>670</b>	<b>360</b>	<b>370</b>	<b>240</b>	<b>260</b>	<b>210</b>	<b>130</b>	<b>190</b>	<b>170</b>	<b>47</b>	<b>75</b>	<b>100</b>	<b>110</b>	<b>58</b>	<b>46</b>	<b>55</b>	
Toluene	160	800	< 0.5	< 0.5	< 0.15	< 0.15	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
trans-1,2-Dichloroethene	20	100	< 0.5	0.50	< 0.27	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Trichloroethene	0.5	5	<b>1</b>	<b>13</b>	<b>9.8</b>	<b>10</b>	<b>4.7</b>	<b>4.4</b>	<b>3.8</b>	<b>2.8</b>	<b>3</b>	<b>2.9</b>	< 0.19	<b>1.2</b>	<b>0.99</b>	<b>0.79</b>	< 0.12	0.15 J	0.22 J	
Trichlorofluoromethane	698	3490	< 2	< 2	< 0.22	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	0.02	0.2	< 0.2	< 0.2	< 0.13	< 0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes, Total	400	2000	< 0.5	< 0.5	< 0.3	< 0.3	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068
<b>Total PCBs</b>																				
Aroclor-1016	0.003	0.03	NA	NA	NA	NA														

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-5D 75 - 80 ft	MW-5D <sup>3</sup> 75 - 80 ft	MW-5D 75 - 80 ft	MW-5D <sup>3</sup> 75 - 80 ft	MW-5D 75 - 80 ft	MW-5D 75 - 80 ft	MW-5D <sup>3</sup> 75 - 80 ft	MW-5D 75 - 80 ft																	
SAMPLE DATE				04/07/2010	04/07/2010	04/12/2012	11/28/2012	01/17/2013	02/13/2013	04/19/2013	07/18/2013	10/04/2013	04/15/2014	10/21/2014	04/13/2015	10/19/2015	01/21/2016	04/21/2016	04/21/2016	07/18/2016	10/12/2016	10/12/2016	1/18/2017	04/12/2017	10/04/2017	04/03/2018	10/12/2018	
<b>VOCs</b>																												
1,1,1,2-Tetrachloroethane	7	70		< 5	< 5	< 0.31	< 1.3	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11	< 0.11	0.51	< 11	< 11	< 0.55	< 0.22	< 0.11	< 0.55	
1,1,1-Trichloroethane	40	200		< 10	< 10	< 0.26	< 1	< 0.4	< 0.4	< 0.4	< 1	< 1	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 0.50	< 0.2	< 0.10	< 0.50	
1,1,2-Trichloroethane	0.5	5		< 5	< 5	< 0.3	< 1.4	< 0.56	< 0.56	< 0.56	< 1.4	< 1.4	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 0.50	< 0.2	< 0.10	< 0.50	
1,1-Dichloroethane	0.7	7		< 10	< 10	< 0.29	< 1.6	< 0.62	< 0.62	< 0.62	< 1.6	< 1.6	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 14	< 14	< 0.70	< 0.28	< 0.14	< 0.70	
1,2,4-Trimethylbenzene	96	480		< 4	< 4	< 0.22	< 0.7	< 0.28	< 0.28	< 0.28	< 0.7	< 0.7	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 6.0	< 6.0	< 0.30	< 0.12	< 0.060	< 0.30	
1,2-Dibromoethane	0.005	0.05		< 4	< 4	< 0.45	< 1.8	< 0.72	< 0.72	< 0.72	< 1.8	< 1.8	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 13	< 13	< 0.65	< 0.26	< 0.13	< 0.65	
1,2-Dichlorobenzene	60	600		< 4	< 4	< 0.21	< 1.4	< 0.54	< 0.54	< 0.54	< 1.4	< 1.4	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 7.6	< 7.6	< 0.38	< 0.15	< 0.076	< 0.38	
1,2-Dichloropropane	0.5	5		< 10	< 10	< 0.36	< 1	< 0.4	< 0.4	< 0.4	< 1	< 1	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 0.50	< 0.2	< 0.10	< 0.50	
1,2,3-Trichlorobenzene	NE	NE		< 5	< 5	< 0.36	< 1.2	< 0.48	< 0.48	< 0.48	< 1.2	< 1.2	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045	< 0.045	0.23 BJ	< 0.045	< 4.5	< 4.5	< 0.23	< 0.09	< 0.045	< 0.23	
1,2,4-Trichlorobenzene	14	70		< 5	< 5	< 0.22	< 1.6	< 0.62	< 0.62	< 0.62	< 1.6	< 1.6	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077	< 0.077	0.13 BJ	< 0.077	< 7.7	< 7.7	< 0.39	< 0.15	< 0.077	< 0.39
1,3,5-Trimethylbenzene	96	480		< 4	< 4	< 0.23	< 0.9	< 0.36	< 0.36	< 0.36	< 0.9	< 0.9	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 7.5	< 7.5	< 0.38	< 0.15	< 0.075	< 0.38	
2-Butanone	800	4000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 300	< 300	< 15	< 6	< 3.0	< 15	
2-Hexanone	NE	NE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 95	< 95	< 4.8	< 1.9	< 0.95	< 4.8	
4-Methyl-2-pentanone	50	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 77	< 77	< 3.9	< 1.5	< 0.77	< 3.9	
Acetone	1800	9000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 340	< 340	< 17	< 6.8	< 3.4	< 17	
Benzene	0.5	5		< 4	< 4	0.29 J	1.1 J	1.2	1	0.88 J	1.5 J	2.8	0.30 J	0.22 J	< 0.074	< 0.15	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	5.7	< 8.9	9.0 J	< 0.45	< 0.18	< 0.089	< 0.45
Bromodichloromethane	0.06	0.6		< 4	< 4	< 0.23	< 0.85	< 0.34	< 0.34	< 0.34	< 0.85	< 0.85	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 7.7	< 7.7	< 0.39	< 0.15	< 0.077	< 0.39	
Bromoform	0.44	4.4		< 4	< 4	< 0.45	< 1.4	< 0.56	< 0.56	< 0.56	< 1.4	< 1.4	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 8.8	< 8.8	< 0.44	< 0.18	< 0.088	< 0.44	
Bromomethane	1	10		< 10	< 10	< 0.49	< 1.6	< 0.62	< 0.62 *	< 0.62	< 1.6	< 1.6	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 5.9	< 5.9	< 3.0	< 1.2	< 0.59	< 3.0	
Carbon disulfide	200	1000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.053	< 0.053	0.11 J	< 0.053	< 0.053	< 5.3	15 J	0.70 J	< 0.11	0.10 J	< 0.27	
Carbon tetrachloride	0.5	5		< 16	< 16	< 0.28	< 1.3	< 0.52	< 0.52	< 0.52	< 1.3	< 1.3	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 3.8	< 3.8	< 0.19	< 0.076	< 0.038	< 0.19	
Chloroform	0.6	6		< 4	< 4	< 0.25	< 1	1.0 J	< 0.4	< 0.4	< 1	< 1	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062	< 0.062	< 0.062	1	< 6.2	11 BJ	< 0.31	< 0.12	< 0.062	< 0.31	
Chloromethane	3	30		< 6	< 6	< 0.24	< 0.9	< 0.36	< 0.36	< 0.36	< 0.9	< 0.9	< 0.18	< 0.18	< 0.18	< 0.32	< 0.16	< 0.16	< 0.16	< 0.16	0.57 BJ	100 J	< 16	< 0.80	1.4 J	< 0.16	< 1.7 U	
cis-1,2-Dichloroethene	7	70		48	48	26	93	110	94	100	120	140	77	100	190	10	0.94	11	13	3.0	210	270	230	13	4	5.8	12	
Dichlorodifluoromethane	200	1000		< 10	< 10	< 0.26	< 1	< 0.4	< 0.4	< 0.4	< 1	< 1	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 11	< 11	< 0.55	< 0.22	< 0.11	< 0.55	
Ethylbenzene	140	700		< 10	< 10	< 0.14	< 0.65	< 0.26	< 0.26	< 0.26	< 0.65	< 0.65	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 5.4	< 5.4	< 0.27	< 0.11	< 0.054	< 0.27	
Isopropylbenzene	NE	NE		< 4	< 4	< 0.21	< 0.7	< 0.28	< 0.28	< 0.28	< 0.7	< 0.7	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 8.1	< 8.1	< 0.41	< 0.16	< 0.081	< 0.41	
m,p-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 5.7	8.0 BJ	< 0.29	< 0.11	0.060 J	< 0.29	
Methyl tert-butyl ether	12	60		< 10	< 10	< 0.28	< 1.2	< 0.48	< 0.48	< 0.48	< 1.2	< 1.2	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	0.75	< 14	< 14	< 0.70	< 0.28	< 0.14	< 0.70	
Methylene chloride	0.5	5		< 20	< 20	< 0.63	< 3.4	< 1.4	< 1.4	< 1.4	< 3.4	< 3.4	< 0.68	< 0.68	< 0.68	< 1.6	0.18 J	< 0.14	< 0.14	< 0.14	< 0.14	< 14	18 BJ	1.3 J	< 0.28	0.17 J	< 0.70	
Naphthalene	10	100		< 5	< 5	< 0.24	< 0.8	< 0.32	< 0.32	< 0.32	< 0.8	< 0.8	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088	< 0.088	0.22 BJ	< 0.088	< 8.8	< 8.8	< 0.44	< 0.18	< 0.088	< 0.44	
n-Butylbenzene	NE	NE		< 4	< 4	< 0.21	< 0.65	< 0.26	< 0.26	< 0.26	< 0.65	< 0.65	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 14	< 14	< 0.70	< 0.28	< 0.14	< 0.70	
n-Hexane	120	600		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 21	< 21	< 1.1	< 0.42	< 0.21	< 1.1	
n-Propylbenzene	NE	NE		< 10	< 10	< 0.19	< 0.65	< 0.26	< 0.26	< 0.26	< 0.65	< 0.65	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 0.50	< 0.2	< 0.10	< 0.50	
o-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 5.8	< 5.8	< 0.29	< 0.12	< 0.058	< 0.29	
p-Isopropyltoluene	NE	NE		< 4	< 4	< 0.24																						

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-5D2 165.8 - 170.8 ft 11/30/2012	MW-5D2 165.8 - 170.8 ft 01/17/2013	MW-5D2 165.8 - 170.8 ft 02/13/2013	MW-5D2 165.8 - 170.8 ft 04/19/2013	MW-5D2 165.8 - 170.8 ft 07/18/2013	MW-5D2 165.8 - 170.8 ft 10/09/2013	MW-5D2 165.8 - 170.8 ft 04/15/2014	MW-5D2 165.8 - 170.8 ft 10/21/2014	MW-5D2 165.8 - 170.8 ft 04/15/2015	MW-5D2 165.8 - 170.8 ft 10/22/2015	MW-5D2 165.8 - 170.8 ft 01/21/2016	MW-5D2 <sup>3</sup> 165.8 - 170.8 ft 01/21/2016	MW-5D2 165.8 - 170.8 ft 04/21/2016	MW-5D2 165.8 - 170.8 ft 07/18/2016	MW-5D2 165.8 - 170.8 ft 10/12/2016	MW-5D2 165.8 - 170.8 ft 1/20/2017	MW-5D2 165.8 - 170.8 ft 04/12/2017	MW-5D2 165.8 - 170.8 ft 10/04/2017	MW-5D2 165.8 - 170.8 ft 04/03/2018	MW-5D2 165.8 - 170.8 ft 10/12/2018
<b>VOCS</b>																							
1,1,1,2-Tetrachloroethane	7	70	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.5	< 0.25	< 0.50	< 0.25	< 0.50	< 0.92	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.55	< 5.5
1,1,1-Trichloroethane	40	200	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.40	< 0.20	< 0.40	< 0.76	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2	< 0.50	< 5.0
1,1,2-Trichloroethane	0.5	5	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.56	< 0.28	< 0.56	< 0.28	< 0.56	< 0.70	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2	< 0.50	< 5.0
1,1-Dichloroethane	0.7	7	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.62	< 0.31	< 0.62	< 0.78	< 1.4	< 1.4	< 5.6	< 1.4	< 2.8	< 2.8	< 2.8	< 2.8	< 0.70	< 7.0
1,2,4-Trimethylbenzene	96	480	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.28	< 0.14	< 0.28	< 0.72	< 1.3	< 1.3	< 5.2	< 1.3	< 2.6	< 2.6	< 2.6	< 2.6	< 0.30	< 3.0
1,2-Dibromoethane	0.005	0.05	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.72	< 0.36	< 0.72	< 0.36	< 0.72	< 0.77	< 1.3	< 1.3	< 5.2	< 1.3	< 2.6	< 2.6	< 2.6	< 2.6	< 0.65	< 6.5
1,2-Dichlorobenzene	60	600	NA	< 0.27	< 0.27	< 0.27	< 0.27	< 0.54	< 0.27	< 0.54	< 0.27	< 0.54	< 0.67	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 0.38	< 3.8
1,2-Dichloropropane	0.5	5	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.40	< 0.20	< 0.40	< 0.86	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2	< 0.50	< 5.0
1,2,3-Trichlorobenzene	NE	NE	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.48	< 0.24	< 0.48	< 0.24	< 0.48	< 0.92	< 1.4	< 1.4	< 5.6	< 1.4	< 2.8	< 2.8	< 2.8	< 2.8	< 0.9	< 2.3
1,2,4-Trichlorobenzene	14	70	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.62	< 0.31	< 0.62	< 0.68	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 0.39	< 3.9
1,3,5-Trimethylbenzene	96	480	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.36	< 0.18	< 0.36	< 0.18	< 0.36	< 0.51	< 0.75	< 0.75	< 3.0	< 0.75	< 1.5	< 1.5	< 1.5	< 1.5	< 0.38	< 3.8
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 30	< 30	< 120	< 30	< 60	< 60	< 60	< 60	< 15	< 150
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 9.5	< 9.5	< 38	< 9.5	< 19	< 19	< 19	< 19	< 4.8	< 48
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7.7	< 7.7	< 31	< 7.7	< 15	< 15	< 15	< 15	< 3.9	< 39
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34	< 34	< 140	< 34	< 68	< 68	< 68	< 68	< 17	< 170
Benzene	0.5	5	NA	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.074	< 0.15	< 0.074	< 0.15	< 0.29	< 0.89	< 0.89	< 3.6	< 0.89	< 1.8	< 1.8	< 1.8	< 1.8	< 0.45	< 4.5
Bromodichloromethane	0.06	0.6	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.34	< 0.17	< 0.34	< 0.74	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.39	< 3.9
Bromoform	0.44	4.4	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.56	< 0.28	< 0.56	< 0.28	< 0.56	< 0.97	< 1.4	< 1.4	< 5.6	< 1.4	< 2.8	< 2.8	< 2.8	< 2.8	< 0.44	< 4.4
Bromomethane	1	10	NA	< 0.31	< 0.31 *	< 0.31	< 0.31	< 0.62	< 0.31	< 0.62	< 0.31	< 0.62	< 1.6	< 2.4	< 2.4	< 9.6	< 2.4	< 4.8	< 4.8	< 4.8	< 4.8	< 3.0	< 30
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.53	< 0.53	< 2.1	< 0.53	< 1.1	< 1.1	< 1.1	< 1.1	< 0.27	< 2.7
Carbon tetrachloride	0.5	5	NA	< 0.26	< 0.26	< 0.26	< 0.26	< 0.52	< 0.26	< 0.52	< 0.26	< 0.52	< 0.77	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.19	< 1.9
Chloroform	0.6	6	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.40	< 0.20	< 0.40	< 0.86	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 0.31	< 3.1
Chloromethane	3	30	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.36	< 0.18	< 0.36	< 0.18	< 0.36	< 0.64	< 0.96	< 0.96	< 3.8	< 0.96	< 1.9	< 1.9	< 1.9	< 1.9	< 0.80	< 8.0
cis-1,2-Dichloroethane	7	70	NA	6.6	9.2	4.7	3.6	1.5	< 0.24	0.79 J	2.1	2.9	1.4 J	1.6 J	1.6 J	< 4.4	6.1	< 2.2	2.2 J	2.2 J	4.8 J	< 0.55	10 J
Dichlorodifluoromethane	200	1000	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.40	< 0.20	< 0.40	< 1.1	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.55	< 5.5
Ethylbenzene	140	700	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.26	< 0.13	< 0.26	< 0.37	< 0.54	< 0.54	< 2.2	< 0.54	< 1.1	< 1.1	< 1.1	< 1.1	< 0.27	< 2.7
Isopropylbenzene	NE	NE	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.28	< 0.14	< 0.28	< 0.77	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.41	< 4.1
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.57	< 0.57	< 2.3	< 0.57	< 1.1	1.6 BJ	< 1.1	1.2 BJ	< 0.29	< 2.9
Methyl tert-butyl ether	12	60	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.48	< 0.24	< 0.48	< 0.24	< 0.48	< 0.79	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.70	< 7.0
Methylene chloride	0.5	5	NA	< 0.68	< 0.68	< 0.68	< 1.4	5.7	< 1.4	< 0.68	< 1.4	< 3.3	< 1.4	< 1.4	< 1.4	< 5.6	< 1.4	< 2.8	< 2.8	< 2.8	< 2.8	0.90 J+	< 7.0
Naphthalene	10	100	NA	< 0.16	< 0.16	< 0.16	< 0.16	< 0.32	< 0.16	< 0.32	< 0.16	< 0.32	< 0.67	< 0.88	< 0.88	12 BJ	< 0.88	< 1.8	< 1.8	< 1.8	< 1.8	< 0.44	< 4.4
n-Butylbenzene	NE	NE	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.26	< 0.13	< 0.26	< 0.78	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.70	< 7.0
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.1	< 2.1	< 8.4	< 2.1	< 4.2	< 4.2	< 4.2	< 4.2	< 1.1	< 11
n-Propylbenzene	NE	NE	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.26	< 0.13	< 0.26	< 0.83	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 0.50	< 5.0
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.58	< 0.58	< 2.3	< 0.58	< 1.2	1.4 BJ	< 1.2	< 1.2	< 0.29	< 2.9
p-Isopropyltoluene	NE	NE	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.34	< 0.17	< 0.34	< 0.72	< 0.85	< 0.85	< 3.4	< 0.85	< 1.7	< 1.7	< 1.7	< 1.7	< 0.43	< 4.3
sec-Butylbenzene	NE	NE	NA	< 0.15	< 0.15	< 0.15	< 0.15	< 0.3	< 0.15	< 0.30	< 0.15	< 0.30	< 0.80	< 1.3	< 1.3	< 5.2	< 1.3	< 2.6	< 2.6	< 2.6	< 2.6	< 0.65	< 6.5
Styrene	10	100	NA	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.20	< 0.1	< 0.20	< 0.40	< 0.77	< 1.0	< 1.0	< 4.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 0.33	< 3.3
tert-Butylbenzene	NE	NE	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.28	< 0.14	< 0.28	< 0.80	< 1.1	< 1.1	< 4.4	< 1.1	< 2.2	< 2.2	< 2.2	< 2.2	< 0.60	< 6.0
Tetrachloroethene	0.5	5	NA	650	650	640	710	110	520	47	700	640	380	380	160	970	550	570	670	940	210	1900	
Toluene	160	800	NA	0.70	0.22 J	0.35 J	2.4	0.43 J	< 0.22	< 0.11	< 0.22	< 0.30	< 0.53	< 0.53	< 2.1	< 0.53	< 1.1	3.2 BJ	< 1.1	1.2 BJ	< 0.27	< 2.7	
trans-1,2-Dichloroethene	20	100	NA	< 0.25	< 0.25	< 0.25	< 0.5																



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-6S 31.4 - 41.4 ft 12/31/2009	MW-6S 31.4 - 41.4 ft 04/07/2010	MW-6S 31.4 - 41.4 ft 07/01/2010	MW-6S 31.4 - 41.4 ft 10/01/2010	MW-6S 31.4 - 41.4 ft 12/28/2010	MW-6S 31.4 - 41.4 ft 04/11/2012	MW-6S 31.4 - 41.4 ft 01/17/2013	MW-6S 31.4 - 41.4 ft 04/20/2013	MW-6S 31.4 - 41.4 ft 07/18/2013	MW-6S 31.4 - 41.4 ft 10/07/2013	MW-6S 31.4 - 41.4 ft 04/17/2014	MW-6S 31.4 - 41.4 ft 10/16/2014	MW-6S 31.4 - 41.4 ft 04/14/2015	MW-6S 31.4 - 41.4 ft 10/22/2015	MW-6S 31.4 - 41.4 ft 10/12/2016	MW-6S 31.4 - 41.4 ft 10/09/2017	MW-6S <sup>3</sup> 31.4 - 41.4 ft 10/09/2017	MW-6S 31.4 - 41.4 ft 04/04/2018	MW-6S 31.4 - 41.4 ft 10/15/2018	MW-6S <sup>3</sup> 31.4 - 41.4 ft 10/15/2018
<b>VOCs</b>																						
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11	NA	< 0.11	< 0.11
1,1,1-Trichloroethane	40	200	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.38	< 0.10	< 0.1	< 0.1	NA	< 0.10	< 0.10
1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.1	< 0.1	NA	< 0.10	< 0.10
1,1-Dichloroethane	0.7	7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14	NA	< 0.14	< 0.14
1,2,4-Trimethylbenzene	96	480	4.3	3.3	1.3	2.2	3.2	4.8	12	0.92 J	< 0.14	1.4	2.0	0.96 J	1.4	1.3	0.83	0.37 J	0.3 J	NA	< 0.060	< 0.060
1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13	NA	< 0.13	< 0.13
1,2-Dichlorobenzene	60	600	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076	NA	< 0.076	< 0.076
1,2-Dichloropropane	0.5	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.43	< 0.10	< 0.1	< 0.1	NA	< 0.10	< 0.10
1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	0.07 BJ	< 0.045	NA	< 0.045	< 0.045
1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077	NA	< 0.077	< 0.077
1,3,5-Trimethylbenzene	96	480	0.92	7.3	0.27	4.6	0.39	1.5	3.4	< 0.18	< 0.18	< 0.18	0.73 J	< 0.18	1.1	1.7	0.45 J	0.17 J	0.15 J	NA	< 0.075	< 0.075
2-Butanone	800	4000	NA	< 3.0	< 3	< 3	NA	< 3.0	< 3.0													
2-Hexanone	NE	NE	NA	< 0.95	< 0.95	< 0.95	NA	< 0.95	< 0.95													
4-Methyl-2-pentanone	50	500	NA	< 0.77	< 0.77	< 0.77	NA	< 0.77	< 0.77													
Acetone	1800	9000	NA	< 3.4	< 3.4	< 3.4	NA	< 3.4	< 13 U													
Benzene	0.5	5	7.6	7.9	5	5.3	5	4.1	9.3	1.9	0.34 J	2.6	2.8	2.1	3.3	3.8	2.9	0.71	0.65	NA	0.10 J	< 0.089
Bromodichloromethane	0.06	0.6	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	1.2	< 0.077	< 0.077	< 0.077	NA	< 0.077	< 0.077
Bromoform	0.44	4.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088	NA	< 0.088	< 0.088
Bromomethane	1	10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59	< 0.59	NA	< 0.59	< 0.59
Carbon disulfide	200	1000	NA	< 0.053	< 0.053	< 0.053	NA	< 0.053	< 0.053													
Carbon tetrachloride	0.5	5	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038	< 0.038	NA	< 0.038	< 0.038
Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.37	< 0.062	< 0.062	< 0.062	NA	< 0.062	< 0.062
Chloromethane	3	30	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	0.62 BJ	2.2	3.6	NA	< 0.50 U	< 0.50 U
cis-1,2-Dichloroethene	7	70	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.41	< 0.11	< 0.11	< 0.11	NA	< 0.11	< 0.11
Dichlorodifluoromethane	200	1000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.54	< 0.11	< 0.11	< 0.11	NA	< 0.11	< 0.11
Ethylbenzene	140	700	23	14	6.0	13	15	9.8	40	0.18 J	< 0.13	8.0	7.5	3.5	6.4	7.1	2.0	0.79	0.75	NA	< 0.054	< 0.054
Isopropylbenzene	NE	NE	12	9.4	5.3	7.5	6.4	4.1	12	< 0.14	< 0.14	3.2	2.6	2.1	2.9	3.7	1.4	0.53	0.52	NA	< 0.081	< 0.081
m,p-Xylene	400	2000	NA	0.78 J	0.37 J	0.35 J	NA	< 0.057	< 0.057													
Methyl tert-butyl ether	12	60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14	< 0.14	NA	< 0.14	< 0.14
Methylene chloride	0.5	5	< 1	< 1	< 1	< 1	< 1	8.3	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	9.4 cn	< 0.14	< 0.14	< 0.14	NA	< 0.29 U	< 0.35 U
Naphthalene	10	100	26	14	6.4	10	16	19	43	< 0.16	< 0.16	3.8	4.2	1.9	6.6	9.8	2.0 J	0.69 BJ	0.29 BJ	NA	< 0.088	< 0.088
n-Butylbenzene	NE	NE	1.6	1.6	0.92	1.2	0.86	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14	NA	< 0.14	< 0.14
n-Hexane	120	600	NA	< 0.21	< 0.21	< 0.21	NA	< 0.21	< 0.21													
n-Propylbenzene	NE	NE	4.9	3.7	1.9	3.3	3.0	1.8	6.8	< 0.13	< 0.13	1.3	1.5	< 0.13	1.2	1.5	0.46 J	0.19 J	< 0.1	NA	< 0.10	< 0.10
o-Xylene	400	2000	NA	0.17 J	0.11 J	0.1 J	NA	< 0.058	< 0.058													
p-Isopropyltoluene	NE	NE	1.7	1.6	0.72	1.1	0.83	< 0.24	2.4	< 0.17	< 0.17	< 0.17	0.56 J	< 0.17	< 0.17	0.95 J	0.35 J	0.16 J	0.14 J	NA	< 0.085	< 0.085
sec-Butylbenzene	NE	NE	1.9	1.8	1.5	1.5	1.0	0.56 J	1.8	< 0.15	< 0.15	< 0.15	0.82 J	< 0.15	< 0.15	0.86 J	0.38 J	0.13 J	< 0.13	NA	< 0.13	< 0.13
Styrene	10	100	0.53	0.51	< 0.5	< 0.5	1.1	< 0.26	0.64 J	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.39	< 0.065	0.1 BJ	0.07 J	NA	< 0.065	< 0.065
tert-Butylbenzene	NE	NE	0.27	0.31	0.22	0.24	< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 0.12	< 0.12	NA	< 0.12	< 0.12
Tetrachloroethene	0.5	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.22	< 0.17	0.53 J	< 0.17	< 0.17	0.66 J	< 0.17	< 0.17	< 0.37	0.6	< 0.081	< 0.081	NA	0.10 J	< 0.081
Toluene	160	800	3.3	3.3	1.2	1.8	2.0	2.5	6.3	0.82	< 0.11	1.1	1.1	< 0.11	1.9	2.4	0.75	0.32 BJ	0.32 J	NA	< 0.053	0.070 J
trans-1,2-Dichloroethene	20	100	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	< 0.11	< 0.11	< 0.11	NA	< 0.11	< 0.11
Trichloroethene	0.5	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.16	< 0.062	< 0.062	< 0.062	NA	< 0.062	< 0.062
Trichlorofluoromethane	698	3490	< 1.7	< 2	< 2	< 2	< 2	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	< 0.50	< 0.5	< 0.5	NA	< 0.13	< 0.13
Vinyl chloride	0.02	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.13	< 0.1	< 0.1	<											

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-6D 65.5 - 70.5 ft 12/31/2009	MW-6D 65.5 - 70.5 ft 04/07/2010	MW-6D 65.5 - 70.5 ft 07/01/2010	MW-6D 65.5 - 70.5 ft 10/01/2010	MW-6D 65.5 - 70.5 ft 12/28/2010	MW-6D 65.5 - 70.5 ft 03/31/2011	MW-6D 65.5 - 70.5 ft 04/12/2012	MW-6D 65.5 - 70.5 ft 01/16/2013	MW-6D <sup>3</sup> 65.5 - 70.5 ft 01/16/2013	MW-6D 65.5 - 70.5 ft 04/20/2013	MW-6D <sup>3</sup> 65.5 - 70.5 ft 04/20/2013	MW-6D 65.5 - 70.5 ft 07/18/2013	MW-6D <sup>3</sup> 65.5 - 70.5 ft 07/18/2013	MW-6D 65.5 - 70.5 ft 10/07/2013	MW-6D <sup>3</sup> 65.5 - 70.5 ft 10/07/2013	MW-6D 65.5 - 70.5 ft 04/17/2014
<b>VOCs</b>																		
1,1,1,2-Tetrachloroethane	7	70	< 13	< 20	< 13	< 0.25	< 2.5	< 10	< 0.62	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.25	< 0.25	< 0.50
1,1,1-Trichloroethane	40	200	< 25	< 40	< 25	< 0.5	< 5	< 20	< 0.52	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.40
1,1,2-Trichloroethane	0.5	5	< 13	< 20	< 13	< 0.25	< 2.5	< 10	< 0.6	< 0.56	< 0.56	< 0.56	< 0.56	< 0.56	< 0.56	< 0.28	< 0.28	< 0.56
1,1-Dichloroethene	0.7	7	< 25	< 40	< 25	< 0.5	< 5	< 20	< 0.58	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.31	< 0.31	< 0.62
1,2,4-Trimethylbenzene	96	480	<b>330</b>	<b>130</b>	<b>130</b>	<b>160</b>	<b>180</b>	74	19	23	25	11	6.1	16	17	41	38	9.7
1,2-Dibromoethane	0.005	0.05	<b>15</b>	< 16	< 10	<b>11</b>	<b>9.7</b>	< 8	< 0.9	< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 0.36	< 0.36	< 0.72
1,2-Dichlorobenzene	60	600	< 10	< 16	< 10	< 0.2	< 2	< 8	< 0.42	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.27	< 0.27	< 0.54
1,2-Dichloropropane	0.5	5	< 25	< 40	< 25	<b>7.2</b>	<b>6</b>	< 20	< 0.72	< 0.4	< 0.4	<b>1.9 J</b>	<b>1.7 J</b>	< 0.4	< 0.4	< 0.2	< 0.2	< 0.40
1,2,3-Trichlorobenzene	NE	NE	< 13	< 20	< 13	< 0.25	< 2.5	< 10	< 0.72	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.24	< 0.24	< 0.48
1,2,4-Trichlorobenzene	14	70	< 13	< 20	< 13	< 0.25	< 2.5	< 10	< 0.44	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.31	< 0.31	< 0.62
1,3,5-Trimethylbenzene	96	480	23	< 16	< 10	13	13	< 8	< 0.46	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	0.71 J	< 0.18	< 0.36
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA								
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA								
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA								
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA								
Benzene	0.5	5	<b>3900</b>	<b>3200</b>	<b>2900</b>	< 0.2	<b>2900</b>	<b>2100</b>	<b>1500</b>	<b>1300</b>	<b>1400</b>	<b>600</b>	<b>500</b>	<b>810</b>	<b>800</b>	<b>1000</b>	<b>840</b>	<b>650</b>
Bromodichloromethane	0.06	0.6	< 10	< 16	< 10	< 0.2	< 2	< 8	< 0.46	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.17	< 0.17	< 0.34
Bromoform	0.44	4.4	< 10	< 16	< 10	< 0.2	< 2	< 8	< 0.9	< 0.56	< 0.56	< 0.56	< 0.56	< 0.56	< 0.56	< 0.28	< 0.28	< 0.56
Bromomethane	1	10	< 25	< 40	< 25	< 0.5	< 5	< 20	< 0.98	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.31	< 0.31	< 0.62
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA								
Carbon tetrachloride	0.5	5	< 40	< 64	< 40	< 0.8	< 8	< 32	< 0.56	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.26	< 0.26	< 0.52
Chloroform	0.6	6	< 10	< 16	< 10	< 0.2	< 2	< 8	<b>3.6</b>	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.40
Chloromethane	3	30	< 15	< 24	< 15	< 0.3	< 3	< 12	< 0.48	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.18	< 0.18	< 0.36
cis-1,2-Dichloroethene	7	70	< 25	< 40	< 25	1.4	< 5	< 20	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	0.89 J	< 0.12	2.8
Dichlorodifluoromethane	200	1000	< 25	< 40	< 25	< 0.5	< 5	< 20	< 0.52	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.2	< 0.2	< 0.40
Ethylbenzene	140	700	47	< 40	26	39	35	< 20	8.7	7.5	7.9	3.5	2.8	7.1	7.9	8.1	7.5	6.7
Isopropylbenzene	NE	NE	54	43	32	45	40	35	23	30	32	16	12	27	30	29	27	22
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA								
Methyl tert-butyl ether	12	60	< 25	< 40	< 25	< 0.5	< 5	< 20	< 0.56	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.24	< 0.24	< 0.48
Methylene chloride	0.5	5	< 50	< 80	< 50	< 1	< 10	< 40	< 1.3	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.68	< 0.68	< 1.4
Naphthalene	10	100	<b>380</b>	<b>280</b>	<b>370</b>	<b>370</b>	<b>360</b>	<b>190</b>	<b>110</b>	<b>54</b>	<b>58</b>	3.9	2.8	<b>50</b>	<b>64</b>	<b>72</b>	<b>71</b>	<b>12</b>
n-Butylbenzene	NE	NE	12	< 16	< 10	10	7.9	< 8	< 0.42	< 0.26	< 0.26	< 0.26	< 0.26	5.0	6.3	< 0.13	4.3	< 0.26
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA								
n-Propylbenzene	NE	NE	49	< 40	27	36	31	21	11	13	14	5.4	3.6	12	13	14	13	9.2
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA								
p-Isopropyltoluene	NE	NE	< 10	< 16	< 10	6.5	5.1	< 8	2.6	3.8	3.9	1.7 J	1.2 J	3.2	3.6	3.4	< 0.17	2.7
sec-Butylbenzene	NE	NE	< 13	< 20	< 13	4.7	4.2	< 10	2.2	3.4	3.8	2.0	1.3 J	3.2	3.6	3.2	3.0	3.0
Styrene	10	100	< 25	< 40	< 25	3.5	<b>12</b>	< 20	< 0.52	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1.0	< 0.1	< 0.20
tert-Butylbenzene	NE	NE	< 10	< 16	< 10	< 0.2	< 2	< 8	< 0.48	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.14	< 0.14	< 0.28
Tetrachloroethene	0.5	5	<b>36</b>	<b>45</b>	<b>27</b>	<b>30</b>	<b>26</b>	<b>28</b>	<b>20</b>	<b>25</b>	<b>26</b>	<b>22</b>	<b>17</b>	<b>23</b>	<b>25</b>	<b>17</b>	<b>16</b>	<b>10</b>
Toluene	160	800	130	100	88	120	120	58	36	30	31	9.4	7.8	24	27	38	35	25
trans-1,2-Dichloroethene	20	100	< 25	< 40	< 25	< 0.5	< 5	< 20	< 0.54	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.25	< 0.25	< 0.50
Trichloroethene	0.5	5	< 10	< 16	< 10	<b>4.5</b>	<b>4.5</b>	< 8	<b>3.9</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>11</b>	<b>12</b>	< 0.38	<b>18</b>	<b>17</b>	<b>24</b>
Trichlorofluoromethane	698	3490	< 85	< 160	< 100	< 2	< 20	< 80	< 0.44	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.19	< 0.19	< 2.0
Vinyl chloride	0.02	0.2	< 10	< 16	< 10	< 0.2	< 2	< 8	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.1	< 0.1	< 0.20
Xylenes, Total	400	2000	<b>630</b>	320	250	<b>450</b>	<b>400</b>	130	40	40	41	12	8.3	34	39	63	58	16
<b>Total PCBs</b>																		
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	NA	NA	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	NA	NA	< 0.094	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	NA	NA	< 0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	NA	NA	< 0.11	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Dissolved PCBs</b>																		
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA								
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA								
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA								
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA								
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA								
<b>Solids</b>																		
Total Dissolved Solids	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA								
Total Suspended Solids (TSS)	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA								

Notes on Page 55.

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-6D <sup>3</sup> 65.5 - 70.5 ft 04/17/2014	MW-6D 65.5 - 70.5 ft 10/16/2014	MW-6D <sup>3</sup> 65.5 - 70.5 ft 10/16/2014	MW-6D 65.5 - 70.5 ft 04/14/2015	MW-6D <sup>3</sup> 65.5 - 70.5 ft 04/14/2015	MW-6D 65.5 - 70.5 ft 10/22/2015	MW-6D <sup>3</sup> 65.5 - 70.5 ft 10/22/2015	MW-6D 65.5 - 70.5 ft 01/22/2016	MW-6D 65.5 - 70.5 ft 04/20/2016	MW-6D 65.5 - 70.5 ft 07/19/2016	MW-6D 65.5 - 70.5 ft 10/12/2016	MW-6D <sup>3</sup> 65.5 - 70.5 ft 10/12/2016	MW-6D 65.5 - 70.5 ft 1/20/2017	MW-6D <sup>3</sup> 65.5 - 70.5 ft 1/20/2017	MW-6D 65.5 - 70.5 ft 04/11/2017	MW-6D <sup>3</sup> 65.5 - 70.5 ft 04/11/2017	MW-6D 65.5 - 70.5 ft 10/09/2017	MW-6D 65.5 - 70.5 ft 04/04/2018	MW-6D 65.5 - 70.5 ft 10/15/2018
<b>VOCs</b>																						
1,1,1,2-Tetrachloroethane	7	70		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.46	< 0.92	< 2.2	< 5.5	< 1.1	< 5.5	< 5.5	< 11	< 5.5	< 11	< 1.1	< 5.5	< 0.11	< 5.5
1,1,1-Trichloroethane	40	200		< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.38	< 0.76	< 2.0	< 5.0	< 1.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 1.0	< 5	< 0.10	< 5.0
1,1,2-Trichloroethane	0.5	5		< 0.56	< 0.56	< 0.56	< 0.56	< 0.56	< 0.35	< 0.70	< 2.0	< 5.0	< 1.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 1.0	< 5	< 0.10	< 5.0
1,1-Dichloroethene	0.7	7		< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.39	< 0.78	< 2.8	< 7.0	< 1.4	< 7.0	< 7.0	< 14	< 7.0	< 14	< 1.4	< 7	< 0.14	< 7.0
1,2,4-Trimethylbenzene	96	480		8.9	13	13	4.0	4.2	6.9	6.6	9.0 J	15 J	57	100	110	110 B	110	96	110	170	140	90
1,2-Dibromoethane	0.005	0.05		< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 0.39	< 0.77	< 2.6	< 6.5	< 1.3	< 6.5	< 6.5	< 13	< 6.5	< 13	< 1.3	< 6.5	< 0.13	< 6.5
1,2-Dichlorobenzene	60	600		< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.33	< 0.67	< 1.5	< 3.8	< 0.76	< 3.8	< 3.8	< 7.6	< 3.8	< 7.6	< 0.76	< 3.8	< 0.076	< 3.8
1,2-Dichloropropane	0.5	5		2.3	2.4	< 0.40	2.2	< 0.40	< 0.43	< 0.86	< 2.0	< 5.0	< 1.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 1.0	< 5	< 0.10	< 5.0
1,2,3-Trichlorobenzene	NE	NE		< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.46	< 0.92	< 0.90	< 2.3	< 0.45	< 2.3	< 2.3	< 4.5	< 2.3	< 4.5	< 0.45	< 2.3	< 0.045	< 2.3
1,2,4-Trichlorobenzene	14	70		< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.34	< 0.68	< 1.5	< 3.9	< 0.77	< 3.9	< 3.9	< 7.7	< 3.9	< 7.7	< 0.77	< 3.9	< 0.077	< 3.9
1,3,5-Trimethylbenzene	96	480		< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.25	< 0.51	< 1.5	< 3.8	< 0.75	< 3.8	< 3.8	< 7.5	< 3.8	< 7.5	< 0.75	< 3.8	2.1	< 3.8
2-Butanone	800	4000		NA	NA	NA	NA	NA	NA	NA	< 60	< 150	< 30	< 150	< 150	< 300	< 150	< 300	< 30	< 150	< 3.0	< 150 J
2-Hexanone	NE	NE		NA	NA	NA	NA	NA	NA	NA	< 19	< 48	< 9.5	< 48	< 48	< 95	< 48	< 95	< 9.5	< 48	< 0.95	< 48
4-Methyl-2-pentanone	50	500		NA	NA	NA	NA	NA	NA	NA	< 15	< 39	< 7.7	< 39	< 39	< 77	< 39	< 77	< 7.7	< 39	< 0.77	< 39
Acetone	1800	9000		NA	NA	NA	NA	NA	NA	NA	< 68	< 170	< 34	< 170	< 170	< 340	< 170	< 340	< 34	< 170	20	< 170
Benzene	0.5	5		710	990	980	790	700	660	560	610	810	1400	1600	1700	2100	2200	1700	1700	2000	2200	1500
Bromodichloromethane	0.06	0.6		< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.37	< 0.74	< 1.5	< 3.9	< 0.77	< 3.9	< 3.9	< 7.7	< 3.9	< 7.7	< 0.77	< 3.9	< 0.077	< 3.9
Bromoform	0.44	4.4		< 0.56	< 0.56	< 0.56	< 0.56	< 0.56	< 0.48	< 0.97	< 1.8	< 4.4	< 0.88	< 4.4	< 4.4	< 8.8	< 4.4	< 8.8	< 0.88	< 4.4	< 0.088	< 4.4
Bromomethane	1	10		< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.80	< 1.6	< 12	< 30	< 5.9	< 30	< 30	< 59	< 30	< 59	< 5.9	< 30	< 0.59	< 30
Carbon disulfide	200	1000		NA	NA	NA	NA	NA	NA	NA	< 1.1	< 2.7	< 0.53	8.5 J	< 2.7	< 5.3	< 2.7	< 5.3	< 0.53	< 2.7	< 0.053	< 2.7
Carbon tetrachloride	0.5	5		< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.38	< 0.77	< 0.76	< 1.9	< 0.38	< 1.9	< 1.9	< 3.8	< 1.9	< 3.8	< 0.38	< 1.9	< 0.038	< 1.9
Chloroform	0.6	6		< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.37	< 0.74	< 1.2	5.5 BJ	< 0.62	< 3.1	< 3.1	< 6.2	< 3.1	< 6.2	< 0.62	< 3.1	< 0.062	< 3.1
Chloromethane	3	30		< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.32	< 0.64	< 3.2	< 8.0	< 1.6	45 BJ	47 J	28 BJ	9.5 BJ	< 16	< 1.6	19 J	< 0.16	< 14 U
cis-1,2-Dichloroethene	7	70		2.5	2.4	2.2	2.9	3.4	3.1	3.2	3.6 J	< 5.5	3.8 J	< 5.5	< 5.5	< 11	< 5.5	< 11 J	7.3 J	< 5.5	8.3	8.5 J
Dichlorodifluoromethane	200	1000		< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.54	< 1.1	< 2.2	< 5.5	< 1.1	< 5.5	< 5.5	< 11	< 5.5	< 11	< 1.1	< 5.5	< 0.11	< 5.5
Ethylbenzene	140	700		6.3	8.0	7.2	3.3	3.5	4.7	4.5	4.0 J	6.0 J	11	18 J	20 J	21 J	20 J	23 J	22	36	47	34
Isopropylbenzene	NE	NE		21	24	20	13	13	17	16	5.8 J	22 J	31	31	28	29 BJ	31	33 J	34	33	30	17 J
m,p-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	8.2 J	22 J	98	140	130	110 B	110 B	73 J	80	140	55	53
Methyl tert-butyl ether	12	60		< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.39	< 0.79	< 2.8	< 7.0	< 1.4	< 7.0	< 7.0	< 14	< 7.0	< 14	< 1.4	< 7	< 0.14	< 7.0 J
Methylene chloride	0.5	5		< 1.4	76	61	< 1.4	< 1.4	< 1.6	< 3.3	< 2.8	< 7.0	51	< 7.0	< 7.0	< 14	< 7.0	< 14	< 1.4	< 7	< 0.14	< 7.0 J+
Naphthalene	10	100		10	18	15	< 0.32	< 0.32	2.9	2.6	< 1.8	7.0 BJ	67	110 J	110 J	140 BJ	140 J	81 J	110 J	140 BJ	65	< 41 U
n-Butylbenzene	NE	NE		< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.39	< 0.78	< 2.8	< 7.0	5.5	< 7.0	< 7.0	< 14	< 7.0	< 14 J	6.3 J	< 7	4.2	< 7.0
n-Hexane	120	600		NA	NA	NA	NA	NA	NA	< 4.2	< 11	< 2.1	< 11	< 11	< 21	< 11	< 21	< 2.1	< 11	< 0.21	< 11	
n-Propylbenzene	NE	NE		8.6	7.9	7.5	3.8	4.0	5.5	5.5	2.6 J	10 J	17	20 J	19 J	23 J	21 J	24 J	24	28	30	16 J
o-Xylene	400	2000		NA	NA	NA	NA	NA	NA	2.6 J	< 2.9	5.3	8.0 J	6.5 J	13 BJ	11 BJ	9.0 J	8.7	9.5 J	6.8	3.0 J	
p-Isopropyltoluene	NE	NE		2.5	2.5	2.2	< 0.34	< 0.34	< 0.36	< 0.72	< 1.7	< 4.3	3.6 J	< 4.3	< 4.3	< 8.5	< 4.3	< 8.5	< 0.85	< 4.3	3.7	< 4.3
sec-Butylbenzene	NE	NE		2.8	2.8	2.3	< 0.30	< 0.30	2.3	2.3	< 2.6	< 6.5	3.4 J	< 6.5	< 6.5	< 13	< 6.5	< 13	< 1.3	< 6.5	3.8	< 6.5
Styrene	10	100		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.39	< 0.77	< 1.3	< 3.3	1.7 J	< 3.3	< 3.3	< 6.5	< 3.3	< 6.5	< 0.65	6 J	< 0.065	< 3.3
tert-Butylbenzene	NE	NE		< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.40	< 0.80	< 2.4	< 6.0	< 1.2	< 6.0	< 6.0	< 12	< 6.0	< 12	< 1.2	< 6	0.35 J	< 6.0
Tetrachloroethene	0.5	5		8.9	4	3.1	< 0.34	< 0.34	0.97 J	1.6 J	1.8 J	< 4.1	2.7 J	7.0 J	9.0 J	< 8.1	< 4.1	< 8.1	0.90 J	9 BJ	0.53	< 4.1
Toluene	160	800		24	26	27	17	17	22	22	13	23 J	65	90	95	120 B	110 B	110	110	140	140	92
trans-1,2-Dichloroethene	20	100		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.35	< 0.70	< 2.2	< 5.5	< 1.1	< 5.5	< 5.5	< 11	< 5.5	< 11 J	1.8 J	< 5.5	3.3	< 5.5
Trichloroethene	0.5	5		23	31	28	21	22	19	18	8.4 J	24 J	25	24 J	22 J	23 BJ	20 BJ	23 J	26	20 J	15	20 J
Trichlorofluoromethane	698	3490		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 10	< 25	< 5.0	< 25	< 25	< 50	< 25	< 50	< 5.0	< 25	< 0.5	< 6.5
Vinyl chloride	0.02	0.2		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.41	< 3.2	< 8.0	< 1.6	< 8.0	< 8.0	< 16	< 8.0	< 16	< 1.6	< 8	< 0.16	< 8.0
Xylenes, Total	400	2000		15	25	24	8.6	9.1	16	16	10.8	22	103.3	148	136.5	120 BJ	120 B	82 J	89	150	62	56 J
<b>Total PCBs</b>																						
Aroclor-101																						

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID SCREEN INTERVAL (feet bgs) SAMPLE DATE	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-9D	MW-9D	MW-9D <sup>3</sup>	MW-9D													
			24 - 35 ft	24 - 34 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft	44 - 49 ft															
			08/26/2011	04/10/2012	01/14/2013	04/16/2013	07/17/2013	10/03/2013	08/26/2011	04/10/2012	01/15/2013	04/16/2013	07/17/2013	10/03/2013	09/09/2011	04/11/2012	04/11/2012	01/15/2013	04/18/2013	07/18/2013	10/04/2013	04/16/2014	10/14/2014	04/09/2015	10/20/2015	10/13/2016	10/04/2017	10/11/2018			
<b>VOCs</b>																															
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.31	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11	
1,1,1-Trichloroethane	40	200	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.26	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.1	< 0.10	
1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.25	< 0.3	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.1	< 0.10	
1,1-Dichloroethene	0.7	7	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.5	< 0.29	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14	
1,2,4-Trimethylbenzene	96	480	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.2	< 0.22	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.06	< 0.060	
1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.2	< 0.45	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13	
1,2-Dichlorobenzene	60	600	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.2	< 0.21	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076	
1,2-Dichloropropane	0.5	5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.5	< 0.36	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.1	< 0.10		
1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.25	< 0.36	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045	< 0.045		
1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.25	< 0.22	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077	
1,3,5-Trimethylbenzene	96	480	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.2	< 0.23	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075	< 0.075	
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.0	< 3	< 3.0	< 3.0														
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.95	< 0.95	< 0.95	< 0.95														
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.77	< 0.77	< 0.77	< 0.77														
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	17 BJ	< 10 U	< 10 U														
Benzene	0.5	5	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.2	< 0.12	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.089	< 0.089	< 0.089	< 0.089	
Bromodichloromethane	0.06	0.6	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.2	< 0.23	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077	< 0.077	< 0.077	
Bromoform	0.44	4.4	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.2	< 0.45	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088	< 0.088
Bromomethane	1	10	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.5	< 0.49	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59	< 0.59	< 0.59
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.16 J	< 0.053	< 0.053	< 0.053														
Carbon tetrachloride	0.5	5	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.8	< 0.28	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	0.09 J	< 0.038	< 0.038	
Chloroform	0.6	6	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062	< 0.062	< 0.062	
Chloromethane	3	30	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.3	< 0.24	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	0.63 BJ	4.7	< 0.57 U	< 0.57 U	
cis-1,2-Dichloroethene	7	70	< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.5	< 0.22	< 0.12	< 0.12	< 0.12	< 0.5	< 0.22	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.41	< 0.11	< 0.11	< 0.11	< 0.11	
Dichlorodifluoromethane	200	1000	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.5	< 0.26	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11	< 0.11	< 0.11	
Ethylbenzene	140	700	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.5	< 0.14	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054	< 0.054	< 0.054	
Isopropylbenzene	NE	NE	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.2	< 0.21	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081	< 0.081	< 0.081	
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.057	< 0.057	< 0.057	< 0.057														
Methyl tert-butyl ether	12	60	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.5	< 0.28	< 0.24	< 0.24	< 0.24	< 0.5	< 0.28	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	
Methylene chloride	0.5	5	< 1	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 1	< 0.63	< 0.68	< 0.68	< 0.68	< 1	9	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.14	< 0.14	< 0.14	< 0.14	
Naphthalene	10	100	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.25	< 0.24	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088	< 0.088	< 0.088	
n-Butylbenzene	NE	NE	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.2	< 0.21	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	< 0.21														
n-Propylbenzene	NE	NE	< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	&																							

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-9D2 64 - 69 ft																			
SCREEN INTERVAL (feet bgs)			09/09/2011	04/11/2012	01/15/2013	04/18/2013	07/18/2013	10/04/2013	04/16/2014	10/14/2014	04/10/2015	10/20/2015	01/21/2016	04/20/2016	07/19/2016	10/13/2016	1/19/2017	04/12/2017	10/04/2017	04/05/2018	10/11/2018	10/11/2018
SAMPLE DATE																						
<b>VOCs</b>																						
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.22
1,1,1-Trichloroethane	40	200	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.20
1,1,2-Trichloroethane	0.5	5	< 0.25	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.20
1,1-Dichloroethane	0.7	7	< 0.5	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.28
1,2,4-Trimethylbenzene	96	480	< 0.2	< 0.22	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.12
1,2-Dibromoethane	0.005	0.05	< 0.2	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.26
1,2-Dichlorobenzene	60	600	< 0.2	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.15
1,2-Dichloropropane	0.5	5	< 0.5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.20
1,2,3-Trichlorobenzene	NE	NE	< 0.25	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.090
1,2,4-Trichlorobenzene	14	70	< 0.25	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.15
1,3,5-Trimethylbenzene	96	480	< 0.2	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075	< 0.15
2-Butanone	800	4000	NA	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3	< 3.0	< 3.0	< 6.0									
2-Hexanone	NE	NE	NA	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 1.9									
4-Methyl-2-pentanone	50	500	NA	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 1.5									
Acetone	1800	9000	NA	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 6.8									
Benzene	0.5	5	< 0.2	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	0.11 J	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	< 0.089	0.09 J	< 0.089	< 0.18
Bromodichloromethane	0.06	0.6	< 0.2	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.077	< 0.15
Bromoform	0.44	4.4	< 0.2	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.18
Bromomethane	1	10	< 0.5	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 1.2
Carbon disulfide	200	1000	NA	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.11									
Carbon tetrachloride	0.5	5	< 0.8	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.076
Chloroform	0.6	6	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.12
Chloromethane	3	30	< 0.3	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	0.29 J	< 0.16	0.40 J	0.55 BJ	0.49 BJ	< 0.16	1.4 J+	< 0.16	< 0.58 U	< 0.32
cis-1,2-Dichloroethene	7	70	12	11	14	16	16	18	19	24	26	32	3.9	34	31	35	1.0 B	1.5	32	1.7	53	54
Dichlorodifluoromethane	200	1000	< 0.5	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	0.36 J	0.48 J	0.46 J	< 0.11	0.63	< 0.11	0.62	0.78 J	
Ethylbenzene	140	700	< 0.5	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.11
Isopropylbenzene	NE	NE	< 0.2	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.16
m,p-Xylene	400	2000	NA	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.11									
Methyl tert-butyl ether	12	60	7.4	9.3	20	10	12	15	9.6	12	17	24	18	21	28	29	2.9 J+	2.4	38	< 0.14	54	54
Methylene chloride	0.5	5	< 1	8.8	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	0.17 J	< 0.14	< 0.14	< 0.14	1.4 BJ	< 0.14	< 0.14	< 0.14	< 0.29 U	< 0.28
Naphthalene	10	100	< 0.25	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	< 0.18
n-Butylbenzene	NE	NE	< 0.2	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.28
n-Hexane	120	600	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.42									
n-Propylbenzene	NE	NE	< 0.5	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.20
o-Xylene	400	2000	NA	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.12									
p-Isopropyltoluene	NE	NE	< 0.2	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.085	< 0.17
sec-Butylbenzene	NE	NE	< 0.25	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.26
Styrene	10	100	< 0.5	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.39	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	< 0.065	0.08 BJ	< 0.065	< 0.065	< 0.13
tert-Butylbenzene	NE	NE	< 0.2	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.24
Tetrachloroethene	0.5	5	29	10	26	28	30	34	26	41	37	41	11	58	44	61	2.6 B	5.5	49	5.9	74	78
Toluene	160	800	< 0.5	< 0.15	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	< 0.053	< 0.053	< 0.053	< 0.053	0.15 BJ	< 0.053	< 0			

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ENFORCEMENT		MW-10S	MW-10S	MW-10S	MW-10S	MW-10S	MW-10S	MW-11S	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S								
SCREEN INTERVAL (feet bgs)	ACTION LIMIT	STANDARD	11 - 21 ft	24 - 34 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft													
SAMPLE DATE			04/10/2012	05/09/2012	01/15/2013	04/17/2013	07/17/2013	10/09/2013	04/12/2012	05/09/2012	01/15/2013	04/17/2013	07/18/2013	10/04/2013	10/09/2017	04/05/2018	10/16/2018	04/12/2012	05/09/2012	01/16/2013	04/17/2013	07/18/2013	10/04/2013
<b>VOCs</b>																							
1,1,1,2-Tetrachloroethane	7	70	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA	NA	< 0.31	< 0.25	< 0.25	< 0.25	< 0.25
1,1,1-Trichloroethane	40	200	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-Trichloroethane	0.5	5	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA	NA	NA	< 0.3	< 0.28	< 0.28	< 0.28	< 0.28
1,1-Dichloroethene	0.7	7	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA	NA	< 0.29	< 0.31	< 0.31	< 0.31	< 0.31
1,2,4-Trimethylbenzene	96	480	0.76 J	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	0.55 J	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA	NA	1.2	< 0.14	< 0.14	< 0.14	< 0.14
1,2-Dibromoethane	0.005	0.05	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	NA	NA	NA	< 0.45	< 0.36	< 0.36	< 0.36	< 0.36
1,2-Dichlorobenzene	60	600	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.21	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	NA	NA	NA	< 0.21	< 0.27	0.79 J	< 0.27	< 0.27
1,2-Dichloropropane	0.5	5	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.36	< 0.2	< 0.2	< 0.2	< 0.2
1,2,3-Trichlorobenzene	NE	NE	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	NA	NA	NA	< 0.36	< 0.24	< 0.24	< 0.24	< 0.24
1,2,4-Trichlorobenzene	14	70	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA	NA	< 0.22	< 0.31	< 0.31	< 0.31	< 0.31
1,3,5-Trimethylbenzene	96	480	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA	NA	< 0.23	< 0.18	< 0.18	< 0.18	< 0.18
2-Butanone	800	4000	NA																				
2-Hexanone	NE	NE	NA																				
4-Methyl-2-pentanone	50	500	NA																				
Acetone	1800	9000	NA																				
Benzene	0.5	5	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	NA	NA	NA	< 0.12	< 0.074	< 0.074	< 0.074	< 0.074
Bromodichloromethane	0.06	0.6	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA	NA	< 0.23	< 0.17	< 0.17	< 0.17	< 0.17
Bromoform	0.44	4.4	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	NA	NA	NA	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28
Bromomethane	1	10	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	NA	NA	NA	< 0.49	< 0.31	< 0.31	< 0.31	< 0.31
Carbon disulfide	200	1000	NA																				
Carbon tetrachloride	0.5	5	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	NA	NA	NA	< 0.28	< 0.26	< 0.26	< 0.26	< 0.26
Chloroform	0.6	6	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
Chloromethane	3	30	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA	NA	< 0.24	< 0.18	< 0.18	< 0.18	< 0.18
cis-1,2-Dichloroethene	7	70	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	NA	NA	NA	< 0.22	< 0.12	< 0.12	< 0.12	< 0.12
Dichlorodifluoromethane	200	1000	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2
Ethylbenzene	140	700	0.20 J	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA	NA	< 0.14	< 0.13	< 0.13	< 0.13	< 0.13
Isopropylbenzene	NE	NE	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA	NA	< 0.21	< 0.14	< 0.14	< 0.14	< 0.14
m,p-Xylene	400	2000	NA																				
Methyl tert-butyl ether	12	60	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	NA	NA	NA	< 0.28	< 0.24	< 0.24	< 0.24	< 0.24
Methylene chloride	0.5	5	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	NA	NA	NA	< 0.63	< 0.68	< 0.68	< 0.68	< 0.68
Naphthalene	10	100	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	NA	NA	NA	< 0.24	< 0.16	< 0.16	< 0.16	< 0.16
n-Butylbenzene	NE	NE	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA	NA	< 0.21	< 0.13	< 0.13	< 0.13	< 0.13
n-Hexane	120	600	NA																				
n-Propylbenzene	NE	NE	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	NA	NA	NA	< 0.19	< 0.13	< 0.13	< 0.13	< 0.13
o-Xylene	400	2000	NA																				
p-Isopropyltoluene	NE	NE	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA	NA	< 0.24	< 0.17	< 0.17	< 0.17	< 0.17
sec-Butylbenzene	NE	NE	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	NA	NA	NA	< 0.19	< 0.15	< 0.15	< 0.15	< 0.15
Styrene	10	100	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA	< 0.26	< 0.1	< 0.1	< 0.1	< 0.1
tert-Butylbenzene	NE	NE	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	NA	NA	NA	< 0.24	< 0.14	< 0.14	< 0.14	< 0.14
Tetrachloroethene	0.5	5	< 0.22	< 0.17	0.85 J	< 0.17	< 0.17	< 0.17	< 0.22	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	NA	NA	NA	0.78 J	1.7	0.93 J	< 0.17	1.3
Toluene	160	800	0.54	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.73	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	NA	NA	NA	0.64	< 0.11	< 0.11	< 0.11	< 0.11
trans-1,2-Dichloroethene	20	100	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA	NA	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25
Trichloroethene	0.5	5	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19</																

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-13 44 - 48 ft 12/06/2012	MP-13 44 - 48 ft 01/19/2013	MP-13 44 - 48 ft 02/21/2013	MP-13 44 - 48 ft 04/17/2013	MP-13 44 - 48 ft 07/22/2013	MP-13 44 - 48 ft 10/07/2013	MP-13 44 - 48 ft 04/16/2014	MP-13 44 - 48 ft 10/14/2014	MP-13 44 - 48 ft 04/14/2015	MP-13 44 - 48 ft 10/16/2015	MP-13 44 - 48 ft 10/10/2016	MP-13 44 - 48 ft 10/03/2017	MP-13 44 - 48 ft 10/09/2018
<b>VOCs</b>																
	1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.5	< 0.25	< 0.25	< 0.50	< 0.50	< 0.50	< 0.46	< 1.1	< 0.44	< 0.11
	1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.40	< 0.38	< 1.0	< 0.4	< 0.10
	1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.28	< 0.56	< 0.28	< 0.28	< 0.56	< 0.56	< 0.56	< 0.35	< 1.0	< 0.4	< 0.10
	1,1-Dichloroethene	0.7	7	<b>0.92 J</b>	<b>1.1</b>	<b>0.88 J</b>	< 0.62	<b>0.85 J</b>	<b>1.1</b>	<b>1.3 J</b>	< 0.62	<b>1.4 J</b>	<b>0.73 J</b>	< 1.4	< 0.56	< 0.14
	1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.36	< 0.60	< 0.24	< 0.060
	1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.36	< 0.72	< 0.36	< 0.36	< 0.72	< 0.72	< 0.72	< 0.39	< 1.3	< 0.52	< 0.13
	1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.27	< 0.54	< 0.27	< 0.27	< 0.54	< 0.54	< 0.54	< 0.33	< 0.76	< 0.3	< 0.076
	1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.40	< 0.43	< 1.0	< 0.4	< 0.10
	1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.24	< 0.48	< 0.24	< 0.24	< 0.48	< 0.48	< 0.48	< 0.46	< 0.45	< 0.18	< 0.045
	1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.34	< 0.77	< 0.31	< 0.077
	1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.18	< 0.36	< 0.18	< 0.18	< 0.36	< 0.36	< 0.36	< 0.25	< 0.75	< 0.3	< 0.075
	2-Butanone	800	4000	NA	< 30	< 12	< 3.0									
	2-Hexanone	NE	NE	NA	< 9.5	< 3.8	< 0.95									
	4-Methyl-2-pentanone	50	500	NA	< 7.7	< 3.1	< 0.77									
	Acetone	1800	9000	NA	< 34	< 14	< 4.7 U									
	Benzene	0.5	5	0.34 J	0.38 J	0.32 J	0.38 J	0.34 J	0.46 J	< 0.15	< 0.15	< 0.15	< 0.15	< 0.89	< 0.36	0.090 J
	Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.37	< 0.77	< 0.31	< 0.077
	Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.28	< 0.56	< 0.28	< 0.28	< 0.56	< 0.56	< 0.56	< 0.48	< 0.88	< 0.35	< 0.088
	Bromomethane	1	10	< 0.31	< 0.31	< 0.31	< 0.62	< 0.31	< 0.31	< 0.62	< 0.62 *	< 0.62	< 0.80	< 5.9	< 2.4	< 0.59
	Carbon disulfide	200	1000	NA	< 0.53	< 0.21	< 0.053									
	Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.26	< 0.52	< 0.26	< 0.26	< 0.52	< 0.52	< 0.52	< 0.38	< 0.38	< 0.15	< 0.038
	Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.40	< 0.37	< 0.62	< 0.25	< 0.46 U
	Chloromethane	3	30	< 0.18	< 0.18	< 0.18	< 0.36	< 0.18	< 0.18	< 0.36	< 0.36	< 0.36	< 0.32	<b>4.3 BJ</b>	< 0.64	< 0.16
	cis-1,2-Dichloroethene	7	70	<b>540</b>	<b>450</b>	<b>460</b>	<b>460</b>	<b>430</b>	<b>480</b>	<b>450</b>	<b>440</b>	<b>360</b>	<b>220</b>	<b>97</b>	<b>50</b>	<b>26</b>
	Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.40	< 0.54	< 1.1	< 0.44	< 0.11
	Ethylbenzene	140	700	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.18	< 0.54	< 0.22	< 0.054
	Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.39	< 0.81	< 0.32	< 0.081
	m,p-Xylene	400	2000	NA	< 0.57	< 0.23	< 0.057									
	Methyl tert-butyl ether	12	60	< 0.24	< 0.24	< 0.24	< 0.48	< 0.24	< 0.24	< 0.48	< 0.48	< 0.48	< 0.39	< 1.4	< 0.56	< 0.14
	Methylene chloride	0.5	5	< 0.68	< 0.68	< 0.68	< 1.4	< 0.68	< 0.68	< 1.4	< 1.4	< 1.4	< 1.6	< 1.4	< 0.56	< 0.43 U
	Naphthalene	10	100	< 0.16	< 0.16	< 0.16	< 0.32	< 0.16	< 0.16	< 0.32	< 0.32	< 0.32	< 0.34	< 0.88	< 0.35	< 0.088
	n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.39	< 1.4	< 0.56	< 0.14
	n-Hexane	120	600	NA	< 2.1	< 0.84	< 0.21									
	n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.26	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.41	< 1.0	< 0.4	< 0.10
	o-Xylene	400	2000	NA	< 0.58	< 0.23	< 0.058									
	p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.36	< 0.85	< 0.34	< 0.085
	sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.15	< 0.3	< 0.15	< 0.15	< 0.30	< 0.30	< 0.30	< 0.40	< 1.3	< 0.52	< 0.13
	Styrene	10	100	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.20	< 0.20	< 0.20	< 0.39	< 0.65	< 0.26	< 0.065
	tert-Butylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.28	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.40	< 1.2	< 0.48	< 0.12
	Tetrachloroethene	0.5	5	<b>640</b>	<b>760</b>	<b>630</b>	<b>680</b>	<b>720</b>	<b>800</b>	<b>750</b>	<b>750</b>	<b>580</b>	<b>360</b>	<b>240</b>	<b>160</b>	<b>140</b>
	Toluene	160	800	< 0.11	< 0.11	< 0.11	< 0.22	< 0.11	< 0.11	< 0.22	< 0.22	< 0.22	< 0.15	< 0.53	< 0.21	< 0.053
	trans-1,2-Dichloroethene	20	100	7.3	6.7	6.1	6.9	6.9	8.4	8.5	7.7	8.4	4.0	< 1.1	0.68 J	0.39 J
	Trichloroethene	0.5	5	<b>230</b>	<b>200</b>	<b>220</b>	<b>230</b>	<b>220</b>	<b>290</b>	<b>300</b>	<b>260</b>	<b>320</b>	<b>170</b>	<b>93</b>	<b>59</b>	<b>45</b>
	Trichlorofluoromethane	698	3490	< 0.19	< 0.19	< 0.19	< 0.38	< 0.19	< 0.19	< 2.0	< 2.0	< 2.0	< 1.0	< 5.0	< 2	< 0.13
	Vinyl chloride	0.02	0.2	<b>15</b>	<b>17</b>	<b>17</b>	<b>13</b>	<b>13</b>	<b>17</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>8.6</b>	<b>3.7 J</b>	<b>1.5 J</b>	<b>0.47 J+</b>
	Xylenes, Total	400	2000	< 0.068	< 0.068	< 0.068	< 0.14	< 0.068	< 0.068	< 0.14	< 0.14	< 0.14	< 0.22	< 0.58	< 0.46	< 0.12
<b>Total PCBs</b>																
	Aroclor-1016	0.003	0.03	< 0.16	NA											
	Aroclor-1232	0.003	0.03	< 0.085	NA											
	Aroclor-1242	0.003	0.03	< 0.12	NA											
	Aroclor-1248	0.003	0.03	< 0.1	NA											
	Total Detected PCBs	0.003	0.03	ND	NA											
<b>Dissolved PCBs</b>																
	Aroclor-1016	0.003	0.03	NA												
	Aroclor-1232	0.003	0.03	NA												
	Aroclor-1242	0.003	0.03	NA												
	Aroclor-1248	0.003	0.03	NA												
	Total Detected PCBs	0.003	0.03	NA												
<b>Solids</b>																
	Total Dissolved Solids	NE	NE	1400	1400	1400	NA									
	Total Suspended Solids (TSS)	NE	NE	NA												
Notes on Page 55.																

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	MP-13	
				67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft	67 - 71 ft
SAMPLE DATE				12/06/2012	01/19/2013	02/21/2013	04/17/2013	07/22/2013	10/07/2013	04/16/2014	10/14/2014	04/14/2015	10/16/2015	10/10/2016	10/03/2017	10/09/2018
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70		< 1.3	< 1.3	< 1.3	< 2.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.92	< 1.1	< 0.22	< 0.11
1,1,1-Trichloroethane	40	200		< 1	< 1	< 1	< 2	< 1	< 1	< 1.0	< 1.0	< 1.0	< 0.76	< 1.0	< 0.2	< 0.10
1,1,2-Trichloroethane	0.5	5		< 1.4	< 1.4	< 1.4	< 2.8	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.70	< 1.0	< 0.2	< 0.10
1,1-Dichloroethene	0.7	7		<b>2.8 J</b>	<b>3.1 J</b>	< 1.6	< 3.1	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.78	< 1.4	< 0.28	< 0.14
1,2,4-Trimethylbenzene	96	480		< 0.7	< 0.7	< 0.7	< 1.4	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 0.72	< 0.60	< 0.12	< 0.060
1,2-Dibromoethane	0.005	0.05		< 1.8	< 1.8	< 1.8	< 3.6	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 0.77	< 1.3	< 0.26	< 0.13
1,2-Dichlorobenzene	60	600		< 1.4	< 1.4	< 1.4	< 2.7	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.67	< 0.76	< 0.15	< 0.076
1,2-Dichloropropane	0.5	5		< 1	< 1	< 1	< 2	< 1	< 1	< 1.0	< 1.0	< 1.0	< 0.86	< 1.0	< 0.2	< 0.10
1,2,3-Trichlorobenzene	NE	NE		< 1.2	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.92	< 0.45	< 0.09	< 0.045
1,2,4-Trichlorobenzene	14	70		< 1.6	< 1.6	< 1.6	< 3.1	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.68	< 0.77	< 0.15	< 0.077
1,3,5-Trimethylbenzene	96	480		< 0.9	< 0.9	< 0.9	< 1.8	< 0.9	< 0.9	< 0.90	< 0.90	< 0.90	< 0.51	< 0.75	< 0.15	< 0.075
2-Butanone	800	4000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 30	< 6	< 3.0
2-Hexanone	NE	NE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 9.5	< 1.9	< 0.95
4-Methyl-2-pentanone	50	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7.7	< 1.5	< 0.77
Acetone	1800	9000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34	< 6.8	< 3.4
Benzene	0.5	5		< 0.37	<b>1.1 J</b>	< 0.37	< 0.74	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.29	< 0.89	< 0.18	< 0.089
Bromodichloromethane	0.06	0.6		< 0.85	< 0.85	< 0.85	< 1.7	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.74	< 0.77	< 0.15	< 0.077
Bromoform	0.44	4.4		< 1.4	< 1.4	< 1.4	< 2.8	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.97	< 0.88	< 0.18	< 0.088
Bromomethane	1	10		< 1.6	< 1.6	< 1.6	< 3.1	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6 *	< 1.6	< 1.6	< 1.2	< 0.59
Carbon disulfide	200	1000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.53	< 0.11	< 0.053
Carbon tetrachloride	0.5	5		< 1.3	< 1.3	< 1.3	< 2.6	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.77	< 0.38	< 0.076	< 0.038
Chloroform	0.6	6		< 1	< 1	< 1	< 2	< 1	< 1	< 1.0	< 1.0	< 1.0	< 0.74	< 0.62	0.18 J	< 0.65 U
Chloromethane	3	30		< 0.9	< 0.9	< 0.9	< 1.8	< 0.9	< 0.9	< 0.90	< 0.90	< 0.90	< 0.64	<b>4.7 BJ</b>	< 0.32	< 0.16
cis-1,2-Dichloroethene	7	70		<b>3500</b>	<b>3100</b>	<b>2900</b>	<b>3200</b>	<b>2300</b>	<b>1500</b>	<b>1300</b>	<b>810</b>	<b>710</b>	<b>470</b>	<b>89</b>	<b>24</b>	<b>14</b>
Dichlorodifluoromethane	200	1000		< 1	< 1	< 1	< 2	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.1	< 1.1	< 0.22	< 0.11
Ethylbenzene	140	700		< 0.65	< 0.65	< 0.65	< 1.3	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.37	< 0.54	< 0.11	< 0.054
Isopropylbenzene	NE	NE		< 0.7	< 0.7	< 0.7	< 1.4	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 0.77	< 0.81	< 0.16	< 0.081
m,p-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.57	< 0.11	< 0.057
Methyl tert-butyl ether	12	60		< 1.2	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.79	< 1.4	< 0.28	< 0.14
Methylene chloride	0.5	5		< 3.4	< 3.4	< 3.4	< 6.8	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.3	< 1.4	< 0.28	< 0.51 U
Naphthalene	10	100		< 0.8	< 0.8	< 0.8	< 1.6	< 0.8	< 0.8	< 0.80	< 0.80	< 0.80	< 0.67	< 0.88	< 0.18	< 0.088
n-Butylbenzene	NE	NE		< 0.65	< 0.65	< 0.65	< 1.3	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.78	< 1.4	< 0.28	< 0.14
n-Hexane	120	600		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.1	< 0.42	< 0.21
n-Propylbenzene	NE	NE		< 0.65	< 0.65	< 0.65	< 1.3	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.83	< 1.0	< 0.2	< 0.10
o-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.58	< 0.12	< 0.058
p-Isopropyltoluene	NE	NE		< 0.85	< 0.85	< 0.85	< 1.7	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.72	< 0.85	< 0.17	< 0.085
sec-Butylbenzene	NE	NE		< 0.75	< 0.75	< 0.75	< 1.5	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.80	< 1.3	< 0.26	< 0.13
Styrene	10	100		< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.77	< 0.65	< 0.13	< 0.065
tert-Butylbenzene	NE	NE		< 0.7	< 0.7	< 0.7	< 1.4	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 0.80	< 1.2	< 0.24	< 0.12
Tetrachloroethene	0.5	5		<b>3800</b>	<b>4300</b>	<b>2900</b>	<b>3800</b>	<b>2800</b>	<b>2000</b>	<b>1600</b>	<b>1600</b>	<b>1200</b>	<b>970</b>	<b>270</b>	<b>84</b>	<b>45</b>
Toluene	160	800		< 0.55	< 0.55	< 0.55	< 1.1	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.30	< 0.53	< 0.11	0.090 J
trans-1,2-Dichloroethene	20	100		<b>60</b>	<b>56</b>	<b>48</b>	<b>52</b>	<b>37</b>	<b>27</b>	<b>23</b>	<b>12</b>	<b>11</b>	< 0.70	< 1.1	0.48 J	0.26 J
Trichloroethene	0.5	5		<b>1100</b>	<b>1000</b>	<b>800</b>	<b>940</b>	<b>630</b>	<b>510</b>	<b>440</b>	<b>260</b>	<b>270</b>	<b>180</b>	<b>55</b>	<b>18</b>	<b>8.8</b>
Trichlorofluoromethane	698	3490		< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 0.95	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 1	< 0.13
Vinyl chloride	0.02	0.2		<b>150</b>	<b>180</b>	<b>140</b>	<b>130</b>	<b>110</b>	<b>92</b>	<b>83</b>	<b>45</b>	<b>50</b>	< 0.41	<b>3.2 J</b>	<b>0.6 J</b>	<b>0.37 J+</b>
Xylenes, Total	400	2000		< 0.34	< 0.34	< 0.34	< 0.68	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.44	< 0.58	< 0.23	< 0.12
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03		< 0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03		< 0.085	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03		< 0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03		< 0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Solids</b>																
Total Dissolved Solids	NE	NE		1100	1100	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS)	NE	NE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 17  
 Groundwater Analytical Results Summary  
 Madison-Kipp Corporation  
 Madison, Wisconsin

WELL ID	PREVENTIVE ACTION	ENFORCEMENT STANDARD	MP-13 81 - 85 ft 12/06/2012	MP-13 81 - 85 ft 12/12/2012	MP-13 81 - 85 ft 01/19/2013	MP-13 <sup>3</sup> 81 - 85 ft 01/19/2013	MP-13 81 - 85 ft 02/21/2013	MP-13 <sup>3</sup> 81 - 85 ft 02/21/2013	MP-13 81 - 85 ft 04/17/2013	MP-13 <sup>3</sup> 81 - 85 ft 04/17/2013	MP-13 81 - 85 ft 07/22/2013	MP-13 <sup>3</sup> 81 - 85 ft 07/22/2013	MP-13 81 - 85 ft 10/07/2013	MP-13 <sup>3</sup> 81 - 85 ft 10/07/2013	MP-13 81 - 85 ft 04/16/2014	MP-13 <sup>3</sup> 81 - 85 ft 04/16/2014	MP-13 81 - 85 ft 10/14/2014	MP-13 81 - 85 ft 04/14/2015	MP-13 <sup>3</sup> 81 - 85 ft 04/14/2015	MP-13 81 - 85 ft 10/16/2015	MP-13 <sup>3</sup> 81 - 85 ft 10/16/2015	MP-13 81 - 85 ft 10/10/2016	MP-13 81 - 85 ft 10/03/2017	MP-13 81 - 85 ft 10/09/2018		
<b>VOCS</b>																										
1,1,1,2-Tetrachloroethane	7	70	< 2.5	NA	4.8 J	4.1 J	4.5 J	4.8 J	< 5	< 2.5	< 2.5	< 2.5	< 1.3	< 1.3	< 2.5	< 5.0	< 2.5	< 2.5	< 2.5	< 9.2	< 9.2	< 22	< 11	< 5.5		
1,1,1-Trichloroethane	40	200	< 2	NA	< 2	< 2	< 1	< 1	< 4	< 2	< 2	< 2	< 1	< 1	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 7.6	< 7.6	< 20	< 10	< 5.0		
1,1,2-Trichloroethane	0.5	5	< 2.8	NA	< 2.8	< 2.8	< 1.4	< 1.4	< 5.6	< 2.8	< 2.8	< 2.8	< 1.4	< 1.4	< 2.8	< 5.6	< 2.8	< 2.8	< 2.8	< 7.0	< 7.0	< 20	< 10	< 5.0		
1,1-Dichloroethene	0.7	7	< 3.1	NA	< 3.1	<b>4.2 J</b>	<b>4.2 J</b>	<b>3.5 J</b>	< 6.2	< 3.1	< 3.1	< 3.1	< 1.6	< 1.6	< 3.1	< 6.2	< 3.1	< 3.1	< 3.1	< 7.8	< 7.8	< 28	< 14	< 7.0		
1,2,4-Trimethylbenzene	96	480	< 1.4	NA	< 1.4	< 1.4	< 0.7	< 0.7	< 2.8	< 1.4	< 1.4	< 1.4	< 0.7	< 0.7	< 1.4	< 2.8	< 1.4	< 1.4	< 1.4	< 7.2	< 7.2	< 12	< 6	< 3.0		
1,2-Dibromoethane	0.005	0.05	< 3.6	NA	< 3.6	< 3.6	< 1.8	< 1.8	< 7.2	< 3.6	< 3.6	< 3.6	< 1.8	< 1.8	< 3.6	< 7.2	< 3.6	< 3.6	< 3.6	< 7.7	< 7.7	< 26	< 13	< 6.5		
1,2-Dichlorobenzene	60	600	< 2.7	NA	< 2.7	< 2.7	< 1.4	< 1.4	< 5.4	< 2.7	< 2.7	< 2.7	< 1.4	< 1.4	< 2.7	< 5.4	< 2.7	< 2.7	< 2.7	< 6.7	< 6.7	< 15	< 7.6	< 3.8		
1,2-Dichloropropane	0.5	5	< 2	NA	< 2	< 2	< 1	< 1	< 4	< 2	< 2	< 2	< 1	< 1	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 8.6	< 8.6	< 20	< 10	< 5.0		
1,2,3-Trichlorobenzene	NE	NE	< 2.4	NA	< 2.4	< 2.4	< 1.2	< 1.2	< 4.8	< 2.4	< 2.4	< 2.4	< 1.2	< 1.2	< 2.4	< 4.8	< 2.4	< 2.4	< 2.4	< 9.2	< 9.2	< 9.0	< 4.5	< 2.3		
1,2,4-Trichlorobenzene	14	70	< 3.1	NA	< 3.1	< 3.1	< 1.6	< 1.6	< 6.2	< 3.1	< 3.1	< 3.1	< 1.6	< 1.6	< 3.1	< 6.2	< 3.1	< 3.1	< 3.1	< 6.8	< 6.8	< 15	< 7.7	< 3.9		
1,3,5-Trimethylbenzene	96	480	< 1.8	NA	< 1.8	< 1.8	< 0.9	< 0.9	< 3.6	< 1.8	< 1.8	< 1.8	< 0.9	< 0.9	< 1.8	< 3.6	< 1.8	< 1.8	< 1.8	< 5.1	< 5.1	< 15	< 7.5	< 3.8		
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 600	< 300	< 150		
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 190	< 95	< 48		
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 150	< 77	< 39		
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 680	500 J	< 170		
Benzene	0.5	5	< 0.74	NA	< 0.74	< 0.74	< 0.37	< 0.37	< 1.5	< 0.74	< 0.74	< 0.74	< 0.37	< 0.37	< 0.74	< 1.5	< 0.74	< 0.74	< 0.74	< 2.9	< 2.9	< 18	< 8.9	< 4.5		
Bromodichloromethane	0.06	0.6	< 1.7	NA	< 1.7	< 1.7	< 0.85	< 0.85	< 3.4	< 1.7	< 1.7	< 1.7	< 0.85	< 0.85	< 1.7	< 3.4	< 1.7	< 1.7	< 1.7	< 7.4	< 7.4	< 15	< 7.7	< 3.9		
Bromoform	0.44	4.4	< 2.8	NA	< 2.8	< 2.8	< 1.4	< 1.4	< 5.6	< 2.8	< 2.8	< 2.8	< 1.4	< 1.4	< 2.8	< 5.6	< 2.8	< 2.8	< 2.8	< 9.7	< 9.7	< 18	< 8.8	< 4.4		
Bromomethane	1	10	< 3.1	NA	< 3.1	< 3.1	< 1.6	< 1.6	< 6.2	< 3.1	< 3.1	< 3.1	< 1.6	< 1.6	< 3.1	< 6.2	< 3.1 *	< 3.1	< 3.1	< 16	< 16	< 120	< 59	< 30		
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 11	< 5.3	< 2.7		
Carbon tetrachloride	0.5	5	< 2.6	NA	< 2.6	< 2.6	< 1.3	< 1.3	< 5.2	< 2.6	< 2.6	< 2.6	< 1.3	< 1.3	< 2.6	< 5.2	< 2.6	< 2.6	< 2.6	< 7.7	< 7.7	< 7.6	< 3.8	< 1.9		
Chloroform	0.6	6	< 2	NA	< 2	< 2	< 1	< 1	< 4	< 2	< 2	< 2	< 1	< 1	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 7.4	< 7.4	< 12	< 6.2	< 3.1		
Chloromethane	3	30	< 1.8	NA	< 1.8	< 1.8	< 0.9	< 0.9	< 3.6	< 1.8	< 1.8	< 1.8	< 0.9	< 0.9	< 1.8	< 3.6	< 1.8	< 1.8	< 1.8	< 6.4	< 6.4	< 32	< 16	< 8.0		
cis-1,2-Dichloroethene	7	70	<b>1900</b>	NA	<b>1800</b>	<b>1800</b>	<b>2100</b>	<b>2300</b>	<b>2700</b>	<b>2400</b>	<b>1700</b>	<b>1800</b>	<b>1200</b>	<b>1200</b>	<b>2200</b>	<b>2400</b>	<b>1700</b>	<b>1600</b>	<b>2000</b>	<b>1900</b>	<b>1800</b>	<b>930</b>	<b>670</b>	<b>240</b>		
Dichlorodifluoromethane	200	1000	< 2	NA	< 2	< 2	< 1	< 1	< 4	< 2	< 2	< 2	< 1	< 1	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 11	< 11	< 22	< 11	< 5.5		
Ethylbenzene	140	700	< 1.3	NA	< 1.3	< 1.3	< 0.65	< 0.65	< 2.6	< 1.3	< 1.3	< 1.3	< 0.65	< 0.65	< 1.3	< 2.6	< 1.3	< 1.3	< 1.3	< 3.7	< 3.7	< 11	< 5.4	< 2.7		
Isopropylbenzene	NE	NE	< 1.4	NA	< 1.4	< 1.4	< 0.7	< 0.7	< 2.8	< 1.4	< 1.4	< 1.4	< 0.7	< 0.7	< 1.4	< 2.8	< 1.4	< 1.4	< 1.4	< 7.7	< 7.7	< 16	< 8.1	< 4.1		
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 11	6 BJ	< 2.9		
Methyl tert-butyl ether	12	60	< 2.4	NA	< 2.4	< 2.4	< 1.2	< 1.2	< 4.8	< 2.4	< 2.4	< 2.4	< 1.2	< 1.2	< 2.4	< 4.8	< 2.4	< 2.4	< 2.4	< 7.9	< 7.9	< 28	< 14	< 7.0		
Methylene chloride	0.5	5	< 6.8	NA	< 6.8	< 6.8	< 3.4	< 3.4	< 14	< 6.8	< 6.8	< 6.8	< 3.4	< 3.4	< 6.8	< 14	< 6.8	< 6.8	< 6.8	< 33	< 33	< 28	< 14	< 7.0		
Naphthalene	10	100	< 1.6	NA	< 1.6	< 1.6	< 0.8	< 0.8	< 3.2	< 1.6	< 1.6	< 1.6	< 0.8	< 0.8	< 1.6	< 3.2	< 1.6	< 1.6	< 1.6	< 6.7	< 6.7	< 18	< 8.8	< 4.4		
n-Butylbenzene	NE	NE	< 1.3	NA	< 1.3	< 1.3	< 0.65	< 0.65	< 2.6	< 1.3	< 1.3	< 1.3	< 0.65	< 0.65	< 1.3	< 2.6	< 1.3	< 1.3	< 1.3	< 7.8	< 7.8	< 28	< 14	< 7.0		
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 42	< 21	< 11		
n-Propylbenzene	NE	NE	< 1.3	NA	< 1.3	< 1.3	< 0.65	< 0.65	< 2.6	< 1.3	< 1.3	< 1.3	< 0.65	< 0.65	< 1.3	< 2.6	< 1.3	< 1.3	< 1.3	< 8.3	< 8.3	< 20	< 10	< 5.0		
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 12	< 5.8	< 2.9		
p-Isopropyltoluene	NE	NE	< 1.7	NA	< 1.7	< 1.7	< 0.85	< 0.85	< 3.4	< 1.7	< 1.7	< 1.7	< 0.85	< 0.85	< 1.7	< 3.4	< 1.7	< 1.7	< 1.7	< 7.2	< 7.2	< 17	< 8.5	< 4.3		
sec-Butylbenzene	NE	NE	< 1.5	NA	< 1.5	< 1.5	< 0.75	< 0.75	< 3	< 1.5	< 1.5	< 1.5	< 0.75	< 0.75	< 1.5	< 3.0	< 1.5	< 1.5	< 1.5	< 8.0	< 8.0	< 26	< 13	< 6.5		
Styrene	10	100	< 1	NA	< 1	< 1	< 0.5	< 0.5	< 2	< 1	< 1	< 1	< 0.5	< 0.5	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 7.7	< 7.7	< 13	< 6.5	< 3.3		
tert-Butylbenzene	NE	NE	< 1.4	NA	< 1.4	< 1.4	< 0.7	< 0.7	< 2.8	< 1.4	< 1.4	< 1.4	< 0.7	< 0.7	< 1.4	< 2.8	< 1.4	< 1.4	< 1.4	< 8.0	< 8.0	< 24	< 12	< 6.0		
Tetrachloroethene	0.5	5	<b>5600</b>	NA	<b>6800</b>	<b>7400</b>	<b>7000</b>	<b>7100</b>	<b>7900</b>	<b>7000</b>	<b>6800</b>	<b>6300</b>	<b>5400</b>	<b>5200</b>	<b>7900</b>	<b>7800</b>	<b>8000</b>	<b>6700</b>	<b>11000</b>	<b>9700</b>	<b>9200</b>	<b>4800</b>	<b>3200</b>	<b>890</b>		
Toluene	160	800	< 1.1	NA	< 1.1	< 1.1	< 0.55	< 0.55	< 2.2	< 1.1	< 1.1	< 1.1	< 0.55	< 0.55	< 1.1	< 2.2	< 1.1	< 1.1	< 1.1	< 3.0	< 3.0	< 11	< 5.3	< 2.7		
trans-1,2-Dichloroethene	20	100	<b>29</b>	NA	<b>38</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>48</b>	<b>35</b>	<b>29</b>	<b>31</b>	19													

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-13												
				102 - 106 ft												
SAMPLE DATE				12/04/2012	01/18/2013	02/21/2013	04/17/2013	07/22/2013	10/07/2013	04/16/2014	10/14/2014	04/14/2015	10/16/2015	10/10/2016	10/03/2017	10/09/2018
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70		< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 4.6	< 2.2	< 2.8	< 5.5
1,1,1-Trichloroethane	40	200		< 1	< 0.4	< 0.4	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 3.8	< 2.0	< 2.5	< 5.0
1,1,2-Trichloroethane	0.5	5		< 1.4	< 0.56	< 0.56	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 3.5	< 2.0	< 2.5	< 5.0
1,1-Dichloroethene	0.7	7		< 1.6	< 0.62	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 3.9	< 2.8	< 3.5	< 7.0
1,2,4-Trimethylbenzene	96	480		< 0.7	< 0.28	< 0.28	< 0.7	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 3.6	< 1.2	< 1.5	< 3.0
1,2-Dibromoethane	0.005	0.05		< 1.8	< 0.72	< 0.72	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 3.9	< 2.6	< 3.3	< 6.5
1,2-Dichlorobenzene	60	600		< 1.4	< 0.54	< 0.54	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 3.3	< 1.5	< 1.9	< 3.8
1,2-Dichloropropane	0.5	5		< 1	< 0.4	< 0.4	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 4.3	< 2.0	< 2.5	< 5.0
1,2,3-Trichlorobenzene	NE	NE		< 1.2	< 0.48	< 0.48	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 4.6	< 0.90	< 1.1	< 2.3
1,2,4-Trichlorobenzene	14	70		< 1.6	< 0.62	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 3.4	< 1.5	< 1.9	< 3.9
1,3,5-Trimethylbenzene	96	480		< 0.9	< 0.36	< 0.36	< 0.9	< 0.9	< 0.9	< 0.90	< 0.90	< 0.90	< 2.5	< 1.5	< 1.9	< 3.8
2-Butanone	800	4000		NA	< 60	< 75	< 150									
2-Hexanone	NE	NE		NA	< 19	< 24	< 48									
4-Methyl-2-pentanone	50	500		NA	< 15	< 19	< 39									
Acetone	1800	9000		NA	< 68	< 85	< 260 U									
Benzene	0.5	5		< 0.37	< 0.15	< 0.15	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 1.5	< 1.8	< 2.2	< 4.5
Bromodichloromethane	0.06	0.6		< 0.85	< 0.34	< 0.34	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 3.7	< 1.5	< 1.9	< 3.9
Bromoform	0.44	4.4		< 1.4	< 0.56	< 0.56	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 4.8	< 1.8	< 2.2	< 4.4
Bromomethane	1	10		< 1.6	< 0.62	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6 *	< 1.6	< 8.0	< 12	< 15	46 J+
Carbon disulfide	200	1000		NA	< 1.1	< 1.3	< 2.7									
Carbon tetrachloride	0.5	5		< 1.3	< 0.52	< 0.52	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 3.8	< 0.76	< 0.95	< 1.9
Chloroform	0.6	6		< 1	< 0.4	< 0.4	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 3.7	< 1.2	< 1.6	< 3.1
Chloromethane	3	30		< 0.9	< 0.36	< 0.36	< 0.9	< 0.9	< 0.9	< 0.90	< 0.90	< 0.90	< 3.2	9.8 BJ	< 4	< 14 U
cis-1,2-Dichloroethene	7	70		1100	690	520	720	660	600	770	730	980	1100	200	350	580
Dichlorodifluoromethane	200	1000		< 1	< 0.4	< 0.4	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 5.4	< 2.2	< 2.8	< 5.5
Ethylbenzene	140	700		< 0.65	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 1.8	< 1.1	< 1.4	< 2.7
Isopropylbenzene	NE	NE		< 0.7	< 0.28	< 0.28	< 0.7	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 3.9	< 1.6	< 2	< 4.1
m,p-Xylene	400	2000		NA	< 1.1	< 1.4	< 2.9									
Methyl tert-butyl ether	12	60		< 1.2	< 0.48	< 0.48	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 3.9	< 2.8	< 3.5	< 7.0
Methylene chloride	0.5	5		< 3.4	< 1.4	< 1.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 16	< 2.8	< 3.5	< 7.0
Naphthalene	10	100		< 0.8	< 0.32	< 0.32	< 0.8	< 0.8	< 0.8	< 0.80	< 0.80	< 0.80	< 3.4	< 1.8	< 2.2	< 4.4
n-Butylbenzene	NE	NE		< 0.65	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 3.9	< 2.8	< 3.5	< 7.0
n-Hexane	120	600		NA	< 4.2	< 5.3	< 11									
n-Propylbenzene	NE	NE		< 0.65	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 4.1	< 2.0	< 2.5	< 5.0
o-Xylene	400	2000		NA	< 1.2	< 1.5	< 2.9									
p-Isopropyltoluene	NE	NE		< 0.85	< 0.34	< 0.34	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 3.6	< 1.7	< 2.1	< 4.3
sec-Butylbenzene	NE	NE		< 0.75	< 0.3	< 0.3	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 4.0	< 2.6	< 3.3	< 6.5
Styrene	10	100		< 0.5	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 3.9	< 1.3	1.8 BJ	< 3.3
tert-Butylbenzene	NE	NE		< 0.7	< 0.28	< 0.28	< 0.7	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 4.0	< 2.4	< 3	< 6.0
Tetrachloroethene	0.5	5		1800	1100	670	1400	1500	1900	1600	2000	2100	4600	870	970	1200
Toluene	160	800		< 0.55	< 0.22	< 0.22	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 1.5	< 1.1	< 1.3	< 2.7
trans-1,2-Dichloroethene	20	100		15	9.5	4.8	6.6	6.0	7.0	9.8	8.1	13	< 3.5	3.2 J	7.3 J	11 J
Trichloroethene	0.5	5		440	330	270	500	450	490	580	530	680	930	230	230	290
Trichlorofluoromethane	698	3490		< 0.95	< 0.38	< 0.38	< 0.95	< 0.95	< 0.95	< 5.0	< 5.0	< 5.0	< 10	< 10	< 13	< 6.5
Vinyl chloride	0.02	0.2		33	23	13	20	19	20	23	22	41	44	< 3.2	< 4	9.0 J+
Xylenes, Total	400	2000		< 0.34	< 0.14	< 0.14	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 2.2	< 1.2	< 2.9	< 5.8
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03		< 0.15	NA											
Aroclor-1232	0.003	0.03		< 0.083	NA											
Aroclor-1242	0.003	0.03		< 0.12	NA											
Aroclor-1248	0.003	0.03		< 0.099	NA											
Total Detected PCBs	0.003	0.03		ND	NA											
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03		NA												
Aroclor-1232	0.003	0.03		NA												
Aroclor-1242	0.003	0.03		NA												
Aroclor-1248	0.003	0.03		NA												
Total Detected PCBs	0.003	0.03		NA												
<b>Solids</b>																
Total Dissolved Solids	NE	NE		1100	970	960	NA									
Total Suspended Solids (TSS)	NE	NE		NA												

Notes on Page 55.

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-13 121 - 125 ft 12/04/2012	MP-13 <sup>3</sup> 121 - 125 ft 12/04/2012	MP-13 121 - 125 ft 01/18/2013	MP-13 121 - 125 ft 02/20/2013	MP-13 121 - 125 ft 04/17/2013	MP-13 121 - 125 ft 07/22/2013	MP-13 121 - 125 ft 10/07/2013	MP-13 121 - 125 ft 04/16/2014	MP-13 121 - 125 ft 10/14/2014	MP-13 121 - 125 ft 04/14/2015	MP-13 121 - 125 ft 10/16/2015	MP-13 121 - 125 ft 10/10/2016	MP-13 121 - 125 ft 10/03/2017	MP-13 121 - 125 ft 10/09/2018
<b>VOCs</b>																	
1,1,1,2-Tetrachloroethane	7	70		< 0.5	< 1.3	< 1.3	NA	< 5	< 2.5	1.1	< 5.0	< 2.5	< 2.5	< 9.2	< 11	< 5.5	< 5.5
1,1,1-Trichloroethane	40	200		< 0.4	< 1	< 1	NA	< 4	< 2	< 0.2	< 4.0	< 2.0	< 2.0	< 7.6	< 10	< 5	< 5.0
1,1,2-Trichloroethane	0.5	5		< 0.56	< 1.4	< 1.4	NA	< 5.6	< 2.8	< 0.28	< 5.6	< 2.8	< 2.8	< 7.0	< 10	< 5	< 5.0
1,1-Dichloroethene	0.7	7		< 0.62	< 1.6	< 1.6	NA	< 6.2	< 3.1	< 0.31	< 6.2	< 3.1	< 3.1	< 7.8	< 14	< 7	< 7.0
1,2,4-Trimethylbenzene	96	480		< 0.28	< 0.7	< 0.7	NA	< 2.8	< 1.4	< 0.14	< 2.8	< 1.4	< 1.4	< 7.2	< 6.0	< 3	< 3.0
1,2-Dibromoethane	0.005	0.05		< 0.72	< 1.8	< 1.8	NA	< 7.2	< 3.6	< 0.36	< 7.2	< 3.6	< 3.6	< 7.7	< 13	< 6.5	< 6.5
1,2-Dichlorobenzene	60	600		< 0.54	< 1.4	< 1.4	NA	< 5.4	< 2.7	< 0.27	< 5.4	< 2.7	< 2.7	< 6.7	< 7.6	< 3.8	< 3.8
1,2-Dichloropropane	0.5	5		< 0.4	< 1	< 1	NA	< 4	< 2	< 0.2	< 4.0	< 2.0	< 2.0	< 8.6	< 10	< 5	< 5.0
1,2,3-Trichlorobenzene	NE	NE		< 0.48	< 1.2	< 1.2	NA	< 4.8	< 2.4	< 0.24	< 4.8	< 2.4	< 2.4	< 9.2	< 4.5	< 2.3	< 2.3
1,2,4-Trichlorobenzene	14	70		< 0.62	< 1.6	< 1.6	NA	< 6.2	< 3.1	< 0.31	< 6.2	< 3.1	< 3.1	< 6.8	< 7.7	< 3.9	< 3.9
1,3,5-Trimethylbenzene	96	480		< 0.36	< 0.9	< 0.9	NA	< 3.6	< 1.8	< 0.18	< 3.6	< 1.8	< 1.8	< 5.1	< 7.5	< 3.8	< 3.8
2-Butanone	800	4000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 300	< 150	< 150
2-Hexanone	NE	NE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 95	< 48	< 48
4-Methyl-2-pentanone	50	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 77	< 39	< 39
Acetone	1800	9000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 340	280 BJ	< 180 U
Benzene	0.5	5		< 0.15	< 0.37	< 0.37	NA	< 1.5	< 0.74	0.29 J	< 1.5	< 0.74	< 0.74	< 2.9	< 8.9	< 4.5	< 4.5
Bromodichloromethane	0.06	0.6		< 0.34	< 0.85	< 0.85	NA	< 3.4	< 1.7	< 0.17	< 3.4	< 1.7	< 1.7	< 7.4	< 7.7	< 3.9	< 3.9
Bromoform	0.44	4.4		< 0.56	< 1.4	< 1.4	NA	< 5.6	< 2.8	< 0.28	< 5.6	< 2.8	< 2.8	< 9.7	< 8.8	< 4.4	< 4.4
Bromomethane	1	10		< 0.62	< 1.6	< 1.6	NA	< 6.2	< 3.1	< 0.31	< 6.2	< 3.1 *	< 3.1	< 16	< 59	< 30	< 30
Carbon disulfide	200	1000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5.3	< 2.7	< 2.7
Carbon tetrachloride	0.5	5		< 0.52	< 1.3	< 1.3	NA	< 5.2	< 2.6	< 0.26	< 5.2	< 2.6	< 2.6	< 7.7	< 3.8	< 1.9	< 1.9
Chloroform	0.6	6		< 0.4	< 1	< 1	NA	< 4	< 2	< 0.2	< 4.0	< 2.0	< 2.0	< 7.4	< 6.2	< 3.1	< 3.1
Chloromethane	3	30		< 0.36	< 0.9	< 0.9	NA	< 3.6	< 1.8	< 0.18	< 3.6	< 1.8	< 1.8	< 6.4	49 BJ	9.5 J+	< 13 U
cis-1,2-Dichloroethene	7	70		910	970	1000	NA	930	760	650	720	630	690	820	200	240	67
Dichlorodifluoromethane	200	1000		< 0.4	< 1	< 1	NA	< 4	< 2	< 0.2	< 4.0	< 2.0	< 2.0	< 11	< 11	< 5.5	< 5.5
Ethylbenzene	140	700		< 0.26	< 0.65	< 0.65	NA	< 2.6	< 1.3	< 0.13	< 2.6	< 1.3	< 1.3	< 3.7	< 5.4	< 2.7	< 2.7
Isopropylbenzene	NE	NE		< 0.28	< 0.7	< 0.7	NA	< 2.8	< 1.4	< 0.14	< 2.8	< 1.4	< 1.4	< 7.7	< 8.1	< 4.1	< 4.1
m,p-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5.7	3 BJ	< 2.9
Methyl tert-butyl ether	12	60		< 0.48	< 1.2	< 1.2	NA	< 4.8	< 2.4	< 0.24	< 4.8	< 2.4	< 2.4	< 7.9	< 14	< 7	< 7.0
Methylene chloride	0.5	5		< 1.4	< 3.4	< 3.4	NA	< 14	< 6.8	< 0.68	< 14	< 6.8	< 6.8	< 33	< 14	< 7	< 7.0
Naphthalene	10	100		< 0.32	< 0.8	< 0.8	NA	< 3.2	< 1.6	< 0.16	< 3.2	< 1.6	< 1.6	< 6.7	< 8.8	< 4.4	< 4.4
n-Butylbenzene	NE	NE		< 0.26	< 0.65	< 0.65	NA	< 2.6	< 1.3	< 0.13	< 2.6	< 1.3	< 1.3	< 7.8	< 14	< 7	< 7.0
n-Hexane	120	600		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 21	< 11	< 11
n-Propylbenzene	NE	NE		< 0.26	< 0.65	< 0.65	NA	< 2.6	< 1.3	< 0.13	< 2.6	< 1.3	< 1.3	< 8.3	< 10	< 5	< 5.0
o-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5.8	< 2.9	< 2.9
p-Isopropyltoluene	NE	NE		< 0.34	< 0.85	< 0.85	NA	< 3.4	< 1.7	< 0.17	< 3.4	< 1.7	< 1.7	< 7.2	< 8.5	< 4.3	< 4.3
sec-Butylbenzene	NE	NE		< 0.3	< 0.75	< 0.75	NA	< 3	< 1.5	< 0.15	< 3.0	< 1.5	< 1.5	< 8.0	< 13	< 6.5	< 6.5
Styrene	10	100		< 0.2	< 0.5	< 0.5	NA	< 2	< 1	< 0.1	< 2.0	< 1.0	< 1.0	< 7.7	< 6.5	3.5 BJ	< 3.3
tert-Butylbenzene	NE	NE		< 0.28	< 0.7	< 0.7	NA	< 2.8	< 1.4	< 0.14	< 2.8	< 1.4	< 1.4	< 8.0	< 12	< 6	< 6.0
Tetrachloroethene	0.5	5		1500	1500	2600	NA	7000	6300	6500	6700	4800	4300	12000	3100	3000	1000
Toluene	160	800		< 0.22	< 0.55	< 0.55	NA	< 2.2	< 1.1	< 0.11	< 2.2	< 1.1	< 1.1	< 3.0	9.0 J	< 2.7	< 2.7
trans-1,2-Dichloroethene	20	100		12	15	17	NA	12 J	12	9.7	10 J	6.7 J	< 2.5	< 7.0	< 11	6 J	< 5.5
Trichloroethene	0.5	5		340	370	460	NA	600	510	550	710	520	640	1100	450	460	110
Trichlorofluoromethane	698	3490		< 0.38	< 0.95	< 0.95	NA	< 3.8	< 1.9	< 0.19	< 2.0	< 1.0	< 1.0	< 2.0	< 5.0	< 2.5	< 6.5
Vinyl chloride	0.02	0.2		36	37	54	NA	13	9.3	8.1	6.2 J	< 1.0	11	< 4.1	< 16	< 8	< 8.0
Xylenes, Total	400	2000		< 0.14	< 0.34	< 0.34	NA	< 1.4	< 0.68	< 0.068	< 1.4	< 0.68	< 0.68	< 4.4	< 5.8	< 5.8	< 5.8
<b>Total PCBs</b>																	
Aroclor-1016	0.003	0.03		< 0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03		< 0.084	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03		< 0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03		< 0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Dissolved PCBs</b>																	
Aroclor-1016	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Solids</b>																	
Total Dissolved Solids	NE	NE		1100	NA	1000	920	NA									
Total Suspended Solids (TSS)	NE	NE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-13 135 - 139 ft 12/04/2012	MP-13 135 - 139 ft 01/17/2013	MP-13 135 - 139 ft 02/20/2013	MP-13 135 - 139 ft 04/17/2013	MP-13 135 - 139 ft 07/22/2013	MP-13 135 - 139 ft 10/07/2013	MP-13 135 - 139 ft 04/16/2014	MP-13 135 - 139 ft 10/14/2014	MP-13 135 - 139 ft 04/14/2015	MP-13 135 - 139 ft 10/16/2015	MP-13 135 - 139 ft 10/10/2016	MP-13 135 - 139 ft 10/03/2017	MP-13 135 - 139 ft 10/09/2018
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70		< 0.5	< 1.3	NA	< 2.5	< 2.5	< 1.3	< 2.5	< 2.5	< 2.5	< 4.6	< 11	< 5.5	< 5.5
1,1,1-Trichloroethane	40	200		< 0.4	< 1	NA	< 2	< 2	< 1	< 2.0	< 2.0	< 2.0	< 3.8	< 10	< 5	< 5.0
1,1,2-Trichloroethane	0.5	5		< 0.56	< 1.4	NA	< 2.8	< 2.8	< 1.4	< 2.8	< 2.8	< 2.8	< 3.5	< 10	< 5	< 5.0
1,1-Dichloroethene	0.7	7		<b>1.5 J</b>	< 1.6	NA	< 3.1	< 3.1	< 1.6	< 3.1	< 3.1	< 3.1	< 3.9	< 14	< 7	< 7.0
1,2,4-Trimethylbenzene	96	480		< 0.28	< 0.7	NA	< 1.4	< 1.4	< 0.7	< 1.4	< 1.4	< 1.4	< 3.6	< 6.0	< 3	< 3.0
1,2-Dibromoethane	0.005	0.05		< 0.72	< 1.8	NA	< 3.6	< 3.6	< 1.8	< 3.6	< 3.6	< 3.6	< 3.9	< 13	< 6.5	< 6.5
1,2-Dichlorobenzene	60	600		< 0.54	< 1.4	NA	< 2.7	< 2.7	< 1.4	< 2.7	< 2.7	< 2.7	< 3.3	< 7.6	< 3.8	< 3.8
1,2-Dichloropropane	0.5	5		< 0.4	< 1	NA	< 2	< 2	< 1	< 2.0	< 2.0	< 2.0	< 4.3	< 10	< 5	< 5.0
1,2,3-Trichlorobenzene	NE	NE		< 0.48	< 1.2	NA	< 2.4	< 2.4	< 1.2	< 2.4	< 2.4	< 2.4	< 4.6	< 4.5	< 2.3	< 2.3
1,2,4-Trichlorobenzene	14	70		< 0.62	< 1.6	NA	< 3.1	< 3.1	< 1.6	< 3.1	< 3.1	< 3.1	< 3.4	< 7.7	< 3.9	< 3.9
1,3,5-Trimethylbenzene	96	480		< 0.36	< 0.9	NA	< 1.8	< 1.8	< 0.9	< 1.8	< 1.8	< 1.8	< 2.5	< 7.5	< 3.8	< 3.8
2-Butanone	800	4000		NA	< 300	< 150	< 150									
2-Hexanone	NE	NE		NA	< 95	< 48	< 48									
4-Methyl-2-pentanone	50	500		NA	< 77	< 39	< 39									
Acetone	1800	9000		NA	< 340	260 J	< 280 U									
Benzene	0.5	5		0.41 J	<b>1.1 J</b>	NA	< 0.74	< 0.74	< 0.37	< 0.74	< 0.74	< 0.74	< 1.5	< 8.9	< 4.5	< 4.5
Bromodichloromethane	0.06	0.6		< 0.34	< 0.85	NA	< 1.7	< 1.7	< 0.85	< 1.7	< 1.7	< 1.7	< 3.7	< 7.7	< 3.9	< 3.9
Bromofom	0.44	4.4		< 0.56	< 1.4	NA	< 2.8	< 2.8	< 1.4	< 2.8	< 2.8	< 2.8	< 4.8	< 8.8	< 4.4	< 4.4
Bromomethane	1	10		< 0.62	< 1.6	NA	< 3.1	< 3.1	< 1.6	< 3.1	< 3.1*	< 3.1	< 8.0	< 59	< 30	<b>56 J+</b>
Carbon disulfide	200	1000		NA	< 5.3	< 2.7	< 2.7									
Carbon tetrachloride	0.5	5		< 0.52	< 1.3	NA	< 2.6	< 2.6	< 1.3	< 2.6	< 2.6	< 2.6	< 3.8	< 3.8	< 1.9	< 1.9
Chloroform	0.6	6		< 0.4	< 1	NA	< 2	< 2	< 1	< 2.0	< 2.0	< 2.0	< 3.7	< 6.2	< 3.1	< 3.1
Chloromethane	3	30		< 0.36	< 0.9	NA	< 1.8	< 1.8	< 0.9	< 1.8	< 1.8	< 1.8	< 3.2	<b>46 BJ</b>	<b>11 J+</b>	< 13 U
cis-1,2-Dichloroethene	7	70		<b>1100</b>	<b>910</b>	NA	<b>540</b>	<b>420</b>	<b>380</b>	<b>370</b>	<b>330</b>	<b>410</b>	<b>170</b>	<b>87</b>	<b>190</b>	<b>150</b>
Dichlorodifluoromethane	200	1000		< 0.4	< 1	NA	< 2	< 2	< 1	< 2.0	< 2.0	< 2.0	< 5.4	< 11	< 5.5	< 5.5
Ethylbenzene	140	700		< 0.26	< 0.65	NA	< 1.3	< 1.3	< 0.65	< 1.3	< 1.3	< 1.3	< 1.8	< 5.4	< 2.7	< 2.7
Isopropylbenzene	NE	NE		< 0.28	< 0.7	NA	< 1.4	< 1.4	< 0.7	< 1.4	< 1.4	< 1.4	< 3.9	< 8.1	< 4.1	< 4.1
m,p-Xylene	400	2000		NA	< 5.7	< 2.9	< 2.9									
Methyl tert-butyl ether	12	60		< 0.48	< 1.2	NA	< 2.4	< 2.4	< 1.2	< 2.4	< 2.4	< 2.4	< 3.9	< 14	< 7	< 7.0
Methylene chloride	0.5	5		< 1.4	< 3.4	NA	< 6.8	< 6.8	< 3.4	< 6.8	< 6.8	< 6.8	< 16	< 14	< 7	< 7.0
Naphthalene	10	100		< 0.32	< 0.8	NA	< 1.6	< 1.6	< 0.8	< 1.6	< 1.6	< 1.6	< 3.4	< 8.8	< 4.4	< 4.4
n-Butylbenzene	NE	NE		< 0.26	< 0.65	NA	< 1.3	< 1.3	< 0.65	< 1.3	< 1.3	< 1.3	< 3.9	< 14	< 7	< 7.0
n-Hexane	120	600		NA	< 21	< 11	< 11									
n-Propylbenzene	NE	NE		< 0.26	< 0.65	NA	< 1.3	< 1.3	< 0.65	< 1.3	< 1.3	< 1.3	< 4.1	< 10	< 5	< 5.0
o-Xylene	400	2000		NA	< 5.8	< 2.9	< 2.9									
p-Isopropyltoluene	NE	NE		< 0.34	< 0.85	NA	< 1.7	< 1.7	< 0.85	< 1.7	< 1.7	< 1.7	< 3.6	< 8.5	< 4.3	< 4.3
sec-Butylbenzene	NE	NE		< 0.3	< 0.75	NA	< 1.5	< 1.5	< 0.75	< 1.5	< 1.5	< 1.5	< 4.0	< 13	< 6.5	< 6.5
Styrene	10	100		< 0.2	< 0.5	NA	< 1	< 1	< 0.5	< 1.0	< 1.0	< 1.0	< 3.9	< 6.5	3.5 BJ	< 3.3
tert-Butylbenzene	NE	NE		< 0.28	< 0.7	NA	< 1.4	< 1.4	< 0.7	< 1.4	< 1.4	< 1.4	< 4.0	< 12	< 6	< 6.0
Tetrachloroethene	0.5	5		<b>1900</b>	<b>2300</b>	NA	<b>3800</b>	<b>4200</b>	<b>6500</b>	<b>5200</b>	<b>6300</b>	<b>5700</b>	<b>5500</b>	<b>2000</b>	<b>4100</b>	<b>3800</b>
Toluene	160	800		< 0.22	< 0.55	NA	< 1.1	< 1.1	< 0.55	< 1.1	< 1.1	< 1.1	< 1.5	8.0 J	< 2.7	< 2.7
trans-1,2-Dichloroethene	20	100		17	15	NA	8.5 J	5.4 J	< 1.3	< 2.5	< 2.5	< 2.5	< 3.5	< 11	< 5.5	< 5.5
Trichloroethene	0.5	5		<b>450</b>	<b>430</b>	NA	<b>310</b>	<b>260</b>	<b>310</b>	<b>320</b>	<b>270</b>	<b>370</b>	<b>210</b>	<b>100</b>	<b>250</b>	<b>250</b>
Trichlorofluoromethane	698	3490		< 0.38	< 0.95	NA	< 1.9	< 1.9	< 0.95	< 1.9	< 1.9	< 1.9	< 10	< 50	< 25	< 6.5
Vinyl chloride	0.02	0.2		<b>50</b>	<b>42</b>	NA	<b>11</b>	<b>8.1</b>	<b>5.8</b>	<b>4.0 J</b>	<b>3.7 J</b>	<b>4.4 J</b>	< 2.0	< 16	< 8	< 8.0
Xylenes, Total	400	2000		< 0.14	< 0.34	NA	< 0.68	< 0.68	< 0.34	< 0.68	< 0.68	< 0.68	< 2.2	< 5.8	< 5.8	< 5.8
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03		< 0.15	NA											
Aroclor-1232	0.003	0.03		< 0.083	NA											
Aroclor-1242	0.003	0.03		< 0.12	NA											
Aroclor-1248	0.003	0.03		< 0.099	NA											
Total Detected PCBs	0.003	0.03		ND	NA											
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03		NA												
Aroclor-1232	0.003	0.03		NA												
Aroclor-1242	0.003	0.03		NA												
Aroclor-1248	0.003	0.03		NA												
Total Detected PCBs	0.003	0.03		NA												
<b>Solids</b>																
Total Dissolved Solids	NE	NE		1100	960	890	NA									
Total Suspended Solids (TSS)	NE	NE		NA												

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Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-13 163 - 167 ft 12/04/2012	MP-13 163 - 167 ft 01/16/2013	MP-13 163 - 167 ft 02/20/2013	MP-13 163 - 167 ft 04/17/2013	MP-13 163 - 167 ft 07/22/2013	MP-13 163 - 167 ft 10/07/2013	MP-13 163 - 167 ft 04/16/2014	MP-13 163 - 167 ft 10/14/2014	MP-13 163 - 167 ft 04/14/2015	MP-13 163 - 167 ft 10/16/2015	MP-13 163 - 167 ft 10/10/2016	MP-13 163 - 167 ft 10/03/2017	MP-13 163 - 167 ft 10/09/2018
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70		< 1.3	< 0.25	NA	< 0.5	< 0.25	< 0.25	< 0.50	< 0.50	< 0.25	< 0.46	< 0.22	< 0.11	< 0.22
1,1,1-Trichloroethane	40	200		< 1	< 0.2	NA	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.20	< 0.38	< 0.20	< 0.1	< 0.20
1,1,2-Trichloroethane	0.5	5		< 1.4	< 0.28	NA	< 0.56	< 0.28	< 0.28	< 0.56	< 0.56	< 0.28	< 0.35	< 0.20	< 0.1	< 0.20
1,1-Dichloroethene	0.7	7		< 1.6	<b>0.97 J</b>	NA	< 0.62	< 0.31	< 0.31	< 0.62	< 0.62	< 0.31	< 0.39	< 0.28	< 0.14	< 0.28
1,2,4-Trimethylbenzene	96	480		< 0.7	< 0.14	NA	< 0.28	< 0.14	< 0.14	< 0.28	< 0.28	< 0.14	< 0.36	< 0.12	< 0.06	< 0.12
1,2-Dibromoethane	0.005	0.05		< 1.8	< 0.36	NA	< 0.72	< 0.36	< 0.36	< 0.72	< 0.72	< 0.36	< 0.39	< 0.26	< 0.13	< 0.26
1,2-Dichlorobenzene	60	600		< 1.4	< 0.27	NA	< 0.54	< 0.27	< 0.27	< 0.54	< 0.54	< 0.27	< 0.33	< 0.15	< 0.076	< 0.15
1,2-Dichloropropane	0.5	5		< 1	< 0.2	NA	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.20	< 0.43	< 0.20	< 0.1	< 0.20
1,2,3-Trichlorobenzene	NE	NE		< 1.2	< 0.24	NA	< 0.48	< 0.24	< 0.24	< 0.48	< 0.48	< 0.24	< 0.46	< 0.090	< 0.045	< 0.090
1,2,4-Trichlorobenzene	14	70		< 1.6	< 0.31	NA	< 0.62	< 0.31	< 0.31	< 0.62	< 0.62	< 0.31	< 0.34	< 0.15	< 0.077	< 0.15
1,3,5-Trimethylbenzene	96	480		< 0.9	< 0.18	NA	< 0.36	< 0.18	< 0.18	< 0.36	< 0.36	< 0.18	< 0.25	< 0.15	< 0.075	< 0.15
2-Butanone	800	4000		NA	< 6.0	< 3	< 6.0									
2-Hexanone	NE	NE		NA	< 1.9	< 0.95	< 1.9									
4-Methyl-2-pentanone	50	500		NA	< 1.5	< 0.77	< 1.5									
Acetone	1800	9000		NA	< 6.8	5.2 BJ	< 6.8									
Benzene	0.5	5		< 0.37	< 0.074	NA	< 0.15	< 0.074	< 0.074	< 0.15	< 0.15	< 0.074	< 0.15	< 0.18	< 0.089	< 0.18
Bromodichloromethane	0.06	0.6		< 0.85	< 0.17	NA	< 0.34	< 0.17	< 0.17	< 0.34	< 0.34	< 0.17	< 0.37	< 0.15	< 0.077	< 0.15
Bromoform	0.44	4.4		< 1.4	< 0.28	NA	< 0.56	< 0.28	< 0.28	< 0.56	< 0.56	< 0.28	< 0.48	< 0.18	< 0.088	< 0.18
Bromomethane	1	10		< 1.6	< 0.31	NA	< 0.62	< 0.31	< 0.31	< 0.62	< 0.62 *	< 0.31	< 0.80	< 1.2	< 0.59	< 1.2
Carbon disulfide	200	1000		NA	< 0.11	< 0.053	< 0.11									
Carbon tetrachloride	0.5	5		< 1.3	< 0.26	NA	< 0.52	< 0.26	< 0.26	< 0.52	< 0.52	< 0.26	< 0.38	< 0.076	< 0.038	< 0.076
Chloroform	0.6	6		< 1	< 0.2	NA	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.20	< 0.37	< 0.12	< 0.062	< 0.12
Chloromethane	3	30		< 0.9	< 0.18	NA	< 0.36	< 0.18	< 0.18	< 0.36	< 0.36	< 0.18	< 0.32	0.76 BJ	0.46 J+	< 0.32
cis-1,2-Dichloroethene	7	70		<b>970</b>	<b>730</b>	NA	<b>460</b>	<b>200</b>	<b>170</b>	<b>180</b>	<b>160</b>	<b>150</b>	<b>33</b>	3.8	3.6	5.8
Dichlorodifluoromethane	200	1000		< 1	< 0.2	NA	< 0.4	< 0.2	< 0.2	< 0.40	< 0.40	< 0.20	< 0.54	< 0.22	< 0.11	< 0.22
Ethylbenzene	140	700		< 0.65	< 0.13	NA	< 0.26	< 0.13	< 0.13	< 0.26	< 0.26	< 0.13	< 0.18	< 0.11	< 0.054	< 0.11
Isopropylbenzene	NE	NE		< 0.7	< 0.14	NA	< 0.28	< 0.14	< 0.14	< 0.28	< 0.28	< 0.14	< 0.39	< 0.16	< 0.081	< 0.16
m,p-Xylene	400	2000		NA	< 0.11	< 0.057	< 0.11									
Methyl tert-butyl ether	12	60		< 1.2	< 0.24	NA	< 0.48	< 0.24	< 0.24	< 0.48	< 0.48	< 0.24	< 0.39	< 0.28	< 0.14	< 0.28
Methylene chloride	0.5	5		< 3.4	< 0.68	NA	< 1.4	< 0.68	< 0.68	< 1.4	< 1.4	< 0.68	< 1.6	< 0.28	< 0.14	< 0.28
Naphthalene	10	100		< 0.8	< 0.16	NA	< 0.32	< 0.16	< 0.16	< 0.32	< 0.32	< 0.16	< 0.34	< 0.18	< 0.088	< 0.18
n-Butylbenzene	NE	NE		< 0.65	< 0.13	NA	< 0.26	< 0.13	< 0.13	< 0.26	< 0.26	< 0.13	< 0.39	< 0.28	< 0.14	< 0.28
n-Hexane	120	600		NA	< 0.42	< 0.21	< 0.42									
n-Propylbenzene	NE	NE		< 0.65	< 0.13	NA	< 0.26	< 0.13	< 0.13	< 0.26	< 0.26	< 0.13	< 0.41	< 0.20	< 0.1	< 0.20
o-Xylene	400	2000		NA	< 0.12	< 0.058	< 0.12									
p-Isopropyltoluene	NE	NE		< 0.85	< 0.17	NA	< 0.34	< 0.17	< 0.17	< 0.34	< 0.34	< 0.17	< 0.36	< 0.17	< 0.085	< 0.17
sec-Butylbenzene	NE	NE		< 0.75	< 0.15	NA	< 0.3	< 0.15	< 0.15	< 0.30	< 0.30	< 0.15	< 0.40	< 0.26	< 0.13	< 0.26
Styrene	10	100		< 0.5	< 0.1	NA	< 0.2	< 0.1	< 0.1	< 0.20	< 0.20	< 0.10	< 0.39	< 0.13	< 0.065	< 0.13
tert-Butylbenzene	NE	NE		< 0.7	< 0.14	NA	< 0.28	< 0.14	< 0.14	< 0.28	< 0.28	< 0.14	< 0.40	< 0.24	< 0.12	< 0.24
Tetrachloroethene	0.5	5		<b>1400</b>	<b>930</b>	NA	<b>840</b>	<b>510</b>	<b>680</b>	<b>870</b>	<b>930</b>	<b>910</b>	<b>350</b>	<b>43</b>	<b>45</b>	<b>60</b>
Toluene	160	800		< 0.55	< 0.11	NA	< 0.22	< 0.11	< 0.11	< 0.22	< 0.22	< 0.11	< 0.15	< 0.11	0.08 BJ	< 0.11
trans-1,2-Dichloroethene	20	100		15	13	NA	7.5	3.3	2.6	3.3	1.9 J	1.9	< 0.35	< 0.22	< 0.11	< 0.22
Trichloroethene	0.5	5		<b>370</b>	<b>250</b>	NA	<b>200</b>	<b>92</b>	<b>96</b>	<b>110</b>	<b>100</b>	<b>99</b>	<b>33</b>	<b>4.8</b>	<b>4.4</b>	<b>4.9</b>
Trichlorofluoromethane	698	3490		< 0.95	< 0.19	NA	< 0.38	< 0.19	< 0.19	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 0.5	< 0.26
Vinyl chloride	0.02	0.2		<b>41</b>	<b>27</b>	NA	<b>6.8</b>	<b>0.74</b>	<b>0.72</b>	<b>0.56 J</b>	< 0.20	<b>1.1</b>	< 0.20	< 0.32	< 0.16	< 0.32
Xylenes, Total	400	2000		< 0.34	< 0.068	NA	< 0.14	< 0.068	< 0.068	< 0.14	< 0.14	< 0.068	< 0.22	< 0.12	< 0.12	< 0.23
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03		< 0.15	NA											
Aroclor-1232	0.003	0.03		< 0.083	NA											
Aroclor-1242	0.003	0.03		< 0.12	NA											
Aroclor-1248	0.003	0.03		< 0.098	NA											
Total Detected PCBs	0.003	0.03		ND	NA											
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03		NA												
Aroclor-1232	0.003	0.03		NA												
Aroclor-1242	0.003	0.03		NA												
Aroclor-1248	0.003	0.03		NA												
Total Detected PCBs	0.003	0.03		NA												
<b>Solids</b>																
Total Dissolved Solids	NE	NE		1100	850	890	NA									
Total Suspended Solids (TSS)	NE	NE		NA												

Notes on Page 55.



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-14	MP-14	MP-14	MP-14														
				135 - 140 ft	135 - 140 ft	135 - 140 ft	135 - 140 ft	135 - 140 ft													
SAMPLE DATE				01/21/2013	04/16/2013	07/16/2013	07/22/2013	10/08/2013	04/14/2014	10/17/2014	04/13/2015	10/15/2015	01/20/2016	04/19/2016	07/18/2016	10/11/2016	1/18/2017	04/10/2017	10/02/2017	04/02/2018	10/09/2018
<b>VOCs</b>																					
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.5	< 0.25	< 0.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 1.1	< 2.2	< 0.11	< 1.1	< 1.1	< 0.11	< 1.1	< 0.11	< 1.1
1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.4	< 0.2	< 0.4	< 0.2	< 0.4	< 0.20	< 0.20	< 0.38	< 1.0	< 2.0	< 0.10	< 1.0	< 1.0	< 0.10	< 1.0	< 0.10	< 1.0
1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.56	< 0.28	< 0.56	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 1.0	< 2.0	< 0.10	< 1.0	< 1.0	< 0.10	< 1.0	< 0.10	< 1.0
1,1-Dichloroethene	0.7	7	< 0.31	< 0.31	< 0.62	< 0.31	< 0.62	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 1.4	< 2.8	< 0.14	< 1.4	< 1.4	< 0.14	< 1.4	< 0.14	< 1.4
1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.28	< 0.14	< 0.28	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 1.2	< 2.4	< 0.060	< 0.60	< 0.60	< 0.060	< 0.60	< 0.060	< 0.60
1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.72	< 0.36	< 0.72	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 1.3	< 2.6	< 0.13	< 1.3	< 1.3	< 0.13	< 1.3	< 0.13	< 1.3
1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.54	< 0.27	< 0.54	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 1.5	< 3.0	< 0.076	< 0.76	< 0.76	< 0.076	< 0.76	< 0.076	< 0.76
1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.4	< 0.2	< 0.4	< 0.2	< 0.2	< 0.20	< 0.20	< 0.43	< 1.0	< 2.0	< 0.10	< 1.0	< 1.0	< 0.10	< 1.0	< 0.10	< 1.0
1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.48	< 0.24	< 0.48	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 1.5	< 3.0	< 0.045	< 0.45	< 0.45	< 0.045	< 0.45	< 0.045	< 0.45
1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.62	< 0.31	< 0.62	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 1.4	< 2.8	< 0.077	< 0.77	< 0.77	< 0.077	< 0.77	< 0.077	< 0.77
1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.36	< 0.18	< 0.36	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 1.5	< 3.0	< 0.075	< 0.75	< 0.75	< 0.075	< 0.75	< 0.075	< 0.75
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 30	< 60	< 3.0	< 30	< 30	< 3.0	< 30	< 3.0	< 30
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 9.5	< 19	< 0.95	< 9.5	< 9.5	< 0.95	< 9.5	< 0.95	< 9.5
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7.7	< 15	< 0.77	< 7.7	< 7.7	< 0.77	< 7.7	< 0.77	< 7.7
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 34	< 68	< 3.4	< 34	< 34	< 3.4	< 34	< 3.4	< 34
Benzene	0.5	5	< 0.074	< 0.074	< 0.15	< 0.074	< 0.15	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.89	< 1.8	< 0.089	< 0.89	< 0.89	< 0.089	< 0.89	< 0.089	< 0.89
Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.34	< 0.17	< 0.34	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 1.5	< 3.0	< 0.077	< 0.77	<b>0.80 BJ</b>	< 0.077	< 0.77	< 0.077	< 0.77
Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.56	< 0.28	< 0.56	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 1.9	< 3.8	< 0.088	< 0.88	< 0.88	< 0.088	< 0.88	< 0.088	< 0.88
Bromomethane	1	10	< 0.31	< 0.31	< 0.62	< 0.31	< 0.62	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 5.9	< 11.8	< 0.59	< 5.9	< 5.9	< 0.59	< 5.9	< 0.59	< 5.9
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.53	< 1.1	< 0.053	3.3 J	< 0.53	< 0.053	< 0.53	0.080 J	< 0.53
Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.52	< 0.26	< 0.52	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 1.9	< 3.8	< 0.038	< 0.38	< 0.38	< 0.038	< 0.38	< 0.038	< 0.38
Chloroform	0.6	6	< 0.2	< 0.2	< 0.4	< 0.2	< 0.4	< 0.2	< 0.2	< 0.20	< 0.20	< 0.37	< 1.5	< 3.0	< 0.062	< 0.62	< 0.62	< 0.062	< 0.62	0.10 J+	< 0.62
Chloromethane	3	30	< 0.18	< 0.18	< 0.36	< 0.18	< 0.36	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	< 1.6	< 3.2	0.16 J	<b>12 BJ</b>	< 1.6	< 0.16	<b>3.4 J+</b>	< 0.16	< 3.3 U
cis-1,2-Dichloroethene	7	70	< 0.12	<b>17</b>	<b>27</b>	<b>29</b>	<b>27</b>	<b>12</b>	<b>8.1</b>	<b>4.3</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>12 B</b>	<b>12</b>	<b>11</b>	<b>17</b>	<b>17</b>	<b>17</b>
Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.4	< 0.2	< 0.4	< 0.2	< 0.20	< 0.20	< 0.20	< 0.54	< 1.1	< 2.2	0.11 J	< 1.1	< 1.1	< 0.11	< 1.1	0.21 J+	< 1.1
Ethylbenzene	140	700	< 0.13	< 0.13	< 0.26	< 0.13	< 0.26	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.54	< 1.1	< 0.054	< 0.54	< 0.54	< 0.054	< 0.54	< 0.054	< 0.54
Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.28	< 0.14	< 0.28	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 1.6	< 0.081	< 0.81	< 0.81	< 0.81	< 0.081	< 0.81	< 0.081	< 0.81
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.57	< 1.1	< 0.057	< 0.57	< 0.57	< 0.057	< 0.57	< 0.057	< 0.57
Methyl tert-butyl ether	12	60	< 0.24	< 0.24	< 0.48	< 0.24	< 0.48	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 1.4	< 2.8	< 0.14	< 1.4	< 1.4	< 0.14	< 1.4	< 0.14	< 1.4
Methylene chloride	0.5	5	< 0.68	< 0.68	< 1.4	< 0.68	< 1.4	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 1.4	< 2.8	< 0.14	< 1.4	< 1.4	< 0.14	< 1.4	< 0.14	< 1.4
Naphthalene	10	100	< 0.16	< 0.16	< 0.32	< 0.16	< 0.32	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.88	6.8 BJ	< 0.088	< 0.88	< 0.88	< 0.088	< 0.88	< 0.088	< 0.88
n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.26	< 0.13	< 0.26	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 1.4	< 2.8	< 0.14	< 1.4	< 1.4	< 0.14	< 1.4	< 0.14	< 1.4
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.1	< 4.2	< 0.21	< 2.1	< 2.1	< 0.21	< 2.1	< 0.21	< 2.1
n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.26	< 0.13	< 0.26	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 1.0	< 2.0	< 0.10	< 1.0	< 1.0	< 0.10	< 1.0	< 0.10	< 1.0
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.58	< 1.2	< 0.058	< 0.58	< 0.58	< 0.058	< 0.58	< 0.058	< 0.58
p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.34	< 0.17	< 0.34	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.85	< 1.7	< 0.085	< 0.85	< 0.85	< 0.085	< 0.85	< 0.085	< 0.85
sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.3	< 0.15	< 0.3	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 1.3	< 2.6	< 0.13	< 1.3	< 1.3	< 0.13	< 1.3	< 0.13	< 1.3
Styrene	10	100	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 0.1	< 0.10	< 0.10	< 0.10	< 0.39	< 0.65	< 1.3	< 0.065	< 0.65	< 0.65	< 0.065	< 0.65	< 0.065	< 0.65
tert-Butylbenzene	NE	NE	< 0.14	< 0.14	< 0.28	< 0.14	< 0.28	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 1.2	< 2.4	< 0.12	< 1.2	< 1.2	< 0.12	< 1.2	< 0.12	< 1.2
Tetrachloroethene	0.5	5	<b>1.7</b>	<b>430</b>	<b>820</b>	<b>920</b>	<b>970</b>	<b>350</b>	<b>190</b>	<b>110</b>	<b>320</b>	<b>290</b>	<b>310</b>	<b>230</b>	<b>250</b>	<b>230</b>	<b>270</b>	<b>250</b>	<b>370</b>	<b>370</b>	<b>370</b>
Toluene	160	800	< 0.11	< 0.22	< 0.11	< 0.22	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	< 0.53	< 1.1	< 0.053	1.4 J	1.5 BJ	< 0.053	< 0.53	< 0.053	< 0.53
trans-1,2-Dichloroethene	20	100	< 0.25	< 0.25	< 0.5	< 0.25	< 0.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	< 1.1	< 2.2	0.24 J	< 1.1	< 1.1	0.18 J	< 1.1	0.39 J+	< 1.1
Trichloroethene	0.5	5	0.24 J	<b>31</b>	<b>53</b>	<b>51</b>	<b>53</b>	<b>23</b>	<b>16</b>	<b>7.9</b>	<b>25</b>	<b>24</b>	<b>28</b>	<b>24</b>	<b>25</b>	<b>2</b>					



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15			
SCREEN INTERVAL (feet bgs)	PREVENTIVE	ENFORCEMENT	100 - 105 ft																						
SAMPLE DATE	ACTION LIMIT	STANDARD	01/22/2013	04/15/2013	07/22/2013	10/08/2013	04/15/2014	10/16/2014	04/14/2015	10/15/2015	10/10/2016	10/03/2017	10/09/2018	01/22/2013	04/15/2013	07/22/2013	10/08/2013	04/15/2014	10/16/2014	04/14/2015	10/15/2015	10/10/2016	10/03/2017	10/09/2018	
<b>VOCs</b>																									
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.5	< 0.50	< 0.50	< 0.25	< 0.46	< 2.2	< 2.2	< 5.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.92	< 11	< 5.5	< 5.5	
1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.20	< 0.38	< 2.0	< 2	< 5.0	< 0.4	< 0.4	< 1	< 1	< 1.0	< 1.0	< 1.0	< 0.76	< 10	< 5	< 5.0	
1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.28	< 0.56	< 0.56	< 0.56	< 0.28	< 0.35	< 2.0	< 2	< 5.0	< 0.56	< 0.56	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.70	< 10	< 5	< 5.0	
1,1-Dichloroethane	0.7	7	< 0.31	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.31	< 0.39	< 2.8	< 2.8	< 7.0	< 0.62	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.78	< 14	< 7	< 7.0	
1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.14	< 0.36	< 1.2	< 1.2	< 3.0	< 0.28	< 0.28	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 0.72	< 6.0	< 3	< 3.0	
1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.36	< 0.72	< 0.72	< 0.72	< 0.36	< 0.39	< 2.6	< 2.6	< 6.5	< 0.72	< 0.72	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 0.77	< 13	< 6.5	< 6.5	
1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.27	< 0.54	< 0.54	< 0.54	< 0.27	< 0.33	< 1.5	< 1.5	< 3.8	< 0.54	< 0.54	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.67	< 7.6	< 3.8	< 3.8	
1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.20	< 0.43	< 2.0	< 2	< 5.0	< 0.4	< 0.4	< 1	< 1	< 1.0	< 1.0	< 1.0	< 0.86	< 10	< 5	< 5.0	
1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.24	< 0.48	< 0.48	< 0.48	< 0.24	< 0.46	< 0.90	< 0.9	< 2.3	< 0.48	< 0.48	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.92	< 4.5	< 2.3	< 2.3	
1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.31	< 0.34	< 1.5	< 1.5	< 3.9	< 0.62	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.68	< 7.7	< 3.9	< 3.9	
1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.18	< 0.36	< 0.36	< 0.36	< 0.18	< 0.25	< 1.5	< 1.5	< 3.8	< 0.36	< 0.36	< 0.9	< 0.9	< 0.90	< 0.90	< 0.90	< 0.51	< 7.5	< 3.8	< 3.8	
2-Butanone	800	4000	NA	< 60	< 60	< 150	NA	< 300	< 150	< 150															
2-Hexanone	NE	NE	NA	< 19	< 19	< 48	NA	< 95	< 48	< 48															
4-Methyl-2-pentanone	50	500	NA	< 15	< 15	< 39	NA	< 77	< 39	< 39															
Acetone	1800	9000	NA	< 68	< 68	< 170	NA	< 340	< 170	< 170															
Benzene	0.5	5	< 0.074	< 0.074	< 0.074	< 0.15	< 0.15	< 0.15	< 0.074	< 0.15	< 1.8	< 1.8	< 4.5	< 0.15	< 0.15	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.29	< 8.9	< 4.5	< 4.5	
Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.17	< 0.37	< 1.5	< 1.5	< 3.9	< 0.34	< 0.34	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.74	< 7.7	< 3.9	< 3.9	
Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.28	< 0.56	< 0.56	< 0.56	< 0.28	< 0.48	< 1.8	< 1.8	< 4.4	< 0.56	< 0.56	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.97	< 8.8	< 4.4	< 4.4	
Bromomethane	1	10	< 0.31	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.31	< 0.80	< 12	< 12	< 30	< 0.62	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 59	< 30	< 30	
Carbon disulfide	200	1000	NA	5.6 J	< 1.1	< 2.7	NA	29 J	< 2.7	< 2.7															
Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.26	< 0.52	< 0.52	< 0.52	< 0.26	< 0.38	< 0.76	< 0.76	< 1.9	< 0.52	< 0.52	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.77	< 3.8	< 1.9	< 1.9	
Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.20	< 0.37	< 1.2	< 1.2	< 3.1	< 0.4	< 0.4	< 1	< 1	< 1.0	< 1.0	< 1.0	< 0.74	< 6.2	< 3.1	< 3.1	
Chloromethane	3	30	< 0.18	< 0.18	< 0.18	< 0.36	< 0.36	< 0.36	< 0.18	< 0.32	21 BJ	< 3.2	< 17 U	< 0.36	< 0.36	< 0.9	< 0.9	< 0.90	< 0.90	< 0.90	< 0.90	< 0.64	96 BJ	< 8	< 8.0
cis-1,2-Dichloroethene	7	70	93	37	68	76	96	83	66	77	61	79	69	200	230	250	220	230	260	200	230	220	140	85	
Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.20	< 0.54	< 2.2	< 2.2	< 5.5	< 0.4	< 0.4	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.1	< 5.5	< 5.5	< 5.5	
Ethylbenzene	140	700	< 0.13	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.13	< 0.18	< 1.1	< 1.1	< 2.7	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.37	< 5.4	< 2.7	< 2.7	
Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.14	< 0.39	< 1.6	< 1.6	< 4.1	< 0.28	< 0.28	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 0.77	< 8.1	< 4.1	< 4.1	
m,p-Xylene	400	2000	NA	< 1.1	< 1.1	< 2.9	NA	< 5.7	< 2.9	< 2.9															
Methyl tert-butyl ether	12	60	2.2	1.3	< 0.24	< 0.48	< 0.48	< 0.48	< 0.24	< 0.39	< 2.8	< 2.8	< 7.0	< 0.48	< 0.48	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.79	< 14	< 7	< 7.0	
Methylene chloride	0.5	5	< 0.68	< 0.68	< 0.68	< 1.4	< 1.4	< 1.4	< 0.68	< 1.6	< 2.8	< 2.8	< 7.0	< 1.4	< 1.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.3	< 14	< 7	< 7.0	
Naphthalene	10	100	< 0.16	< 0.16	< 0.16	< 0.32	< 0.32	< 0.32	< 0.16	< 0.34	< 1.8	< 1.8	< 4.4	< 0.32	< 0.32	< 0.8	< 0.8	< 0.80	< 0.80	< 0.80	< 0.67	< 8.8	< 4.4	< 4.4	
n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.13	< 0.39	< 2.8	< 2.8	< 7.0	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.78	< 14	< 7	< 7.0
n-Hexane	120	600	NA	6.2 J	< 4.2	< 11	NA	< 21	< 11	< 11															
n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.13	< 0.41	< 2.0	< 2	< 5.0	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.83	< 10	< 5	< 5.0
o-Xylene	400	2000	NA	< 1.2	< 1.2	< 2.9	NA	< 5.8	< 2.9	< 2.9															
p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.17	< 0.36	< 1.7	< 1.7	< 4.3	< 0.34	< 0.34	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.72	< 8.5	< 4.3	< 4.3	
sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.15	< 0.3	< 0.30	< 0.30	< 0.15	< 0.40	< 2.6	< 2.6	< 6.5	< 0.3	< 0.3	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.80	< 13	< 6.5	< 6.5	
Styrene	10	100	< 0.1	< 0.1	< 0.1	< 0.2	< 0.20	< 0.20	< 0.10	< 0.39	< 1.3	1.6 BJ	< 3.3	< 0.2	< 0.2	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.77	< 6.5	4 BJ	< 3.3	
tert-Butylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.14	< 0.40	< 2.4	< 2.4	< 6.0	< 0.28	< 0.28	< 0.7	< 0.7	< 0.70	< 0.70	< 0.70	< 0.80	< 12	< 6	< 6.0	
Tetrachloroethene	0.5																								

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15	MP-15				
SCREEN INTERVAL (feet bgs)	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft	142 - 146 ft				
SAMPLE DATE	01/22/2013	04/15/2013	07/22/2013	10/08/2013	04/15/2014	10/16/2014	04/14/2015	10/15/2015	10/10/2016	10/03/2017	10/09/2018	01/22/2013	04/15/2013	07/22/2013	10/08/2013	04/15/2014	10/16/2014	04/14/2015	10/15/2015	10/10/2016	10/03/2017	10/09/2018			
PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-15	MP-15																						
<b>VOCS</b>																									
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.5	< 0.50	< 0.50	< 0.50	< 0.92	< 4.4	< 5.5	< 5.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11	
1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.40	< 0.76	< 4.0	< 5	< 5.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.1	< 0.10	
1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.28	< 0.56	< 0.56	< 0.56	< 0.56	< 0.70	< 4.0	< 5	< 5.0	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.1	< 0.10	
1,1-Dichloroethene	0.7	7	< 0.31	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.62	< 0.78	< 5.6	< 7	< 7.0	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14	
1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.28	< 0.72	< 2.4	< 3	< 3.0	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.06	< 0.060
1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.36	< 0.72	< 0.72	< 0.72	< 0.72	< 0.77	< 5.2	< 6.5	< 6.5	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13
1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.27	< 0.54	< 0.54	< 0.54	< 0.54	< 0.67	< 3.0	< 3.8	< 3.8	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076	
1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.40	< 0.86	< 4.0	< 5	< 5.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.1	< 0.10	
1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.24	< 0.48	< 0.48	< 0.48	< 0.48	< 0.92	< 1.8	< 2.3	< 2.3	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045	< 0.045	
1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.62	< 0.68	< 3.1	< 3.9	< 3.9	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077	
1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.18	< 0.36	< 0.36	< 0.36	< 0.36	< 0.51	< 3.0	< 3.8	< 3.8	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075	< 0.075	
2-Butanone	800	4000	NA	< 120	< 150	< 150	NA	< 3.0	< 3	< 3.0															
2-Hexanone	NE	NE	NA	< 38	< 48	< 48	NA	< 0.95	< 0.95	< 0.95															
4-Methyl-2-pentanone	50	500	NA	< 31	< 39	< 39	NA	< 0.77	< 0.77	< 0.77															
Acetone	1800	9000	NA	< 140	230 J	< 170	NA	< 3.4	< 3.4	< 5.4 U															
Benzene	0.5	5	< 0.074	< 0.074	< 0.074	< 0.15	< 0.15	0.37 J	< 0.15	< 0.29	< 3.6	< 4.5	< 4.5	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	0.23 J	< 0.074	< 0.15	< 0.089	< 0.089	< 0.089	
Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.34	< 0.74	< 3.1	< 3.9	< 3.9	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077	< 0.077	
Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.28	< 0.56	< 0.56	< 0.56	< 0.56	< 0.97	< 3.5	< 4.4	< 4.4	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088	
Bromomethane	1	10	< 0.31	< 0.31	< 0.31	< 0.62	< 0.62	< 0.62	< 0.62	< 1.6	< 24	< 30	< 30	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59	< 0.59	
Carbon disulfide	200	1000	NA	10 J	< 2.7	< 2.7	NA	< 0.053	< 0.053	0.080 J															
Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.26	< 0.52	< 0.52	< 0.52	< 0.52	< 0.77	< 1.5	< 1.9	< 1.9	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038	< 0.038	
Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.40	< 0.74	< 2.5	< 3.1	< 3.1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062	< 0.062	
Chloromethane	3	30	< 0.18	< 0.18	< 0.18	< 0.36	< 0.36	< 0.36	< 0.36	< 0.64	35 BJ	9.5 J+	< 14 U	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	< 0.16	0.37 J+	< 0.66 U	
cis-1,2-Dichloroethene	7	70	9.7	75	110	140	140	150	140	190	180	180	160	9.5	6.7	6.0	16	17	31	33	5.2	0.60	0.48 J	0.50	
Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.2	< 0.4	< 0.40	< 0.40	< 0.40	< 1.1	< 4.4	< 5.5	< 5.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11	< 0.11	
Ethylbenzene	140	700	< 0.13	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.26	< 0.37	< 2.2	< 2.7	< 2.7	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054	< 0.054	
Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.28	< 0.28	< 0.28	< 0.28	< 0.77	< 3.2	< 4.1	< 4.1	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081	< 0.081	
m,p-Xylene	400	2000	NA	< 2.3	3 BJ	< 2.9	NA	< 0.057	< 0.057	< 0.057															
Methyl tert-butyl ether	12	60	2.0	< 0.24	< 0.24	< 0.48	< 0.48	< 0.48	< 0.48	< 0.79	< 5.6	< 7	< 7.0	2.5	1.6	0.86 J	0.90 J	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14	< 0.14	
Methylene chloride	0.5	5	< 0.68	< 0.68	< 0.68	< 1.4	< 1.4	< 1.4	< 1.4	< 3.3	< 5.6	< 7	< 7.0	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.14	< 0.14	< 0.29 U	
Naphthalene	10	100	< 0.16	< 0.16	< 0.16	< 0.32	< 0.32	< 0.32	< 0.32	< 0.67	< 3.5	< 4.4	< 4.4	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088	< 0.15 U	
n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.26	< 0.78	< 5.6	< 7	< 7.0	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14	
n-Hexane	120	600	NA	15 J	< 11	< 11	NA	< 0.21	< 0.21	< 0.21															
n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.26	< 0.26	< 0.26	< 0.26	< 0.83	< 4.0	< 5	< 5.0	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.1	< 0.10	
o-Xylene	400	2000	NA	< 2.3	< 2.9	< 2.9	NA	< 0.058	< 0.058	< 0.058															
p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.34	< 0.72	< 3.4	< 4.3	< 4.3	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 0.085	< 0.085	
sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.15	< 0.3	< 0.30	< 0.30	< 0.30	< 0.80	< 5.2	< 6.5	< 6.5	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 0.13	< 0.13	
Styrene	10	100	< 0.1	< 0.1	< 0.1	< 0.2	< 0.20	< 0.20	< 0.20	< 0.77	< 2.6	3.5 BJ	< 3.3	< 0.1											





Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MP-16 175 - 179 ft 01/22/2013	MP-16 175 - 179 ft 04/16/2013	MP-16 175 - 179 ft 07/23/2013	MP-16 175 - 179 ft 10/09/2013	MP-16 175 - 179 ft 04/15/2014	MP-16 175 - 179 ft 10/16/2014	MP-16 175 - 179 ft 04/13/2015	MP-16 175 - 179 ft 10/15/2015	MP-16 175 - 179 ft 10/11/2016	MP-16 175 - 179 ft 10/02/2017	MP-16 175 - 179 ft 10/08/2018
<b>VOCs</b>														
	1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11	< 0.11
	1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.1	< 0.10
	1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.1	< 0.10
	1,1-Dichloroethene	0.7	7	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14	< 0.14
	1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.06	< 0.060
	1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13	< 0.13
	1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 0.076	< 0.076
	1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.1	< 0.10
	1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045	< 0.045
	1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 0.077	< 0.077
	1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075	< 0.075
	2-Butanone	800	4000	NA	< 3.0	< 3	< 3.0							
	2-Hexanone	NE	NE	NA	< 0.95	< 0.95	< 0.95							
	4-Methyl-2-pentanone	50	500	NA	< 0.77	< 0.77	< 0.77							
	Acetone	1800	9000	NA	< 3.4	< 3.4	< 3.8 U							
	Benzene	0.5	5	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.089	< 0.089	< 0.089
	Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077	< 0.077
	Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088	< 0.088
	Bromomethane	1	10	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59	< 0.59
	Carbon disulfide	200	1000	NA	< 0.053	< 0.053	0.11 J							
	Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038	< 0.038
	Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	< 0.062	< 0.062
	Chloromethane	3	30	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	< 0.16	0.81 J	< 0.61 U
	cis-1,2-Dichloroethene	7	70	1.9	0.99 J	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.41	< 0.11	< 0.11	< 0.11
	Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.2 *	< 0.2	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11	< 0.11
	Ethylbenzene	140	700	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054	< 0.054
	Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081	< 0.081
	m,p-Xylene	400	2000	NA	< 0.057	< 0.057	< 0.057							
	Methyl tert-butyl ether	12	60	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14	< 0.14
	Methylene chloride	0.5	5	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.14	0.16 J	< 0.15 U
	Naphthalene	10	100	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088	< 0.088
	n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14	< 0.14
	n-Hexane	120	600	NA	< 0.21	< 0.21	< 0.21							
	n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.1	< 0.10
	o-Xylene	400	2000	NA	< 0.058	< 0.058	< 0.058							
	p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 0.085	< 0.085
	sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 0.13	< 0.13
	Styrene	10	100	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.39	< 0.065	0.07 BJ	< 0.065
	tert-Butylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 0.12	< 0.12
	Tetrachloroethene	0.5	5	<b>13</b>	<b>6.7</b>	<b>2.2</b>	<b>3.7</b>	<b>3.8</b>	<b>4.8</b>	<b>4.2</b>	<b>2.7</b>	<b>3.1</b>	<b>4.2</b>	<b>2.5</b>
	Toluene	160	800	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	0.080 J	< 0.053	< 0.053
	trans-1,2-Dichloroethene	20	100	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	< 0.11	< 0.11	< 0.11
	Trichloroethene	0.5	5	<b>2.2</b>	<b>1.2</b>	0.42 J	<b>0.98</b>	<b>0.87</b>	<b>0.98</b>	<b>0.69</b>	0.42 J	<b>0.54</b>	<b>0.64</b>	0.40 J
	Trichlorofluoromethane	698	3490	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.5	< 0.13
	Vinyl chloride	0.02	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.20	< 0.16	< 0.16	< 0.16
	Xylenes, Total	400	2000	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.22	< 0.058	< 0.12	< 0.12
<b>Total PCBs</b>														
	Aroclor-1016	0.003	0.03	NA										
	Aroclor-1232	0.003	0.03	NA										
	Aroclor-1242	0.003	0.03	NA										
	Aroclor-1248	0.003	0.03	NA										
	Total Detected PCBs	0.003	0.03	NA										
<b>Dissolved PCBs</b>														
	Aroclor-1016	0.003	0.03	NA										
	Aroclor-1232	0.003	0.03	NA										
	Aroclor-1242	0.003	0.03	NA										
	Aroclor-1248	0.003	0.03	NA										
	Total Detected PCBs	0.003	0.03	NA										
<b>Solids</b>														
	Total Dissolved Solids	NE	NE	NA										
	Total Suspended Solids (TSS)	NE	NE	NA										
Notes on Page 55.														



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE	ENFORCEMENT	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S
SCREEN INTERVAL (feet bgs)	ACTION LIMIT	STANDARD	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft	20 - 30 ft
SAMPLE DATE			11/28/2012	12/18/2012	12/19/2012	12/28/2012	01/03/2013	01/15/2013	01/15/2013	01/31/2013	02/12/2013	02/12/2013	02/28/2013	03/12/2013	04/19/2013	07/17/2013	10/09/2013	04/22/2014	10/23/2014
<b>VOCS</b>																			
1,1,1,2-Tetrachloroethane	7	70	< 1.3	NA	NA	NA	NA	NA	< 0.25	NA	NA	< 0.5	NA	< 1.3	< 1.3	< 1.3	< 1.3	< 0.25	< 0.25
1,1,1-Trichloroethane	40	200	< 1	NA	NA	NA	NA	NA	< 0.2	NA	NA	< 0.4	NA	< 1	< 1	< 1	< 1	< 0.20	< 0.20
1,1,2-Trichloroethane	0.5	5	< 1.4	NA	NA	NA	NA	NA	< 0.28	NA	NA	< 0.56	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 0.28	< 0.28
1,1-Dichloroethene	0.7	7	< 1.6	NA	NA	NA	NA	NA	< 0.31	NA	NA	< 0.62	NA	< 1.6	< 1.6	< 1.6	< 1.6	< 0.31	< 0.31
1,2,4-Trimethylbenzene	96	480	< 0.7	NA	NA	NA	NA	NA	< 0.14	NA	NA	< 0.28	NA	< 0.7	< 0.7	< 0.7	< 0.7	< 0.14	< 0.14
1,2-Dibromoethane	0.005	0.05	< 1.8	NA	NA	NA	NA	NA	< 0.36	NA	NA	< 0.72	NA	< 1.8	< 1.8	< 1.8	< 1.8	< 0.36	< 0.36
1,2-Dichlorobenzene	60	600	< 1.4	NA	NA	NA	NA	NA	< 0.27	NA	NA	< 0.54	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 0.27	< 0.27
1,2-Dichloropropane	0.5	5	< 1	NA	NA	NA	NA	NA	< 0.2	NA	NA	< 0.4	NA	< 1	< 1	< 1	< 1	< 0.20	< 0.20
1,2,3-Trichlorobenzene	NE	NE	< 1.2	NA	NA	NA	NA	NA	< 0.24	NA	NA	< 0.48	NA	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24
1,2,4-Trichlorobenzene	14	70	< 1.6	NA	NA	NA	NA	NA	< 0.31	NA	NA	< 0.62	NA	< 1.6	< 1.6	< 1.6	< 1.6	< 0.31	< 0.31
1,3,5-Trimethylbenzene	96	480	< 0.9	NA	NA	NA	NA	NA	< 0.18	NA	NA	< 0.36	NA	< 0.9	< 0.9	< 0.9	< 0.9	< 0.18	< 0.18
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	<b>3.2</b>	NA	NA	NA	NA	NA	0.46 J	NA	NA	<b>1.4</b>	NA	<b>1.9 J</b>	<b>2.2 J</b>	< 0.37	<b>1.3 J</b>	0.38 J	0.46 J
Bromodichloromethane	0.06	0.6	< 0.85	NA	NA	NA	NA	NA	< 0.17	NA	NA	< 0.34	NA	< 0.85	< 0.85	< 0.85	< 0.85	< 0.17	< 0.17
Bromoform	0.44	4.4	< 1.4	NA	NA	NA	NA	NA	< 0.28	NA	NA	< 0.56	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 0.28	< 0.28
Bromomethane	1	10	< 1.6	NA	NA	NA	NA	NA	< 0.31	NA	NA	< 0.62	NA	< 1.6	< 1.6	< 1.6	< 1.6	< 0.31	< 0.31
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	0.5	5	< 1.3	NA	NA	NA	NA	NA	< 0.26	NA	NA	< 0.52	NA	< 1.3	< 1.3	< 1.3	< 1.3	< 0.26	< 0.26
Chloroform	0.6	6	<b>7.2</b>	NA	NA	NA	NA	NA	<b>2.3</b>	NA	NA	<b>4.5</b>	NA	<b>7.5</b>	<b>6.2</b>	< 1	<b>5.2</b>	<b>1.4</b>	<b>2</b>
Chloromethane	3	30	< 0.9	NA	NA	NA	NA	NA	< 0.18	NA	NA	< 0.36	NA	< 0.9	< 0.9	< 0.9	< 0.9	< 0.18	< 0.18
cis-1,2-Dichloroethene	7	70	<b>150</b>	NA	NA	NA	NA	NA	<b>40</b>	NA	NA	<b>77</b>	NA	<b>110</b>	<b>99</b>	<b>70</b>	<b>78</b>	<b>21</b>	<b>26</b>
Dichlorodifluoromethane	200	1000	< 1	NA	NA	NA	NA	NA	< 0.2	NA	NA	< 0.4	NA	< 1	< 1	< 1	< 1	< 0.20	< 0.20
Ethylbenzene	140	700	< 0.65	NA	NA	NA	NA	NA	< 0.13	NA	NA	< 0.26	NA	< 0.65	< 0.65	< 0.65	< 0.65	< 0.13	< 0.13
Isopropylbenzene	NE	NE	< 0.7	NA	NA	NA	NA	NA	< 0.14	NA	NA	< 0.28	NA	< 0.7	< 0.7	< 0.7	< 0.7	< 0.14	< 0.14
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	12	60	< 1.2	NA	NA	NA	NA	NA	< 0.24	NA	NA	< 0.48	NA	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24
Methylene chloride	0.5	5	< 3.4	NA	NA	NA	NA	NA	< 0.68	NA	NA	< 1.4	NA	< 3.4	< 3.4	< 3.4	< 3.4	< 0.68	< 0.68
Naphthalene	10	100	< 0.8	NA	NA	NA	NA	NA	< 0.16	NA	NA	< 0.32	NA	< 0.8	< 0.8	< 0.8	< 0.8	< 0.16	< 0.16
n-Butylbenzene	NE	NE	< 0.65	NA	NA	NA	NA	NA	< 0.13	NA	NA	< 0.26	NA	< 0.65	< 0.65	< 0.65	< 0.65	< 0.13	< 0.13
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NE	NE	< 0.65	NA	NA	NA	NA	NA	< 0.13	NA	NA	< 0.26	NA	< 0.65	< 0.65	< 0.65	< 0.65	< 0.13	< 0.13
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NE	NE	< 0.85	NA	NA	NA	NA	NA	< 0.17	NA	NA	< 0.34	NA	< 0.85	< 0.85	< 0.85	< 0.85	< 0.17	< 0.17
sec-Butylbenzene	NE	NE	< 0.75	NA	NA	NA	NA	NA	< 0.15	NA	NA	< 0.3	NA	< 0.75	< 0.75	< 0.75	< 0.75	< 0.15	< 0.15
Styrene	10	100	< 0.5	NA	NA	NA	NA	NA	< 0.1	NA	NA	< 0.2	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.10	< 0.10
tert-Butylbenzene	NE	NE	< 0.7	NA	NA	NA	NA	NA	< 0.14	NA	NA	< 0.28	NA	< 0.7	< 0.7	< 0.7	< 0.7	< 0.14	< 0.14
Tetrachloroethene	0.5	5	<b>3300</b>	NA	NA	NA	NA	NA	<b>690</b>	NA	NA	<b>1900</b>	NA	<b>2600</b>	<b>2600</b>	<b>2900</b>	<b>1800</b>	<b>520</b>	<b>520</b>
Toluene	160	800	1.1 J	NA	NA	NA	NA	NA	< 0.11	NA	NA	< 0.22	NA	< 0.55	< 0.55	< 0.55	< 0.55	< 0.11	< 0.11
trans-1,2-Dichloroethene	20	100	7.4	NA	NA	NA	NA	NA	2.6	NA	NA	3.8	NA	5.3	4.1 J	2.6 J	4.6 J	1.3	1.9
Trichloroethene	0.5	5	<b>230</b>	NA	NA	NA	NA	NA	<b>59</b>	NA	NA	<b>130</b>	NA	<b>160</b>	<b>170</b>	<b>140</b>	<b>150</b>	<b>43</b>	<b>65</b>
Trichlorofluoromethane	698	3490	< 0.95	NA	NA	NA	NA	NA	< 0.19	NA	NA	< 0.38	NA	< 0.95	< 0.95	< 0.95	< 0.95	< 1.0	< 1.0
Vinyl chloride	0.02	0.2	< 0.5	NA	NA	NA	NA	NA	< 0.1	NA	NA	< 0.2	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.10	< 0.10
Xylenes, Total	400	2000	< 0.34	NA	NA	NA	NA	NA	< 0.068	NA	NA	< 0.14	NA	< 0.34	< 0.34	< 0.34	< 0.34	< 0.068	< 0.068
<b>Total PCBs</b>																			
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Dissolved PCBs</b>																			
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Solids</b>																			
Total Dissolved Solids	NE	NE	3300	1700	4800	4300	3900	3200	2700	2800	20000	12000	15000	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS)	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes on Page 55.

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-19D 60 - 90 ft 11/29/2012	MW-19D 60 - 90 ft 12/11/2012	MW-19D 60 - 90 ft 12/12/2012	MW-19D 60 - 90 ft 12/13/2012	MW-19D 60 - 90 ft 12/14/2012	MW-19D 60 - 90 ft 12/15/2012	MW-19D 60 - 90 ft 12/16/2012	MW-19D 60 - 90 ft 12/17/2012	MW-19D 60 - 90 ft 12/18/2012	MW-19D 60 - 90 ft 12/19/2012	MW-19D 60 - 90 ft 12/27/2012	MW-19D 60 - 90 ft 01/02/2013	MW-19D 60 - 90 ft 01/16/2013	MW-19D 60 - 90 ft 01/16/2013	MW-19D 60 - 90 ft 01/30/2013	MW-19D 60 - 90 ft 02/11/2013	MW-19D 60 - 90 ft 02/28/2013	MW-19D 60 - 90 ft 03/11/2013	MW-19D 60 - 90 ft 04/19/2013	MW-19D 60 - 90 ft 07/17/2013	MW-19D 60 - 90 ft 10/09/2013	MW-19D 60 - 90 ft 04/17/2014	MW-19D 60 - 90 ft 10/21/2014	
<b>VOCs</b>																											
1,1,1,2-Tetrachloroethane	7	70	< 1.3	NA	< 1.3	NA	< 1.3	NA	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.50													
1,1,1-Trichloroethane	40	200	< 1	NA	< 1	NA	< 1	NA	< 1	< 1	< 1	< 1	< 1.0	< 0.40													
1,1,2-Trichloroethane	0.5	5	< 1.4	NA	< 1.4	NA	< 1.4	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.56													
1,1-Dichloroethene	0.7	7	< 1.6	NA	< 1.6	NA	< 1.6	NA	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.62													
1,2,4-Trimethylbenzene	96	480	< 0.7	NA	< 0.7	NA	< 0.7	NA	< 0.7	< 0.7	< 0.7	< 0.7	< 0.70	< 0.28													
1,2-Dibromoethane	0.005	0.05	< 1.8	NA	< 1.8	NA	< 1.8	NA	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 0.72													
1,2-Dichlorobenzene	60	600	< 1.4	NA	< 1.4	NA	< 1.4	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.54													
1,2-Dichloropropane	0.5	5	< 1	NA	< 1	NA	< 1	NA	< 1	< 1	< 1	< 1	< 1.0	< 0.40													
1,2,3-Trichlorobenzene	NE	NE	< 1.2	NA	< 1.2	NA	< 1.2	NA	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.48													
1,2,4-Trichlorobenzene	14	70	< 1.6	NA	< 1.6	NA	< 1.6	NA	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.62													
1,3,5-Trimethylbenzene	96	480	< 0.9	NA	< 0.9	NA	< 0.9	NA	< 0.9	< 0.9	< 0.9	< 0.9	< 0.90	< 0.36													
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	< 0.37	NA	< 0.37	NA	< 0.37	NA	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.15													
Bromodichloromethane	0.06	0.6	< 0.85	NA	< 0.85	NA	< 0.85	NA	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.34													
Bromoform	0.44	4.4	< 1.4	NA	< 1.4	NA	< 1.4	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 0.56													
Bromomethane	1	10	< 1.6	NA	< 1.6	NA	< 1.6 *	NA	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 0.62													
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	0.5	5	< 1.3	NA	< 1.3	NA	< 1.3	NA	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.52													
Chloroform	0.6	6	< 1	NA	< 1	NA	< 1	NA	< 1	< 1	< 1	< 1	< 1.0	< 0.40													
Chloromethane	3	30	< 0.9	NA	< 0.9	NA	< 0.9	NA	< 0.9	< 0.9	< 0.9	< 0.9	< 0.90	< 0.36													
cis-1,2-Dichloroethene	7	70	<b>530</b>	NA	<b>170</b>	NA	<b>450</b>	NA	<b>420</b>	<b>520</b>	<b>540</b>	<b>300</b>	<b>49</b>	<b>240</b>													
Dichlorodifluoromethane	200	1000	< 1	NA	< 1	NA	< 1	NA	< 1	< 1	< 1	< 1	< 1.0	< 0.40													
Ethylbenzene	140	700	< 0.65	NA	< 0.65	NA	< 0.65	NA	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.26													
Isopropylbenzene	NE	NE	< 0.7	NA	< 0.7	NA	< 0.7	NA	< 0.7	< 0.7	< 0.7	< 0.70	< 0.28														
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	12	60	< 1.2	NA	< 1.2	NA	< 1.2	NA	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.48													
Methylene chloride	0.5	5	< 3.4	NA	< 3.4	NA	< 3.4	NA	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 1.4													
Naphthalene	10	100	< 0.8	NA	< 0.8	NA	< 0.8	NA	< 0.8	< 0.8	< 0.8	< 0.8	< 0.80	< 0.32													
n-Butylbenzene	NE	NE	< 0.65	NA	< 0.65	NA	< 0.65	NA	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.26													
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NE	NE	< 0.65	NA	< 0.65	NA	< 0.65	NA	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.26													
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NE	NE	< 0.85	NA	< 0.85	NA	< 0.85	NA	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	< 0.34													
sec-Butylbenzene	NE	NE	< 0.75	NA	< 0.75	NA	< 0.75	NA	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.30													
Styrene	10	100	< 0.5	NA	< 0.5	NA	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.50	< 0.20													
tert-Butylbenzene	NE	NE	< 0.7	NA	< 0.7	NA	< 0.7	NA	< 0.7	< 0.7	< 0.7	< 0.70	< 0.28														
Tetrachloroethene	0.5	5	<b>2400</b>	NA	<b>1700</b>	NA	<b>2700</b>	NA	<b>2100</b>	<b>2200</b>	<b>2700</b>	<b>1500</b>	<b>1400</b>	<b>1500</b>													
Toluene	160	800	< 0.55	NA	< 0.55	NA	< 0.55	NA	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.22													
trans-1,2-Dichloroethene	20	100	7.2	NA	< 1.3	NA	4.4 J	NA	5.1	6.3	8.1	4.1 J	< 1.3	3.1													
Trichloroethene	0.5	5	<b>230</b>	NA	<b>69</b>	NA	<b>180</b>	NA	<b>180</b>	<b>200</b>	<b>240</b>	<b>150</b>	<b>68</b>	<b>140</b>													
Trichlorofluoromethane	698	3490	< 0.95	NA	< 0.95	NA	< 0.95	NA	< 0.95	< 0.95	< 0.95	< 0.95	< 5.0	< 2.0													
Vinyl chloride	0.02	0.2	<b>9.7</b>	NA	<b>3.2</b>	NA	<b>8</b>	NA	<b>11</b>	<b>18</b>	<b>20</b>	<b>6.6</b>	< 0.50	<b>4.5</b>													
Xylenes, Total	400	2000	< 0.34	NA	< 0.34	NA	< 0.34	NA	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.14													
<b>Total PCBs</b>																											
Aroclor-1016																											



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE	ENFORCEMENT	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D					
SCREEN INTERVAL (feet bgs)	ACTION LIMIT	STANDARD	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft	60 - 90 ft					
SAMPLE DATE			11/29/2012	12/11/2012	12/12/2012	12/13/2012	12/14/2012	12/15/2012	12/16/2012	12/17/2012	12/18/2012	12/19/2012	12/27/2012	01/02/2013	01/16/2013	01/16/2013	01/30/2013	02/12/2013	02/12/2013	02/12/2013	02/28/2013	03/12/2013	04/18/2013	07/17/2013	10/09/2013	04/15/2014	10/22/2014				
<b>VOCs</b>																															
1,1,1,2-Tetrachloroethane	7	70	< 1.3	NA	< 0.25	NA	NA	NA	< 0.25	NA	< 0.25	< 1.3	< 0.5	< 1.3	< 0.50	< 0.50															
1,1,1-Trichloroethane	40	200	< 1	NA	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.4	< 1	< 0.40	< 0.40															
1,1,2-Trichloroethane	0.5	5	< 1.4	NA	< 0.28	NA	NA	NA	< 0.28	NA	< 0.28	< 1.4	< 0.56	< 1.4	< 0.56	< 0.56															
1,1-Dichloroethene	0.7	7	< 1.6	NA	< 0.31	NA	NA	NA	< 0.31	NA	< 0.31	< 1.6	< 0.62	< 1.6	< 0.62	< 0.62															
1,2,4-Trimethylbenzene	96	480	< 0.7	NA	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.28	< 0.7	< 0.28	< 0.28															
1,2-Dibromoethane	0.005	0.05	< 1.8	NA	< 0.36	NA	NA	NA	< 0.36	NA	< 0.36	< 1.8	< 0.72	< 1.8	< 0.72	< 0.72															
1,2-Dichlorobenzene	60	600	< 1.4	NA	< 0.27	NA	NA	NA	< 0.27	NA	< 0.27	< 1.4	< 0.54	< 1.4	< 0.54	< 0.54															
1,2-Dichloropropane	0.5	5	< 1	NA	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.4	< 1	< 0.40	< 0.40															
1,2,3-Trichlorobenzene	NE	NE	< 1.2	NA	< 0.24	NA	NA	NA	< 0.24	NA	< 0.24	< 1.2	< 0.48	< 1.2	< 0.48	< 0.48															
1,2,4-Trichlorobenzene	14	70	< 1.6	NA	< 0.31	NA	NA	NA	< 0.31	NA	< 0.31	< 1.6	< 0.62	< 1.6	< 0.62	< 0.62															
1,3,5-Trimethylbenzene	96	480	< 0.9	NA	< 0.18	NA	NA	NA	< 0.18	NA	< 0.18	< 0.9	< 0.36	< 0.9	< 0.36	< 0.36															
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	< 0.37	NA	< 0.074	NA	NA	NA	< 0.074	NA	< 0.074	< 0.37	< 0.15	< 0.37	< 0.15	< 0.15															
Bromodichloromethane	0.06	0.6	< 0.85	NA	< 0.17	NA	NA	NA	< 0.17	NA	< 0.17	< 0.85	< 0.34	< 0.85	< 0.34	< 0.34															
Bromoform	0.44	4.4	< 1.4	NA	< 0.28	NA	NA	NA	< 0.28	NA	< 0.28	< 1.4	< 0.56	< 1.4	< 0.56	< 0.56															
Bromomethane	1	10	< 1.6	NA	< 0.31	NA	NA	NA	< 0.31	NA	< 0.31	< 1.6	< 0.62	< 1.6	< 0.62	< 0.62															
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	0.5	5	< 1.3	NA	< 0.26	NA	NA	NA	< 0.26	NA	< 0.26	< 1.3	< 0.52	< 1.3	< 0.52	< 0.52															
Chloroform	0.6	6	< 1	NA	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.4	< 1	< 0.40	< 0.40															
Chloromethane	3	30	< 0.9	NA	< 0.18	NA	NA	NA	< 0.18	NA	< 0.18	< 0.9	< 0.36	< 0.9	< 0.36	< 0.36															
cis-1,2-Dichloroethene	7	70	<b>370</b>	NA	0.69 J	NA	NA	<b>20</b>	NA	<b>39</b>	<b>220</b>	<b>180</b>	<b>170</b>	<b>140</b>	<b>200</b>																
Dichlorodifluoromethane	200	1000	< 1	NA	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.4	< 1	< 0.40	< 0.40															
Ethylbenzene	140	700	< 0.65	NA	< 0.13	NA	NA	NA	< 0.13	NA	< 0.13	< 0.65	< 0.26	< 0.65	< 0.26	< 0.26															
Isopropylbenzene	NE	NE	< 0.7	NA	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.28	< 0.7	< 0.28	< 0.28															
m,p-Xylene	400	2000	< 0.7	NA	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.28	< 0.7	< 0.28	< 0.28															
Methyl tert-butyl ether	12	60	< 1.2	NA	< 0.24	NA	NA	NA	< 0.24	NA	< 0.24	< 1.2	< 0.48	< 1.2	< 0.48	< 0.48															
Methylene chloride	0.5	5	< 3.4	NA	< 0.68	NA	NA	NA	< 0.68	NA	< 0.68	< 3.4	< 1.4	< 3.4	< 1.4	< 1.4															
Naphthalene	10	100	< 0.8	NA	< 0.16	NA	NA	NA	< 0.16	NA	< 0.16	< 0.8	< 0.32	< 0.8	< 0.32	< 0.32															
n-Butylbenzene	NE	NE	< 0.65	NA	< 0.13	NA	NA	NA	< 0.13	NA	< 0.13	< 0.65	< 0.26	< 0.65	< 0.26	< 0.26															
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NE	NE	< 0.65	NA	< 0.13	NA	NA	NA	< 0.13	NA	< 0.13	< 0.65	< 0.26	< 0.65	< 0.26	< 0.26															
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NE	NE	< 0.85	NA	< 0.17	NA	NA	NA	< 0.17	NA	< 0.17	< 0.85	< 0.34	< 0.85	< 0.34	< 0.34															
sec-Butylbenzene	NE	NE	< 0.75	NA	< 0.15	NA	NA	NA	< 0.15	NA	< 0.15	< 0.75	< 0.3	< 0.75	< 0.30	< 0.30															
Styrene	10	100	< 0.5	NA	< 0.1	NA	NA	NA	< 0.1	NA	< 0.1	< 0.5	< 0.2	< 0.5	< 0.20	< 0.20															
tert-Butylbenzene	NE	NE	< 0.7	NA	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.28	< 0.7	< 0.28	< 0.28															
Tetrachloroethene	0.5	5	<b>1600</b>	NA	<b>190</b>	NA	NA	NA	<b>690</b>	NA	<b>650</b>	<b>1100</b>	<b>1000</b>	<b>1200</b>																	

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-20D2 110 - 140 ft 11/29/2012	MW-20D2 110 - 140 ft 12/13/2012	MW-20D2 110 - 140 ft 12/14/2012	MW-20D2 110 - 140 ft 12/15/2012	MW-20D2 110 - 140 ft 12/16/2012	MW-20D2 110 - 140 ft 12/17/2012	MW-20D2 110 - 140 ft 12/18/2012	MW-20D2 110 - 140 ft 12/19/2012	MW-20D2 110 - 140 ft 12/27/2012	MW-20D2 110 - 140 ft 01/02/2013	MW-20D2 110 - 140 ft 01/16/2013	MW-20D2 110 - 140 ft 01/16/2013	MW-20D2 <sup>1</sup> 110 - 140 ft 02/12/2013	MW-20D2 110 - 140 ft 01/30/2013	MW-20D2 110 - 140 ft 02/12/2013	MW-20D2 110 - 140 ft 02/12/2013	MW-20D2 <sup>1,3</sup> 110 - 140 ft 02/12/2013	MW-20D2 110 - 140 ft 02/28/2013	MW-20D2 <sup>1</sup> 110 - 140 ft 03/12/2013	MW-20D2 <sup>1</sup> 110 - 140 ft 04/18/2013	MW-20D2 <sup>1</sup> 110 - 140 ft 07/17/2013	MW-20D2 <sup>1</sup> 110 - 140 ft 10/15/2013	MW-20D2 110 - 140 ft 04/15/2014	MW-20D2 <sup>1</sup> 110 - 140 ft 10/22/2014	
<b>VOCs</b>																												
1,1,1,2-Tetrachloroethane	7	70		< 0.5	NA	< 0.25	< 0.25	NA	NA	NA	< 0.25	NA	< 0.25	< 1.3	< 0.25	< 0.25	< 1.3	< 0.50										
1,1,1-Trichloroethane	40	200		< 0.4	NA	< 0.2	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.2	< 0.2	< 1.0	< 0.40										
1,1,2-Trichloroethane	0.5	5		< 0.56	NA	< 0.28	< 0.28	NA	NA	NA	< 0.28	NA	< 0.28	< 1.4	< 0.28	< 0.28	< 1.4	< 0.56										
1,1-Dichloroethene	0.7	7		< 0.62	NA	< 0.31	< 0.31	NA	NA	NA	< 0.31	NA	< 0.31	< 1.6	< 0.31	< 0.31	< 1.6	< 0.62										
1,2,4-Trimethylbenzene	96	480		< 0.28	NA	< 0.14	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.14	< 0.14	< 0.70	< 0.28										
1,2-Dibromoethane	0.005	0.05		< 0.72	NA	< 0.36	< 0.36	NA	NA	NA	< 0.36	NA	< 0.36	< 1.8	< 0.36	< 0.36	< 1.8	< 0.72										
1,2-Dichlorobenzene	60	600		< 0.54	NA	< 0.27	< 0.27	NA	NA	NA	< 0.27	NA	< 0.27	< 1.4	< 0.27	< 0.27	< 1.4	< 0.54										
1,2-Dichloropropane	0.5	5		< 0.4	NA	< 0.2	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.2	< 0.2	< 1.0	< 0.40										
1,2,3-Trichlorobenzene	NE	NE		< 0.48	NA	< 0.24	< 0.24	NA	NA	NA	< 0.24	NA	< 0.24	< 1.2	< 0.24	< 0.24	< 1.2	< 0.48										
1,2,4-Trichlorobenzene	14	70		< 0.62	NA	< 0.31	< 0.31	NA	NA	NA	< 0.31	NA	< 0.31	< 1.6	< 0.31	< 0.31	< 1.6	< 0.62										
1,3,5-Trimethylbenzene	96	480		< 0.36	NA	< 0.18	< 0.18	NA	NA	NA	< 0.18	NA	< 0.18	< 0.9	< 0.18	< 0.18	< 0.90	< 0.36										
2-Butanone	800	4000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
2-Hexanone	NE	NE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
4-Methyl-2-pentanone	50	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
Acetone	1800	9000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
Benzene	0.5	5		< 0.15	NA	< 0.074	0.19 J	NA	NA	NA	< 0.074	NA	< 0.074	< 0.37	< 0.074	< 0.074	< 0.37	< 0.15										
Bromodichloromethane	0.06	0.6		< 0.34	NA	< 0.17	< 0.17	NA	NA	NA	< 0.17	NA	< 0.17	< 0.85	< 0.17	< 0.17	< 0.85	< 0.34										
Bromoform	0.44	4.4		< 0.56	NA	< 0.28	< 0.28	NA	NA	NA	< 0.28	NA	< 0.28	< 1.4	< 0.28	< 0.28	< 1.4	< 0.56										
Bromomethane	1	10		< 0.62	NA	< 0.31	< 0.31	NA	NA	NA	< 0.31	NA	< 0.31	< 1.6	< 0.31	< 0.31	< 1.6	< 0.62										
Carbon disulfide	200	1000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
Carbon tetrachloride	0.5	5		< 0.52	NA	< 0.26	< 0.26	NA	NA	NA	< 0.26	NA	< 0.26	< 1.3	< 0.26	< 0.26	< 1.3	< 0.52										
Chloroform	0.6	6		< 0.4	NA	0.47 J	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.2	< 0.2	< 1.0	< 0.40										
Chloromethane	3	30		< 0.36	NA	< 0.18	< 0.18	NA	NA	NA	< 0.18	NA	< 0.18	< 0.9	< 0.18	< 0.18	< 0.90	< 0.36										
cis-1,2-Dichloroethene	7	70		<b>330</b>	NA	< 0.12	2.8	NA	NA	NA	< 0.12	NA	2.8	<b>30</b>	< 0.12	1.4	< 0.60	<b>12</b>										
Dichlorodifluoromethane	200	1000		< 0.4	NA	< 0.2	< 0.2	NA	NA	NA	< 0.2	NA	< 0.2	< 1	< 0.2	< 0.2	< 1.0	< 0.40										
Ethylbenzene	140	700		< 0.26	NA	< 0.13	< 0.13	NA	NA	NA	< 0.13	NA	< 0.13	< 0.65	< 0.13	< 0.13	< 0.65	< 0.26										
Isopropylbenzene	NE	NE		< 0.28	NA	< 0.14	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.14	< 0.14	< 0.70	< 0.28										
m,p-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
Methyl tert-butyl ether	12	60		< 0.48	NA	< 0.24	< 0.24	NA	NA	NA	< 0.24	NA	< 0.24	< 1.2	< 0.24	< 0.24	< 1.2	< 0.48										
Methylene chloride	0.5	5		< 1.4	NA	< 0.68	< 0.68	NA	NA	NA	< 0.68	NA	< 0.68	< 3.4	< 0.68	< 0.68	< 3.4	< 1.4										
Naphthalene	10	100		< 0.32	NA	< 0.16	< 0.16	NA	NA	NA	< 0.16	NA	< 0.16	< 0.8	< 0.16	< 0.16	< 0.80	< 0.32										
n-Butylbenzene	NE	NE		< 0.26	NA	< 0.13	< 0.13	NA	NA	NA	< 0.13	NA	< 0.13	< 0.65	< 0.13	< 0.13	< 0.65	< 0.26										
n-Hexane	120	600		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
n-Propylbenzene	NE	NE		< 0.26	NA	< 0.13	< 0.13	NA	NA	NA	< 0.13	NA	< 0.13	< 0.65	< 0.13	< 0.13	< 0.65	< 0.26										
o-Xylene	400	2000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
p-Isopropyltoluene	NE	NE		< 0.34	NA	< 0.17	< 0.17	NA	NA	NA	< 0.17	NA	< 0.17	< 0.85	< 0.17	< 0.17	< 0.85	< 0.34										
sec-Butylbenzene	NE	NE		< 0.3	NA	< 0.15	< 0.15	NA	NA	NA	< 0.15	NA	< 0.15	< 0.75	< 0.15	< 0.15	< 0.75	< 0.30										
Styrene	10	100		< 0.2	NA	< 0.1	< 0.1	NA	NA	NA	< 0.1	NA	< 0.1	< 0.5	< 0.1	< 0.1	< 0.50	< 0.20										
tert-Butylbenzene	NE	NE		< 0.28	NA	< 0.14	< 0.14	NA	NA	NA	< 0.14	NA	< 0.14	< 0.7	< 0.14	< 0.14	< 0.70	< 0.28										
Tetrachloroethene	0.5	5		<b>1300</b>	NA	<b>190</b>	<b>700</b>	NA	NA	NA	<b>24</b>	NA	<b>490</b>	<b>1100</b>	<b>53</b>	<b>380</b>	<b>1600</b>	<b>740</b>										
Toluene	160	800		< 0.22	NA	0.34 J	< 0.11	NA	NA	NA	< 0.11	NA	< 0.11	< 0.55	< 0.11	< 0.11	< 0.55	< 0.22										
trans-1,2-Dichloroethene	20	100		4.3	NA	< 0.25	< 0.25	NA	NA	NA	< 0.25	NA	< 0.25	< 1.3	< 0.25	< 0.25	< 1.3	< 0.50										
Trichloroethene	0.5	5		<b>150</b>	NA	< 0.19	<b>7.9</b>	NA	NA	NA	< 0.19	NA	< 0.19	<b>5.3</b>	<b>41</b>	< 0.19	<b>4.5</b>	<b>2.7</b>										
Trichlorofluoromethane	698	3490		< 0.38	NA	< 0.19	NA	NA	NA	< 0.19	NA																	

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-21D 60 - 90 ft 11/28/2012	MW-21D 60 - 90 ft 12/12/2012	MW-21D 60 - 90 ft 12/13/2012	MW-21D 60 - 90 ft 12/14/2012	MW-21D 60 - 90 ft 12/15/2012	MW-21D 60 - 90 ft 12/16/2012	MW-21D 60 - 90 ft 12/17/2012	MW-21D 60 - 90 ft 12/18/2012	MW-21D 60 - 90 ft 12/19/2012	MW-21D 60 - 90 ft 12/27/2012	MW-21D 60 - 90 ft 01/02/2013	MW-21D 60 - 90 ft 01/17/2013	MW-21D 60 - 90 ft 01/17/2013	MW-21D 60 - 90 ft 01/30/2013	MW-21D 60 - 90 ft 02/14/2013	MW-21D 60 - 90 ft 02/14/2013	MW-21D <sup>1</sup> 60 - 90 ft 02/14/2013	MW-21D 60 - 90 ft 02/28/2013	MW-21D <sup>1</sup> 60 - 90 ft 03/12/2013	MW-21D <sup>1</sup> 60 - 90 ft 04/17/2013	MW-21D 60 - 90 ft 07/18/2013	MW-21D 60 - 90 ft 10/10/2013	MW-21D 60 - 90 ft 04/15/2014	MW-21D 60 - 90 ft 10/23/2014		
<b>VOCs</b>																													
1,1,1,2-Tetrachloroethane	7	70	< 0.5	NA	< 0.5	NA	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.25																	
1,1,1-Trichloroethane	40	200	< 0.4	NA	< 0.4	NA	< 0.4	< 1	< 1	< 1	< 1.0	< 0.20																	
1,1,2-Trichloroethane	0.5	5	< 0.56	NA	< 0.56	NA	< 0.56	< 1.4	< 1.4	< 1.4	< 1.4	< 0.28																	
1,1-Dichloroethene	0.7	7	< 0.62	NA	< 0.62	NA	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 0.31																	
1,2,4-Trimethylbenzene	96	480	< 0.28	NA	< 0.28	NA	< 0.28	< 0.7	< 0.7	< 0.7	< 0.70	< 0.14																	
1,2-Dibromoethane	0.005	0.05	< 0.72	NA	< 0.72	NA	< 0.72	< 1.8	< 1.8	< 1.8	< 1.8	< 0.36																	
1,2-Dichlorobenzene	60	600	< 0.54	NA	< 0.54	NA	< 0.54	< 1.4	< 1.4	< 1.4	< 1.4	< 0.27																	
1,2-Dichloropropane	0.5	5	< 0.4	NA	< 0.4	NA	< 0.4	< 1	< 1	< 1	< 1.0	< 0.20																	
1,2,3-Trichlorobenzene	NE	NE	< 0.48	NA	< 0.48	NA	< 0.48	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24																	
1,2,4-Trichlorobenzene	14	70	< 0.62	NA	< 0.62	NA	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 0.31																	
1,3,5-Trimethylbenzene	96	480	< 0.36	NA	< 0.36	NA	< 0.36	< 0.9	< 0.9	< 0.9	< 0.90	< 0.18																	
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Benzene	0.5	5	< 0.15	NA	< 0.15	NA	< 0.15	< 0.37	< 0.37	< 0.37	< 0.37	0.33 J																	
Bromodichloromethane	0.06	0.6	< 0.34	NA	< 0.34	NA	< 0.34	< 0.85	< 0.85	< 0.85	< 0.85	< 0.17																	
Bromoform	0.44	4.4	< 0.56	NA	< 0.56	NA	< 0.56	< 1.4	< 1.4	< 1.4	< 1.4	< 0.28																	
Bromomethane	1	10	< 0.62	NA	< 0.62 *	NA	< 0.62	< 1.6	< 1.6	< 1.6	< 1.6	< 0.31																	
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Carbon tetrachloride	0.5	5	< 0.52	NA	< 0.52	NA	< 0.52	< 1.3	< 1.3	< 1.3	< 1.3	< 0.26																	
Chloroform	0.6	6	< 0.4	NA	< 0.4	NA	< 0.4	< 1	< 1	< 1	< 1.0	0.70 J																	
Chloromethane	3	30	< 0.36	NA	< 0.36	NA	< 0.36	< 0.9	< 0.9	< 0.9	< 0.90	< 0.18																	
cis-1,2-Dichloroethene	7	70	<b>380</b>	NA	<b>270</b>	NA	<b>310</b>	<b>310</b>	<b>370</b>	<b>360</b>	<b>320</b>	<b>230</b>																	
Dichlorodifluoromethane	200	1000	< 0.4	NA	< 0.4	NA	< 0.4	< 1	< 1	< 1	< 1.0	< 0.20																	
Ethylbenzene	140	700	< 0.26	NA	0.43 J	NA	< 0.26	< 0.26	< 0.65	< 0.65	< 0.65	< 0.13																	
Isopropylbenzene	NE	NE	< 0.28	NA	< 0.28	NA	< 0.28	< 0.7	< 0.7	< 0.7	< 0.70	< 0.14																	
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Methyl tert-butyl ether	12	60	< 0.48	NA	< 0.48	NA	< 0.48	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24																	
Methylene chloride	0.5	5	< 1.4	NA	< 1.4	NA	< 1.4	< 3.4	< 3.4	< 3.4	< 3.4	< 0.68																	
Naphthalene	10	100	< 0.32	NA	< 0.32	NA	< 0.32	< 0.8	< 0.8	< 0.8	< 0.80	< 0.16																	
n-Butylbenzene	NE	NE	< 0.26	NA	< 0.26	NA	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.13																	
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
n-Propylbenzene	NE	NE	< 0.26	NA	< 0.26	NA	< 0.26	< 0.65	< 0.65	< 0.65	< 0.65	< 0.13																	
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
p-Isopropyltoluene	NE	NE	< 0.34	NA	< 0.34	NA	< 0.34	< 0.85	< 0.85	< 0.85	< 0.85	< 0.17																	
sec-Butylbenzene	NE	NE	< 0.3	NA	< 0.3	NA	< 0.3	< 0.75	< 0.75	< 0.75	< 0.75	< 0.15																	
Styrene	10	100	< 0.2	NA	< 0.2	NA	< 0.2	< 0.5	< 0.5	< 0.5	< 0.50	< 0.10																	
tert-Butylbenzene	NE	NE	< 0.28	NA	< 0.28	NA	< 0.28	< 0.7	< 0.7	< 0.7	< 0.70	< 0.14																	
Tetrachloroethene	0.5	5	<b>1200</b>	NA	<b>700</b>	NA	<b>1600</b>	NA	<b>1500</b>	<b>1100</b>	<b>1700</b>	<b>1600</b>	<b>1800</b>	<b>1200</b>															
Toluene	160	800	< 0.22	NA	< 0.22	NA	< 0.22	< 0.55	< 0.55	< 0.55	< 0.55	< 0.11																	
trans-1,2-Dichloroethene	20	100	5.1	NA	< 0.25	NA	< 0.5	2.9	< 1.3	5.2	6.2	5.0	4.1																
Trichloroethene	0.5	5	<b>180</b>	NA	<b>23</b>	NA	<b>130</b>	NA	<b>160</b>	<b>140</b>	<b>180</b>	<b>160</b>	<b>180</b>	<b>170</b>															
Trichlorofluoromethane	698	3490	< 0.38	NA	< 0.38	NA	< 0.38	< 0.95	< 0.95	< 0.95	< 0.95	< 5.0	< 1.0																
Vinyl chloride	0.02	0.2	<b>1.4</b>	NA	< 0.1	NA	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	<b>1.5 J</b>	<b>1.3</b>																
Xylenes, Total	400	2000	< 0.14	NA	< 0.14	NA	< 0.14	< 0.34	< 0.34	< 0.34	< 0.34	< 0.068																	
<b>Total PCBs</b> </																													



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-22S											
				24 - 35 ft											
SAMPLE DATE				01/15/2013	03/07/2013	04/19/2013	07/16/2013	10/10/2013	04/18/2014	10/20/2014	04/09/2015	10/20/2015	10/14/2016	10/06/2017	10/06/2017
<b>VOCs</b>															
1,1,1,2-Tetrachloroethane	7	70		< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 0.11
1,1,1-Trichloroethane	40	200		< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 0.1
1,1,2-Trichloroethane	0.5	5		< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 0.1
1,1-Dichloroethene	0.7	7		< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 0.14
1,2,4-Trimethylbenzene	96	480		0.86 J	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 0.06
1,2-Dibromoethane	0.005	0.05		< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 0.13
1,2-Dichlorobenzene	60	600		< 0.27	NA	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	0.11 J
1,2-Dichloropropane	0.5	5		< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 0.1
1,2,3-Trichlorobenzene	NE	NE		< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.045
1,2,4-Trichlorobenzene	14	70		< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	0.08 BJ
1,3,5-Trimethylbenzene	96	480		< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 0.075
2-Butanone	800	4000		NA	< 3.0	< 3									
2-Hexanone	NE	NE		NA	< 0.95	< 0.95									
4-Methyl-2-pentanone	50	500		NA	< 0.77	< 0.77									
Acetone	1800	9000		NA	< 3.4	< 3.4									
Benzene	0.5	5		1.1	NA	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.089	< 0.089
Bromodichloromethane	0.06	0.6		< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 0.077
Bromoform	0.44	4.4		< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 0.088
Bromomethane	1	10		< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.80	< 0.59	< 0.59
Carbon disulfide	200	1000		NA	< 0.053	< 0.053									
Carbon tetrachloride	0.5	5		< 0.26	NA	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.038
Chloroform	0.6	6		1	NA	0.91 J	1.4	< 0.2	< 0.20	0.75 J	< 0.20	0.66 J	0.91	0.5	0.49 J
Chloromethane	3	30		< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	0.72 J	3
cis-1,2-Dichloroethene	7	70		1.8	NA	6.1	3.8	97	46	58	65	32	46	38 J	37
Dichlorodifluoromethane	200	1000		< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.54	< 0.11	< 0.11
Ethylbenzene	140	700		0.50	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 0.054
Isopropylbenzene	NE	NE		< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 0.081
m,p-Xylene	400	2000		NA	< 0.057	< 0.057									
Methyl tert-butyl ether	12	60		< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 0.14
Methylene chloride	0.5	5		< 0.68	NA	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.14	< 0.14
Naphthalene	10	100		< 0.16	NA	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 0.088
n-Butylbenzene	NE	NE		< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 0.14
n-Hexane	120	600		NA	< 0.21	< 0.21									
n-Propylbenzene	NE	NE		< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 0.1
o-Xylene	400	2000		NA	< 0.058	< 0.058									
p-Isopropyltoluene	NE	NE		< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 0.085
sec-Butylbenzene	NE	NE		< 0.15	NA	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 0.13
Styrene	10	100		< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.39	< 0.065	< 0.065
tert-Butylbenzene	NE	NE		< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 0.12
Tetrachloroethene	0.5	5		180	NA	160	210	13	23	61	17	30	18	24 BJ	23 B
Toluene	160	800		< 0.11	NA	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	0.12 J	< 0.053
trans-1,2-Dichloroethene	20	100		< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	0.36 J	0.49 J
Trichloroethene	0.5	5		4.8	NA	5.4	8.5	6.1	4.2	7.1	2.9	4.1	9.8	9.4	9.1
Trichlorofluoromethane	698	3490		< 0.19	NA	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.5
Vinyl chloride	0.02	0.2		< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.20	0.40 J	0.85	0.8
Xylenes, Total	400	2000		1.5	NA	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.22	< 0.058	< 0.12	< 0.12
<b>Total PCBs</b>															
Aroclor-1016	0.003	0.03		12	< 0.033	4	< 0.064	< 0.064	< 0.065	NA	NA	NA	NA	< 0.035	< 0.035
Aroclor-1232	0.003	0.03		< 0.49	13	< 0.19	< 0.19	12	< 0.20	NA	NA	NA	NA	< 0.037	< 0.037
Aroclor-1242	0.003	0.03		< 0.69	< 0.099	< 0.19	4.7	< 0.19	7.1	NA	NA	NA	NA	< 0.038	< 0.038
Aroclor-1248	0.003	0.03		< 0.58	< 0.099	< 0.19	< 0.19	< 0.19	< 0.20	NA	NA	NA	NA	2	1.9
Total Detected PCBs	0.003	0.03		12	13	4	4.7	12	7.1	NA	NA	NA	NA	2	1.9
<b>Dissolved PCBs</b>															
Aroclor-1016	0.003	0.03		NA	< 0.037	< 0.068	< 0.065	< 0.063	< 0.067	0.89	< 0.063	< 0.064	NA	NA	NA
Aroclor-1232	0.003	0.03		NA	< 0.11	< 0.2	< 0.19	< 0.19	< 0.20	< 0.19	< 0.19	< 0.19	NA	NA	NA
Aroclor-1242	0.003	0.03		NA	< 0.11	< 0.2	< 0.19	< 0.19	0.28 J	< 0.19	1.9	< 0.19	NA	NA	NA
Aroclor-1248	0.003	0.03		NA	< 0.11	< 0.2	< 0.19	< 0.19	< 0.20	< 0.19	< 0.19	< 0.19	NA	NA	NA
Total Detected PCBs	0.003	0.03		NA	ND	ND	ND	ND	0.28 J	0.89	1.9	ND	NA	NA	NA
<b>Solids</b>															
Total Dissolved Solids	NE	NE		NA	806	830	838								
Total Suspended Solids (TSS)	NE	NE		NA	4.0	1.2 J	< 0.95								

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Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-22D 45 - 50 ft	MW-22D <sup>3</sup> 45 - 50 ft	MW-22D 45 - 50 ft	MW-22D 45 - 50 ft	MW-22D <sup>3</sup> 45 - 50 ft	MW-22D 45 - 50 ft	MW-22D <sup>3</sup> 45 - 50 ft	MW-22D 45 - 50 ft	MW-22D <sup>3</sup> 45 - 50 ft	MW-22D 45 - 50 ft	MW-22D <sup>3</sup> 45 - 50 ft	MW-22D 45 - 50 ft	MW-22D <sup>3</sup> 45 - 50 ft	MW-22D 45 - 50 ft
SCREEN INTERVAL (feet bgs)			01/15/2013	01/15/2013	03/08/2013	04/19/2013	04/19/2013	07/16/2013	07/16/2013	10/10/2013	10/10/2013	04/18/2014	04/18/2014	10/16/2014	10/16/2014	04/09/2015
SAMPLE DATE																
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
1,1-Dichloroethene	0.7	7	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	NA	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	< 0.074	< 0.074	NA	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	0.47 J
Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
Bromoform	0.44	4.4	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
Bromomethane	1	10	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	0.5	5	< 0.26	< 0.26	NA	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Chloroform	0.6	6	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Chloromethane	3	30	0.47 J	< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
cis-1,2-Dichloroethene	7	70	3.6	3.3	NA	4.9	4.9	3.7	3.7	< 0.12	4.0	2.6	2.5	4.2	4.9	4.2
Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	140	700	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
Isopropylbenzene	NE	NE	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	12	60	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Methylene chloride	0.5	5	< 0.68	< 0.68	NA	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	<b>6.6</b>	<b>7.1</b>	< 0.68
Naphthalene	10	100	< 0.16	< 0.16	NA	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
n-Butylbenzene	NE	NE	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NE	NE	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
sec-Butylbenzene	NE	NE	< 0.15	< 0.15	NA	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Styrene	10	100	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
tert-Butylbenzene	NE	NE	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
Tetrachloroethene	0.5	5	<b>5.20</b>	<b>4.70</b>	NA	<b>4.50</b>	<b>4.30</b>	<b>2.70</b>	<b>3.10</b>	<b>1.90</b>	<b>1.90</b>	<b>4.30</b>	<b>4.50</b>	<b>2.50</b>	<b>2.70</b>	<b>1.70</b>
Toluene	160	800	< 0.11	< 0.11	NA	< 0.11	< 0.11	0.37 J	0.38 J	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
trans-1,2-Dichloroethene	20	100	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Trichloroethene	0.5	5	<b>5.8</b>	<b>6</b>	NA	<b>5.8</b>	<b>5.7</b>	<b>5</b>	<b>5.3</b>	<b>4.9</b>	<b>5.3</b>	<b>6.8</b>	<b>6.7</b>	<b>5.7</b>	<b>6.9</b>	<b>5.6</b>
Trichlorofluoromethane	698	3490	< 0.19	< 0.19	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	0.02	0.2	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	<b>0.92</b>	< 0.10	< 0.10	<b>0.68</b>	<b>0.66</b>	<b>0.62</b>
Xylenes, Total	400	2000	< 0.068	< 0.068	NA	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068	< 0.068
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03	<b>2.4</b>	NA	< 0.033	< 0.064	NA	< 0.063	NA	< 0.063	NA	< 0.065	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	< 0.092	NA	<b>2.6</b>	< 0.19	NA	< 0.19	NA	<b>3.3</b>	NA	< 0.19	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	< 0.13	NA	< 0.1	< 0.19	NA	<b>0.97</b>	NA	< 0.19	NA	< 0.19	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	< 0.11	NA	< 0.1	< 0.19	NA	NA	NA	NA						
Total Detected PCBs	0.003	0.03	<b>2.4</b>	NA	<b>2.6</b>	ND	NA	<b>0.97</b>	NA	<b>3.3</b>	NA	ND	NA	NA	NA	NA
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03	NA	NA	< 0.033	< 0.064	NA	< 0.064	NA	< 0.065	NA	< 0.066	NA	< 0.063	NA	< 0.063
Aroclor-1232	0.003	0.03	NA	NA	< 0.1	< 0.19	NA	< 0.19	NA	< 0.19	NA	< 0.20	NA	< 0.19	NA	< 0.19
Aroclor-1242	0.003	0.03	NA	NA	< 0.1	< 0.19	NA	< 0.19	NA	< 0.19	NA	< 0.20	NA	< 0.19	NA	<b>4.3</b>
Aroclor-1248	0.003	0.03	NA	NA	< 0.1	< 0.19	NA	< 0.19	NA	< 0.19	NA	< 0.20	NA	< 0.19	NA	< 0.19
Total Detected PCBs	0.003	0.03	NA	NA	ND	ND	NA	<b>4.3</b>								
<b>Solids</b>																
Total Dissolved Solids	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids (TSS)	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-22D <sup>3</sup>	MW-22D	MW-22D	MW-22D	MW-22D <sup>3</sup>	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D <sup>3</sup>	
				45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft	45 - 50 ft
SAMPLE DATE				04/09/2015	06/10/2015	07/20/2015	10/20/2015	10/20/2015	01/22/2016	04/21/2016	07/20/2016	10/14/2016	1/20/2017	04/11/2017	10/06/2017	10/06/2017
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70	< 0.25	NA	NA	< 0.46	< 0.46	< 0.11	< 2.2	< 0.55	< 0.44	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55
1,1,1-Trichloroethane	40	200	< 0.20	NA	NA	< 0.38	< 0.38	< 0.10	< 2.0	< 0.50	< 0.40	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	0.5	5	< 0.28	NA	NA	< 0.35	< 0.35	< 0.10	< 2.0	< 0.50	< 0.40	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.7	7	< 0.31	NA	NA	< 0.39	< 0.39	< 0.14	< 2.8	< 0.70	< 0.56	< 0.70	< 0.70	< 0.7	< 0.7	< 0.7
1,2,4-Trimethylbenzene	96	480	< 0.14	NA	NA	< 0.36	< 0.36	< 0.060	< 1.2	< 0.30	< 0.24	< 0.30	< 0.30	< 0.3	< 0.3	< 0.3
1,2-Dibromoethane	0.005	0.05	< 0.36	NA	NA	< 0.39	< 0.39	< 0.13	< 2.6	< 0.65	< 0.52	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
1,2-Dichlorobenzene	60	600	< 0.27	NA	NA	< 0.33	< 0.33	< 0.076	< 1.5	< 0.38	< 0.30	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
1,2-Dichloropropane	0.5	5	< 0.20	NA	NA	< 0.43	< 0.43	< 0.10	< 2.0	< 0.50	< 0.40	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	NE	NE	< 0.24	NA	NA	< 0.46	< 0.46	< 0.045	< 0.90	< 0.23	< 0.18	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
1,2,4-Trichlorobenzene	14	70	< 0.31	NA	NA	< 0.34	< 0.34	< 0.077	< 1.5	< 0.39	< 0.31	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
1,3,5-Trimethylbenzene	96	480	< 0.18	NA	NA	< 0.25	< 0.25	< 0.075	< 1.5	< 0.38	< 0.30	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
2-Butanone	800	4000	NA	NA	NA	NA	NA	< 3.0	< 60	< 15	< 12	< 15	< 15	< 15	< 15	< 15
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	< 0.95	< 19	< 4.8	< 3.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	< 0.77	< 15	< 3.9	< 3.1	< 3.9	< 3.9	< 3.9	< 3.9	< 3.9
Acetone	1800	9000	NA	NA	NA	NA	NA	< 3.4	< 68	< 17	< 14	< 17	38 BJ	< 17	< 17	< 17
Benzene	0.5	5	< 0.074	NA	NA	< 0.15	< 0.15	< 0.089	< 1.8	< 0.45	< 0.36	< 0.45	0.80 J	< 0.45	< 0.45	< 0.45
Bromodichloromethane	0.06	0.6	< 0.17	NA	NA	< 0.37	< 0.37	< 0.077	< 1.5	< 0.39	< 0.31	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Bromoform	0.44	4.4	< 0.28	NA	NA	< 0.48	< 0.48	< 0.088	< 1.8	< 0.44	< 0.35	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Bromomethane	1	10	< 0.31	NA	NA	< 0.80	< 0.80	< 0.59	< 12	< 3.0	< 2.4	< 3.0	< 3.0	< 3	< 3	< 3
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	< 0.053	9.2 J	< 0.27	< 0.21	< 0.27	2.3 J	< 0.27	< 0.27	< 0.27
Carbon tetrachloride	0.5	5	< 0.26	NA	NA	< 0.38	< 0.38	< 0.038	0.76 J	< 0.19	< 0.15	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Chloroform	0.6	6	< 0.20	NA	NA	< 0.37	< 0.37	0.36 J	2.4 BJ	< 0.31	< 0.25	0.40 BJ	1.1 J	< 0.31	< 0.31	< 0.31
Chloromethane	3	30	< 0.18	NA	NA	< 0.32	< 0.32	< 0.16	< 3.2	< 0.80	3.4 J	< 0.80	2.8 J+	< 0.8	4.9 J	4.9 J
cis-1,2-Dichloroethene	7	70	4.4	NA	NA	4.0	3.9	3.9	3.6 J	3.8	5.6	14	26	47	47	47
Dichlorodifluoromethane	200	1000	< 0.20	NA	NA	< 0.54	< 0.54	< 0.11	< 2.2	< 0.55	< 0.44	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55
Ethylbenzene	140	700	< 0.13	NA	NA	< 0.18	< 0.18	< 0.054	< 1.1	< 0.27	< 0.22	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
Isopropylbenzene	NE	NE	< 0.14	NA	NA	< 0.39	< 0.39	< 0.081	< 1.6	< 0.41	< 0.32	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	< 0.057	< 1.1	< 0.29	< 0.23	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
Methyl tert-butyl ether	12	60	< 0.24	NA	NA	< 0.39	< 0.39	< 0.14	< 2.8	< 0.70	< 0.56	< 0.70	< 0.70	< 0.7	< 0.7	< 0.7
Methylene chloride	0.5	5	< 0.68	NA	NA	< 1.6	< 1.6	< 0.14	< 2.8	< 0.70	< 0.56	1.3 BJ	< 0.70	< 0.7	< 0.7	< 0.7
Naphthalene	10	100	< 0.16	NA	NA	< 0.34	< 0.34	< 0.088	< 1.8	< 0.44	< 0.35	< 0.44	1.6 BJ	< 0.44	< 0.44	< 0.44
n-Butylbenzene	NE	NE	< 0.13	NA	NA	< 0.39	< 0.39	< 0.14	< 2.8	< 0.70	< 0.56	< 0.70	< 0.70	< 0.7	< 0.7	< 0.7
n-Hexane	120	600	NA	NA	NA	NA	NA	< 0.21	< 4.2	< 1.1	< 0.84	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
n-Propylbenzene	NE	NE	< 0.13	NA	NA	< 0.41	< 0.41	< 0.10	< 2.0	< 0.50	< 0.40	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5
o-Xylene	400	2000	NA	NA	NA	NA	NA	< 0.058	< 1.2	< 0.29	< 0.23	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
p-Isopropyltoluene	NE	NE	< 0.17	NA	NA	< 0.36	< 0.36	< 0.085	< 1.7	< 0.43	< 0.34	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
sec-Butylbenzene	NE	NE	< 0.15	NA	NA	< 0.40	< 0.40	< 0.13	< 2.6	< 0.65	< 0.52	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
Styrene	10	100	< 0.10	NA	NA	< 0.39	< 0.39	< 0.065	< 1.3	< 0.33	< 0.26	< 0.33	< 0.33	< 0.33	0.35 BJ	0.35 BJ
tert-Butylbenzene	NE	NE	< 0.14	NA	NA	< 0.40	< 0.40	< 0.12	< 2.4	< 0.60	< 0.48	< 0.60	< 0.60	< 0.6	< 0.6	< 0.6
Tetrachloroethene	0.5	5	190	NA	NA	140	160	220	140	130	92	120	120	120 B	120 B	120 B
Toluene	160	800	< 0.11	NA	NA	< 0.15	< 0.15	< 0.053	< 1.1	< 0.27	0.48 J	0.50 BJ	0.80 J	< 0.27	< 0.27	< 0.27
trans-1,2-Dichloroethene	20	100	< 0.25	NA	NA	< 0.35	< 0.35	0.23 J	< 2.2	< 0.55	< 0.44	0.70 J	1.3 J	2.3 J	2.5 J	2.5 J
Trichloroethene	0.5	5	5.7	NA	NA	5.4	5.7	6.1	5.6 J	5.7	4.4	5.2 B	6.3	9.4	9.4	9.4
Trichlorofluoromethane	698	3490	< 1.0	NA	NA	< 1.0	< 1.0	< 0.50	< 10	< 2.5	< 2.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Vinyl chloride	0.02	0.2	< 0.10	NA	NA	0.66	0.74	< 0.16	< 3.2	0.85 J	2.2	4.3	6.5 J+	10	11	11
Xylenes, Total	400	2000	< 0.068	NA	NA	< 0.22	< 0.22	< 0.058	< 1.2	< 0.29	< 0.23	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.035	< 0.035
Aroclor-1232	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.037	< 0.037
Aroclor-1242	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.038	< 0.038
Aroclor-1248	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.31
Total Detected PCBs	0.003	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.31
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03	NA	< 0.066	< 0.062	< 0.069	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	NA	< 0.20	< 0.19	< 0.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	NA	< 0.20	< 0.19	< 0.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	NA	< 0.20	< 0.19	< 0.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Solids</b>																
Total Dissolved Solids	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	892	890
Total Suspended Solids (TSS)	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.95	< 0.95

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Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID SCREEN INTERVAL (feet bgs) SAMPLE DATE	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-23S													
			24 - 35 ft													
			01/15/2013	04/19/2013	07/16/2013	09/05/2013	09/05/2013	10/10/2013	04/18/2014	10/20/2014	04/09/2015	10/20/2015	10/14/2016	10/14/2016	10/06/2017	10/06/2017
<b>VOCs</b>																
1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.44	< 0.22	< 0.22	< 0.55
1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.2	< 0.2	NA	< 0.2	< 0.20	< 0.20	< 0.20	< 0.38	< 0.40	< 0.20	< 0.2	< 0.5
1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.28	< 0.28	NA	1.8	< 0.28	< 0.28	< 0.28	< 0.35	< 0.40	< 0.20	< 0.2	< 0.5
1,1-Dichloroethene	0.7	7	< 0.31	< 0.31	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.56	< 0.28	< 0.28	< 0.7
1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.24	< 0.12	< 0.12	< 0.3
1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.52	< 0.26	< 0.26	< 0.65
1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.27	< 0.27	NA	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.30	< 0.15	< 0.15	< 0.38
1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.2	< 0.2	NA	< 0.2	< 0.20	< 0.20	< 0.20	< 0.43	< 0.40	< 0.20	< 0.2	< 0.5
1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.18	< 0.090	< 0.09	< 0.23
1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.31	< 0.15	< 0.15	< 0.39
1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.18	< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.30	< 0.15	< 0.15	< 0.38
2-Butanone	800	4000	NA	< 12	< 6.0	< 6	< 15									
2-Hexanone	NE	NE	NA	< 3.8	< 1.9	< 1.9	< 4.8									
4-Methyl-2-pentanone	50	500	NA	< 3.1	< 1.5	< 1.5	< 3.9									
Acetone	1800	9000	NA	< 14	< 6.8	14 J	< 17									
Benzene	0.5	5	0.73	< 0.074	< 0.074	< 0.074	NA	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.36	< 0.18	< 0.18	< 0.45
Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.17	< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.31	< 0.15	< 0.15	< 0.39
Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.35	< 0.18	< 0.18	< 0.44
Bromomethane	1	10	< 0.31	< 0.31	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31 *	< 0.31	< 0.80	< 2.4	< 1.2	< 1.2	< 3
Carbon disulfide	200	1000	NA	< 0.21	< 0.11	< 0.11	< 0.27									
Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.26	< 0.26	NA	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.15	< 0.076	< 0.076	< 0.19
Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.2	NA	< 0.2	< 0.20	< 0.20	< 0.20	< 0.37	< 0.25	< 0.12	< 0.12	< 0.31
Chloromethane	3	30	1.2	< 0.18	< 0.18	< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	2.3 BJ	0.86 J	0.92 J	2.7 J
cis-1,2-Dichloroethene	7	70	< 0.12	3.7	29	27	NA	16	16	19	20	9.6	12	15	33	33
Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.2	< 0.2	NA	< 0.2	< 0.20	< 0.20	< 0.20	< 0.54	< 0.44	< 0.22	< 0.22	< 0.55
Ethylbenzene	140	700	0.43 J	< 0.13	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.22	< 0.11	< 0.11	< 0.27
Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.32	< 0.16	< 0.16	< 0.41
m,p-Xylene	400	2000	NA	< 0.23	< 0.11	< 0.11	< 0.29									
Methyl tert-butyl ether	12	60	< 0.24	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.56	< 0.28	< 0.28	< 0.7
Methylene chloride	0.5	5	< 0.68	< 0.68	< 0.68	< 0.68	NA	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	< 0.56	< 0.28	< 0.28	< 0.7
Naphthalene	10	100	< 0.16	< 0.16	< 0.16	< 0.16	NA	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.35	< 0.18	< 0.18	0.45 BJ
n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.56	< 0.28	< 0.28	< 0.7
n-Hexane	120	600	NA	< 0.84	< 0.42	< 0.42	< 1.1									
n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.40	< 0.20	< 0.2	< 0.5
o-Xylene	400	2000	NA	< 0.23	< 0.12	< 0.12	< 0.29									
p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.17	< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.34	< 0.17	< 0.17	< 0.43
sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.15	< 0.15	NA	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.52	< 0.26	< 0.26	< 0.65
Styrene	10	100	< 0.1	< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.10	< 0.10	< 0.10	< 0.39	< 0.26	< 0.13	< 0.13	0.35 BJ
tert-Butylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.48	< 0.24	< 0.24	< 0.6
Tetrachloroethene	0.5	5	290	580	420	240	NA	130	210	190	190	360	66	88	120 B	120 B
Toluene	160	800	< 0.11	< 0.11	< 0.11	< 0.11	NA	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	< 0.21	< 0.11	< 0.11	< 0.27
trans-1,2-Dichloroethene	20	100	< 0.25	< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	< 0.44	< 0.22	< 0.22	< 0.55
Trichloroethene	0.5	5	0.64	1.4	20	17	NA	15	11	11	10	5.9	7.2	9.1	7.8	7.6
Trichlorofluoromethane	698	3490	< 0.19	< 0.19	< 0.19	< 0.19	NA	< 0.19	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1	< 2.5
Vinyl chloride	0.02	0.2	< 0.1	< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.10	< 0.10	< 0.10	< 0.20	< 0.64	< 0.32	< 0.32	< 0.8
Xylenes, Total	400	2000	0.95 J	< 0.068	< 0.068	< 0.068	NA	< 0.068	< 0.068	< 0.068	< 0.068	< 0.22	< 0.23	< 0.12	< 0.23	< 0.58
<b>Total PCBs</b>																
Aroclor-1016	0.003	0.03	< 0.19	NA	< 0.063	< 0.028	NA	< 0.066	NA	NA	NA	NA	NA	NA	< 0.035	< 0.035
Aroclor-1232	0.003	0.03	< 0.11	NA	< 0.19	< 0.083	NA	< 0.2	NA	NA	NA	NA	NA	NA	< 0.037	< 0.037
Aroclor-1242	0.003	0.03	< 0.15	NA	< 0.19	< 0.083	NA	< 0.2	NA	NA	NA	NA	NA	NA	< 0.038	< 0.038
Aroclor-1248	0.003	0.03	< 0.13	NA	< 0.19	< 0.083	NA	< 0.2	NA	NA	NA	NA	NA	NA	0.034 J	< 0.02
Total Detected PCBs	0.003	0.03	ND	NA	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	0.034 J	ND
<b>Dissolved PCBs</b>																
Aroclor-1016	0.003	0.03	NA	NA	< 0.063	NA	< 0.026	< 0.064	NA	< 0.063	< 0.063	< 0.063	NA	NA	NA	NA
Aroclor-1232	0.003	0.03	NA	NA	< 0.19	NA	< 0.078	< 0.19	NA	< 0.19	< 0.19	< 0.19	NA	NA	NA	NA
Aroclor-1242	0.003	0.03	NA	NA	< 0.19	NA	< 0.078	< 0.19	NA	< 0.19	< 0.19	< 0.19	NA	NA	NA	NA
Aroclor-1248	0.003	0.03	NA	NA	< 0.19	NA	< 0.078	< 0.19	NA	< 0.19	< 0.19	< 0.19	NA	NA	NA	NA
Total Detected PCBs	0.003	0.03	NA	NA	ND	NA	ND	ND	NA	ND	ND	ND	NA	NA	NA	NA
<b>Solids</b>																
Total Dissolved Solids	NE	NE	NA	478	NA	656	644									
Total Suspended Solids (TSS)	NE	NE	NA	5.8	NA	16.8	18									
Notes on Page 55.																

Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-23D 45 - 50 ft 01/14/2013	MW-23D 45 - 50 ft 03/08/2013	MW-23D 45 - 50 ft 04/19/2013	MW-23D 45 - 50 ft 04/20/2013	MW-23D 45 - 50 ft 07/17/2013	MW-23D 45 - 50 ft 10/10/2013	MW-23D 45 - 50 ft 04/18/2014	MW-23D 45 - 50 ft 10/20/2014	MW-23D 45 - 50 ft 04/09/2015	MW-23D 45 - 50 ft 10/20/2015	MW-23D 45 - 50 ft 01/22/2016	MW-23D 45 - 50 ft 04/21/2016	MW-23D 45 - 50 ft 07/20/2016	MW-23D 45 - 50 ft 10/14/2016	MW-23D 45 - 50 ft 1/20/2017	MW-23D 45 - 50 ft 04/11/2017	MW-23D <sup>3</sup> 45 - 50 ft 04/11/2017	MW-23D 45 - 50 ft 10/06/2017	MW-23D <sup>3</sup> 45 - 50 ft 10/06/2017
<b>VOCs</b>																						
1,1,1,2-Tetrachloroethane	7	70	< 0.25	NA	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.46	< 0.11	< 2.2	< 0.55	< 0.11	< 1.1	< 1.1	< 0.11	< 0.55	< 0.55
1,1,1-Trichloroethane	40	200	< 0.2	NA	< 0.2	NA	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.38	< 0.10	< 2.0	< 0.50	< 0.10	< 1.0	< 1.0	< 0.10	< 0.5	< 0.5
1,1,2-Trichloroethane	0.5	5	< 0.28	NA	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.35	< 0.10	< 2.0	< 0.50	< 0.10	< 1.0	< 1.0	< 0.10	< 0.5	< 0.5
1,1-Dichloroethane	0.7	7	< 0.31	NA	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.39	< 0.14	< 2.8	< 0.70	< 0.14	< 1.4	< 1.4	< 0.14	< 0.7	< 0.7
1,2,4-Trimethylbenzene	96	480	< 0.14	NA	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.36	< 0.060	< 1.2	< 0.30	< 0.060	< 0.60	< 0.60	< 0.060	< 0.3	< 0.3
1,2-Dibromoethane	0.005	0.05	< 0.36	NA	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.39	< 0.13	< 2.6	< 0.65	< 0.13	< 1.3	< 1.3	< 0.13	< 0.65	< 0.65
1,2-Dichlorobenzene	60	600	< 0.27	NA	< 0.27	NA	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.33	< 0.076	< 1.5	< 0.38	< 0.076	< 0.76	< 0.76	< 0.076	< 0.38	< 0.38
1,2-Dichloropropane	0.5	5	< 0.2	NA	< 0.2	NA	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.43	< 0.10	< 2.0	< 0.50	< 0.10	< 1.0	< 1.0	< 0.10	< 0.5	< 0.5
1,2,3-Trichlorobenzene	NE	NE	< 0.24	NA	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.045	< 0.90	< 0.23	< 0.045	< 0.45	< 0.45	< 0.045	< 0.23	< 0.23
1,2,4-Trichlorobenzene	14	70	< 0.31	NA	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.34	< 0.077	< 1.5	< 0.39	< 0.077	< 0.77	< 0.77	< 0.077	< 0.39	< 0.39
1,3,5-Trimethylbenzene	96	480	< 0.18	NA	< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.25	< 0.075	< 1.5	< 0.38	< 0.075	< 0.75	< 0.75	< 0.075	< 0.38	< 0.38
2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.0	< 6.0	< 15	< 3.0	< 3.0	< 3.0	< 3.0	< 15	< 15
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.95	< 19	< 4.8	< 0.95	< 9.5	< 9.5	< 0.95	< 4.8	< 4.8
4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.77	< 15	< 3.9	< 0.77	< 7.7	< 7.7	< 0.77	< 3.9	< 3.9
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4	< 68	< 17	< 3.4	< 34	< 34	9.6 BJ	< 17	< 17
Benzene	0.5	5	0.32 J	NA	< 0.074	NA	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.15	< 0.089	< 1.8	< 0.45	< 0.089	< 0.89	< 0.89	< 0.089	< 0.45	< 0.45
Bromodichloromethane	0.06	0.6	< 0.17	NA	< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.37	< 0.077	< 1.5	< 0.39	< 0.077	1.1 BJ	< 0.77	< 0.77	< 0.39	< 0.39
Bromoform	0.44	4.4	< 0.28	NA	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.088	< 1.8	< 0.44	< 0.088	< 0.88	< 0.88	< 0.088	< 0.44	< 0.44
Bromomethane	1	10	< 0.31	NA	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31 *	< 0.31	< 0.31	< 0.80	< 0.59	< 12	< 3.0	< 0.59	< 5.9	< 5.9	< 0.59	< 3	< 3
Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.053	< 1.1	< 0.27	< 0.053	1.4 J	< 0.53	< 0.053	< 0.27	< 0.27
Carbon tetrachloride	0.5	5	< 0.26	NA	< 0.26	NA	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.38	< 0.038	< 0.76	< 0.19	< 0.038	< 0.38	< 0.38	< 0.038	< 0.19	< 0.19
Chloroform	0.6	6	< 0.2	NA	< 0.2	NA	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.37	< 0.062	2.2 BJ	< 0.31	< 0.062	1.1 BJ	1.1 J	< 0.062	< 0.31	< 0.31
Chloromethane	3	30	< 0.18	NA	< 0.18	NA	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.32	< 0.16	< 3.2	< 0.80	< 0.16	3.2 BJ	< 1.6	< 0.16	1.5 J	4.3 J
cis-1,2-Dichloroethene	7	70	< 0.12	NA	< 0.12	NA	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.41	< 0.11	< 2.2	< 0.55	< 0.11	< 1.1	< 1.1	< 0.11	< 0.55	< 0.55
Dichlorodifluoromethane	200	1000	< 0.2	NA	< 0.2	NA	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.54	0.27 J	< 2.2	< 0.55	< 0.11	< 1.1	< 1.1	< 0.11	< 0.55	< 0.55
Ethylbenzene	140	700	0.20 J	NA	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.18	< 0.054	< 1.1	< 0.27	< 0.054	< 0.54	< 0.54	< 0.054	< 0.27	< 0.27
Isopropylbenzene	NE	NE	< 0.14	NA	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.39	< 0.081	< 1.6	< 0.41	< 0.081	< 0.81	< 0.81	< 0.081	< 0.41	< 0.41
m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.057	< 1.1	< 0.29	< 0.057	< 0.57	< 0.57	< 0.057	< 0.29	< 0.29
Methyl tert-butyl ether	12	60	< 0.24	NA	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.39	< 0.14	< 2.8	< 0.70	< 0.14	< 1.4	< 1.4	< 0.14	< 0.7	< 0.7
Methylene chloride	0.5	5	< 0.68	NA	< 0.68	NA	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 1.6	0.57 J	< 2.8	< 0.70	< 0.14	1.8 BJ	< 1.4	< 0.14	< 0.7	< 0.7
Naphthalene	10	100	< 0.16	NA	< 0.16	NA	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.34	< 0.088	< 1.8	< 0.44	< 0.088	< 0.88	< 0.88	< 0.088	< 0.44	< 0.44
n-Butylbenzene	NE	NE	< 0.13	NA	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.39	< 0.14	< 2.8	< 0.70	< 0.14	< 1.4	< 1.4	< 0.14	< 0.7	< 0.7
n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 4.2	< 1.1	< 0.21	< 2.1	< 2.1	< 0.21	< 1.1	< 1.1
n-Propylbenzene	NE	NE	< 0.13	NA	< 0.13	NA	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.41	< 0.10	< 2.0	< 0.50	< 0.10	< 1.0	< 1.0	< 0.10	< 0.5	< 0.5
o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.058	< 1.2	< 0.29	< 0.058	< 0.58	< 0.58	< 0.058	< 0.29	< 0.29
p-Isopropyltoluene	NE	NE	< 0.17	NA	< 0.17	NA	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.36	< 0.085	< 1.7	< 0.43	< 0.085	< 0.85	< 0.85	< 0.085	< 0.43	< 0.43
sec-Butylbenzene	NE	NE	< 0.15	NA	< 0.15	NA	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.40	< 0.13	< 2.6	< 0.65	< 0.13	< 1.3	< 1.3	< 0.13	< 0.65	< 0.65
Styrene	10	100	< 0.1	NA	< 0.1	NA	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.39	< 0.065	< 1.3	< 0.33	< 0.065	< 0.65	< 0.65	< 0.065	0.45 J	< 0.33
tert-Butylbenzene	NE	NE	< 0.14	NA	< 0.14	NA	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.40	< 0.12	< 2.4	< 0.60	< 0.12	< 1.2	< 1.2	< 0.12	< 0.6	< 0.6
Tetrachloroethene	0.5	5	100	NA	86	NA	170	160	190	190	220	84	170	130	160	160	140	140	140	130 B	130 B	
Toluene	160	800	< 0.11	NA	< 0.11	NA	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.15	< 0.053	< 1.1	< 0.27	< 0.053	1.6 BJ	< 0.53	< 0.053	< 0.27	< 0.27
trans-1,2-Dichloroethene	20	100	< 0.25	NA	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.35	< 0.11	< 2.2	< 0.55	< 0.11	< 1.1	< 1.1	< 0.11	< 0.55	< 0.55
Trichloroethene	0.5	5	< 0.19	NA	0.53	NA	0.21 J	< 0.19	< 0.19	< 0.19	0.27 J	< 0.19	< 0.16	0.22 J	< 1.2	< 0.31	0.19 J	< 0.62	< 0.62	0.16 J	< 0.31	< 0.31
Trichlorofluoromethane	698	3490	< 0.19	NA	< 0.19																	



Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

WELL ID	SCREEN INTERVAL (feet bgs)	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	MW-25D2 160 - 170 ft 05/06/2013	MW-25D2 160 - 170 ft 07/19/2013	MW-25D2 160 - 170 ft 10/04/2013	MW-25D2 160 - 170 ft 04/21/2014	MW-25D2 160 - 170 ft 07/10/2014	MW-25D2 160 - 170 ft 08/26/2014	MW-25D2 160 - 170 ft 10/22/2014	MW-25D2 160 - 170 ft 01/28/2015	MW-25D2 160 - 170 ft 04/10/2015	MW-25D2 160 - 170 ft 07/21/2015	MW-25D2 160 - 170 ft 10/19/2015	MW-25D2 160 - 170 ft 01/21/2016	MW-25D2 160 - 170 ft 04/20/2016	MW-25D2 160 - 170 ft 07/19/2016	MW-25D2 160 - 170 ft 10/11/2016	MW-25D2 160 - 170 ft 1/19/2017	MW-25D2 160 - 170 ft 04/12/2017	MW-25D2 160 - 170 ft 10/03/2017	MW-25D2 160 - 170 ft 04/03/2018	MW-25D2 <sup>3</sup> 160 - 170 ft 04/03/2018	MW-25D2 160 - 170 ft 10/10/2018	
<b>VOCs</b>																									
	1,1,1,2-Tetrachloroethane	7	70	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
	1,1,1-Trichloroethane	40	200	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	1,1,2-Trichloroethane	0.5	5	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
	1,1-Dichloroethane	0.7	7	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
	1,2,4-Trimethylbenzene	96	480	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
	1,2-Dibromoethane	0.005	0.05	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
	1,2-Dichlorobenzene	60	600	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
	1,2-Dichloropropane	0.5	5	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	1,2,3-Trichlorobenzene	NE	NE	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
	1,2,4-Trichlorobenzene	14	70	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
	1,3,5-Trimethylbenzene	96	480	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
	2-Butanone	800	4000	NA	NA	NA	NA	NA	NA	NA	NA														
	2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA														
	4-Methyl-2-pentanone	50	500	NA	NA	NA	NA	NA	NA	NA	NA														
	Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA														
	Benzene	0.5	5	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074
	Bromodichloromethane	0.06	0.6	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
	Bromoform	0.44	4.4	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
	Bromomethane	1	10	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
	Carbon disulfide	200	1000	NA	NA	NA	NA	NA	NA	NA	NA														
	Carbon tetrachloride	0.5	5	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
	Chloroform	0.6	6	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	Chloromethane	3	30	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	0.17 J	0.68 BJ	< 0.16	0.64 J	0.37 J+	< 0.16	< 0.16	< 0.57 U
	cis-1,2-Dichloroethane	7	70	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
	Dichlorodifluoromethane	200	1000	< 0.2	< 0.2	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	Ethylbenzene	140	700	< 0.13	< 0.13	< 0.13	< 0.13	0.47 J	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	Isopropylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
	m,p-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA														
	Methyl tert-butyl ether	12	60	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
	Methylene chloride	0.5	5	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68
	Naphthalene	10	100	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
	n-Butylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	n-Hexane	120	600	NA	NA	NA	NA	NA	NA	NA	NA														
	n-Propylbenzene	NE	NE	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	o-Xylene	400	2000	NA	NA	NA	NA	NA	NA	NA	NA														
	p-Isopropyltoluene	NE	NE	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
	sec-Butylbenzene	NE	NE	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
	Styrene	10	100	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
	tert-Butylbenzene	NE	NE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.1																	





Table 17  
Groundwater Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

**Footnotes:**

- 1 - Indicates that the sample was quenched prior to analysis.
- 2 - Indicates that the sample was not quenched prior to analysis.
- 3 - Indicates the result of a field duplicate.

Updated By: P. Popp 12/3/2018  
Checked By:

**General Notes:**

All concentrations noted in this table are reported in micrograms per liter (µg/L) unless otherwise noted.

Analytes shown in the table are from VOC and PCB analyte lists. Only analytes that were detected in at least one sample are shown in the table. A complete list of constituents analyzed are included in the laboratory analytical reports.

**100** = NR 140 Wis. Adm. Code Preventive Action Limit Exceedance

**100** = NR 140 Wis. Adm. Code Enforcement Standard Exceedance

< = Constituent not detected above noted laboratory method detection limit.

\* = Data is suspect and not used in evaluation. (Note from historical data through 2015, provided by Arcadis)

B = Compound was found in the blank and sample.

bgs = Below Ground Surface.

cn = Laboratory Contaminant.

E = Estimated concentration, exceeds instrumental calibration range.

ID = Identification.

J = Estimated concentration above the adjusted method detection limit and below the reporting limit or because of non-compliant laboratory quality check.

J- = Results may be biased low because of non-compliant laboratory quality check.

J+ = Results may be biased high because of non-compliant laboratory quality check.

U = Results determined to be non-detect at the concentration limit because of blank contamination.

NA = Not Analyzed.

ND = Not Detected.

NE = Not Established.

PCBs = Polychlorinated biphenyls.

VOCs = Volatile Organic Compounds.

Table 18  
Groundwater Monitoring Plan - 2019  
Madison-Kipp Corporation  
201 Waubesa Street  
Madison, Wisconsin

WELL/ POINT ID	BEDROCK UNIT	SCREENED INTERVAL (ft bgs)	APRIL & OCTOBER GAUGING	APRIL VOC SAMPLING	OCTOBER VOC SAMPLING	APRIL/OCTOBER PCB SAMPLING	PUMP TYPE
GWE-1*	Lone Rock/ Wonewoc	55-175	x	x	x		NA
MW-1	Unconsolidated	14-24	x		x		Peristaltic
MW-2S	Unconsolidated	19-29	x				NA
MW-2D	Upper Lone Rock	39-44	x	x	x		Peristaltic
MW-3S	Unconsolidated	19-29	x		x		Peristaltic
MW-3D	Upper Lone Rock	48-53	x	x	x	x	Peristaltic
MW-3D2	Lower Lone Rock	76-81	x	x	x		Peristaltic
MW-3D3	Lower Wonewoc	214-224	x		x		GeoSub
MW-4S	Unconsolidated/ Upper Lone Rock	35-50	x			x	NA
MW-4D	Lower Lone Rock	65-70	x			x	NA
MW-4D2	Lower Lone Rock	91-96	x	x	x		Bladder
MW-5S	Upper Lone Rock	34-44	x		x	x	Peristaltic
MW-5D	Lower Lone Rock	75-80	x	x	x		Peristaltic
MW-5D2	Lower Wonewoc	166-171	x	x	x		Bladder
MW-5D3	Lower Wonewoc	225-235	x	x	x		GeoSub
MW-6S	Unconsolidated/ Upper Lone Rock	32-42	x		x	x	Bladder
MW-6D	Lower Lone Rock	66-71	x	x	x		Bladder
MW-7	Unconsolidated	25-35	x				NA
MW-8	Unconsolidated	24-34	x				NA
MW-9D	Upper Lone Rock	44-49	x		x		Peristaltic
MW-9D2	Lower Lone Rock	64-69	x	x	x		Peristaltic
MW-10S	Unconsolidated	11-21	x				NA
MW-11S	Unconsolidated	24-34	x			x	NA
MW-12S	Unconsolidated	3-13	x				NA
MW-17	Lower Wonewoc	160-170	x	x	x		Bladder
MW-18S	Unconsolidated	20-30	x				NA
MW-21D2	Upper/Lower Wonewoc	110-170	x				NA
MW-22S	Unconsolidated	25-35				Well Abandoned on January 16, 2018	
MW-22D	Upper Lone Rock	45-50				Well Abandoned on January 16, 2018	
MW-23S	Unconsolidated	25-35				Well Abandoned on January 16, 2018	
MW-23D	Upper Lone Rock	45-50				Well Abandoned on January 16, 2018	
MW-24	Upper Lone Rock	30-40	x			x	NA
MW-25D	Upper Wonewoc	120-130	x		x		Bladder
MW-25D2	Upper Wonewoc	160-170	x	x	x		Bladder
MW-26S	Unconsolidated	6.8-16.8	x				NA
MW-27D	Upper Wonewoc	130-140	x	x	x		Bladder
MW-27D2	Lower Wonewoc	170-180	x		x		Bladder
MW-28	Unconsolidated	28-38	x		x	x	Peristaltic
MW-29S	Unconsolidated	24-34	x			x	Peristaltic
MW-29D	Upper Lone Rock	45-50	x			x	Bladder
MP-13 Port 1	Lower Wonewoc	163-167	x		x		Westbay
MP-13 Port 2	Upper Wonewoc	135-139	x		x		Westbay
MP-13 Port 3	Upper Wonewoc	121-125	x		x		Westbay
MP-13 Port 4	Upper Wonewoc	102-106	x		x		Westbay
MP-13 Port 5	Lower Lone Rock	81-85	x		x		Westbay
MP-13 Port 6	Lower Lone Rock	67-71	x		x		Westbay
MP-13 Port 7	Upper Lone Rock	44-48	x		x		Westbay
MP-14 Port 1	Lower Wonewoc	170-178	x		x		Westbay
MP-14 Port 2	Upper Wonewoc	135-140	x	x	x		Westbay
MP-14 Port 3	Upper Wonewoc	100-105	x		x		Westbay
MP-14 Port 4	Lower Lone Rock	70-75	x				NA

Table 18  
 Groundwater Monitoring Plan - 2019  
 Madison-Kipp Corporation  
 201 Waubesa Street  
 Madison, Wisconsin

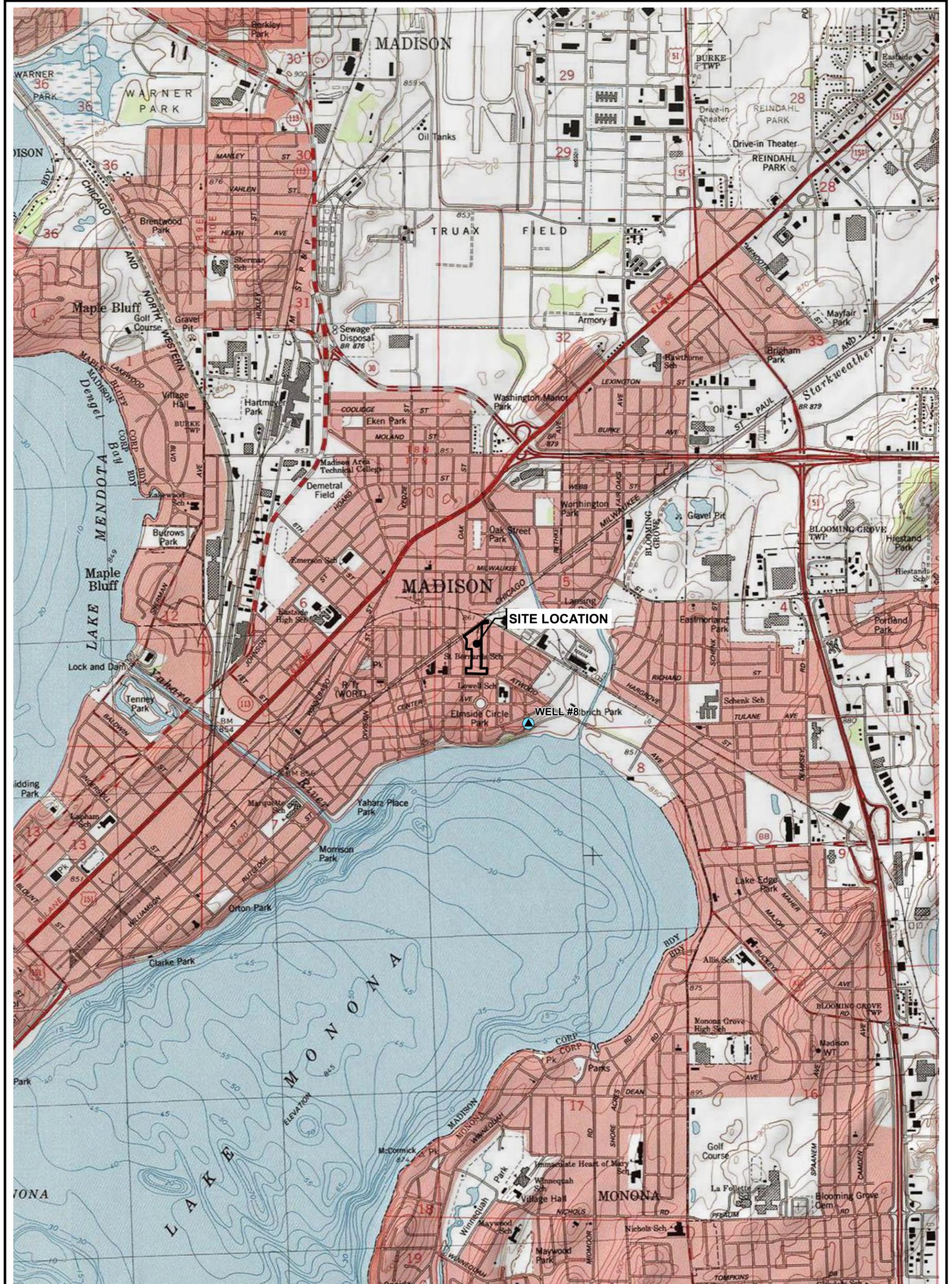
WELL/ POINT ID	BEDROCK UNIT	SCREENED INTERVAL (ft bgs)	APRIL & OCTOBER GAUGING	APRIL VOC SAMPLING	OCTOBER VOC SAMPLING	APRIL/OCTOBER PCB SAMPLING	PUMP TYPE
MP-15 Port 1	Lower Wonewoc	177-187	x		x		Westbay
MP-15 Port 2	Lower Wonewoc	142-146	x		x		Westbay
MP-15 Port 3	Upper Wonewoc	120-125	x		x		Westbay
MP-15 Port 4	Upper Wonewoc	100-105	x		x		Westbay
MP-15 Port 5	Upper Wonewoc	88-92	x		x		Westbay
MP-16 Port 1	Lower Wonewoc	175-179	x		x		Westbay
MP-16 Port 2	Upper Wonewoc	140-144	x	x	x		Westbay
MP-16 Port 3	Upper Wonewoc	106-116	x		x		Westbay
MP-16 Port 4	Lower Lone Rock	80-84	x				NA
<b>Total Sample Points:</b>			<b>56</b>	<b>15</b>	<b>40</b>	<b>10</b>	

Notes:

\* = The GWE-1 influent sample results from the month of the sampling event will be used.

Update By: A. Stehn 2/15/2019

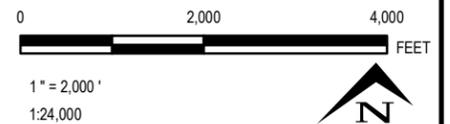
Checked By: W. Braga 2/15/2019



**LEGEND**

-  SITE PROPERTY BOUNDARY
-  MUNICIPAL SUPPLY WELL

BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES, "USA TOPO MAPS" WEB BASEMAP SERVICE LAYER.

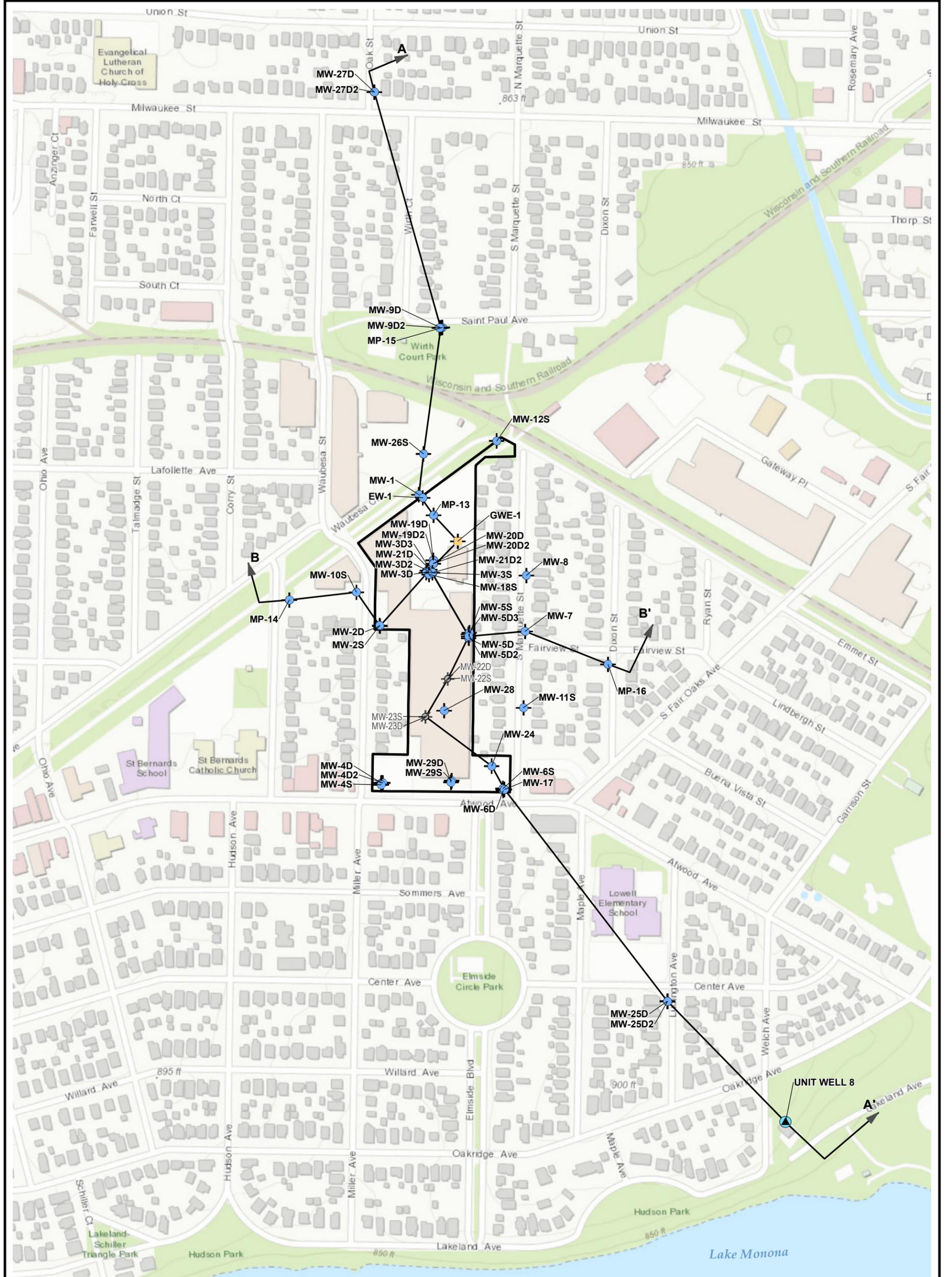



708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT:	<b>MADISON-KIPP CORPORATION 201 WAUBESA STREET MADISON, WISCONSIN</b>
TITLE:	<b>SITE LOCATION MAP</b>

DRAWN BY:	A. ADAIR
CHECKED BY:	S. SELLWOOD
APPROVED BY:	K. VATER
DATE:	MARCH 2019
PROJ. NO.:	323372
FILE:	266431-2018S2-014.mxd

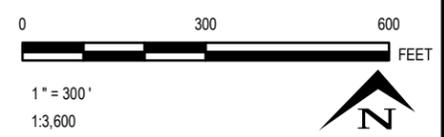
**FIGURE 1**



BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP" WEB BASEMAP SERVICE LAYER.

**LEGEND**

-  SITE PROPERTY BOUNDARY
-  CROSS SECTION
-  GROUNDWATER EXTRACTION WELL
-  MONITORING WELL
-  MUNICIPAL SUPPLY WELL

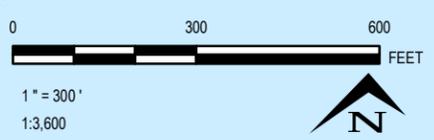
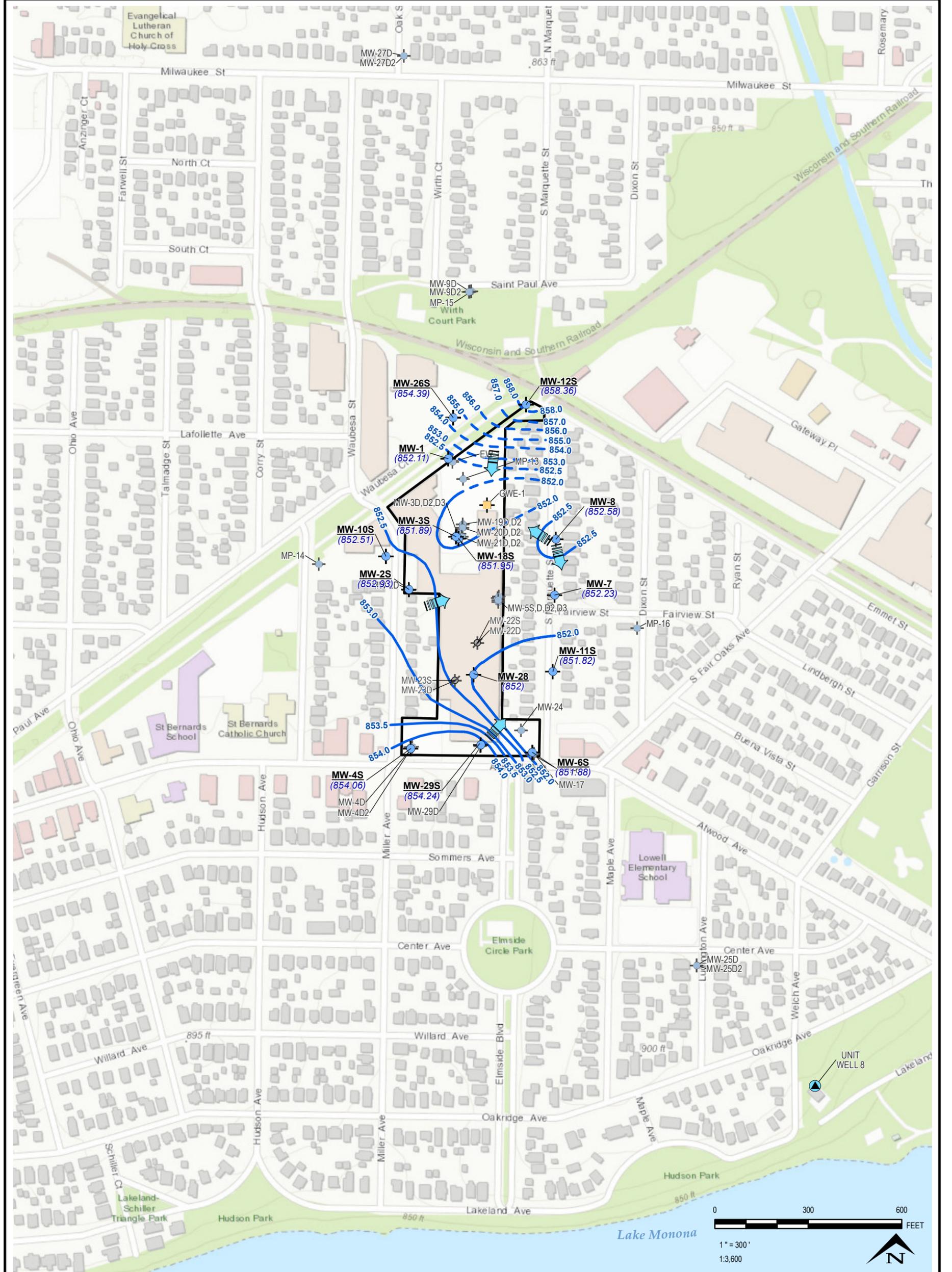



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 Phone: 608.826.3600

PROJECT:	<b>MADISON-KIPP CORPORATION</b> 201 WAUBESA STREET MADISON, WISCONSIN
TITLE:	<b>WELL LOCATIONS MAP</b>

DRAWN BY:	A.ADAIR
CHECKED BY:	S.SELLWOOD
APPROVED BY:	K.VATER
DATE:	MARCH 2019
PROJ. NO.:	323372
FILE:	266431-2018S2-002.mxd

**FIGURE 2**



**LEGEND**

- SITE PROPERTY BOUNDARY
- GROUNDWATER ELEVATION CONTOUR (0.5' INTERVAL, DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

- ABANDONED MONITORING WELL
- MONITORING WELL
- GROUNDWATER EXTRACTION WELL
- MUNICIPAL SUPPLY WELL

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE WATER TABLE LIES WITHIN UNCONSOLIDATED SEDIMENTS WHICH ARE PRESENT TO A DEPTH OF APPROXIMATELY 35 FT BELOW GROUND SURFACE (835 FT ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. GROUNDWATER ELEVATIONS MEASURED OCTOBER 8 AND 9, 2018.



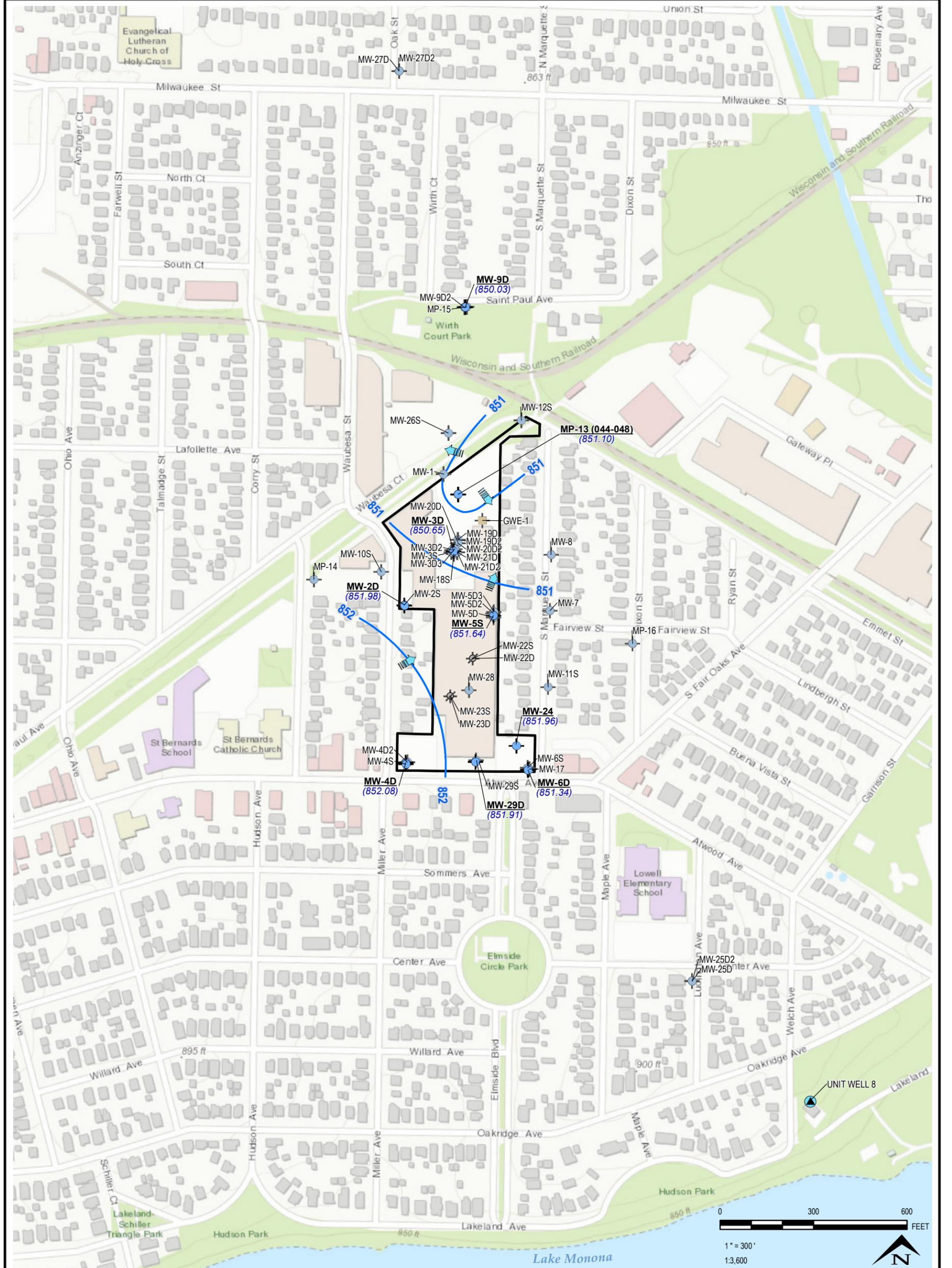
708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
**201 WAUBESA STREET**  
**MADISON, WISCONSIN**

TITLE: **WATER TABLE ELEVATIONS**  
**OCTOBER 2018**

DRAWN BY:	A.ADAIR
CHECKED BY:	S.SELLWOOD
APPROVED BY:	K.VATER
DATE:	MARCH 2019
PROJ. NO.:	323372
FILE:	266431-2018S2-003.mxd

**FIGURE 3**



**LEGEND**

- SITE PROPERTY BOUNDARY
- GROUNDWATER ELEVATION CONTOUR (1' INTERVAL, DASHED WHERE INFERRED)
- GROUNDWATER FLOW
- ABANDONED MONITORING WELL
- MONITORING WELL
- GROUNDWATER EXTRACTION WELL
- MUNICIPAL SUPPLY WELL

**NOTES**

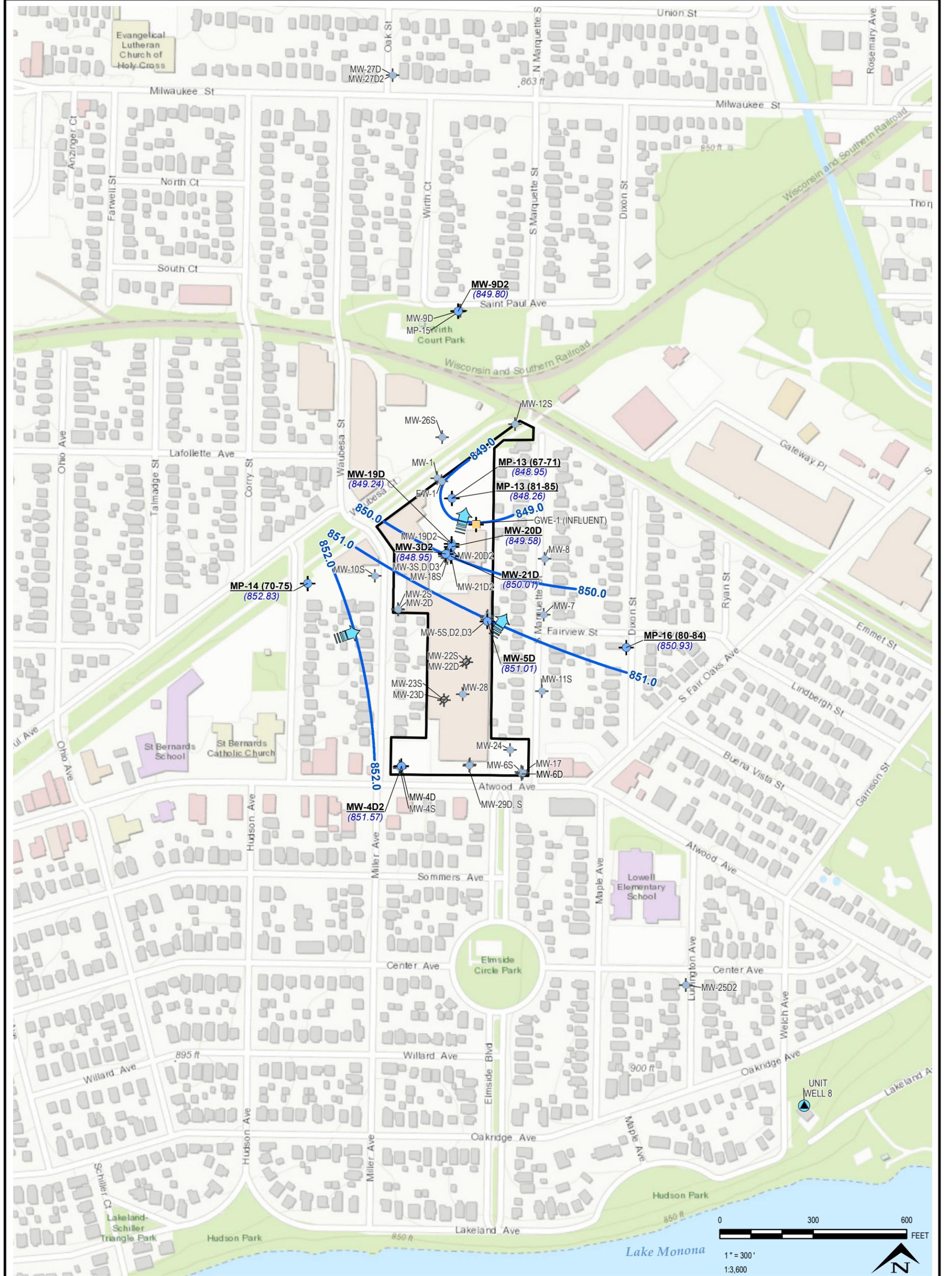
1. BASE MAP IMAGERY FROM, "WORLD TOPOGRAPHIC MAP" WEB BASEMAP SERVICE LAYER.
2. THE UPPER LONE ROCK FORMATION IS INTERPRETED TO BE APPROXIMATELY 3560 FEET BELOW GROUND SURFACE (835-810 FEET ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUND WATER UNIT.
4. GROUNDWATER ELEVATIONS MEASURED OCTOBER 8 AND 9, 2018.

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PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **UPPER LONE ROCK FORMATION  
 POTENTIOMETRIC SURFACE  
 OCTOBER 2018**

DRAWN BY:	A. ADAIR
CHECKED BY:	S. SELLWOOD
APPROVED BY:	K. VATER
DATE:	MARCH 2019
PROJ. NO.:	323372
FILE:	266431-2018S2-004.mxd
<b>FIGURE 4</b>	



**LEGEND**

	SITE PROPERTY BOUNDARY		ABANDONED MONITORING WELL
	GROUNDWATER ELEVATION CONTOUR (1' FT INTERVAL, DASHED WHERE INFERRED)		MONITORING WELL
	GROUNDWATER FLOW DIRECTION		GROUNDWATER EXTRACTION WELL
			MUNICIPAL SUPPLY WELL

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE LOWER LONE ROCK FORMATION IS INTERPRETED TO BE FROM APPROXIMATELY 60-100 FEET BELOW GROUND SURFACE (810-770 FEET ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. GROUNDWATER ELEVATIONS MEASURED OCTOBER 8 AND 9, 2018.
5. MW-3D2 NOT USED FOR CONTOURING.



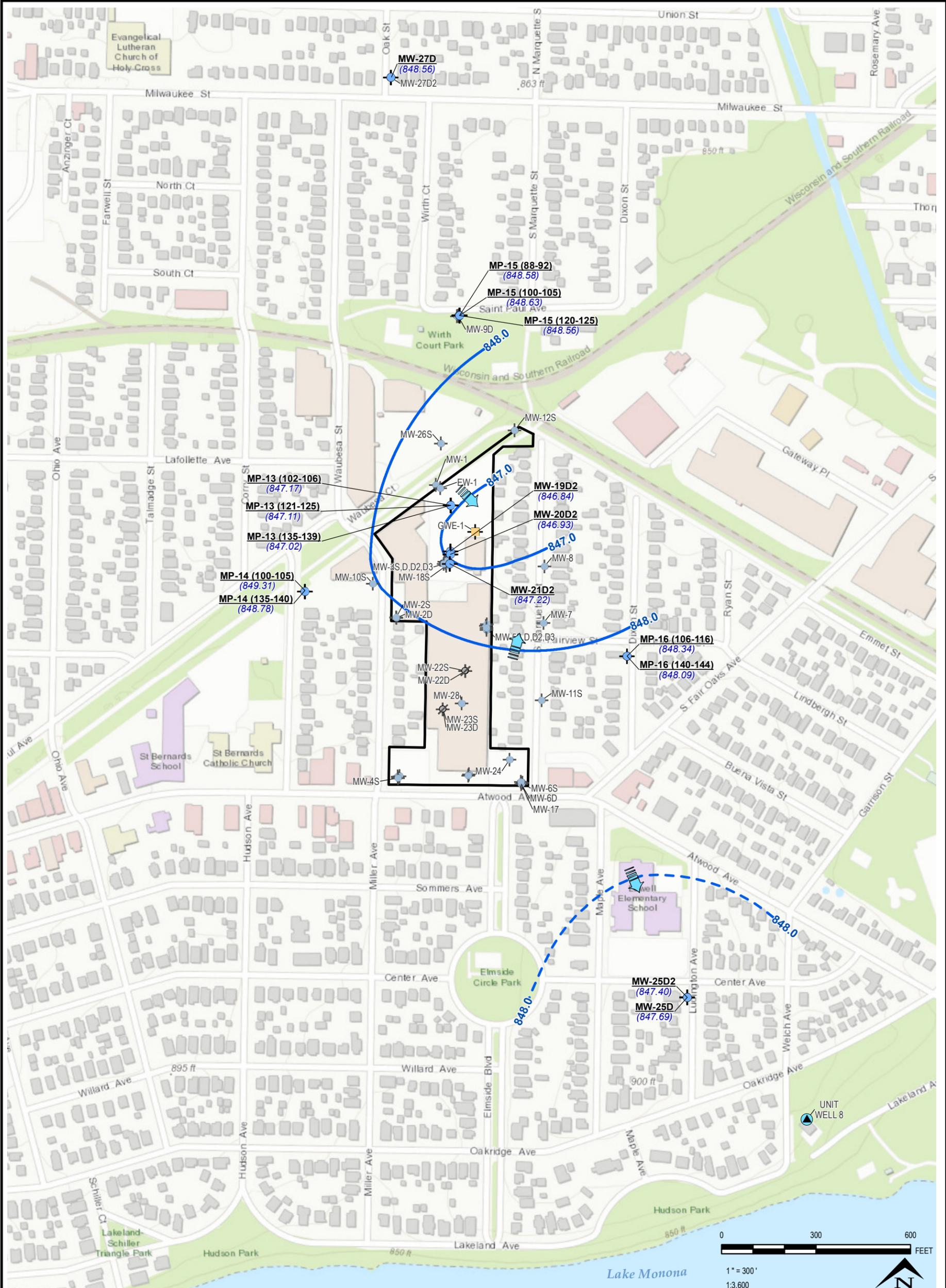
708 Heartland Trail  
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 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **LOWER LONE ROCK FORMATION  
 POTENTIOMETRIC SURFACE  
 OCTOBER 2018**

DRAWN BY:	A. ADAIR
CHECKED BY:	S. SELLWOOD
APPROVED BY:	K. VATER
DATE:	MARCH 2019
PROJ. NO.:	266431.0004
FILE:	266431-2018S2-005.mxd

**FIGURE 5**



**LEGEND**

- SITE PROPERTY BOUNDARY
- GROUNDWATER ELEVATION CONTOUR (1' FT INTERVAL, DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

- Abandoned Monitoring Well
- Monitoring Well
- Groundwater Extraction Well
- Municipal Supply Well

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE UPPER WONEWOC FORMATION IS INTERPRETED TO BE FROM APPROXIMATELY 100-155 FEET BELOW GROUND SURFACE (770-715 FEET ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. GROUNDWATER ELEVATIONS MEASURED OCTOBER 8 AND 9, 2018.



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PROJECT:

**MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE:

**UPPER WONEWOC FORMATION  
 POTENTIOMETRIC SURFACE  
 OCTOBER 2018**

DRAWN BY:

A. ADAIR

CHECKED BY:

S. SELLWOOD

APPROVED BY:

K. VATER

DATE:

MARCH 2019

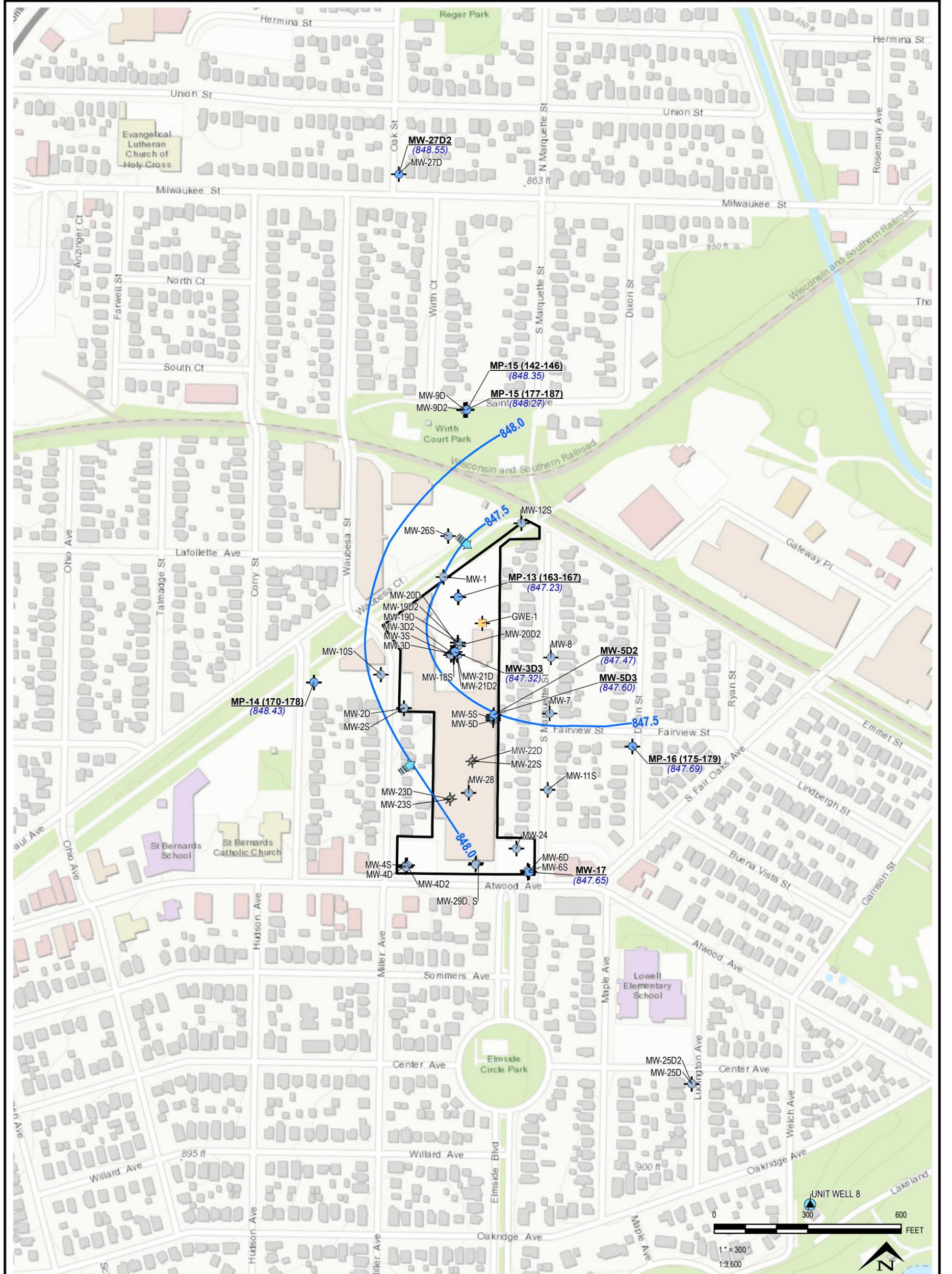
PROJ. NO.:

323372

FILE:

266431-2018S2-006.mxd

**FIGURE 6**



**LEGEND**

- SITE PROPERTY BOUNDARY
- GROUNDWATER ELEVATION CONTOUR (0.5' INTERVAL, DASHED WHERE INFERRED)
- GROUNDWATER FLOW

**NOTES**

- ABANDONED MONITORING WELL
  - MONITORING WELL
  - GROUNDWATER EXTRACTION WELL
  - MUNICIPAL SUPPLY WELL
1. BASE MAP IMAGERY FROM ESRI, "WORLD TOPOGRAPHIC MAP" WEB BASEMAP SERVICE LAYER.
  2. THE LOWER WONEWOC FORMATION IS INTERPRETED TO BE FROM APPROXIMATELY 155-240 FEET BELOW GROUND SURFACE (715- 630 FEET ABOVE MEAN SEA LEVEL).
  3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
  4. GROUNDWATER ELEVATIONS MEASURED OCTOBER 8 AND 9, 2018.



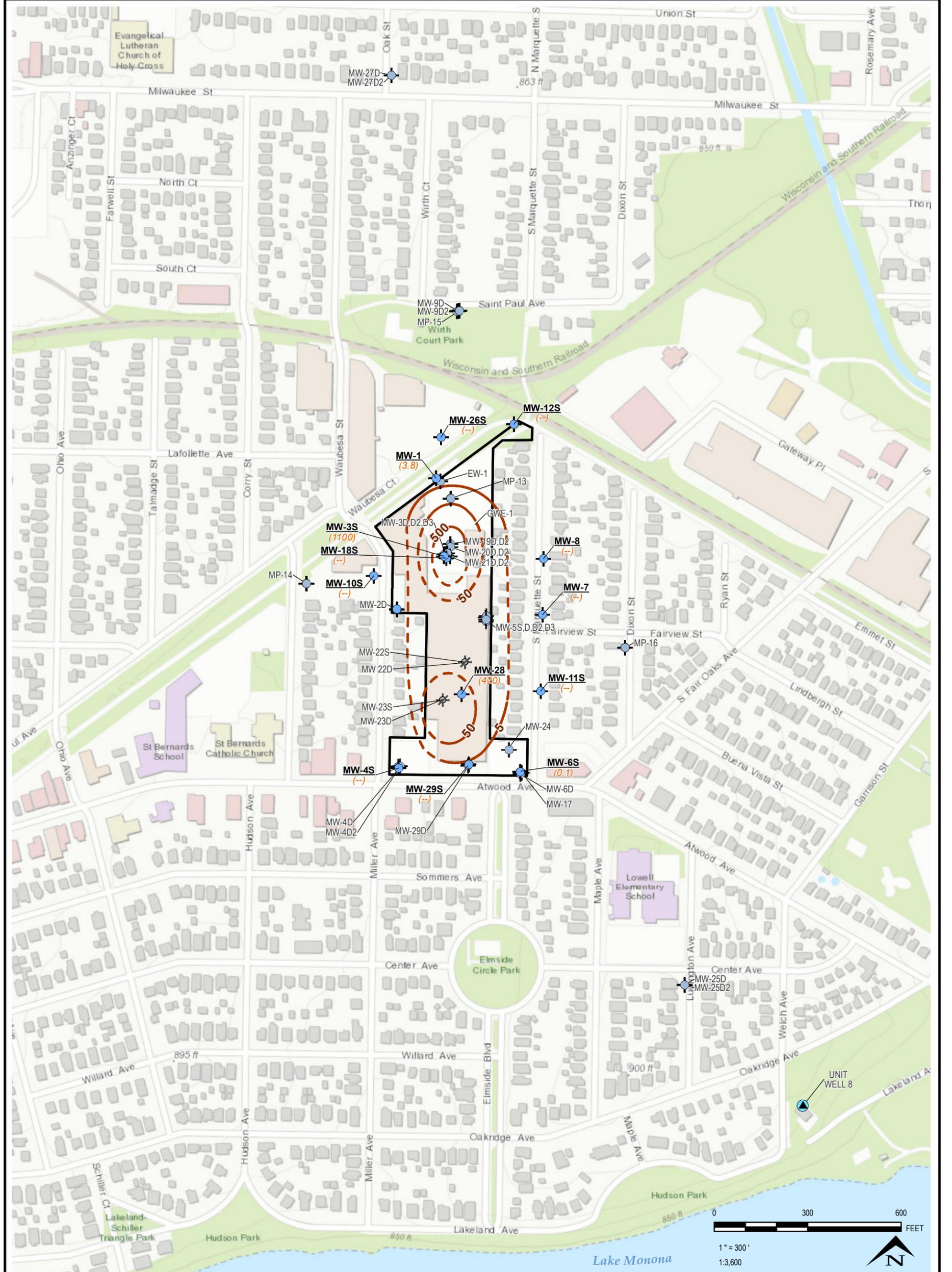
708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
**201 WAUBESA STREET**  
**MADISON, WISCONSIN**

TITLE: **LOWER WONEWOC FORMATION**  
**POTENTIOMETRIC SURFACE**  
**OCTOBER 2018**

DRAWN BY:	AADAIR
CHECKED BY:	S. SELLWOOD
APPROVED BY:	K.VATER
DATE:	MARCH 2019
PROJ. NO.:	323372
FILE:	266431-2018S2-007.mxd

**FIGURE 7**



**LEGEND**

- SITE PROPERTY BOUNDARY
- MUNICIPAL SUPPLY WELL
- (7.5) PCE CONCENTRATION [µg/L]
- (-) NOT SAMPLED
- PCE ISOCONCENTRATION CONTOUR (µg/L, DASHED WHERE INFERRED)

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE WATER TABLE LIES WITHIN UNCONSOLIDATED SEDIMENTS WHICH ARE PRESENT TO A DEPTH OF APPROXIMATELY 35 FT BELOW GROUND SURFACE (835 FT ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. WELLS SAMPLED 10/08/2018-10/17/2018.
5. DATA QUALIFIERS NOT INCLUDED, SEE TABLES OR LABORATORY REPORTS.



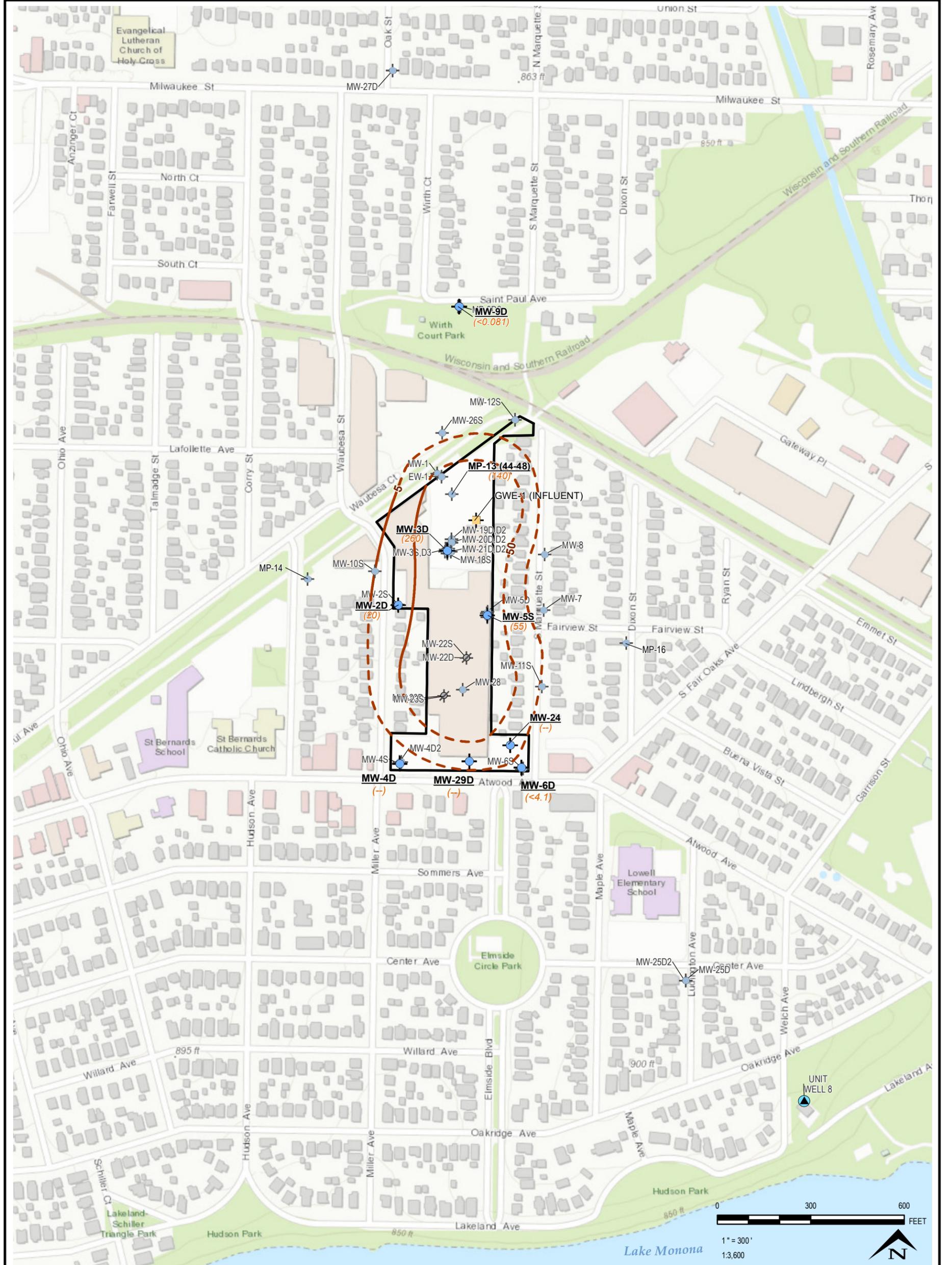
708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **WATER TABLE**  
**TETRACHLOROETHENE (PCE) ISOCONCENTRATIONS**  
**OCTOBER 2018**

DRAWN BY:	A.ADAIR
CHECKED BY:	S.SELLWOOD
APPROVED BY:	K.VATER
DATE:	MARCH 2019
PROJ. NO.:	266431.0004
FILE:	266431-2018S2-008.mxd

**FIGURE 8**



**LEGEND**

- SITE PROPERTY BOUNDARY
- ABANDONED MONITORING WELL
- MONITORING WELL
- GROUNDWATER EXTRACTION WELL
- MUNICIPAL SUPPLY WELL
- (7.5) PCE CONCENTRATION [µg/L]
- (-) NOT SAMPLED
- PCE ISOCONCENTRATION CONTOUR (µg/L, DASHED WHERE INFERRED)

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE UPPER LONE ROCK FORMATION IS INTERPRETED TO BE FROM APPROXIMATELY 35-60 FEET BELOW GROUND SURFACE (835-810 FEET ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. WELLS SAMPLED 10/08/2018 - 10/17/2018.
5. DATA QUALIFIERS NOT INCLUDED, SEE TABLES OR LABORATORY REPORTS.



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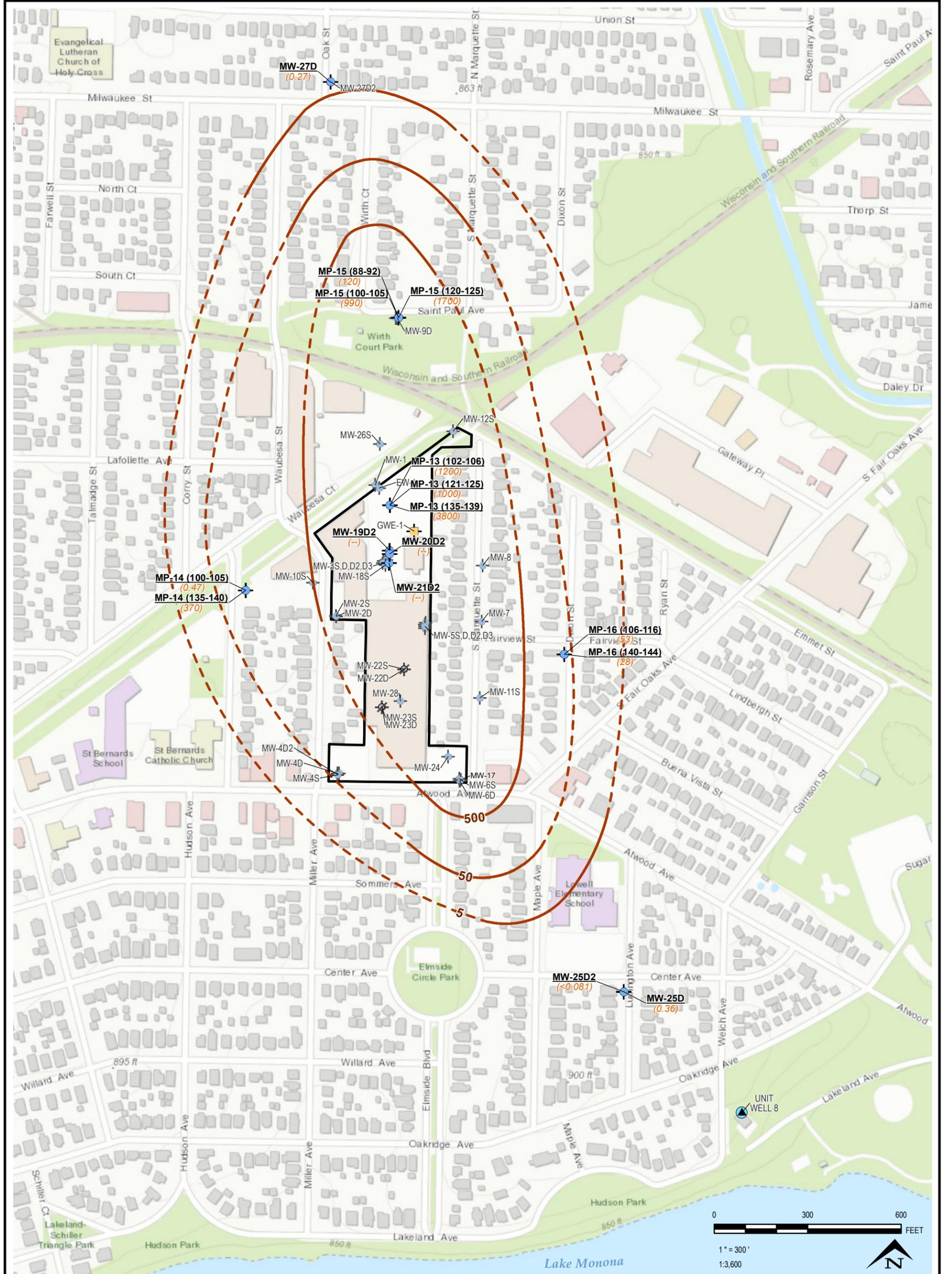
PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **UPPER LONE ROCK FORMATION**  
**TETRACHLOROETHENE (PCE) ISOCONCENTRATIONS**  
**OCTOBER 2018**

DRAWN BY: A.ADAIR  
 CHECKED BY: S.SELLWOOD  
 APPROVED BY: K.VATER  
 DATE: MARCH 2019  
 PROJ. NO.: 266431.0004  
 FILE: 266431-2018S2-009.mxd

**FIGURE 9**





**LEGEND**

- SITE PROPERTY BOUNDARY
- GROUNDWATER EXTRACTION WELL
- MONITORING WELL
- MUNICIPAL SUPPLY WELL
- (7.5) PCE CONCENTRATION [µg/L]
- (--) NOT SAMPLED
- PCE ISOCONCENTRATION CONTOUR (µg/L, DASHED WHERE INFERRED)

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE UPPER WONEWOC FORMATION IS INTERPRETED TO BE FROM APPROXIMATELY 100-155 FEET BELOW GROUND SURFACE (770 - 715 FEET ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. WELLS SAMPLED 10/08/2018 - 10/17/2018.
5. DATA QUALIFIERS NOT INCLUDED, SEE TABLES OR LABORATORY REPORTS.



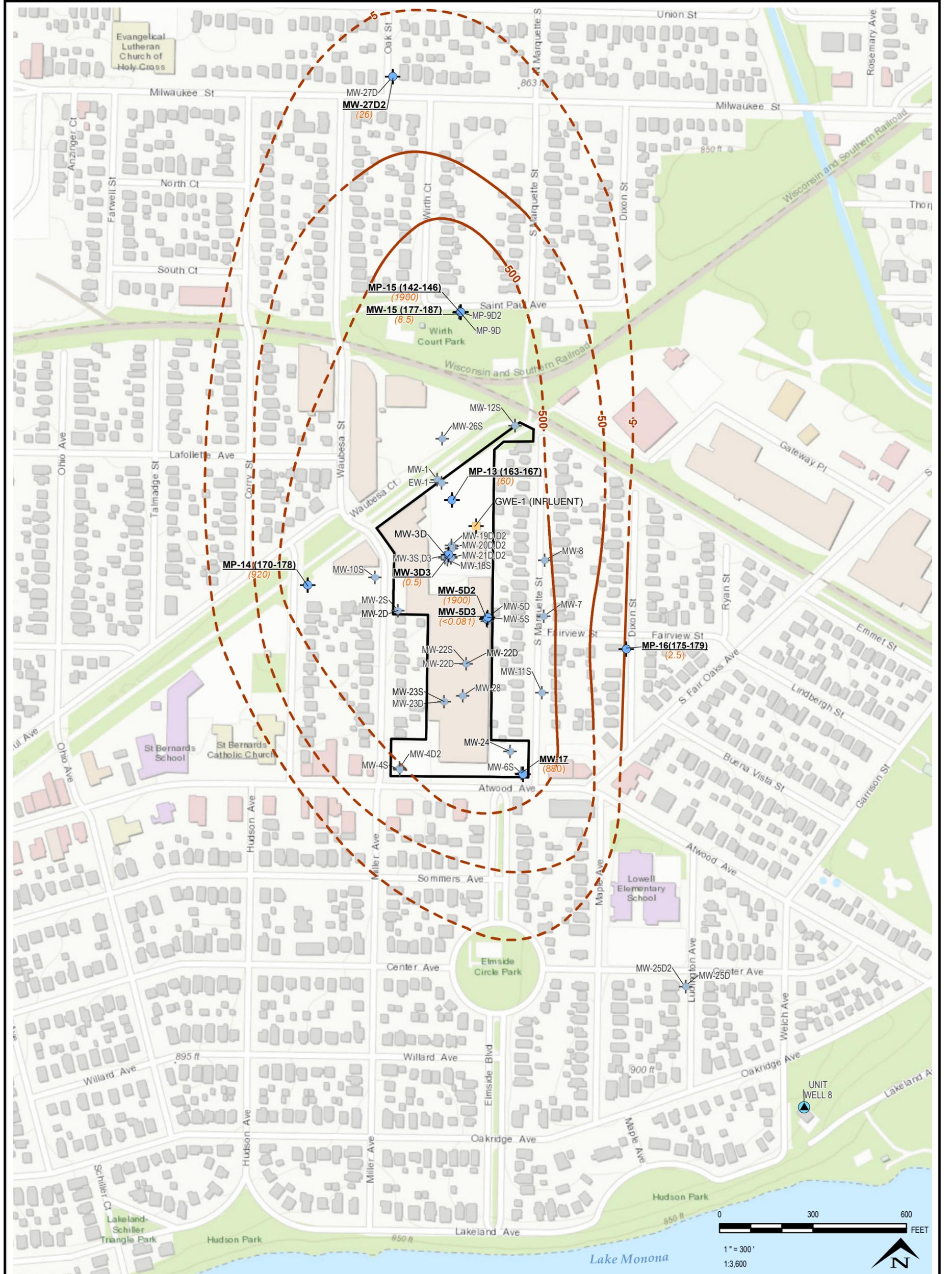
708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **UPPER WONEWOC FORMATION**  
**TETRACHLOROETHENE (PCE) ISOCONCENTRATIONS**  
**OCTOBER 2018**

DRAWN BY:	A. ADAIR
CHECKED BY:	S. SELLWOOD
APPROVED BY:	K. VATER
DATE:	MARCH 2019
PROJ. NO.:	266431.0004
FILE:	266431-2018S2-011.mxd

**FIGURE 11**



**LEGEND**

SITE PROPERTY BOUNDARY  
 MONITORING WELL  
 GROUNDWATER EXTRACTION WELL  
 MUNICIPAL SUPPLY WELL

(7.5) PCE CONCENTRATION [µg/L]  
 (-) NOT SAMPLED  
 PCE ISOCONCENTRATION CONTOUR (µg/L, DASHED WHERE INFERRED)

**NOTES**

1. BASE MAP FROM ESRI, "WORLD TOPOGRAPHIC MAP", WEB BASEMAP SERVICE LAYER.
2. THE LOWER WONEWOC FORMATION IS INTERPRETED TO BE FROM APPROXIMATELY 155 - 240 FEET BELOW GROUND SURFACE (715-630 FEET ABOVE MEAN SEA LEVEL).
3. WELLS SHOWN IN GRAY ARE NOT PART OF THIS GROUNDWATER UNIT.
4. WELLS SAMPLED 10/08/2018 - 10/17/2018.
5. DATA QUALIFIERS NOT INCLUDED, SEE TABLES OR LABORATORY REPORTS.

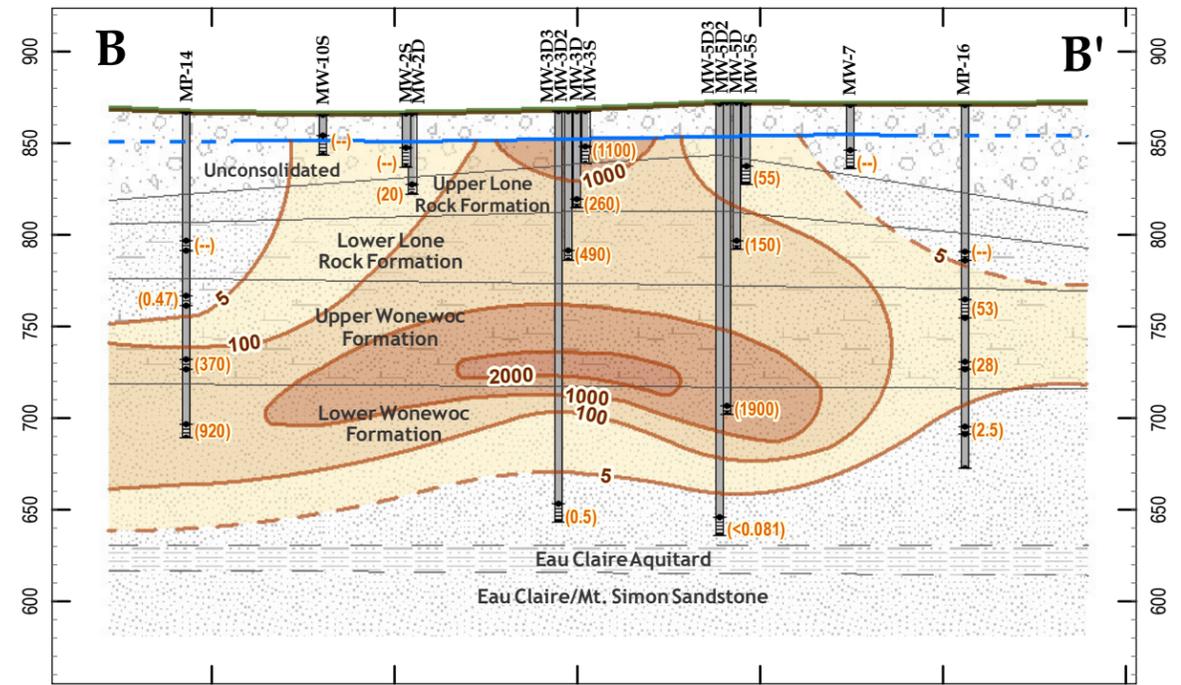
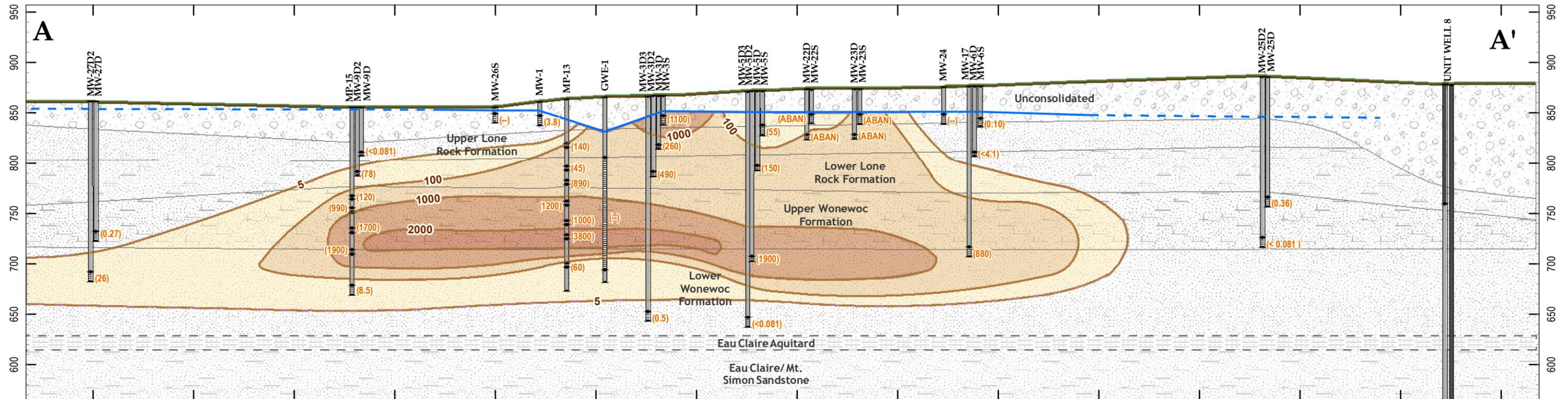
708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **LOWER WONEWOC FORMATION**  
**TETRACHLOROETHENE (PCE) ISOCONCENTRATIONS**  
**OCTOBER 2018**

DRAWN BY: A. ADAIR  
 CHECKED BY: S. SELLWOOD  
 APPROVED BY: K. VATER  
 DATE: MARCH 2019  
 PROJ. NO.: 266431.0004  
 FILE: 266431-2018S2-0012.mxd

**FIGURE 12**

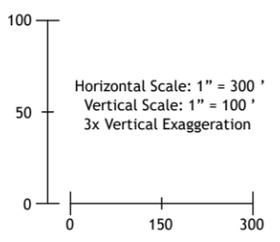


**LEGEND**

- WELL CONSTRUCTION
  - WELL RISER
  - WELL CASING
  - WELL SCREEN
- WATER TABLE ELEVATION
- (550) PCE CONCENTRATION [µg/L]
- (--) NOT SAMPLED
- PCE CONCENTRATIONS IN GROUNDWATER (DASHED WHERE INFERRED)
  - < 5 µg/L
  - 5 - <100 µg/L
  - 100 - <1000 µg/L
  - 1000 - <2000 µg/L
  - >2000 µg/L

**NOTES**

1. SEE FIGURE 2 FOR PLAN VIEW CROSS SECTION LOCATIONS.
2. WELLS SAMPLED BETWEEN OCT. 02-12, 2017.
3. FEATURES SHOWN ARE APPROXIMATE
4. DATA QUALIFIERS NOT INCLUDED, SEE TABLES OR LABORATORY REPORTS.
5. OCTOBER 2017 PCE CONCENTRATION FOR EXTRACTION WELL GWE-1 WAS NOT USED FOR CONTOURING.

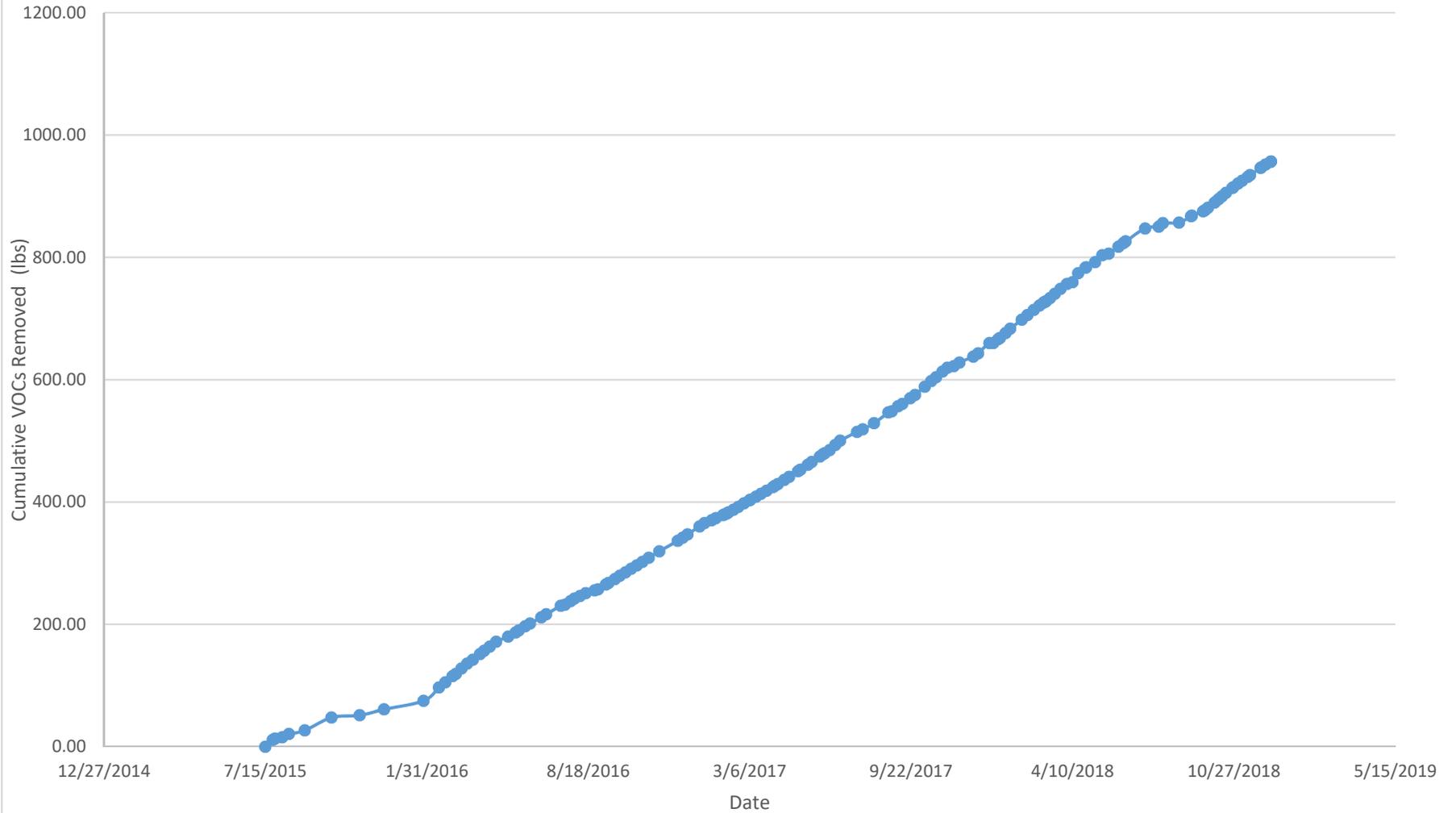


PROJECT:		<b>MADISON-KIPP CORPORATION</b> 201 WAUBESA STREET MADISON, WISCONSIN	
TITLE: <b>GEOLOGIC CROSS SECTIONS A-A' AND B-B'</b> <b>TETRACHLOROETHENE (PCE)</b> <b>CONCENTRATIONS - OCTOBER 2018</b>			
DRAWN BY:	A. ADAIR	PROJ NO.:	323372
CHECKED BY:	S. SELLWOOD	<b>FIGURE 13</b>	
APPROVED BY:	K. VATER		
DATE:	MARCH 2019		
		708 Heartland Trail, Suite 3000 Madison, WI 53717 Phone: 608.826.3600 www.trcsolutions.com	
FILE NO.:	323372_Cross_Section.mxd		

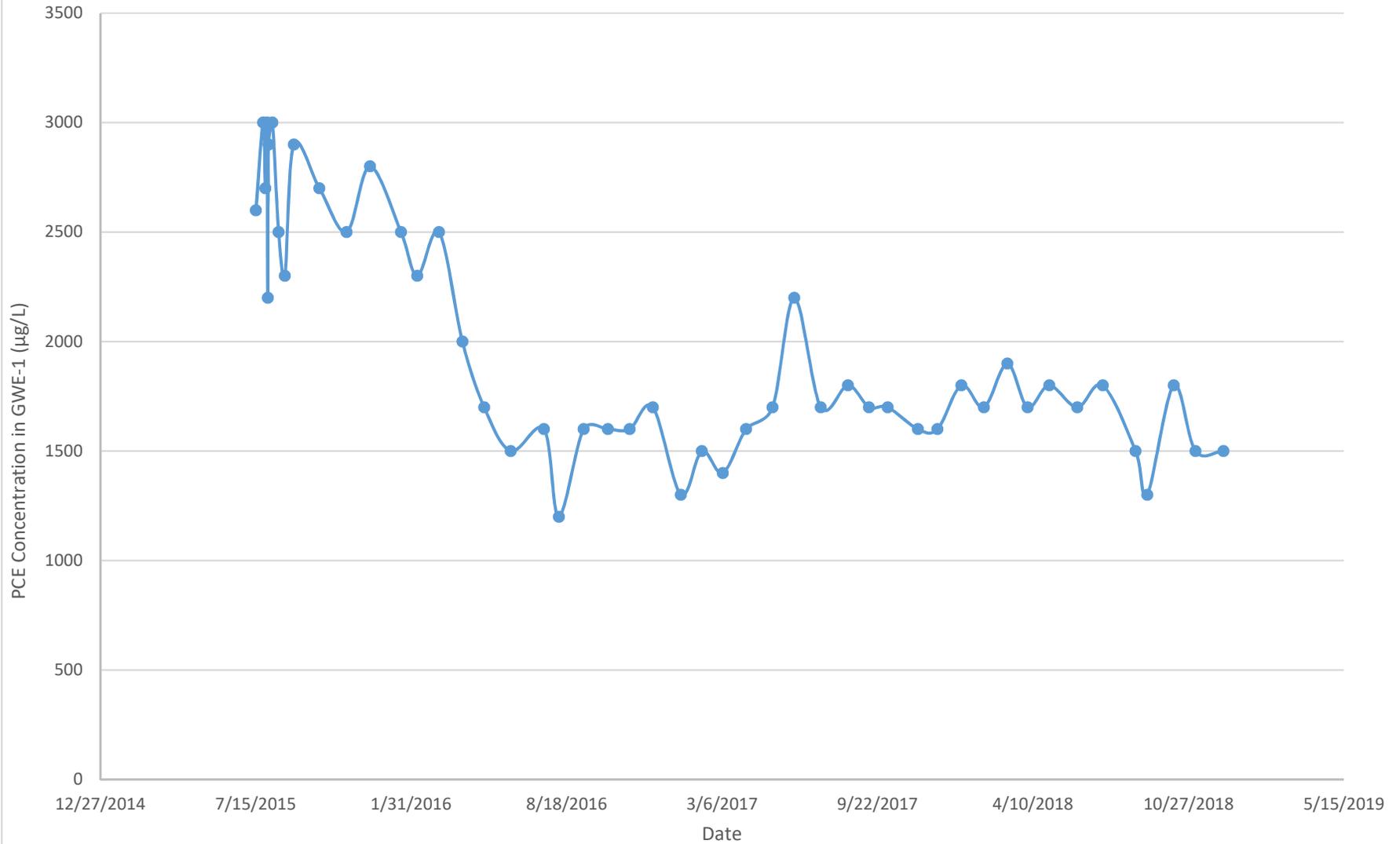
# Appendix A Trend Plots

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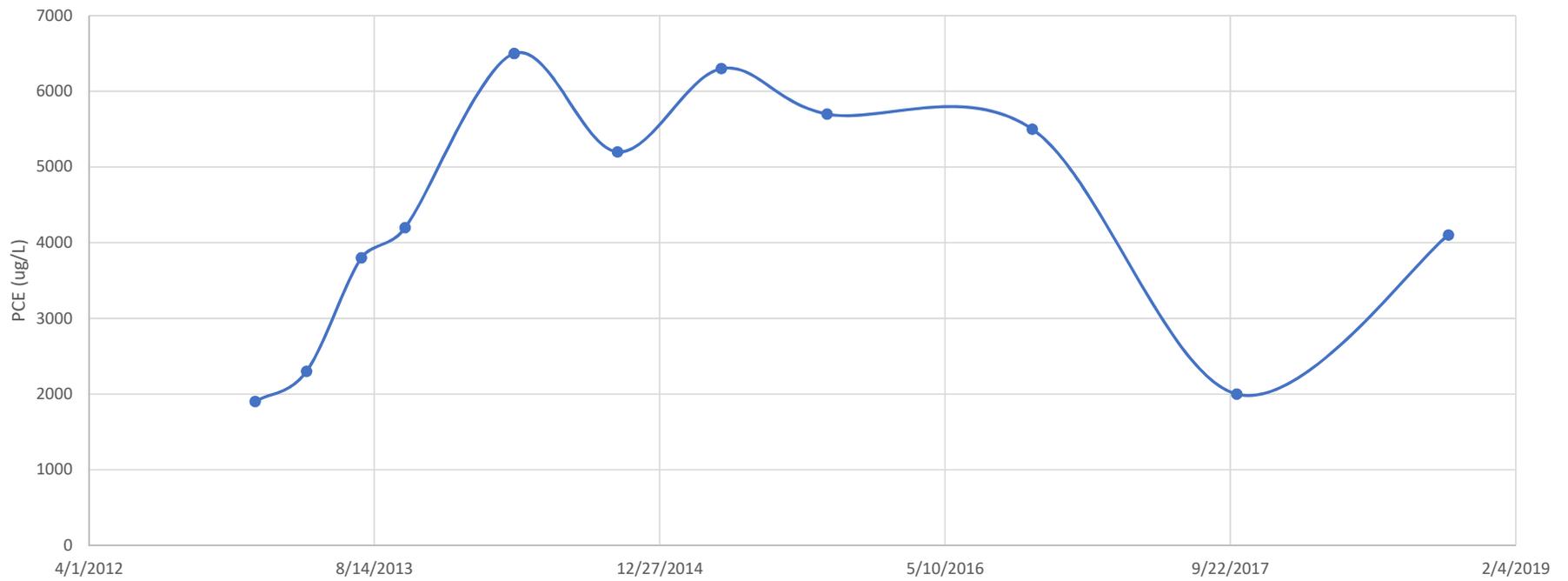
Trend Plot A.1  
Groundwater Extraction System Operation  
Cumulative Volatile Organic Compounds (VOCs) Removed  
Madison Kipp Corporation  
201 Waubesa Street  
Madison, Wisconsin



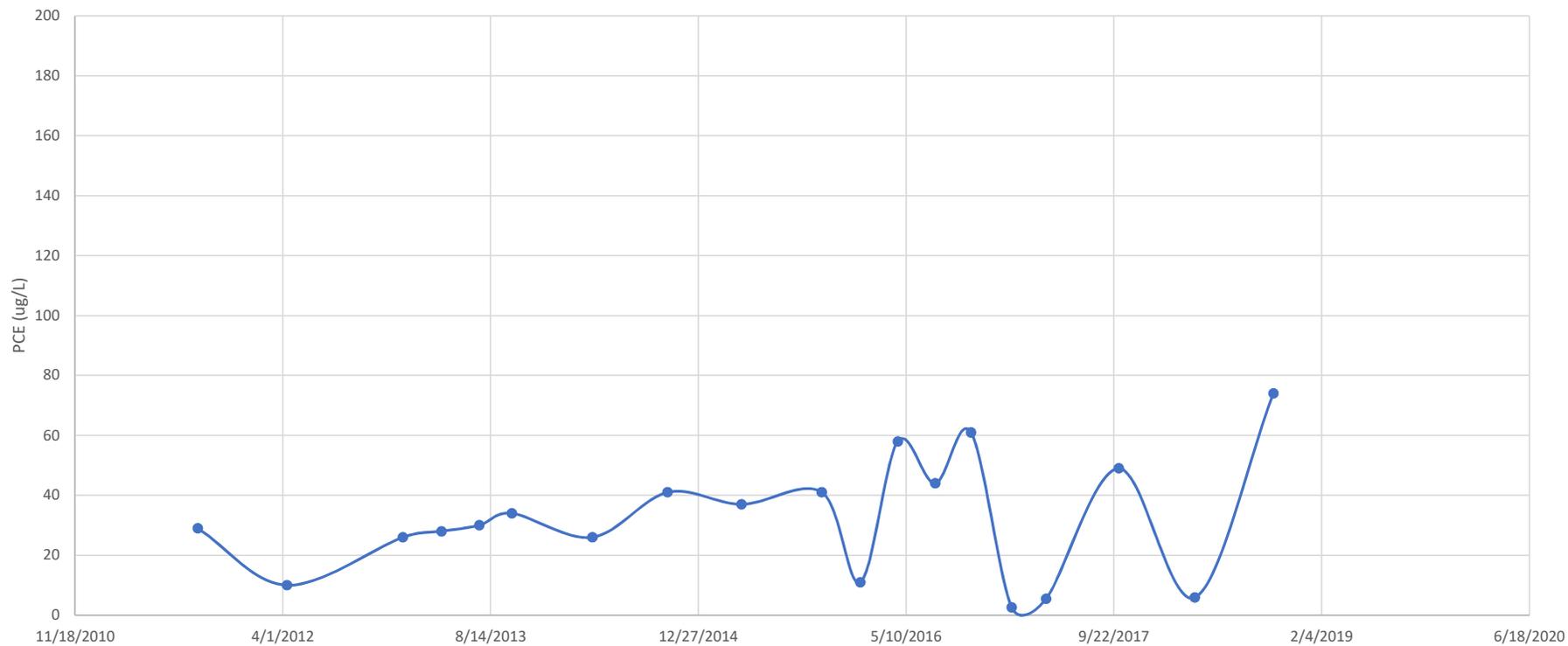
Trend Plot A.2  
PCE Concentration in GWE-1  
Madison Kipp Corporation  
201 Waubesa Street  
Madison, Wisconsin



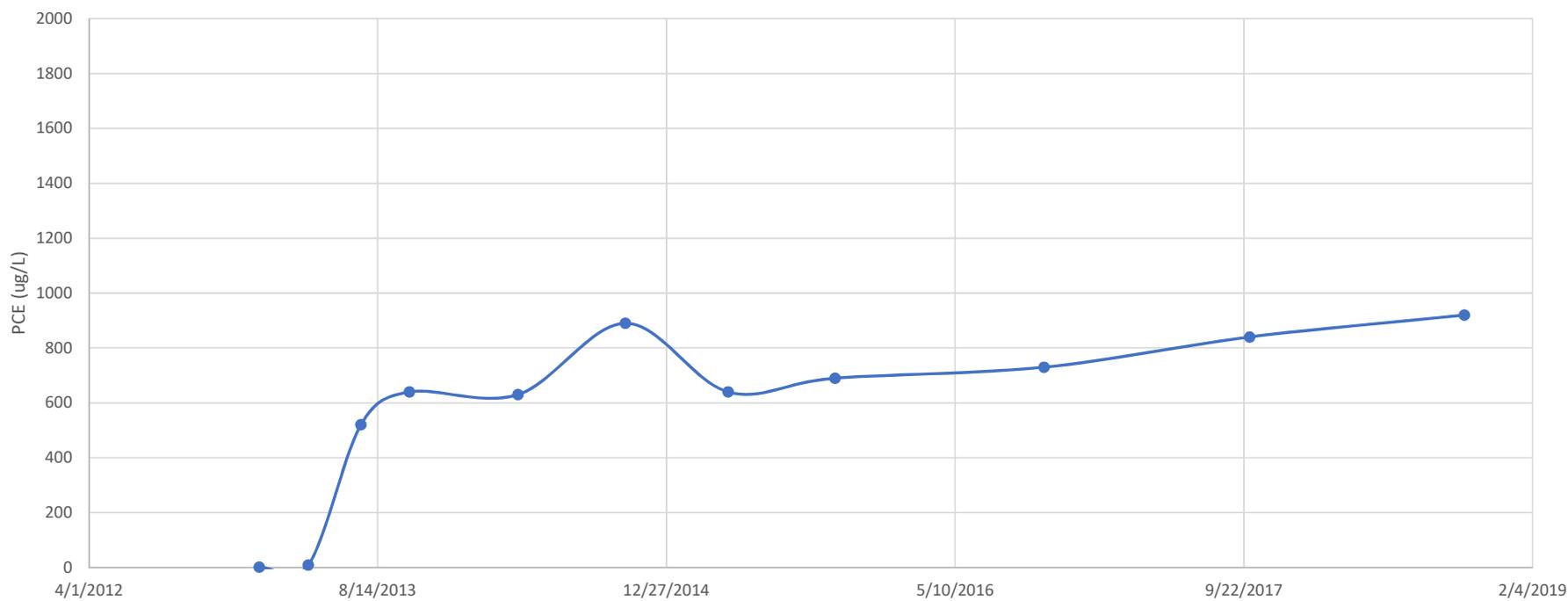
**Trend Plot A.3**  
**MP-13 (135-139)**  
**Tetrachloroethene (PCE) Concentration**  
**Madison Kipp Corporation**  
**201 Waubesa Street**  
**Madison, WI**



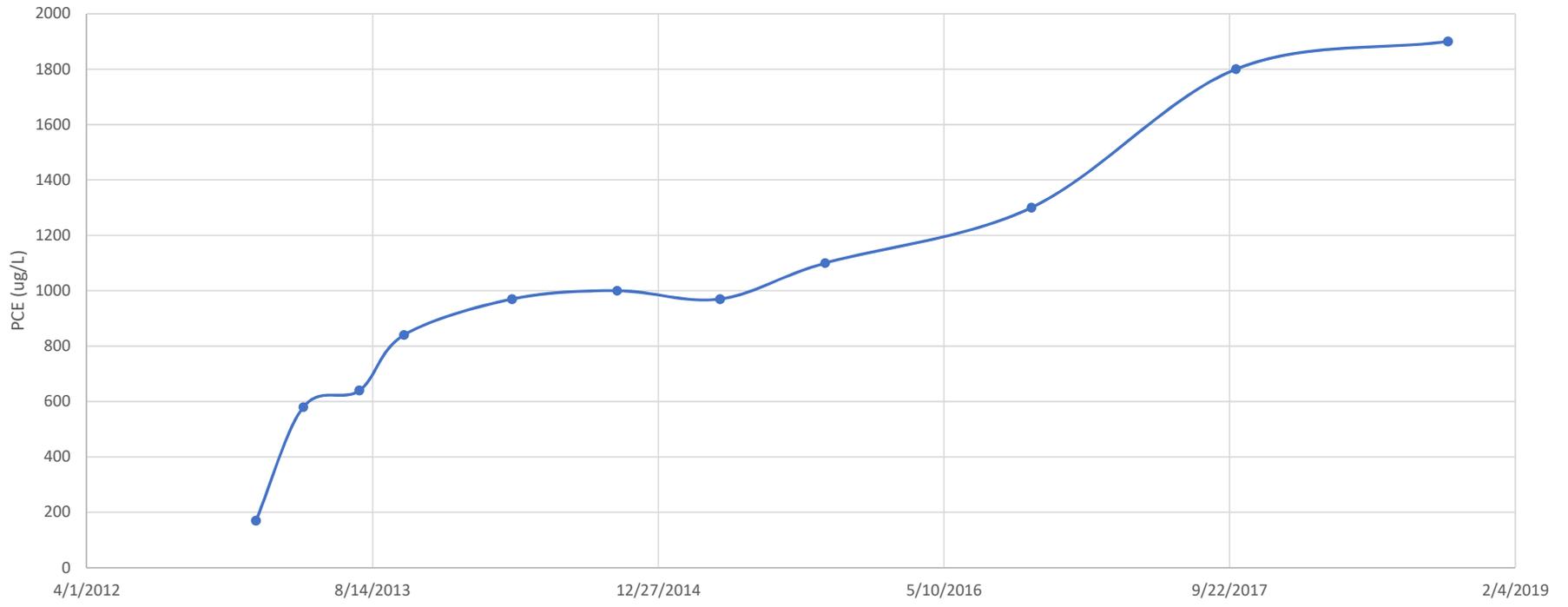
**Trend Plot A.4**  
**MW-9D2**  
**Tetrachloroethene (PCE) Concentration**  
**Madison Kipp Corporation**  
**201 Waubesa Street**  
**Madison, WI**



**Trend Plot A.5**  
**MP-14 (170-178)**  
**Tetrachloroethene (PCE) Concentration**  
**Madison Kipp Corporation**  
**201 Waubesa Street**  
**Madison, WI**



**Trend Plot A.6**  
**MP-15 (142-146)**  
**Tetrachloroethene (PCE) Concentration**  
**Madison Kipp Corporation**  
**201 Waubesa Street**  
**Madison, WI**



# Appendix B

## Remediation Site Operation, Maintenance, Monitoring, and Optimization Report Form 4400-194

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**GENERAL INSTRUCTIONS, PURPOSE AND APPLICABILITY OF THIS FORM:** Completion of this form is required under s. NR 724.13(3), Wis. Adm. Code. A narrative report or letter containing the equivalent information required in this form may be submitted in lieu of the actual form. Failure to submit this form as required is a violation of s. NR 724.13(3), Wis. Adm. Code, and is subject to the penalties in s. 292.99, Wis. Stats. This form must be submitted every six months for soil or groundwater remediation projects that report operation and maintenance progress in accordance with s. NR 724.13(3), Wis. Adm. Code.

Note: Long-term monitoring results submitted in accordance with s. NR 724.17(3), Wis. Adm. Code are required to be submitted within 10 business days of receiving sampling results and are not required to be submitted using this form. However, portions of this form require monitoring data summary information that may be based on information previously submitted in accordance with s. NR 724.17(3), Wis. Adm. Code.

Note: Responsible parties should check with the State Project Manager assigned to the site to determine if this form is required to be submitted at sites responded to under the Federal Comprehensive Environmental Response and Compensation Act (commonly known as Superfund) or an equivalent State lead Superfund response.

Note: Responsible parties should check with the State Project Manager assigned to the site to determine if any of the information required in this form may be omitted or changed and obtain prior written approval for any omissions or changes.

Submittal of this form is not a substitute for reporting required by Department programs such as Waste Water or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31-19.39, Wis. Stats.). Unless otherwise noted, all citations refer to Wisconsin Administrative Code.

Note: There is a separate semi-annual report required under s. NR 700.11(1), Wis. Adm. Code. Reporting under that provision is through an internet-based form:

<http://dnr.wi.gov/topic/Brownfields/documents/regs/NR700progreport.pdf>

**Section GI - General Site Information**

**A. General Information**

1. Site name

Madison-Kipp Corporation

2. Reporting period from: 07/01/2018 To: 12/31/2018 Days in period: 184

3. Regulatory agency (enter DNR, DATCP and/or other) 4. BRRTS ID No. (2 digit program-2 digit county-6 digit site specific)  
 DNR 02-13-558625

5. Site location

Region	County	Address					
South Central Region	Dane	201 Waubesa Street					
Municipality name <input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village	Township	Range	<input checked="" type="radio"/> E <input type="radio"/> W	Section	¼	¼ ¼	
Madison	07 N	10		5	SW	NW	

6. Responsible party Name	7. Consultant					
Tony Koblinski	<input type="checkbox"/> Select if the following information has changed since the last submittal					
Mailing address	Company name					
201 Waubesa Street, Madison, WI 53704	TRC					
Phone number	Mailing address				Phone number	
(608) 242-5244	708 Heartland Trail, Suite 3000				(608) 826-3600	
	Madison, WI 53717					

8. Contaminants  
 VOCs, Metals, PCBs

9. Soil types (USCS or USDA)  
 CL, SP, GP

10. Hydraulic conductivity(cm/sec): 0.08 - 13.2 11. Average linear velocity of groundwater (ft/yr) 0.5 - 12.9

12. If soil is treated ex situ, is the treatment location off site?  Yes  No

If yes, give location: Region \_\_\_\_\_ County \_\_\_\_\_

Municipality name <input type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village	Township	Range	<input type="radio"/> E <input type="radio"/> W	Section	¼	¼ ¼
	N					

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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### B. Remediation Method

Only submit sections that apply to an individual site. Check all that apply:

- Groundwater extraction (submit a completed Section GW-1).
- Free product recovery (submit a completed Section GW-1).
- In situ air sparging (submit a completed Section GW-2).
- Groundwater natural attenuation (submit a completed Section GW-3).
- Other groundwater remediation method (submit a completed Section GW-4).
- Soil venting (including soil vapor extraction building venting and bioventing submit a completed Section IS-1).
- Soil natural attenuation (submit a completed Section IS-2).
- Other in situ soil remediation method (submit a completed Section IS-3).
- Biopiles (submit a completed Section ES-1).
- Landspreading/thinspreading of petroleum contaminated soil (submit a completed Section ES-2).
- Other ex situ remediation method (submit a completed Section ES-3).
- Site is a landfill (submit a completed Section LF-1).

### C. General Effectiveness Evaluation for All Active Systems

If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications?  Yes  No

If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.

2. Are modifications to the system warranted to improve effectiveness  Yes  No

If yes, explain:

3. Is natural attenuation an effective low cost option at this time?  Yes  No

4. Is closure sampling warranted at this time?  Yes  No

5. Are there any modifications that can be made to the remediation to improve cost effectiveness?  Yes  No

If yes, explain:

The onsite soil vapor extraction system is currently being evaluated for continued operation. The system as approved by the WDNR was temporarily shutdown in October 2018 and soil gas is being monitored at the site.

### D. Economic and Cost Data to Date

1. Total investigation cost: Cost not included

2. Implementation costs (design, capital and installation costs, excluding investigation costs): \_\_\_\_\_

3. Total costs during the previous reporting period: \_\_\_\_\_

4. Total costs during this reporting period: \_\_\_\_\_

5. Total anticipated costs for the next reporting period: \_\_\_\_\_

6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above?  Yes  No

If yes, explain:

7. If closure is anticipated within 12 months, estimated costs for project closeout: \_\_\_\_\_

Site name: Madison-Kipp Corporation  
 Reporting period from: 07/01/2018 To: 12/31/2018  
 Days in period: 184

**E. Name(s), Signature(s) and Date of Person(s) Submitting Form**

Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form for sites with any ongoing active remediation, monitoring or an investigation. Other persons may sign this form for sites with no response activities during the six month reporting period.

**Registered Professional Engineers:**

I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name Katherine Vater	Title Project Manager
Signature <i>Katherine Vater</i>	Date 3/6/2019

**Hydrogeologists:**

I hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

**Scientists:**

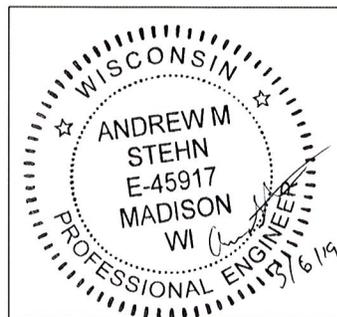
I hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

**Other Persons:**

Print name Andrew Stehn	Title Project Engineer
Signature <i>Andrew Stehn</i>	Date 3/6/2019

**Professional Seal(s), if applicable:**



Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

# Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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## Section GW-1, Groundwater Pump and Treat Systems and Free Product Recovery Systems

### A. Groundwater Extraction System Operation:

1. Total number of groundwater extraction wells or trenches available: 1 and the number in use during period: 1

2. Number of days of operation (only list the number of days the system actually operated, if unknown explain):  
132 days

3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:  
71.5%

Hydrogen peroxide chemical pump wasn't operating correctly and triggering alarms that would shut the system down. Diaphragm in chemical pump has been replaced which eliminated issues being experienced. Groundwater extraction well pump was not operational and required replacement, which caused the system to be down for a period of time.

4. Quantity of groundwater extracted during this time period: 8,175,415 gallons

5. Average groundwater extraction rate: 40 - 45 gpm

6. Quantity of dissolved phase contaminants removed during this time period in pounds: 135.1 lbs

### B. Free Product Recovery System Operation

1. Is free product (nonaqueous phase liquid) being recovered at this site?  Yes  No

If yes, explain:

2. Quantity of free product extracted during this time period (enter none if none): \_\_\_\_\_ gallons

3. Average free product extraction rate: \_\_\_\_\_ gpm

### C. System Effectiveness Evaluation

1. Is a contaminated groundwater plume fully contained in the capture zone?  Yes  No

If no, explain:

The groundwater extraction and treatment system was designed to facilitate the removal of volatile organic compound (VOC) mass in addition to providing hydraulic containment of VOCs in groundwater in order to minimize off-site VOC migration.

2. If free product is present, is the free product fully contained in capture zone?  Yes  No

If no, explain:

3. If free product is present in any wells at the site, but free product was not recovered during reporting period, explain:

4. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in C.4.a.

a. Contaminant: Tetrachloroethene

b. Percent reduction necessary to reach ch. NR 140 ES and PAL: 99 %

c. Maximum contaminant concentration level in any monitoring well of that contaminant: 3,800 µg/L

d. Maximum contaminant concentration level in any extraction well of that contaminant: 1900 µg/L

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018 To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

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- e. If the maximum concentration in a monitoring well is more that one order of magnitude above the concentration measured in an extraction well, explain why the extracted groundwater contamination levels are significantly less than the levels at other locations within the aquifer.

Not Applicable

### D. Additional Attachments

Attach the following to this form:

- Most recent report to the DNR Wastewater Program, if applicable. [Appendix C](#)
- Groundwater contour map with capture zone indicated. [Figures 3-7](#)
- Groundwater contaminant distribution map (may be combined with contour map). [Figures 8-13](#)
- Graph of cumulative contaminant removal, if both free product recovery and ground water extraction are used, provide separate graphs. [Appendix A: Graph A.1](#)
- Time versus groundwater contaminant concentration graphs for the contaminant listed in C.4.a. (above), as follows:
  - Graph of contaminant concentrations versus time for each extraction well in use during the period. [Appendix A: Graph A.2](#)
  - Graph of contaminant concentrations versus time for the monitoring well with the greatest level of contamination. [Appendix A: Graph A.3](#)
- Groundwater contaminant chemistry table. [Table 17](#)
- Groundwater elevations table. [Table 16](#)
- System operational data table. [Table 1](#)

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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N/A

### Section GW-2, In Situ Air Sparging Systems

#### A. In Situ Air Sparging System Operation

1. Number of air injection wells at the site and the number actually in use during the period: \_\_\_\_\_
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain): \_\_\_\_\_
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain: \_\_\_\_\_

#### B. System Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in B.1.a.
  - a. Contaminant: \_\_\_\_\_
  - b. Percent reduction necessary to reach ch. NR 140 ES and PAL: \_\_\_\_\_ %
  - c. Maximum contaminant concentration level in any monitoring well: \_\_\_\_\_ µg/L
2. Is there any evidence that air is short circuiting through natural or man-made pathways?  Yes  No  
If yes, explain: \_\_\_\_\_
3. Is the size of the plume:  Increasing  Stabalized  Decreasing ?  
If increasing, explain: \_\_\_\_\_

#### C. Additional Attachments

Attach the following to this form:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Site map with all air injection wells and groundwater monitoring points.
- Graph of contaminant concentrations versus time for the contaminant listed in B.1.a. (above) for the monitoring point with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- System operational data table.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

# Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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## Section GW-3, Natural Attenuation (Passive Bioremediation) in Groundwater

N/A

### A. Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a

a. Contaminant: \_\_\_\_\_

b. Percent reduction necessary to reach ch. NR 140 ES and PAL: \_\_\_\_\_ %

c. Maximum contaminant concentration level in any monitoring well of that contaminant: \_\_\_\_\_ µg/L

2. Aquifer parameters:

a. Hydraulic conductivity: \_\_\_\_\_ cm/sec

b. Groundwater average linear velocity: \_\_\_\_\_ ft/yr

3. Is there a downgradient monitoring well that meets ch. NR 140 standards?  Yes  No

4. Based on water chemistry results, is the plume:  Expanding  Stabalized  Contracting ?

5. If the answer in 4. (above) is "expanding," is natural attenuation still the best option?  Yes  No

If yes, explain:

6. Biodegradation parameters:

a. Upgradient (or other site specific background) DO level: \_\_\_\_\_ µg/L

b. DO levels in the part of the plume that is most heavily contaminated \_\_\_\_\_ µg/L

7. Is site closure a viable option within 12 months from the date of this form?  Yes  No

8. Are there any modifications that can improve cost effectiveness?  Yes  No

If yes, explain:

9. Have groundwater table fluctuations changed the contaminant level trends over time?  Yes  No

If yes, explain:

10. Has the direction of groundwater flow changed during the reporting period?  Yes  No

If yes, approximate change in degrees: \_\_\_\_\_

### B. Additional Attachments

Attach the following:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.

Note: This is the minimum required graph; however, it is recommended that multiple time versus contamination concentration graphs as described in the instructions on page 24 for Natural Attenuation of Groundwater be submitted.

- Graph of contaminant concentrations versus distance.
- Groundwater contaminant chemistry table.
- Groundwater biological parameters.
- Groundwater elevations table.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

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### Section GW-4, Other Groundwater Remediation Methods

N/A

#### A. Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a.

a. Contaminant: \_\_\_\_\_

b. Percent reduction necessary: \_\_\_\_\_ %

c. Maximum contaminant concentration level in any monitoring well: \_\_\_\_\_ µg/L

2. Is the size of the plume:  Increasing  Stabalized  Decreasing ?

3. Describe the method used to remediate groundwater at the site:

4. List any additional information required by the DNR for this method for this site:

#### B. Additional Attachments

Attach the following:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- Any other attachments required by the DNR for this remediation method.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018 To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

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### Section IS-1, Soil Venting (Including Soil Vapor Extraction, Building Venting and Bioventing)

#### A. Soil Venting Operation

**Note:** This form is not required for building vapor mitigation systems that are installed proactively to protect building occupants/users and are not considered part of ongoing active soil remediation.

1. Number of air extraction wells available and number of wells actually in use during the period: 9

2. Number of days of operation (only list the number of days the system actually operated, if unknown explain):  
69 days

3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:  
37.3% - The SVE system shut down periodically during the first part of the reporting period due to alarms and was restarted following maintenance and repairs. In addition, the system was shut down between 10/25/18 - 12/31/2018 for evaluation purposes per the WDNR approval.

4. Average depth to groundwater: 17.95 ft

#### B. Building Basement/Subslab Venting System Operation

1. Number of venting points available and number of points actually in use during the period: \_\_\_\_\_

2. Number of days of operation (only list the number of days the system actually operated, if unknown explain): \_\_\_\_\_

3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain: \_\_\_\_\_

#### C. Effectiveness Evaluation

1. Average contaminant removal rate for the entire system: NA pounds per day

SVE exhaust when in operation is combined with GETS exhaust, which is discussed in Section GW-1A.

2. Average contaminant removal rate per well or venting point: NA pounds per day

3. If the average contaminant removal rate is less than one pound per day for the entire system, or if the average contaminant removal rate per well is less than one tenth of a pound per day, evaluate the following:

a. If contaminants are aerobically biodegradable and confirmation borings have not been drilled in

i. Oxygen levels in extracted air: \_\_\_\_\_ percent

ii. Methane levels in extracted air (ppm<sub>v</sub>) If over 10 ppm<sub>v</sub>, explain: \_\_\_\_\_

iii. If methane is not present above 10 ppm<sub>v</sub> and if oxygen is greater than 20 percent in extracted air, you should either:

- Drill confirmation borings during the next reporting period, if the entire site should be considered for closure.
- Or, perform an in situ respirometry test in a zone of high contamination. Do not perform the test in an air extraction well, use a gas probe or water table well. If a zero order rate of decay based on oxygen depletion is less than 2 mg/kg per day, then you should drill confirmation borings, if the entire site should be considered for closure. If the rate of decay is between 2 and 10 mg/kg, operate for one more reporting period before evaluating further. If the zero order rate of decay is greater than 10 mg/kg total hydrocarbons, continue operating the system in a manner than maximizes aerobic biodegradation.

b. If contaminants are not aerobically biodegradable and confirmation borings have not been recently drilled during the past year, you should drill confirmation borings during the next reporting period if the entire site should be considered for closure.

c. If soil borings were drilled during the past year and soil contamination remains above acceptable levels, explain if the system effectiveness can be increased and/or if other options need to be considered to achieve cleanup criteria.

#### D. Additional Attachments

Attach the following to this form:

- Well and soil sample location map indicating all air extraction wells. If forced air injection wells are also in use, identify those wells. Appendix G
- If water table monitoring wells are present at the site, a map of well locations. Figure 2
- Time versus vapor phase contaminant concentration graph. N/A - SVE and GETS vapor is combined and sampled.
- Time versus cumulative contaminant removal graph. N/A - SVE and GETS vapor is combined and sampled.
- Groundwater elevations table, if water table wells are present at the site; also list screen lengths and elevations. Table 16
- Table of soil contaminant chemistry data. N/A
- Soil gas data, if gas probes are used to monitor subsurface conditions in locations other than where air is extracted. Appendix G
- System operational data table. Table 14

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

# Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

Page 10 of 28

## Section IS-2, Natural Attenuation (Passive Bioremediation) in Soil

N/A

### A. Effectiveness Evaluation

1. Soil gas information in the soil that is most contaminated from a permanently installed gas probe(s) or water table monitoring well(s).

a. Hydrocarbon levels: \_\_\_\_\_ ppm, with an FID

b. Oxygen levels: \_\_\_\_\_ percent

c. Carbon dioxide levels(specify ppm or percent): \_\_\_\_\_

d. Methane levels: \_\_\_\_\_ ppm

2. Soil gas information in background (uncontaminated soil) from permanently installed gas probe(s) or water table monitoring well(s):

a. Hydrocarbon levels: \_\_\_\_\_ ppm, with an FID

b. Oxygen levels: \_\_\_\_\_ percent

c. Carbon dioxide levels(specify ppm or percent): \_\_\_\_\_

d. Methane levels: \_\_\_\_\_ ppm

3. List the results of the single boring that had the highest levels of soil contamination during the last round of soil sampling, and the date those samples were collected. Since soil borings are only drilled periodically, list the most recent data even if the data is prior to this reporting period. Since this data is used to assess progress based on the most recent soil sampling event, do not list data from prior sampling events.

a. Total hydrocarbons (Specify if GRO and/or DRO): \_\_\_\_\_ µg/kg

b. Specific compounds (µg/kg):

i. Benzene: \_\_\_\_\_ µg/kg

ii. 1,2 Dichloroethane: \_\_\_\_\_ µg/kg

iii. Ethylbenzene: \_\_\_\_\_ µg/kg

iv. Toluene: \_\_\_\_\_ µg/kg

v. Total xylenes: \_\_\_\_\_ µg/kg

4. Is there any evidence that contaminants are leaching into groundwater?  Yes  No

If the answer is yes and if groundwater quality is not being monitored, explain:

5. Is site closure a viable option within 12 months from the date of this form?  Yes  No

6. Are there any modifications that can be made to the remediation to improve cost effectiveness?  Yes  No

If yes, explain:

### B. Additional Attachments

Attach the following to this form:

- Well and soil sample location map.
- Cross sections showing the water table, soil sampling locations, screened intervals for gas probes or water table wells, geologic contacts, and any former excavation boundaries.
- Graphs of contaminant concentrations, oxygen, carbon dioxide and methane levels over time.
- Groundwater elevations table, if water table wells are present at the site.
- Table of soil contaminant chemistry.
- Table of soil gas readings.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

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### Section IS-3, Other In Situ Soil Remediation Methods

N/A

#### A. Effectiveness Evaluation

1. Describe the method used to remediate soil at the site:

2. List all information required by the DNR for this remediation method for this site:

#### B. Additional Attachments

Attach the following to this form:

- Any other attachments required by the DNR for this remediation method.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

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### Section ES-1, Ex Situ Soil Treatment Using Biopiles

N/A

#### A. Effectiveness Evaluation

1. Volume of soil in the biopile (if multiple biopiles, list number of piles and total volume):

2. Monitoring used to assess progress and verify optimal conditions for biodegradation.

a. Vapor phase measurements of gases (average of all readings from most recent sampling event):

i. VOCs by FID: \_\_\_\_\_ ppm

ii. Oxygen: \_\_\_\_\_ percent

iii. Carbon dioxide: \_\_\_\_\_ percent

iv. Methane: \_\_\_\_\_ ppm

b. Soil temperature: \_\_\_\_\_ °F

c. Soil moisture sensors, if used: \_\_\_\_\_ percent

3. Treatment amendments added to the soil during construction:

a. Artificial nutrients, excluding manure.

i. Types and total pounds added:

ii. Nitrogen and phosphorous content of the added amendment: \_\_\_\_\_ percent

b. Manure: \_\_\_\_\_ total pounds

c. Natural organic materials (straw, wood chips, etc.)(type and total pounds):

4. Forced air biopiles only answer the following:

a. Total air flow rate of the ventilation system: \_\_\_\_\_ scfm

b. Average contaminant removal rate: \_\_\_\_\_ pounds per day

c. Average biodegradation rate based on oxygen utilization: \_\_\_\_\_ pounds per day

5. If soil samples have been taken to monitor progress, list results. Only list the most recent results. If none collected enter NA.

a. Total hydrocarbons. Specify if GRO and/or DRO: \_\_\_\_\_ µg/kg

b. Specific compounds (µg/kg):

i. Benzene: \_\_\_\_\_ µg/kg

ii. 1,2 Dichloroethane: \_\_\_\_\_ µg/kg

iii. Ethylbenzene: \_\_\_\_\_ µg/kg

iv. Toluene: \_\_\_\_\_ µg/kg

v. Total xylenes: \_\_\_\_\_ µg/kg

#### B. Additional Attachments

Attach the following to this form:

- Figure showing the construction details of the biopile and any sampling locations within the biopile.
- Table of soil contaminant chemistry data.
- Table of operational data.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018 To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

Page 13 of 28

### Section ES-2, Ex Situ Soil Treatment Using Landspreading/Thinspreading

N/A

#### A. Effectiveness Evaluation

1. Method used:  landspreading  thinspreading

**Note:** For purposes of this form, "landspreading" is the placement of contaminated soil on native topsoil, incorporation of that soil into the native soil and planting crops or other plants on it. The term "thinspreading" refers to placing contaminated soil on an impervious base for aeration.

2. Was any progress monitoring using field screening on soil conducted during this reporting period?  Yes  No

3. If the answer to A.2. (above) is yes:

i. List monitoring method:

ii. List monitoring results:

4. Is there any evidence of soil erosion at the landspreading/thinspreading location?  Yes  No

5. Spreading thickness: \_\_\_\_\_ inches

6. Type of crop planted (if thinspreading with no crop planted, so state):

7. Confirmation sampling date: \_\_\_\_\_ Anticipated confirmation sampling date: \_\_\_\_\_

8. Most recent soil sample results, if soil samples for laboratory analysis have been collected to monitor progress. Only list the highest result of the most recent sampling round. If no samples have been collected, enter NA.

a. Total hydrocarbons. Specify if GRO and/or DRO: \_\_\_\_\_  $\mu\text{g}/\text{kg}$

b. Specific compounds ( $\mu\text{g}/\text{kg}$ ):

i. Benzene: \_\_\_\_\_  $\mu\text{g}/\text{kg}$

ii. 1,2 Dichloroethane: \_\_\_\_\_  $\mu\text{g}/\text{kg}$

iii. Ethylbenzene: \_\_\_\_\_  $\mu\text{g}/\text{kg}$

iv. Toluene: \_\_\_\_\_  $\mu\text{g}/\text{kg}$

v. Total xylenes: \_\_\_\_\_  $\mu\text{g}/\text{kg}$

#### B. Additional Attachments

Attach the following to this form:

- Map of the landspreading/thinspreading area. If soil samples have been collected, specify locations of samples and dates of sampling.
- Table of soil contaminant chemistry data.
- Table of any field screening results with dates of sample collection.

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018 To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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### Section ES-3, Landfills

N/A

**Note:** Reporting forms or reporting requirements in a Department approved Operation and Maintenance Plan for a landfill may take the place of this form.

Specific Inspection Items	Potential Problem Areas	Status	Notes
Perimeter Security Fencing	Broken or missing wood slats, torn chain link fabric, barbed wire, other - list		
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative.		
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing.		
Final Cover Vegetation	Bare spots, stressed vegetation, deep rooted vegetation.		
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding.		
Evidence of Burrowing Animals	Damage to final cover, evidence of waste.		
Stormwater Drainage Channels	Gullies, erosion, debris, culvert blocked.		
Passive Landfill Gas Venting System	Damaged or blocked vent risers, stressed vegetation.		
Active Landfill Gas Extraction System	Damaged or blocked piping, cleanouts, other blower flare, knockouts, etc.		
Leachate Collection System	Pumps, connection piping, collection system piping, extraction wells, collection tanks, tanker truck loading system or sanitary sewer discharge piping.		
Access Road Cover Mowing; Tall Vegetation Removal	Ponding, rutting, erosion, cracked or damaged pavement. Mowing and tall vegetation removal done to specified vegetation.		

Summary of Deficiencies and/or Corrective Actions:

Site name: Madison-Kipp Corporation

Reporting period from: 07/01/2018

To: 12/31/2018

Days in period: 184

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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### B. Additional Attachments

N/A

Attach the following to this form:

- Any photographs documenting problems and maintenance activities.
- Maps, drawings showing site features requiring maintenance.
- Records for leachate pumping/discharge/hauling.
- Records for active gas extraction volumes.

**Appendix C**

**December 2018 WPDES DMR Submittal and  
Monthly Laboratory Reports (on CD)**

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# Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: MADISON KIPP CORPORATION  
 Contact Address: 708 Heartland Trail, Suite 3000  
 Madison, WI 53717  
 Facility Contact: Andrew Stehn, Project Engineer  
 Phone Number: 608-826-3665  
 Reporting Period: 12/01/2018 - 12/31/2018  
 Form Due Date: 01/21/2019  
 Permit Number: 0046566

Date Received:  
 DOC: 419064  
 FIN: 7960  
 FID: 113125320  
 Region: South Central Region  
 Permit Drafter: Trevor J Moen  
 Reviewer: Christopher A Dietrich  
 Office: Milwaukee

Sample Point	001	001	001	001	001	
Description	Surface Water Discharge					
Parameter	211	918	40	54	80	
Description	Flow Rate	Potassium Permanganate	Benzene	BETX, Total	Bromoform	
Units	gpd	mg/L	ug/L	ug/L	ug/L	
Sample Type	ESTIMATED	GRAB	GRAB	GRAB	GRAB	
Frequency	DAILY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	
Sample Results	Day 1	57600				
	2	57600				
	3	57600				
	4	57600				
	5	57600				
	6	57600				
	7	57600				
	8	57600				
	9	57600				
	10	24760				
	11	27818		<0.15	<0.40	<0.45
	12	57600				
	13	57600				
	14	57600				
	15	57600				
	16	57600				
	17	57600				
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	19	57600				
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	29	57600				
	30	57600				
	31	57600				

	Sample Point	001		001		001		001	
	Description	Surface Water Discharge		Surface Water Discharge		Surface Water Discharge		Surface Water Discharge	
	Parameter	211		918		40		54	
	Description	Flow Rate		Potassium Permanganate		Benzene		BETX, Total	
	Units	gpd		mg/L		ug/L		ug/L	
<b>Summary Values</b>	<b>Monthly Avg</b>	55579.935483871				0		0	
	<b>Daily Max</b>	57600				<0.15		<0.4	
	<b>Daily Min</b>	24760				<0.15		<0.4	
<b>Limit(s) in Effect</b>	<b>Monthly Avg</b>					50	0	750	0
<b>QA/QC Information</b>	<b>LOD</b>					0.15			
	<b>LOQ</b>					0.5			
	<b>QC Exceedance</b>	N		N		N		N	
	<b>Lab Certification</b>					999580010		999580010	

	<b>Sample Point</b>	001	001	001	001	001	
	<b>Description</b>	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge	
	<b>Parameter</b>	93	118	174	570	558	
	<b>Description</b>	Carbon tetrachloride	Chloroform	Dichlorobromo- methane (bromo- dichloromethane)	1,2-Dichloro- ethane	1,1-Dichloro- ethylene	
	<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L	
	<b>Sample Type</b>	GRAB	GRAB	GRAB	GRAB	GRAB	
	<b>Frequency</b>	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	
<b>Sample Results</b>	<b>Day 1</b>						
	<b>2</b>						
	<b>3</b>						
	<b>4</b>						
	<b>5</b>						
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	<b>7</b>						
	<b>8</b>						
	<b>9</b>						
	<b>10</b>						
	<b>11</b>		<0.38	<0.37	<0.37	<0.39	<0.39
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	<b>30</b>						
	<b>31</b>						

	<b>Sample Point</b>	001		001		001		001		001	
	<b>Description</b>	Surface Water Discharge		Surface Water Discharge		Surface Water Discharge		Surface Water Discharge		Surface Water Discharge	
	<b>Parameter</b>	93		118		174		570		558	
	<b>Description</b>	Carbon tetrachloride		Chloroform		Dichlorobromo- methane (bromo- dichloromethane)		1,2-Dichloro- ethane		1,1-Dichloro- ethylene	
	<b>Units</b>	ug/L		ug/L		ug/L		ug/L		ug/L	
<b>Summary Values</b>	<b>Monthly Avg</b>	0		0		0		0		0	
	<b>Daily Max</b>	<0.38		<0.37		<0.37		<0.39		<0.39	
	<b>Daily Min</b>	<0.38		<0.37		<0.37		<0.39		<0.39	
<b>Limit(s) in Effect</b>	<b>Monthly Avg</b>	150	0	120	0	120	0	180	0	50	0
<b>QA/QC Information</b>	<b>LOD</b>	0.38		0.37		0.37		0.39		0.39	
	<b>LOQ</b>	1		2		1		1		1	
	<b>QC Exceedance</b>	N		N		N		N		N	
	<b>Lab Certification</b>	999580010		999580010		999580010		999580010		999580010	

	<b>Sample Point</b>	001	001	001	001	001
	<b>Description</b>	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge
	<b>Parameter</b>	82	120	565	490	563
	<b>Description</b>	Methyl bromide	Chloromethane	1,1,2,2-Tetrachloro-ethane	Tetrachloroethylene	1,1,2-Trichloro-ethane
	<b>Units</b>	ug/L	ug/L	ug/L	ug/L	ug/L
	<b>Sample Type</b>	GRAB	GRAB	GRAB	GRAB	GRAB
	<b>Frequency</b>	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
<b>Sample Results</b>	<b>Day 1</b>					
	<b>2</b>					
	<b>3</b>					
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	<b>10</b>					
	<b>11</b>	<0.65	<0.32	<0.40	14	<0.35
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	<b>31</b>					

	<b>Sample Point</b>	001		001		001		001		001	
	<b>Description</b>	Surface Water Discharge		Surface Water Discharge		Surface Water Discharge		Surface Water Discharge		Surface Water Discharge	
	<b>Parameter</b>	82		120		565		490		563	
	<b>Description</b>	Methyl bromide		Chloromethane		1,1,2,2-Tetrachloro-ethane		Tetrachloroethylene		1,1,2-Trichloro- ethane	
	<b>Units</b>	ug/L		ug/L		ug/L		ug/L		ug/L	
<b>Summary Values</b>	<b>Monthly Avg</b>	0		0		0		14		0	
	<b>Daily Max</b>	<0.65		<0.32		<0.4		14		<0.35	
	<b>Daily Min</b>	<0.65		<0.32		<0.4		14		<0.35	
<b>Limit(s) in Effect</b>	<b>Monthly Avg</b>	120	0	120	0	50	0	50	0	50	0
<b>QA/QC Information</b>	<b>LOD</b>	0.65		0.32		0.4		0.37		0.35	
	<b>LOQ</b>	2		1		1		1		1	
	<b>QC Exceedance</b>	N		N		N		N		N	
	<b>Lab Certification</b>	999580010		999580010		999580010		999580010		999580010	

	<b>Sample Point</b>	001	001	001
	<b>Description</b>	Surface Water Discharge	Surface Water Discharge	Surface Water Discharge
	<b>Parameter</b>	561	508	517
	<b>Description</b>	1,1,1-Trichloro- ethane	Trichloro- ethylene	Vinyl chloride
	<b>Units</b>	ug/L	ug/L	ug/L
	<b>Sample Type</b>	GRAB	GRAB	GRAB
	<b>Frequency</b>	MONTHLY	MONTHLY	MONTHLY
<b>Sample Results</b>	<b>Day 1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
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	<b>10</b>			
	<b>11</b>	<0.38	3.9	<0.20
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	<b>Sample Point</b>	001		001		001	
	<b>Description</b>	Surface Water Discharge		Surface Water Discharge		Surface Water Discharge	
	<b>Parameter</b>	561		508		517	
	<b>Description</b>	1,1,1-Trichloro- ethane		Trichloro- ethylene		Vinyl chloride	
	<b>Units</b>	ug/L		ug/L		ug/L	
<b>Summary Values</b>	<b>Monthly Avg</b>	0		3.9		0	
	<b>Daily Max</b>	<0.38		3.9		<0.2	
	<b>Daily Min</b>	<0.38		3.9		<0.2	
<b>Limit(s) in Effect</b>	<b>Monthly Avg</b>	50	0	50	0	10	0
<b>QA/QC Information</b>	<b>LOD</b>	0.38		0.16		0.2	
	<b>LOQ</b>	1		0.5		1	
	<b>QC Exceedance</b>	N		N		N	
	<b>Lab Certification</b>	999580010		999580010		999580010	

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

General Remarks

Potassium Permanganate: Absent (Parameter visually monitored by TRC for neutralization and photo documentation can be provided upon request.

No BTEX parameters were reported above the laboratory LOD. The parameter with highest detection limit was reported.

The GETS was shutdown between 12/10/18 and 12/11/2018 for maintenance including cleaning of the air stripper system. TSS was analyzed and is included in the short report for this reporting event.

Laboratory Quality Control Comments

Submitted by astehn on 01/18/2019 1:33:17 PM

**Wastewater Discharge Monitoring Short Report**

**For DNR Use Only**

Facility Name : MADISON KIPP CORPORATION  
 Contact Address : 708 Heartland Trail, Suite 3000  
 Madison, WI 53717  
 Facility Contact : Andrew Stehn, Project Engineer  
 Phone Number : 608-826-3665  
 Reporting Period : 10/01/2018 - 12/31/2018  
 Form Due Date : 01/21/2019  
 Permit Number : **0046566**

Date Received:  
 DOC: 419063  
 FIN: 7960  
 FID: 113125320  
 Region: South Central Region  
 Permit Drafter: Trevor J Moen  
 Reviewer: Christopher A Dietrich  
 Office: Milwaukee

Sample Point	Parameter #	Parameter	Date Sample	Sample Type	Sample Results	Units	Limit Type	Limit	LOD	LOQ	QC Exceed?	Lab Certification
001	377	pH Field	10/17/2018	GRAB	8.29	su	Daily Max Daily Min	9(0) 6(0)			N	
001	651	Oil & Grease (Hexane)	12/11/2018	GRAB	1.9	mg/L	Daily Max	10(0)	1.4	5.2	N	999580010
001	457	Suspended Solids, Total	12/11/2018	GRAB	2.0	mg/L	Daily Max	40(0)	1.9	5	N	999580010
001	393	PAHs	12/11/2018	GRAB	<0.048	ug/L	Monthly Avg	0.10(0)			N	998020430
001	44	Benzo(a)pyrene	12/11/2018	GRAB	<0.024	ug/L	Monthly Avg	0.10(0)	0.024	0.048	N	998020430
001	307	Naphthalene	12/11/2018	GRAB	<0.048	ug/L	Monthly Avg	70(0)	0.048	0.095	N	998020430

## Wastewater Discharge Monitoring Short Report

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

### General Remarks

The Oil & Grease and TSS concentrations reported are between their method LOD and LOQ and are approximate values. The GETS effluent was sampled for BOD (<2.0 mg/L), Chloride(230 mg/L) and VOCs per the previous permit requirements. Further VOC data is included in the long report for this reporting period.

### Laboratory Quality Control Comments

Submitted by astehn on 01/18/2019 1:48:44 PM

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-148124-1

Client Project/Site: MadisonKipp - GETS 292257

For:

TRC Environmental Corporation.

708 Heartland Trail

Suite 3000

Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:

7/17/2018 7:51:53 AM

Sandie Fredrick, Project Manager II

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

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**Job ID: 500-148124-1**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

**Job Narrative  
500-148124-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 7/10/2018 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

**GC/MS VOA**

Method(s) 624: The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (500-148124-1). Elevated reporting limits (RLs) are provided.

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

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# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Client Sample ID: Influent

## Lab Sample ID: 500-148124-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	190		2.0	0.82	ug/L	2		624	Total/NA
Trichloroethene	210		1.0	0.33	ug/L	2		624	Total/NA
Tetrachloroethene - DL	1800		20	7.4	ug/L	20		624	Total/NA

## Client Sample ID: Effluent

## Lab Sample ID: 500-148124-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	17		1.0	0.41	ug/L	1		624	Total/NA
Tetrachloroethene	23		1.0	0.37	ug/L	1		624	Total/NA
Trichloroethene	5.7		0.50	0.16	ug/L	1		624	Total/NA

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-148124-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CHI

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-148124-1	Influent	Water	07/09/18 08:57	07/10/18 09:05
500-148124-2	Effluent	Water	07/09/18 09:05	07/10/18 09:05
500-148124-3	Trip Blank	Water	07/09/18 00:00	07/10/18 09:05

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

**Client Sample ID: Influent**

**Date Collected: 07/09/18 08:57**

**Date Received: 07/10/18 09:05**

**Lab Sample ID: 500-148124-1**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.29		1.0	0.29	ug/L			07/12/18 23:33	2
Bromoform	<0.89		2.0	0.89	ug/L			07/12/18 23:33	2
Carbon tetrachloride	<0.77		2.0	0.77	ug/L			07/12/18 23:33	2
Chloroform	<0.74		4.0	0.74	ug/L			07/12/18 23:33	2
<b>cis-1,2-Dichloroethene</b>	<b>190</b>		2.0	0.82	ug/L			07/12/18 23:33	2
Dichlorobromomethane	<0.74		2.0	0.74	ug/L			07/12/18 23:33	2
1,2-Dichloroethane	<0.78		2.0	0.78	ug/L			07/12/18 23:33	2
1,1-Dichloroethene	<0.78		2.0	0.78	ug/L			07/12/18 23:33	2
Ethylbenzene	<0.37		1.0	0.37	ug/L			07/12/18 23:33	2
Methyl bromide	<1.3		4.0	1.3	ug/L			07/12/18 23:33	2
Methyl chloride	<0.64		2.0	0.64	ug/L			07/12/18 23:33	2
Methyl tert-butyl ether	<0.79		2.0	0.79	ug/L			07/12/18 23:33	2
1,1,2,2-Tetrachloroethane	<0.80		2.0	0.80	ug/L			07/12/18 23:33	2
Toluene	<0.30		1.0	0.30	ug/L			07/12/18 23:33	2
trans-1,2-Dichloroethene	<0.70		2.0	0.70	ug/L			07/12/18 23:33	2
1,1,1-Trichloroethane	<0.76		2.0	0.76	ug/L			07/12/18 23:33	2
1,1,2-Trichloroethane	<0.70		2.0	0.70	ug/L			07/12/18 23:33	2
<b>Trichloroethene</b>	<b>210</b>		1.0	0.33	ug/L			07/12/18 23:33	2
Vinyl chloride	<0.41		2.0	0.41	ug/L			07/12/18 23:33	2
Xylenes, Total	<0.80		2.0	0.80	ug/L			07/12/18 23:33	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		71 - 120		07/12/18 23:33	2
1,2-Dichloroethane-d4 (Surr)	86		71 - 127		07/12/18 23:33	2
Toluene-d8 (Surr)	90		75 - 120		07/12/18 23:33	2

**Method: 624 - Volatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Tetrachloroethene</b>	<b>1800</b>		20	7.4	ug/L			07/13/18 00:02	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		71 - 120		07/13/18 00:02	20
1,2-Dichloroethane-d4 (Surr)	90		71 - 127		07/13/18 00:02	20
Toluene-d8 (Surr)	96		75 - 120		07/13/18 00:02	20

**Client Sample ID: Effluent**

**Date Collected: 07/09/18 09:05**

**Date Received: 07/10/18 09:05**

**Lab Sample ID: 500-148124-2**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/18 00:31	1
Bromoform	<0.45		1.0	0.45	ug/L			07/13/18 00:31	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/18 00:31	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/18 00:31	1
<b>cis-1,2-Dichloroethene</b>	<b>17</b>		1.0	0.41	ug/L			07/13/18 00:31	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			07/13/18 00:31	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/18 00:31	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/18 00:31	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/18 00:31	1

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Client Sample ID: Effluent

Date Collected: 07/09/18 09:05

Date Received: 07/10/18 09:05

## Lab Sample ID: 500-148124-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl bromide	<0.65		2.0	0.65	ug/L			07/13/18 00:31	1
Methyl chloride	<0.32		1.0	0.32	ug/L			07/13/18 00:31	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/18 00:31	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/18 00:31	1
<b>Tetrachloroethene</b>	<b>23</b>		1.0	0.37	ug/L			07/13/18 00:31	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/18 00:31	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/18 00:31	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/18 00:31	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/18 00:31	1
<b>Trichloroethene</b>	<b>5.7</b>		0.50	0.16	ug/L			07/13/18 00:31	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			07/13/18 00:31	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			07/13/18 00:31	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	98		71 - 120					07/13/18 00:31	1
1,2-Dichloroethane-d4 (Surr)	89		71 - 127					07/13/18 00:31	1
Toluene-d8 (Surr)	96		75 - 120					07/13/18 00:31	1

## Client Sample ID: Trip Blank

Date Collected: 07/09/18 00:00

Date Received: 07/10/18 09:05

## Lab Sample ID: 500-148124-3

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/13/18 01:00	1
Bromoform	<0.45		1.0	0.45	ug/L			07/13/18 01:00	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/13/18 01:00	1
Chloroform	<0.37		2.0	0.37	ug/L			07/13/18 01:00	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/13/18 01:00	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			07/13/18 01:00	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/13/18 01:00	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/13/18 01:00	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/13/18 01:00	1
Methyl bromide	<0.65		2.0	0.65	ug/L			07/13/18 01:00	1
Methyl chloride	<0.32		1.0	0.32	ug/L			07/13/18 01:00	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/13/18 01:00	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/13/18 01:00	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/13/18 01:00	1
Toluene	<0.15		0.50	0.15	ug/L			07/13/18 01:00	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/13/18 01:00	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/13/18 01:00	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/13/18 01:00	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/13/18 01:00	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			07/13/18 01:00	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			07/13/18 01:00	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	98		71 - 120					07/13/18 01:00	1
1,2-Dichloroethane-d4 (Surr)	92		71 - 127					07/13/18 01:00	1
Toluene-d8 (Surr)	97		75 - 120					07/13/18 01:00	1

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## Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## GC/MS VOA

### Analysis Batch: 440556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-148124-1	Influent	Total/NA	Water	624	
500-148124-1 - DL	Influent	Total/NA	Water	624	
500-148124-2	Effluent	Total/NA	Water	624	
500-148124-3	Trip Blank	Total/NA	Water	624	
MB 500-440556/29	Method Blank	Total/NA	Water	624	
LCS 500-440556/27	Lab Control Sample	Total/NA	Water	624	

# Surrogate Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (71-120)	DCA (71-127)	TOL (75-120)
500-148124-1	Influent	101	86	90
500-148124-1 - DL	Influent	100	90	96
500-148124-2	Effluent	98	89	96
500-148124-3	Trip Blank	98	92	97
LCS 500-440556/27	Lab Control Sample	93	80	101
MB 500-440556/29	Method Blank	98	86	97

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-440556/29**

**Matrix: Water**

**Analysis Batch: 440556**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			07/12/18 21:37	1
Bromoform	<0.45		1.0	0.45	ug/L			07/12/18 21:37	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/12/18 21:37	1
Chloroform	<0.37		2.0	0.37	ug/L			07/12/18 21:37	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/12/18 21:37	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			07/12/18 21:37	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/12/18 21:37	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/12/18 21:37	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/12/18 21:37	1
Methyl bromide	<0.65		2.0	0.65	ug/L			07/12/18 21:37	1
Methyl chloride	<0.32		1.0	0.32	ug/L			07/12/18 21:37	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/12/18 21:37	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/12/18 21:37	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/12/18 21:37	1
Toluene	<0.15		0.50	0.15	ug/L			07/12/18 21:37	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/12/18 21:37	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/12/18 21:37	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/12/18 21:37	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/12/18 21:37	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			07/12/18 21:37	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			07/12/18 21:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		71 - 120		07/12/18 21:37	1
1,2-Dichloroethane-d4 (Surr)	86		71 - 127		07/12/18 21:37	1
Toluene-d8 (Surr)	97		75 - 120		07/12/18 21:37	1

**Lab Sample ID: LCS 500-440556/27**

**Matrix: Water**

**Analysis Batch: 440556**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	42.7		ug/L		85	37 - 151
Bromoform	50.0	41.2		ug/L		82	45 - 169
Carbon tetrachloride	50.0	41.1		ug/L		82	70 - 140
Chloroform	50.0	40.3		ug/L		81	51 - 138
cis-1,2-Dichloroethene	50.0	43.0		ug/L		86	70 - 130
Dichlorobromomethane	50.0	41.0		ug/L		82	35 - 155
1,2-Dichloroethane	50.0	39.4		ug/L		79	49 - 155
1,1-Dichloroethene	50.0	43.2		ug/L		86	10 - 234
Ethylbenzene	50.0	51.4		ug/L		103	37 - 162
Methyl bromide	50.0	55.1		ug/L		110	10 - 242
Methyl chloride	50.0	61.0		ug/L		122	10 - 273
m&p-Xylene	50.0	50.2		ug/L		100	
o-Xylene	50.0	50.3		ug/L		101	
1,1,2,2-Tetrachloroethane	50.0	46.5		ug/L		93	46 - 157
Tetrachloroethene	50.0	48.0		ug/L		96	64 - 148
Toluene	50.0	50.3		ug/L		101	47 - 150

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-440556/27

Matrix: Water

Analysis Batch: 440556

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	43.4		ug/L		87	54 - 156
1,1,1-Trichloroethane	50.0	40.3		ug/L		81	52 - 162
1,1,2-Trichloroethane	50.0	46.7		ug/L		93	52 - 150
Trichloroethene	50.0	43.9		ug/L		88	71 - 157
Vinyl chloride	50.0	41.2		ug/L		82	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		71 - 120
1,2-Dichloroethane-d4 (Surr)	80		71 - 127
Toluene-d8 (Surr)	101		75 - 120

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Client Sample ID: Influent

Date Collected: 07/09/18 08:57

Date Received: 07/10/18 09:05

## Lab Sample ID: 500-148124-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		2	440556	07/12/18 23:33	JDD	TAL CHI
Total/NA	Analysis	624	DL	20	440556	07/13/18 00:02	JDD	TAL CHI

## Client Sample ID: Effluent

Date Collected: 07/09/18 09:05

Date Received: 07/10/18 09:05

## Lab Sample ID: 500-148124-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	440556	07/13/18 00:31	JDD	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 07/09/18 00:00

Date Received: 07/10/18 09:05

## Lab Sample ID: 500-148124-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	440556	07/13/18 01:00	JDD	TAL CHI

### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-148124-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18 *

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\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604  
Phone: 708.534.5200 Fax: 708.534.



500-148124 COC

Report To Andy Stehn (optional)  
Contact: \_\_\_\_\_  
Company: TRC  
Address: 708 Heartland Tr  
Address: Madison WI 53717  
Phone: (608) 826-3665  
Fax: \_\_\_\_\_  
E-Mail: astehn@trcsolutions.com

Bill To \_\_\_\_\_ (optional)  
Contact: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: 7/19/18  
PO#/Reference# 117373-117375

## Chain of Custody Record

Lab Job #: 500-148124  
Chain of Custody Number: 157575  
Page 1 of 1  
Temperature °C of Cooler: 0.5 → 2.0

Client		Client Project #		Preservative														Preservative Key		
<u>MKC</u>		<u>292257</u>		<u>1</u>														1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Lab Project #		Parameter																
<u>GETS Monitoring</u>				<u>VOC's</u>																
Project Location/State		Lab Project #																		
<u>Madison WI</u>																				
Sampler		Lab PM																		
<u>J. Roelke</u>		<u>Sandi Fredrick</u>																		
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix													Comments	
			Date	Time																
<u>1</u>		<u>Influent</u>	<u>7/19/18</u>	<u>857</u>	<u>3</u>	<u>W</u>	<u>X</u>													
<u>2</u>		<u>Effluent</u>	<u>7/19/18</u>	<u>905</u>	<u>3</u>	<u>W</u>	<u>X</u>													
<u>3</u>		<u>Trip Blank</u>	<u>6/28/18</u>	<u>-</u>	<u>1</u>	<u>W</u>	<u>X</u>													

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>J. Roelke</u> Company <u>TRC</u> Date <u>7/19/18</u> Time <u>1430</u>	Received By <u>Shawn</u> Company <u>TRC</u> Date <u>7/10/18</u> Time <u>0905</u>
Relinquished By _____ Company _____ Date _____ Time _____	Received By _____ Company _____ Date _____ Time _____
Relinquished By _____ Company _____ Date _____ Time _____	Received By _____ Company _____ Date _____ Time _____

Lab Courier: \_\_\_\_\_  
Shipped: FedEx  
Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
W - Water SO - Soil  
S - Soil L - Leachate  
SL - Sludge WI - Wipe  
MS - Miscellaneous DW - Drinking Water  
OL - Oil O - Other  
A - Air

Client Comments

VOC list attached

Lab Comments:

Parameter	Method
<b>VOCs</b>	
Bromoform	624
Carbon Tetrachloride	624
Dichlorobromomethane	624
1,2-Dichloroethane	624
1,1-Dichloroethylene	624
Methyl Bromide	624
Methyl Chloride	624
1,1,2,2-Tetrachloroethane	624
Tetrachloroethylene	624
1,1,2-Trichloroethane	624
1,1,1-Trichloroethane	624
Trichloroethylene	624
Vinyl Chloride	624
Cis-1,2-Dichloroethene	624
Trans-1,2-Dichloroethene	624
<del>TSS</del>	
<del>Suspended Solids, Total</del>	<del>2540D</del>
<del><b>BTEX</b></del>	
<del>Benzene</del>	
<del>Toluene</del>	
<del>Ethylbenzene</del>	624
<del>Xylenes</del>	

7/9/18  
3AR



## Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-148124-1

**Login Number: 148124**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-149102-1

Client Project/Site: MadisonKipp - GETS 292257

For:

TRC Environmental Corporation.

708 Heartland Trail

Suite 3000

Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:

7/31/2018 5:28:49 PM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

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results through

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[www.testamericainc.com](http://www.testamericainc.com)

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

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**Job ID: 500-149102-1**

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**Laboratory: TestAmerica Chicago**

---

**Narrative**

**Job Narrative**  
**500-149102-1**

**Comments**

No additional comments.

**Receipt**

The sample was received on 7/27/2018 10:25 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

**General Chemistry**

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

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# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

**Client Sample ID: Effluent**

**Lab Sample ID: 500-149102-1**

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

---

Method	Method Description	Protocol	Laboratory
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI

---

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-149102-1	Effluent	Water	07/26/18 14:30	07/27/18 10:25

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

**Client Sample ID: Effluent**

**Date Collected: 07/26/18 14:30**

**Date Received: 07/27/18 10:25**

**Lab Sample ID: 500-149102-1**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			07/31/18 12:28	1

- 1
- 2
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## Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

## General Chemistry

### Analysis Batch: 443297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149102-1	Effluent	Total/NA	Water	SM 2540D	
MB 500-443297/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-443297/2	Lab Control Sample	Total/NA	Water	SM 2540D	
500-149102-1 DU	Effluent	Total/NA	Water	SM 2540D	

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# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID: MB 500-443297/1**  
**Matrix: Water**  
**Analysis Batch: 443297**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			07/31/18 12:05	1

**Lab Sample ID: LCS 500-443297/2**  
**Matrix: Water**  
**Analysis Batch: 443297**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	196		mg/L		98	80 - 120

**Lab Sample ID: 500-149102-1 DU**  
**Matrix: Water**  
**Analysis Batch: 443297**

**Client Sample ID: Effluent**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	<1.9		<1.9		mg/L		NC	5

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

**Client Sample ID: Effluent**

**Date Collected: 07/26/18 14:30**

**Date Received: 07/27/18 10:25**

**Lab Sample ID: 500-149102-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	443297	(Start) 07/31/18 12:28 (End) 07/31/18 12:30	SMO	TAL CHI

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-149102-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18 *

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\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: ANDREW STEHN  
 Company: TRC  
 Address: 708 HEARLAND TRC  
 Address: Suite 3000  
 Phone: 608-826-3665  
 Fax:  
 E-Mail: astehn@trcsolutions.com

Bill To (optional)  
 Contact:  
 Company:  
 Address: Same as Rpt to.  
 Address:  
 Phone:  
 Fax: 500-149102 COC  
 PO#/Reference#: 117375

## Chain of Custody Record

Lab Job #: 500-149102  
 Chain of Custody Number:  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: 0.8, 7.8

Client		Client Project #		Preservative		Parameter		Project Location/State		Lab Project #		Sampler		Lab PM		Preservative Key	
MUC/TRC		26 292257		8				Madison				ANDREW STEHN				1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Project Location/State		Sampler		Date		Time		# of Containers		Matrix		Comments			
Madison Kipp Corp. GETS		WI		ANDREW STEHN		7/26/18		1430		1		W		X			
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix											
1		Effluent	7/26/18	1430	1	W	TSS										

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days  5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other  
 Requested Due Date \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>astehn</u>	Company <u>TRC</u>	Date <u>8/26/18</u>	Time <u>1500</u>	Received By <u>[Signature]</u>	Company <u>TRC</u>	Date <u>7-27-18</u>	Time <u>1025</u>	Lab Courier
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments

Lab Comments:

## Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-149102-1

**Login Number: 149102**

**List Number: 1**

**Creator: James, Jeff A**

**List Source: TestAmerica Chicago**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-150206-1  
Client Project/Site: MadisonKipp - GETS 292257

For:  
TRC Environmental Corporation.  
708 Heartland Trail  
Suite 3000  
Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:  
8/23/2018 2:03:26 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

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**Job ID: 500-150206-1**

---

**Laboratory: TestAmerica Chicago**

## Narrative

---

**Job Narrative**  
**500-150206-1**

## Comments

No additional comments.

## Receipt

The samples were received on 8/21/2018 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

## GC/MS VOA

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

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# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Client Sample ID: Influent

Lab Sample ID: 500-150206-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	450		5.0	2.0	ug/L	5		624	Total/NA
Toluene	2.3	J	2.5	0.76	ug/L	5		624	Total/NA
trans-1,2-Dichloroethene	7.2		5.0	1.7	ug/L	5		624	Total/NA
Trichloroethene	300		2.5	0.82	ug/L	5		624	Total/NA
Vinyl chloride	4.0	J	5.0	1.0	ug/L	5		624	Total/NA
Tetrachloroethene - DL	1500		50	19	ug/L	50		624	Total/NA

## Client Sample ID: Effluent

Lab Sample ID: 500-150206-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	29		1.0	0.41	ug/L	1		624	Total/NA
Tetrachloroethene	18		1.0	0.37	ug/L	1		624	Total/NA
Toluene	0.28	J	0.50	0.15	ug/L	1		624	Total/NA
Trichloroethene	7.4		0.50	0.16	ug/L	1		624	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 500-150206-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CHI

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-150206-1	Influent	Water	08/20/18 10:00	08/21/18 09:25
500-150206-2	Effluent	Water	08/20/18 09:50	08/21/18 09:25
500-150206-3	Trip Blank	Water	08/20/18 00:00	08/21/18 09:25

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

**Client Sample ID: Influent**

**Date Collected: 08/20/18 10:00**

**Date Received: 08/21/18 09:25**

**Lab Sample ID: 500-150206-1**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.73		2.5	0.73	ug/L			08/22/18 12:53	5
Bromoform	<2.2		5.0	2.2	ug/L			08/22/18 12:53	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			08/22/18 12:53	5
Chloroform	<1.9		10	1.9	ug/L			08/22/18 12:53	5
<b>cis-1,2-Dichloroethene</b>	<b>450</b>		5.0	2.0	ug/L			08/22/18 12:53	5
Dichlorobromomethane	<1.9		5.0	1.9	ug/L			08/22/18 12:53	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			08/22/18 12:53	5
1,1-Dichloroethene	<2.0		5.0	2.0	ug/L			08/22/18 12:53	5
Ethylbenzene	<0.92		2.5	0.92	ug/L			08/22/18 12:53	5
Methyl bromide	<3.2		10	3.2	ug/L			08/22/18 12:53	5
Methyl chloride	<1.6		5.0	1.6	ug/L			08/22/18 12:53	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			08/22/18 12:53	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			08/22/18 12:53	5
<b>Toluene</b>	<b>2.3 J</b>		2.5	0.76	ug/L			08/22/18 12:53	5
<b>trans-1,2-Dichloroethene</b>	<b>7.2</b>		5.0	1.7	ug/L			08/22/18 12:53	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			08/22/18 12:53	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			08/22/18 12:53	5
<b>Trichloroethene</b>	<b>300</b>		2.5	0.82	ug/L			08/22/18 12:53	5
<b>Vinyl chloride</b>	<b>4.0 J</b>		5.0	1.0	ug/L			08/22/18 12:53	5
Xylenes, Total	<2.0		5.0	2.0	ug/L			08/22/18 12:53	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		71 - 120					08/22/18 12:53	5
1,2-Dichloroethane-d4 (Surr)	91		71 - 127					08/22/18 12:53	5
Toluene-d8 (Surr)	93		75 - 120					08/22/18 12:53	5

**Method: 624 - Volatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Tetrachloroethene</b>	<b>1500</b>		50	19	ug/L			08/22/18 13:19	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		71 - 120					08/22/18 13:19	50
1,2-Dichloroethane-d4 (Surr)	93		71 - 127					08/22/18 13:19	50
Toluene-d8 (Surr)	92		75 - 120					08/22/18 13:19	50

**Client Sample ID: Effluent**

**Date Collected: 08/20/18 09:50**

**Date Received: 08/21/18 09:25**

**Lab Sample ID: 500-150206-2**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/22/18 13:45	1
Bromoform	<0.45		1.0	0.45	ug/L			08/22/18 13:45	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/22/18 13:45	1
Chloroform	<0.37		2.0	0.37	ug/L			08/22/18 13:45	1
<b>cis-1,2-Dichloroethene</b>	<b>29</b>		1.0	0.41	ug/L			08/22/18 13:45	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			08/22/18 13:45	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/22/18 13:45	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/22/18 13:45	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/22/18 13:45	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Client Sample ID: Effluent

Date Collected: 08/20/18 09:50

Date Received: 08/21/18 09:25

## Lab Sample ID: 500-150206-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl bromide	<0.65		2.0	0.65	ug/L			08/22/18 13:45	1
Methyl chloride	<0.32		1.0	0.32	ug/L			08/22/18 13:45	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/22/18 13:45	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/22/18 13:45	1
<b>Tetrachloroethene</b>	<b>18</b>		1.0	0.37	ug/L			08/22/18 13:45	1
<b>Toluene</b>	<b>0.28 J</b>		0.50	0.15	ug/L			08/22/18 13:45	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/22/18 13:45	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/22/18 13:45	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/22/18 13:45	1
<b>Trichloroethene</b>	<b>7.4</b>		0.50	0.16	ug/L			08/22/18 13:45	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/22/18 13:45	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			08/22/18 13:45	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	90		71 - 120					08/22/18 13:45	1
1,2-Dichloroethane-d4 (Surr)	98		71 - 127					08/22/18 13:45	1
Toluene-d8 (Surr)	91		75 - 120					08/22/18 13:45	1

## Client Sample ID: Trip Blank

Date Collected: 08/20/18 00:00

Date Received: 08/21/18 09:25

## Lab Sample ID: 500-150206-3

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/22/18 11:09	1
Bromoform	<0.45		1.0	0.45	ug/L			08/22/18 11:09	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/22/18 11:09	1
Chloroform	<0.37		2.0	0.37	ug/L			08/22/18 11:09	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/22/18 11:09	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			08/22/18 11:09	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/22/18 11:09	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/22/18 11:09	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/22/18 11:09	1
Methyl bromide	<0.65		2.0	0.65	ug/L			08/22/18 11:09	1
Methyl chloride	<0.32		1.0	0.32	ug/L			08/22/18 11:09	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/22/18 11:09	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/22/18 11:09	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/22/18 11:09	1
Toluene	<0.15		0.50	0.15	ug/L			08/22/18 11:09	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/22/18 11:09	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/22/18 11:09	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/22/18 11:09	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/22/18 11:09	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/22/18 11:09	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			08/22/18 11:09	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93		71 - 120					08/22/18 11:09	1
1,2-Dichloroethane-d4 (Surr)	92		71 - 127					08/22/18 11:09	1
Toluene-d8 (Surr)	92		75 - 120					08/22/18 11:09	1

TestAmerica Chicago

# Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## GC/MS VOA

### Analysis Batch: 446455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150206-1	Influent	Total/NA	Water	624	
500-150206-1 - DL	Influent	Total/NA	Water	624	
500-150206-2	Effluent	Total/NA	Water	624	
500-150206-3	Trip Blank	Total/NA	Water	624	
MB 500-446455/8	Method Blank	Total/NA	Water	624	
LCS 500-446455/6	Lab Control Sample	Total/NA	Water	624	

# Surrogate Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (71-120)	DCA (71-127)	TOL (75-120)
500-150206-1	Influent	91	91	93
500-150206-1 - DL	Influent	91	93	92
500-150206-2	Effluent	90	98	91
500-150206-3	Trip Blank	93	92	92
LCS 500-446455/6	Lab Control Sample	86	91	94
MB 500-446455/8	Method Blank	96	96	93

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-446455/8**

**Matrix: Water**

**Analysis Batch: 446455**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/22/18 10:42	1
Bromoform	<0.45		1.0	0.45	ug/L			08/22/18 10:42	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/22/18 10:42	1
Chloroform	<0.37		2.0	0.37	ug/L			08/22/18 10:42	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/22/18 10:42	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			08/22/18 10:42	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/22/18 10:42	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/22/18 10:42	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/22/18 10:42	1
Methyl bromide	<0.65		2.0	0.65	ug/L			08/22/18 10:42	1
Methyl chloride	<0.32		1.0	0.32	ug/L			08/22/18 10:42	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/22/18 10:42	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/22/18 10:42	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/22/18 10:42	1
Toluene	<0.15		0.50	0.15	ug/L			08/22/18 10:42	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/22/18 10:42	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/22/18 10:42	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/22/18 10:42	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/22/18 10:42	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/22/18 10:42	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			08/22/18 10:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		71 - 120		08/22/18 10:42	1
1,2-Dichloroethane-d4 (Surr)	96		71 - 127		08/22/18 10:42	1
Toluene-d8 (Surr)	93		75 - 120		08/22/18 10:42	1

**Lab Sample ID: LCS 500-446455/6**

**Matrix: Water**

**Analysis Batch: 446455**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	48.7		ug/L		97	37 - 151
Bromoform	50.0	44.9		ug/L		90	45 - 169
Carbon tetrachloride	50.0	50.8		ug/L		102	70 - 140
Chloroform	50.0	48.7		ug/L		97	51 - 138
cis-1,2-Dichloroethene	50.0	49.2		ug/L		98	70 - 130
Dichlorobromomethane	50.0	46.3		ug/L		93	35 - 155
1,2-Dichloroethane	50.0	45.9		ug/L		92	49 - 155
1,1-Dichloroethene	50.0	51.3		ug/L		103	10 - 234
Ethylbenzene	50.0	47.0		ug/L		94	37 - 162
Methyl bromide	50.0	41.7		ug/L		83	10 - 242
Methyl chloride	50.0	52.5		ug/L		105	10 - 273
m&p-Xylene	50.0	48.0		ug/L		96	
o-Xylene	50.0	48.1		ug/L		96	
1,1,2,2-Tetrachloroethane	50.0	40.5		ug/L		81	46 - 157
Tetrachloroethene	50.0	53.5		ug/L		107	64 - 148
Toluene	50.0	47.7		ug/L		95	47 - 150

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-446455/6

Matrix: Water

Analysis Batch: 446455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	53.9		ug/L		108	54 - 156
1,1,1-Trichloroethane	50.0	50.6		ug/L		101	52 - 162
1,1,2-Trichloroethane	50.0	49.8		ug/L		100	52 - 150
Trichloroethene	50.0	50.6		ug/L		101	71 - 157
Vinyl chloride	50.0	54.9		ug/L		110	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		71 - 120
1,2-Dichloroethane-d4 (Surr)	91		71 - 127
Toluene-d8 (Surr)	94		75 - 120

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Client Sample ID: Influent

Date Collected: 08/20/18 10:00

Date Received: 08/21/18 09:25

## Lab Sample ID: 500-150206-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		5	446455	08/22/18 12:53	PMF	TAL CHI
Total/NA	Analysis	624	DL	50	446455	08/22/18 13:19	PMF	TAL CHI

## Client Sample ID: Effluent

Date Collected: 08/20/18 09:50

Date Received: 08/21/18 09:25

## Lab Sample ID: 500-150206-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	446455	08/22/18 13:45	PMF	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 08/20/18 00:00

Date Received: 08/21/18 09:25

## Lab Sample ID: 500-150206-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	446455	08/22/18 11:09	PMF	TAL CHI

### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150206-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

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North Canton, OH 44720  
Phone: 330.497.9396 Fax: 330.497.0772

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact		Project Manager: <u>Andy Stehn</u>		Site Contact: <u>Andy Stehn</u>		Date: <u>8/20/18</u>		COC No: <u>155772</u>	
Company Name: <u>TRC</u>		Tel/Fax: <u>(608) 826-3665</u>		Lab Contact: <u>Sandy Froelock</u>		Carrier: <u>Fed Ex</u>		1 of 1 COCs	
Address: <u>708 Heathland Tr</u>		Analysis Turnaround Time							
City/State/Zip: <u>Madison WI 53717</u>		<input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____							
Phone: <u>(608) 826-3665</u>		<input type="checkbox"/> 2 weeks <input checked="" type="checkbox"/> 1 week <u>ans</u> <input checked="" type="checkbox"/> 2 days <input type="checkbox"/> 1 day							
Project Name: <u>MKC</u>		Filtered Sample (Y/N) <u>NO</u> Perform MS / MSD (Y/N) <u>NO</u> 500-150206 COC							
Site: <u>Madison WI</u>									
P O # <u>117375</u>									
For Lab Use Only:		Sample Specific Notes:							
Walk-in Client:		Job / SDG No.: <u>500-150206</u>							
Lab Sampling:									
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)		
<u>Influent</u>	<u>8/18</u>	<u>1000</u>	<u>G</u>	<u>W</u>	<u>3</u>	<u>N</u>	<u>X</u>	<u>See attached sheet</u>	
<u>Effluent</u>	<u>8/18</u>	<u>0950</u>	<u>G</u>	<u>W</u>	<u>3</u>	<u>N</u>	<u>X</u>	<u>See attached sheet</u>	
<u>Trip Blank</u>	<u>4/24/18</u>	<u>-</u>	<u>G</u>	<u>W</u>	<u>1</u>	<u>N</u>	<u>X</u>		
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other									
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: <u>234393234394</u>		Cooler Temp. (°C): Obs'd: <u>3.3</u> Corr'd: <u>3.3</u>		Therm ID No.:			
Relinquished by: <u>Andy Stehn TRC</u>		Company: <u>TRC</u>		Date/Time: <u>8/20/18</u>		Received by:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received in laboratory by: <u>Shawn Scott TRC-CHT</u>		Date/Time: <u>8/21/18 0925</u>	

Parameter	Method
<b>VOCs</b>	
Bromoform	624
Carbon Tetrachloride	624
Dichlorobromomethane	624
1,2-Dichloroethane	624
1,1-Dichloroethylene	624
Methyl Bromide	624
Methyl Chloride	624
1,1,2,2-Tetrachloroethane	624
Tetrachloroethylene	624
1,1,2-Trichloroethane	624
1,1,1-Trichloroethane	624
Trichloroethylene	624
Vinyl Chloride	624
Cis-1,2-Dichloroethene	624
Trans-1,2-Dichloroethene	624
<b>TSS</b>	
Suspended Solids, Total	2540D
<b>BTEX</b>	
Benzene	624
Toluene	
Ethylbenzene	
Xylenes	



## Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-150206-1

**Login Number: 150206**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-150926-1

Client Project/Site: MadisonKipp - GETS 292257

For:

TRC Environmental Corporation.

708 Heartland Trail

Suite 3000

Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:

9/12/2018 4:43:17 PM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through

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Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

**Job ID: 500-150926-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-150926-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/5/2018 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2° C.

#### GC/MS VOA

Method(s) 624: The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (500-150926-1). Elevated reporting limits (RLs) are provided.

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

#### GC/MS Semi VOA

Method(s) 625 SIM: The method blank for preparation batch 490-541136 and analytical batch 490-541218 contained Phenanthrene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 625 SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-541136 and analytical batch 490-541218.

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

#### General Chemistry

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

#### Organic Prep

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

# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Client Sample ID: Influent

## Lab Sample ID: 500-150926-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	450		5.0	2.0	ug/L	5		624	Total/NA
trans-1,2-Dichloroethene	7.2		5.0	1.7	ug/L	5		624	Total/NA
Trichloroethene	290		2.5	0.82	ug/L	5		624	Total/NA
Vinyl chloride	2.9	J	5.0	1.0	ug/L	5		624	Total/NA
Tetrachloroethene - DL	1300		50	19	ug/L	50		624	Total/NA
Phenanthrene	0.092	J B	0.095	0.047	ug/L	1		625 SIM	Total/NA
Chloride	260		20	17	mg/L	100		300.0	Total/NA
Total Suspended Solids	2.0	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA

## Client Sample ID: Effluent

## Lab Sample ID: 500-150926-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	31		1.0	0.41	ug/L	1		624	Total/NA
Tetrachloroethene	20		1.0	0.37	ug/L	1		624	Total/NA
Trichloroethene	7.6		0.50	0.16	ug/L	1		624	Total/NA
Phenanthrene	0.075	J B	0.098	0.049	ug/L	1		625 SIM	Total/NA
Chloride	260		20	17	mg/L	100		300.0	Total/NA
Total Suspended Solids	2.5	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-150926-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CHI
625 SIM	Semivolatile Organic Compounds GC/MS (SIM)	40CFR136A	TAL NSH
1664B	HEM and SGT-HEM	1664B	TAL CHI
300.0	Anions, Ion Chromatography	MCAWW	TAL CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI
SM 5210B	BOD, 5-Day	SM	TAL CHI
1664B	HEM and SGT-HEM (SPE)	1664B	TAL CHI
625	Liquid-Liquid Extraction	40CFR136A	TAL NSH

#### Protocol References:

1664B = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

#### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-150926-1	Influent	Water	09/04/18 15:15	09/05/18 09:10
500-150926-2	Effluent	Water	09/04/18 15:35	09/05/18 09:10
500-150926-3	Trip Blank	Water	09/04/18 00:00	09/05/18 09:10

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Client Sample ID: Influent

Date Collected: 09/04/18 15:15

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-1

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.73		2.5	0.73	ug/L			09/11/18 11:49	5
Bromoform	<2.2		5.0	2.2	ug/L			09/11/18 11:49	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			09/11/18 11:49	5
Chloroform	<1.9		10	1.9	ug/L			09/11/18 11:49	5
<b>cis-1,2-Dichloroethene</b>	<b>450</b>		5.0	2.0	ug/L			09/11/18 11:49	5
Dichlorobromomethane	<1.9		5.0	1.9	ug/L			09/11/18 11:49	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			09/11/18 11:49	5
1,1-Dichloroethene	<2.0		5.0	2.0	ug/L			09/11/18 11:49	5
Ethylbenzene	<0.92		2.5	0.92	ug/L			09/11/18 11:49	5
Methyl bromide	<3.2		10	3.2	ug/L			09/11/18 11:49	5
Methyl chloride	<1.6		5.0	1.6	ug/L			09/11/18 11:49	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			09/11/18 11:49	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			09/11/18 11:49	5
Toluene	<0.76		2.5	0.76	ug/L			09/11/18 11:49	5
<b>trans-1,2-Dichloroethene</b>	<b>7.2</b>		5.0	1.7	ug/L			09/11/18 11:49	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			09/11/18 11:49	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			09/11/18 11:49	5
<b>Trichloroethene</b>	<b>290</b>		2.5	0.82	ug/L			09/11/18 11:49	5
<b>Vinyl chloride</b>	<b>2.9 J</b>		5.0	1.0	ug/L			09/11/18 11:49	5
Xylenes, Total	<2.0		5.0	2.0	ug/L			09/11/18 11:49	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93		71 - 120					09/11/18 11:49	5
1,2-Dichloroethane-d4 (Surr)	100		71 - 127					09/11/18 11:49	5
Toluene-d8 (Surr)	94		75 - 120					09/11/18 11:49	5

### Method: 624 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Tetrachloroethene</b>	<b>1300</b>		50	19	ug/L			09/11/18 12:18	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92		71 - 120					09/11/18 12:18	50
1,2-Dichloroethane-d4 (Surr)	100		71 - 127					09/11/18 12:18	50
Toluene-d8 (Surr)	95		75 - 120					09/11/18 12:18	50

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.024		0.047	0.024	ug/L		09/07/18 05:46	09/07/18 18:12	1
Benzo[a]pyrene	<0.024		0.047	0.024	ug/L		09/07/18 05:46	09/07/18 18:12	1
Benzo[b]fluoranthene	<0.024		0.047	0.024	ug/L		09/07/18 05:46	09/07/18 18:12	1
Benzo[g,h,i]perylene	<0.047		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1
Benzo[k]fluoranthene	<0.047		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1
Chrysene	<0.047		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1
Dibenz(a,h)anthracene	<0.024		0.047	0.024	ug/L		09/07/18 05:46	09/07/18 18:12	1
Fluoranthene	<0.047		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1
Indeno[1,2,3-cd]pyrene	<0.024		0.047	0.024	ug/L		09/07/18 05:46	09/07/18 18:12	1
Naphthalene	<0.047		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1
<b>Phenanthrene</b>	<b>0.092 J B</b>		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1
Pyrene	<0.047		0.095	0.047	ug/L		09/07/18 05:46	09/07/18 18:12	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Client Sample ID: Influent

Date Collected: 09/04/18 15:15

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-1

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	43		27 - 120	09/07/18 05:46	09/07/18 18:12	1
Terphenyl-d14	83		13 - 120	09/07/18 05:46	09/07/18 18:12	1
2-Fluorobiphenyl (Surr)	55		10 - 120	09/07/18 05:46	09/07/18 18:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<1.4		5.2	1.4	mg/L		09/07/18 17:18	09/07/18 18:30	1
<b>Chloride</b>	<b>260</b>		20	17	mg/L			09/10/18 21:49	100
<b>Total Suspended Solids</b>	<b>2.0</b>	<b>J</b>	5.0	1.9	mg/L			09/10/18 11:40	1
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			09/05/18 18:59	1

## Client Sample ID: Effluent

Date Collected: 09/04/18 15:35

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			09/11/18 12:45	1
Bromoform	<0.45		1.0	0.45	ug/L			09/11/18 12:45	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/11/18 12:45	1
Chloroform	<0.37		2.0	0.37	ug/L			09/11/18 12:45	1
<b>cis-1,2-Dichloroethene</b>	<b>31</b>		1.0	0.41	ug/L			09/11/18 12:45	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			09/11/18 12:45	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/11/18 12:45	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/11/18 12:45	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/11/18 12:45	1
Methyl bromide	<0.65		2.0	0.65	ug/L			09/11/18 12:45	1
Methyl chloride	<0.32		1.0	0.32	ug/L			09/11/18 12:45	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/11/18 12:45	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/11/18 12:45	1
<b>Tetrachloroethene</b>	<b>20</b>		1.0	0.37	ug/L			09/11/18 12:45	1
Toluene	<0.15		0.50	0.15	ug/L			09/11/18 12:45	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/11/18 12:45	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/11/18 12:45	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/11/18 12:45	1
<b>Trichloroethene</b>	<b>7.6</b>		0.50	0.16	ug/L			09/11/18 12:45	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/11/18 12:45	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			09/11/18 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		71 - 120		09/11/18 12:45	1
1,2-Dichloroethane-d4 (Surr)	101		71 - 127		09/11/18 12:45	1
Toluene-d8 (Surr)	94		75 - 120		09/11/18 12:45	1

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.024		0.049	0.024	ug/L		09/07/18 05:46	09/07/18 18:33	1
Benzo[a]pyrene	<0.024		0.049	0.024	ug/L		09/07/18 05:46	09/07/18 18:33	1
Benzo[b]fluoranthene	<0.024		0.049	0.024	ug/L		09/07/18 05:46	09/07/18 18:33	1
Benzo[g,h,i]perylene	<0.049		0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1
Benzo[k]fluoranthene	<0.049		0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Client Sample ID: Effluent

Date Collected: 09/04/18 15:35

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-2

Matrix: Water

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.049		0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1
Dibenz(a,h)anthracene	<0.024		0.049	0.024	ug/L		09/07/18 05:46	09/07/18 18:33	1
Fluoranthene	<0.049		0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1
Indeno[1,2,3-cd]pyrene	<0.024		0.049	0.024	ug/L		09/07/18 05:46	09/07/18 18:33	1
Naphthalene	<0.049		0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1
<b>Phenanthrene</b>	<b>0.075</b>	<b>J B</b>	0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1
Pyrene	<0.049		0.098	0.049	ug/L		09/07/18 05:46	09/07/18 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	37		27 - 120	09/07/18 05:46	09/07/18 18:33	1
Terphenyl-d14	70		13 - 120	09/07/18 05:46	09/07/18 18:33	1
2-Fluorobiphenyl (Surr)	47		10 - 120	09/07/18 05:46	09/07/18 18:33	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<1.4		5.1	1.4	mg/L		09/07/18 17:33	09/07/18 18:30	1
<b>Chloride</b>	<b>260</b>		20	17	mg/L			09/10/18 22:01	100
<b>Total Suspended Solids</b>	<b>2.5</b>	<b>J</b>	5.0	1.9	mg/L			09/10/18 11:42	1
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			09/05/18 19:02	1

## Client Sample ID: Trip Blank

Date Collected: 09/04/18 00:00

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-3

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			09/11/18 11:20	1
Bromoform	<0.45		1.0	0.45	ug/L			09/11/18 11:20	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/11/18 11:20	1
Chloroform	<0.37		2.0	0.37	ug/L			09/11/18 11:20	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/11/18 11:20	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			09/11/18 11:20	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/11/18 11:20	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/11/18 11:20	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/11/18 11:20	1
Methyl bromide	<0.65		2.0	0.65	ug/L			09/11/18 11:20	1
Methyl chloride	<0.32		1.0	0.32	ug/L			09/11/18 11:20	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/11/18 11:20	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/11/18 11:20	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/11/18 11:20	1
Toluene	<0.15		0.50	0.15	ug/L			09/11/18 11:20	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/11/18 11:20	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/11/18 11:20	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/11/18 11:20	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/11/18 11:20	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/11/18 11:20	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			09/11/18 11:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		71 - 120		09/11/18 11:20	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

**Client Sample ID: Trip Blank**

**Date Collected: 09/04/18 00:00**

**Date Received: 09/05/18 09:10**

**Lab Sample ID: 500-150926-3**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)**

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	99		71 - 127		09/11/18 11:20	1
Toluene-d8 (Surr)	94		75 - 120		09/11/18 11:20	1

- 1
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- 3
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- 5
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- 14
- 15

# Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## GC/MS VOA

### Analysis Batch: 449095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	624	
500-150926-1 - DL	Influent	Total/NA	Water	624	
500-150926-2	Effluent	Total/NA	Water	624	
500-150926-3	Trip Blank	Total/NA	Water	624	
MB 500-449095/7	Method Blank	Total/NA	Water	624	
LCS 500-449095/5	Lab Control Sample	Total/NA	Water	624	

## GC/MS Semi VOA

### Prep Batch: 541136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	625	
500-150926-2	Effluent	Total/NA	Water	625	
MB 490-541136/1-A	Method Blank	Total/NA	Water	625	
LCS 490-541136/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 490-541136/3-A	Lab Control Sample Dup	Total/NA	Water	625	

### Analysis Batch: 541218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	625 SIM	541136
500-150926-2	Effluent	Total/NA	Water	625 SIM	541136
MB 490-541136/1-A	Method Blank	Total/NA	Water	625 SIM	541136
LCS 490-541136/2-A	Lab Control Sample	Total/NA	Water	625 SIM	541136
LCSD 490-541136/3-A	Lab Control Sample Dup	Total/NA	Water	625 SIM	541136

## General Chemistry

### Analysis Batch: 448441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	SM 5210B	
500-150926-2	Effluent	Total/NA	Water	SM 5210B	
USB 500-448441/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 500-448441/2	Lab Control Sample	Total/NA	Water	SM 5210B	
LCSD 500-448441/3	Lab Control Sample Dup	Total/NA	Water	SM 5210B	

### Prep Batch: 448744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	1664B	
500-150926-2	Effluent	Total/NA	Water	1664B	
MB 500-448744/1-A	Method Blank	Total/NA	Water	1664B	
LCS 500-448744/2-A	Lab Control Sample	Total/NA	Water	1664B	

### Analysis Batch: 448761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	1664B	448744
500-150926-2	Effluent	Total/NA	Water	1664B	448744
MB 500-448744/1-A	Method Blank	Total/NA	Water	1664B	448744
LCS 500-448744/2-A	Lab Control Sample	Total/NA	Water	1664B	448744

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# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## General Chemistry (Continued)

### Analysis Batch: 448995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	SM 2540D	
500-150926-2	Effluent	Total/NA	Water	SM 2540D	
MB 500-448995/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-448995/2	Lab Control Sample	Total/NA	Water	SM 2540D	

### Analysis Batch: 449042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-150926-1	Influent	Total/NA	Water	300.0	
500-150926-2	Effluent	Total/NA	Water	300.0	
MB 500-449042/10	Method Blank	Total/NA	Water	300.0	
LCS 500-449042/11	Lab Control Sample	Total/NA	Water	300.0	
500-150926-2 MS	Effluent	Total/NA	Water	300.0	
500-150926-2 MSD	Effluent	Total/NA	Water	300.0	

# Surrogate Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (71-120)	DCA (71-127)	TOL (75-120)
500-150926-1 - DL	Influent	92	100	95
500-150926-1	Influent	93	100	94
500-150926-2	Effluent	94	101	94
500-150926-3	Trip Blank	95	99	94
LCS 500-449095/5	Lab Control Sample	91	94	97
MB 500-449095/7	Method Blank	94	97	95

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	NBZ (27-120)	TPHL (13-120)	FBP (10-120)
500-150926-1	Influent	43	83	55
500-150926-2	Effluent	37	70	47
LCS 490-541136/2-A	Lab Control Sample	34	69	43
LCSD 490-541136/3-A	Lab Control Sample Dup	36	69	52
MB 490-541136/1-A	Method Blank	30	52	39

#### Surrogate Legend

NBZ = Nitrobenzene-d5

TPHL = Terphenyl-d14

FBP = 2-Fluorobiphenyl (Surr)

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-449095/7**

**Matrix: Water**

**Analysis Batch: 449095**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			09/11/18 10:52	1
Bromoform	<0.45		1.0	0.45	ug/L			09/11/18 10:52	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/11/18 10:52	1
Chloroform	<0.37		2.0	0.37	ug/L			09/11/18 10:52	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/11/18 10:52	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			09/11/18 10:52	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/11/18 10:52	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/11/18 10:52	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/11/18 10:52	1
Methyl bromide	<0.65		2.0	0.65	ug/L			09/11/18 10:52	1
Methyl chloride	<0.32		1.0	0.32	ug/L			09/11/18 10:52	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/11/18 10:52	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/11/18 10:52	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/11/18 10:52	1
Toluene	<0.15		0.50	0.15	ug/L			09/11/18 10:52	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/11/18 10:52	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/11/18 10:52	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/11/18 10:52	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/11/18 10:52	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/11/18 10:52	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			09/11/18 10:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		71 - 120		09/11/18 10:52	1
1,2-Dichloroethane-d4 (Surr)	97		71 - 127		09/11/18 10:52	1
Toluene-d8 (Surr)	95		75 - 120		09/11/18 10:52	1

**Lab Sample ID: LCS 500-449095/5**

**Matrix: Water**

**Analysis Batch: 449095**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	43.3		ug/L		87	37 - 151
Bromoform	50.0	45.3		ug/L		91	45 - 169
Carbon tetrachloride	50.0	43.9		ug/L		88	70 - 140
Chloroform	50.0	44.8		ug/L		90	51 - 138
cis-1,2-Dichloroethene	50.0	43.7		ug/L		87	70 - 130
Dichlorobromomethane	50.0	43.1		ug/L		86	35 - 155
1,2-Dichloroethane	50.0	42.3		ug/L		85	49 - 155
1,1-Dichloroethene	50.0	46.2		ug/L		92	10 - 234
Ethylbenzene	50.0	41.2		ug/L		82	37 - 162
Methyl bromide	50.0	41.8		ug/L		84	10 - 242
Methyl chloride	50.0	44.4		ug/L		89	10 - 273
m&p-Xylene	50.0	42.6		ug/L		85	
o-Xylene	50.0	43.8		ug/L		88	
1,1,2,2-Tetrachloroethane	50.0	45.5		ug/L		91	46 - 157
Tetrachloroethene	50.0	43.7		ug/L		87	64 - 148
Toluene	50.0	42.3		ug/L		85	47 - 150

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-449095/5**  
**Matrix: Water**  
**Analysis Batch: 449095**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	44.9		ug/L		90	54 - 156
1,1,1-Trichloroethane	50.0	42.3		ug/L		85	52 - 162
1,1,2-Trichloroethane	50.0	42.9		ug/L		86	52 - 150
Trichloroethene	50.0	44.1		ug/L		88	71 - 157
Vinyl chloride	50.0	47.5		ug/L		95	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		71 - 120
1,2-Dichloroethane-d4 (Surr)	94		71 - 127
Toluene-d8 (Surr)	97		75 - 120

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

**Lab Sample ID: MB 490-541136/1-A**  
**Matrix: Water**  
**Analysis Batch: 541218**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 541136**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.025		0.050	0.025	ug/L		09/07/18 05:46	09/07/18 17:10	1
Benzo[a]pyrene	<0.025		0.050	0.025	ug/L		09/07/18 05:46	09/07/18 17:10	1
Benzo[b]fluoranthene	<0.025		0.050	0.025	ug/L		09/07/18 05:46	09/07/18 17:10	1
Benzo[g,h,i]perylene	<0.050		0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1
Benzo[k]fluoranthene	<0.050		0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1
Chrysene	<0.050		0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1
Dibenz(a,h)anthracene	<0.025		0.050	0.025	ug/L		09/07/18 05:46	09/07/18 17:10	1
Fluoranthene	<0.050		0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1
Indeno[1,2,3-cd]pyrene	<0.025		0.050	0.025	ug/L		09/07/18 05:46	09/07/18 17:10	1
Naphthalene	<0.050		0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1
Phenanthrene	0.0684	J	0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1
Pyrene	<0.050		0.10	0.050	ug/L		09/07/18 05:46	09/07/18 17:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	30		27 - 120	09/07/18 05:46	09/07/18 17:10	1
Terphenyl-d14	52		13 - 120	09/07/18 05:46	09/07/18 17:10	1
2-Fluorobiphenyl (Surr)	39		10 - 120	09/07/18 05:46	09/07/18 17:10	1

**Lab Sample ID: LCS 490-541136/2-A**  
**Matrix: Water**  
**Analysis Batch: 541218**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 541136**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	8.00	5.89		ug/L		74	33 - 143
Benzo[a]pyrene	8.00	6.38		ug/L		80	17 - 163
Benzo[b]fluoranthene	8.00	6.23		ug/L		78	24 - 159
Benzo[g,h,i]perylene	8.00	5.79		ug/L		72	10 - 219
Benzo[k]fluoranthene	8.00	6.41		ug/L		80	11 - 162
Chrysene	8.00	5.59		ug/L		70	17 - 168

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCS 490-541136/2-A**  
**Matrix: Water**  
**Analysis Batch: 541218**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 541136**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz(a,h)anthracene	8.00	5.23		ug/L		65	10 - 227
Fluoranthene	8.00	5.04		ug/L		63	26 - 137
Indeno[1,2,3-cd]pyrene	8.00	5.70		ug/L		71	10 - 171
Naphthalene	8.00	3.08		ug/L		38	21 - 133
Phenanthrene	8.00	4.97		ug/L		62	54 - 120
Pyrene	8.00	5.36		ug/L		67	52 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	34		27 - 120
Terphenyl-d14	69		13 - 120
2-Fluorobiphenyl (Surr)	43		10 - 120

**Lab Sample ID: LCSD 490-541136/3-A**  
**Matrix: Water**  
**Analysis Batch: 541218**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 541136**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene	8.00	5.93		ug/L		74	33 - 143	1	30
Benzo[a]pyrene	8.00	6.48		ug/L		81	17 - 163	2	30
Benzo[b]fluoranthene	8.00	6.20		ug/L		78	24 - 159	0	30
Benzo[g,h,i]perylene	8.00	5.86		ug/L		73	10 - 219	1	30
Benzo[k]fluoranthene	8.00	6.51		ug/L		81	11 - 162	1	30
Chrysene	8.00	5.57		ug/L		70	17 - 168	0	30
Dibenz(a,h)anthracene	8.00	5.41		ug/L		68	10 - 227	3	30
Fluoranthene	8.00	4.94		ug/L		62	26 - 137	2	30
Indeno[1,2,3-cd]pyrene	8.00	5.87		ug/L		73	10 - 171	3	30
Naphthalene	8.00	3.33		ug/L		42	21 - 133	8	30
Phenanthrene	8.00	5.00		ug/L		62	54 - 120	1	30
Pyrene	8.00	5.37		ug/L		67	52 - 115	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	36		27 - 120
Terphenyl-d14	69		13 - 120
2-Fluorobiphenyl (Surr)	52		10 - 120

## Method: 1664B - HEM and SGT-HEM

**Lab Sample ID: MB 500-448744/1-A**  
**Matrix: Water**  
**Analysis Batch: 448761**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 448744**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	2.10	J	5.0	1.3	mg/L		09/07/18 15:00	09/07/18 18:30	1

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Method: 1664B - HEM and SGT-HEM (Continued)

**Lab Sample ID:** LCS 500-448744/2-A  
**Matrix:** Water  
**Analysis Batch:** 448761

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 448744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil & Grease)	40.0	39.00		mg/L		98	78 - 114

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID:** MB 500-449042/10  
**Matrix:** Water  
**Analysis Batch:** 449042

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.17		0.20	0.17	mg/L			09/10/18 14:43	1

**Lab Sample ID:** LCS 500-449042/11  
**Matrix:** Water  
**Analysis Batch:** 449042

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.00	2.94		mg/L		98	90 - 110

**Lab Sample ID:** 500-150926-2 MS  
**Matrix:** Water  
**Analysis Batch:** 449042

**Client Sample ID:** Effluent  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	260		100	348		mg/L		86	80 - 120

**Lab Sample ID:** 500-150926-2 MSD  
**Matrix:** Water  
**Analysis Batch:** 449042

**Client Sample ID:** Effluent  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	260		100	351		mg/L		90	80 - 120	1	20

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID:** MB 500-448995/1  
**Matrix:** Water  
**Analysis Batch:** 448995

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			09/10/18 11:30	1

**Lab Sample ID:** LCS 500-448995/2  
**Matrix:** Water  
**Analysis Batch:** 448995

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	183		mg/L		92	80 - 120

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 500-448441/1  
 Matrix: Water  
 Analysis Batch: 448441

Client Sample ID: Method Blank  
 Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			09/05/18 18:24	1

Lab Sample ID: LCS 500-448441/2  
 Matrix: Water  
 Analysis Batch: 448441

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	221		mg/L		112	85 - 115

Lab Sample ID: LCSD 500-448441/3  
 Matrix: Water  
 Analysis Batch: 448441

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biochemical Oxygen Demand	198	213		mg/L		108	85 - 115	4	20

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Client Sample ID: Influent

Date Collected: 09/04/18 15:15

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		5	449095	09/11/18 11:49	PMF	TAL CHI
Total/NA	Analysis	624	DL	50	449095	09/11/18 12:18	PMF	TAL CHI
Total/NA	Prep	625			541136	09/07/18 05:46	CC	TAL NSH
Total/NA	Analysis	625 SIM		1	541218	09/07/18 18:12	T1C	TAL NSH
Total/NA	Prep	1664B			448744	09/07/18 17:18	SA	TAL CHI
Total/NA	Analysis	1664B		1	448761	09/07/18 18:30	SA	TAL CHI
Total/NA	Analysis	300.0		100	449042	09/10/18 21:49	EAT	TAL CHI
Total/NA	Analysis	SM 2540D		1	448995	09/10/18 11:40 (Start) 09/10/18 11:42 (End)	SMO	TAL CHI
Total/NA	Analysis	SM 5210B		1	448441	09/05/18 18:59 (Start) 09/05/18 19:02 (End)	SSN	TAL CHI

## Client Sample ID: Effluent

Date Collected: 09/04/18 15:35

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	449095	09/11/18 12:45	PMF	TAL CHI
Total/NA	Prep	625			541136	09/07/18 05:46	CC	TAL NSH
Total/NA	Analysis	625 SIM		1	541218	09/07/18 18:33	T1C	TAL NSH
Total/NA	Prep	1664B			448744	09/07/18 17:33	SA	TAL CHI
Total/NA	Analysis	1664B		1	448761	09/07/18 18:30	SA	TAL CHI
Total/NA	Analysis	300.0		100	449042	09/10/18 22:01	EAT	TAL CHI
Total/NA	Analysis	SM 2540D		1	448995	09/10/18 11:42 (Start) 09/10/18 11:43 (End)	SMO	TAL CHI
Total/NA	Analysis	SM 5210B		1	448441	09/05/18 19:02 (Start) 09/05/18 19:05 (End)	SSN	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 09/04/18 00:00

Date Received: 09/05/18 09:10

## Lab Sample ID: 500-150926-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	449095	09/11/18 11:20	PMF	TAL CHI

### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Chicago

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-150926-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

## Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998020430	08-31-19

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)	Bill To (optional)
Contact: Andrew Stehn	Contact: _____
Company: TRC Environmental	Company: Same as reporting
Address: 708, Heartland Trail Suite 300A	Address: _____
Address: Madison, WI 53717	Address: _____
Phone: 608-826-3665	Phone: _____
Fax: _____	Fax: _____
E-Mail: astehn@trcsolutions.com	PO#/Reference#: 117375

## Chain of Custody Record

Lab Job #: 500-1509260

Chain of Custody Number: \_\_\_\_\_

Page 1 of 1

Temperature °C of Cooler: 1.2

Client		Client Project #		Preservative		Parameter										Preservative Key		
TRC/MKC		292257		1	8	8	2											1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		# of Containers		Matrix										Comments		
GETS/SVE Monitoring																		
Project Location/State		Lab PM		Date		Time												
WI																		
Sampler		Sample ID		Date		Time												
Andrew Stehn																		
1		Influent	9/4/18	15:15	8	W	X	X	X	X								
2		Effluent	9/4/18	15:35	8	W	↓	↓	↓	↓								
3		Trip Blank			1	W	↓											



500-150926 COC

Turnaround Time Required (Business Days):  1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Requested Due Date: \_\_\_\_\_

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <i>Andrew Stehn</i>	Company: TRC	Date: 09/04/18	Time: 16:00	Received By: <i>Andrew Stehn</i>	Company: TRC	Date: 09/05/18	Time: 0910	Lab Courier: _____
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____	Shipped: <b>FED EX</b>
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____	Hand Delivered: _____

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments:

SEE ATTACHED SAMPLE PARAMETER LIST

Custody Seal # 503106

503107

Lab Comments:



Parameter	Method
<b>VOCs</b>	
Bromoform	624
Carbon Tetrachloride	624
Dichlorobromomethane	624
1,2-Dichloroethane	624
1,1-Dichloroethylene	624
Methyl Bromide	624
Methyl Chloride	624
1,1,2,2-Tetrachloroethane	624
Tetrachloroethylene	624
1,1,2-Trichloroethane	624
1,1,1-Trichloroethane	624
Trichloroethylene	624
Vinyl Chloride	624
Cis-1,2-Dichloroethene	624
Trans-1,2-Dichloroethene	624
<b>TSS</b>	
Suspended Solids, Total	2540D
<b>BTEX</b>	
Benzene	624
Toluene	
Ethylbenzene	
Xylenes	



<b>PAHs (Group of 10)</b>	
Benzo(a)anthracene	625 SIM
Benzo(b)fluoranthene	
Benzo(g,h,i)perylene	
Benzo(k)fluoranthene	
Chrysene	
Dibenzo(a,h)anthracene	
Fluoranthene	
Indeno(1,2,3-cd)pyrene	
Phenanthrene	
Pyrene	
<b>PAHs</b>	
Benzo(a)pyrene	625 SIM
Naphthalene	
<b>Oil and Grease</b>	
Oil and Grease	1664
<b>BOD<sub>5</sub></b>	
BOD <sub>5</sub>	5210B
<b>Anions</b>	
Chloride	300

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estAm **ca**

THE LEADER IN ENVIRONMENTAL TESTING

5  
10:30  
4554  
09.03

Part # 1804E-434 8172 512 08/18

ORIGIN ID: JOTA (708) 534-5200  
ANDREW STEHN  
TRC ENVIRONMENTAL CORPORATION.  
708 HEARTLAND TRAIL  
SUITE 3000  
MADISON, WI 53717  
UNITED STATES US

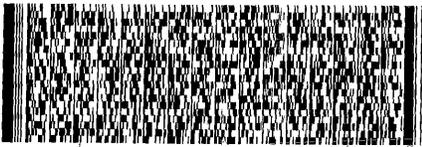
SHIP DATE: 30AUG18  
ACTWTG: 20.00 LB MAN  
CAD: 93264/CAFE3211

TO **SAMPLE LOGIN**  
**TESTAMERICA LABS**  
**2417 BOND ST**

**UNIVERSITY PARK IL 60484**

(708) 534-5200  
REF: 5500 - 59447

RMA: ||| ||| |||



FedEx  
TRK# 4059 7175 4558  
0221

WED - 05 SEP 10:30A  
PRIORITY OVERNIGHT

**79 JOTA**

**60484**  
IL-US ORD



500-150926 Waybill



#2637074 09/04 552J1/F7BC/9C65

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## COOLER RECEIPT FORM

Cooler Received/Opened On 9/6/2018 @ 10:15

Time Samples Removed From Cooler 1245 Time Samples Placed In Storage 1249 (2 Hour Window)

1. Tracking # 5T88 (last 4 digits, FedEx) Courier: FedEx  
IR Gun ID 97310166 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 0.6 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) [Signature]

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # \_\_\_\_\_

I certify that I unloaded the cooler and answered questions 7-14 (initial) GH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) GH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) GH

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

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



## Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-150926-1

**Login Number: 150926**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-152822-1

Client Project/Site: MadisonKipp - GETS 292257

For:

TRC Environmental Corporation.

708 Heartland Trail

Suite 3000

Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:

10/16/2018 7:37:19 AM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

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**Job ID: 500-152822-1**

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**Laboratory: TestAmerica Chicago**

## Narrative

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**Job Narrative**  
**500-152822-1**

## Comments

No additional comments.

## Receipt

The samples were received on 10/9/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

## GC/MS VOA

The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (500-152822-1). Elevated reporting limits (RLs) are provided.

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



# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Client Sample ID: Influent

Lab Sample ID: 500-152822-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	220		2.0	0.82	ug/L	2		624	Total/NA
Trichloroethene	220		1.0	0.33	ug/L	2		624	Total/NA
Tetrachloroethene - DL	1800		20	7.4	ug/L	20		624	Total/NA

## Client Sample ID: Effluent

Lab Sample ID: 500-152822-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	22		1.0	0.41	ug/L	1		624	Total/NA
Tetrachloroethene	31		1.0	0.37	ug/L	1		624	Total/NA
Trichloroethene	7.7		0.50	0.16	ug/L	1		624	Total/NA
Xylenes, Total	0.50	J	1.0	0.40	ug/L	1		624	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 500-152822-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CHI

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-152822-1	Influent	Water	10/08/18 12:50	10/09/18 09:00
500-152822-2	Effluent	Water	10/08/18 12:55	10/09/18 09:00
500-152822-3	Trip Blank	Water	10/08/18 00:00	10/09/18 09:00

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

**Client Sample ID: Influent**

**Date Collected: 10/08/18 12:50**

**Date Received: 10/09/18 09:00**

**Lab Sample ID: 500-152822-1**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.29		1.0	0.29	ug/L			10/13/18 16:28	2
Bromoform	<0.89		2.0	0.89	ug/L			10/13/18 16:28	2
Carbon tetrachloride	<0.77		2.0	0.77	ug/L			10/13/18 16:28	2
Chloroform	<0.74		4.0	0.74	ug/L			10/13/18 16:28	2
<b>cis-1,2-Dichloroethene</b>	<b>220</b>		2.0	0.82	ug/L			10/13/18 16:28	2
Dichlorobromomethane	<0.74		2.0	0.74	ug/L			10/13/18 16:28	2
1,2-Dichloroethane	<0.78		2.0	0.78	ug/L			10/13/18 16:28	2
1,1-Dichloroethene	<0.78		2.0	0.78	ug/L			10/13/18 16:28	2
Ethylbenzene	<0.37		1.0	0.37	ug/L			10/13/18 16:28	2
Methyl bromide	<1.3		4.0	1.3	ug/L			10/13/18 16:28	2
Methyl chloride	<0.64		2.0	0.64	ug/L			10/13/18 16:28	2
Methyl tert-butyl ether	<0.79		2.0	0.79	ug/L			10/13/18 16:28	2
1,1,1,2-Tetrachloroethane	<0.80		2.0	0.80	ug/L			10/13/18 16:28	2
Toluene	<0.30		1.0	0.30	ug/L			10/13/18 16:28	2
trans-1,2-Dichloroethene	<0.70		2.0	0.70	ug/L			10/13/18 16:28	2
1,1,1-Trichloroethane	<0.76		2.0	0.76	ug/L			10/13/18 16:28	2
1,1,2-Trichloroethane	<0.70		2.0	0.70	ug/L			10/13/18 16:28	2
<b>Trichloroethene</b>	<b>220</b>		1.0	0.33	ug/L			10/13/18 16:28	2
Vinyl chloride	<0.41		2.0	0.41	ug/L			10/13/18 16:28	2
Xylenes, Total	<0.80		2.0	0.80	ug/L			10/13/18 16:28	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		71 - 120					10/13/18 16:28	2
1,2-Dichloroethane-d4 (Surr)	105		71 - 127					10/13/18 16:28	2
Toluene-d8 (Surr)	94		75 - 120					10/13/18 16:28	2

**Method: 624 - Volatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Tetrachloroethene</b>	<b>1800</b>		20	7.4	ug/L			10/13/18 16:54	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		71 - 120					10/13/18 16:54	20
1,2-Dichloroethane-d4 (Surr)	104		71 - 127					10/13/18 16:54	20
Toluene-d8 (Surr)	94		75 - 120					10/13/18 16:54	20

**Client Sample ID: Effluent**

**Date Collected: 10/08/18 12:55**

**Date Received: 10/09/18 09:00**

**Lab Sample ID: 500-152822-2**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			10/13/18 12:55	1
Bromoform	<0.45		1.0	0.45	ug/L			10/13/18 12:55	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			10/13/18 12:55	1
Chloroform	<0.37		2.0	0.37	ug/L			10/13/18 12:55	1
<b>cis-1,2-Dichloroethene</b>	<b>22</b>		1.0	0.41	ug/L			10/13/18 12:55	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			10/13/18 12:55	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			10/13/18 12:55	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			10/13/18 12:55	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			10/13/18 12:55	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Client Sample ID: Effluent

Date Collected: 10/08/18 12:55

Date Received: 10/09/18 09:00

## Lab Sample ID: 500-152822-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl bromide	<0.65		2.0	0.65	ug/L			10/13/18 12:55	1
Methyl chloride	<0.32		1.0	0.32	ug/L			10/13/18 12:55	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			10/13/18 12:55	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			10/13/18 12:55	1
<b>Tetrachloroethene</b>	<b>31</b>		1.0	0.37	ug/L			10/13/18 12:55	1
Toluene	<0.15		0.50	0.15	ug/L			10/13/18 12:55	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			10/13/18 12:55	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			10/13/18 12:55	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			10/13/18 12:55	1
<b>Trichloroethene</b>	<b>7.7</b>		0.50	0.16	ug/L			10/13/18 12:55	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			10/13/18 12:55	1
<b>Xylenes, Total</b>	<b>0.50</b>	<b>J</b>	1.0	0.40	ug/L			10/13/18 12:55	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103		71 - 120					10/13/18 12:55	1
1,2-Dichloroethane-d4 (Surr)	102		71 - 127					10/13/18 12:55	1
Toluene-d8 (Surr)	95		75 - 120					10/13/18 12:55	1

## Client Sample ID: Trip Blank

Date Collected: 10/08/18 00:00

Date Received: 10/09/18 09:00

## Lab Sample ID: 500-152822-3

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			10/13/18 11:08	1
Bromoform	<0.45		1.0	0.45	ug/L			10/13/18 11:08	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			10/13/18 11:08	1
Chloroform	<0.37		2.0	0.37	ug/L			10/13/18 11:08	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			10/13/18 11:08	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			10/13/18 11:08	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			10/13/18 11:08	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			10/13/18 11:08	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			10/13/18 11:08	1
Methyl bromide	<0.65		2.0	0.65	ug/L			10/13/18 11:08	1
Methyl chloride	<0.32		1.0	0.32	ug/L			10/13/18 11:08	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			10/13/18 11:08	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			10/13/18 11:08	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			10/13/18 11:08	1
Toluene	<0.15		0.50	0.15	ug/L			10/13/18 11:08	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			10/13/18 11:08	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			10/13/18 11:08	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			10/13/18 11:08	1
Trichloroethene	<0.16		0.50	0.16	ug/L			10/13/18 11:08	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			10/13/18 11:08	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			10/13/18 11:08	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101		71 - 120					10/13/18 11:08	1
1,2-Dichloroethane-d4 (Surr)	102		71 - 127					10/13/18 11:08	1
Toluene-d8 (Surr)	95		75 - 120					10/13/18 11:08	1

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# Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## GC/MS VOA

### Analysis Batch: 454704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152822-1	Influent	Total/NA	Water	624	
500-152822-1 - DL	Influent	Total/NA	Water	624	
500-152822-2	Effluent	Total/NA	Water	624	
500-152822-3	Trip Blank	Total/NA	Water	624	
MB 500-454704/30	Method Blank	Total/NA	Water	624	
LCS 500-454704/28	Lab Control Sample	Total/NA	Water	624	

# Surrogate Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (71-120)	DCA (71-127)	TOL (75-120)
500-152822-1	Influent	104	105	94
500-152822-1 - DL	Influent	100	104	94
500-152822-2	Effluent	103	102	95
500-152822-3	Trip Blank	101	102	95
LCS 500-454704/28	Lab Control Sample	96	101	95
MB 500-454704/30	Method Blank	103	102	97

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-454704/30**

**Matrix: Water**

**Analysis Batch: 454704**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			10/13/18 10:15	1
Bromoform	<0.45		1.0	0.45	ug/L			10/13/18 10:15	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			10/13/18 10:15	1
Chloroform	<0.37		2.0	0.37	ug/L			10/13/18 10:15	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			10/13/18 10:15	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			10/13/18 10:15	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			10/13/18 10:15	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			10/13/18 10:15	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			10/13/18 10:15	1
Methyl bromide	<0.65		2.0	0.65	ug/L			10/13/18 10:15	1
Methyl chloride	<0.32		1.0	0.32	ug/L			10/13/18 10:15	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			10/13/18 10:15	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			10/13/18 10:15	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			10/13/18 10:15	1
Toluene	<0.15		0.50	0.15	ug/L			10/13/18 10:15	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			10/13/18 10:15	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			10/13/18 10:15	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			10/13/18 10:15	1
Trichloroethene	<0.16		0.50	0.16	ug/L			10/13/18 10:15	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			10/13/18 10:15	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			10/13/18 10:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		71 - 120		10/13/18 10:15	1
1,2-Dichloroethane-d4 (Surr)	102		71 - 127		10/13/18 10:15	1
Toluene-d8 (Surr)	97		75 - 120		10/13/18 10:15	1

**Lab Sample ID: LCS 500-454704/28**

**Matrix: Water**

**Analysis Batch: 454704**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.5		ug/L		95	37 - 151
Bromoform	50.0	44.3		ug/L		89	45 - 169
Carbon tetrachloride	50.0	51.8		ug/L		104	70 - 140
Chloroform	50.0	48.8		ug/L		98	51 - 138
cis-1,2-Dichloroethene	50.0	49.1		ug/L		98	70 - 130
Dichlorobromomethane	50.0	46.0		ug/L		92	35 - 155
1,2-Dichloroethane	50.0	50.3		ug/L		101	49 - 155
1,1-Dichloroethene	50.0	50.2		ug/L		100	10 - 234
Ethylbenzene	50.0	44.1		ug/L		88	37 - 162
Methyl bromide	50.0	56.4		ug/L		113	10 - 242
Methyl chloride	50.0	49.5		ug/L		99	10 - 273
m&p-Xylene	50.0	44.6		ug/L		89	
o-Xylene	50.0	44.5		ug/L		89	
1,1,2,2-Tetrachloroethane	50.0	38.8		ug/L		78	46 - 157
Tetrachloroethene	50.0	49.3		ug/L		99	64 - 148
Toluene	50.0	44.6		ug/L		89	47 - 150

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# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-454704/28

Matrix: Water

Analysis Batch: 454704

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	50.3		ug/L		101	54 - 156
1,1,1-Trichloroethane	50.0	54.0		ug/L		108	52 - 162
1,1,2-Trichloroethane	50.0	44.3		ug/L		89	52 - 150
Trichloroethene	50.0	49.7		ug/L		99	71 - 157
Vinyl chloride	50.0	50.5		ug/L		101	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		71 - 120
1,2-Dichloroethane-d4 (Surr)	101		71 - 127
Toluene-d8 (Surr)	95		75 - 120

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Client Sample ID: Influent

Date Collected: 10/08/18 12:50

Date Received: 10/09/18 09:00

## Lab Sample ID: 500-152822-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		2	454704	10/13/18 16:28	PMF	TAL CHI
Total/NA	Analysis	624	DL	20	454704	10/13/18 16:54	PMF	TAL CHI

## Client Sample ID: Effluent

Date Collected: 10/08/18 12:55

Date Received: 10/09/18 09:00

## Lab Sample ID: 500-152822-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	454704	10/13/18 12:55	PMF	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 10/08/18 00:00

Date Received: 10/09/18 09:00

## Lab Sample ID: 500-152822-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	454704	10/13/18 11:08	PMF	TAL CHI

### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-152822-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

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# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60441  
 Phone: 708.534.5200 Fax: 708.534.5



500-152822 COC

Report To (optional) \_\_\_\_\_  
 Contact: Andy Stehn  
 Company: TRC  
 Address: 708 Heartland Tr  
 Address: Madison WZ 53717  
 Phone: (608) 826-3665  
 Fax: \_\_\_\_\_  
 E-Mail: astehn@trcsolutions.com

Bill To (optional) \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Company: Same  
 Address: \_\_\_\_\_  
 Address: AS  
 Phone: Reporting  
 Fax: \_\_\_\_\_  
 PO#/Reference# 117375

## Chain of Custody Record

Lab Job #: 500-152822  
 Chain of Custody Number: 480928  
 Page 1 of 1  
 Temperature °C of Cooler: 2.7

Client		Client Project #		Preservative		Parameter		Project Location/State		Lab Project #		Sampler		Lab PM		Preservative Key	
<u>MKC/TRC</u>		<u>292257.0000.0000</u>		<u>1</u>				<u>Madison WZ</u>				<u>J Roetke</u>		<u>Sandie Fredrick</u>		1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Comments										
<u>1</u>		<u>Influent</u>	<u>10/8/18</u>	<u>1250</u>	<u>3</u>	<u>W</u>	<u>X</u>										
<u>2</u>		<u>Effluent</u>	<u>10/8/18</u>	<u>1255</u>	<u>3</u>	<u>W</u>	<u>X</u>										
<u>3</u>		<u>Top Blank</u>	<u>10/2/18</u>	<u>-</u>	<u>1</u>	<u>W</u>	<u>X</u>										

Turnaround Time Required (Business Days) 1 Day 2 Days  5 Days 7 Days 10 Days 15 Days \_\_\_\_\_ Other \_\_\_\_\_

Requested Due Date \_\_\_\_\_

Sample Disposal  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>[Signature]</u>	Company <u>TRC</u>	Date <u>10/8/18</u>	Time <u>15:00</u>	Received By <u>[Signature]</u>	Company <u>TRC</u>	Date <u>10/9/18</u>	Time <u>09:00</u>	Lab Courier
Relinquished By _____	Company _____	Date _____	Time _____	Received By _____	Company _____	Date _____	Time _____	Shipped <u>[Signature]</u>
Relinquished By _____	Company _____	Date _____	Time _____	Received By _____	Company _____	Date _____	Time _____	Hand Delivered

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: See Additional sheet for VOC's

Lab Comments:

Parameter	Method
<b>VOCs</b>	
Bromoform	624
Carbon Tetrachloride	624
Dichlorobromomethane	624
1,2-Dichloroethane	624
1,1-Dichloroethylene	624
Methyl Bromide	624
Methyl Chloride	624
1,1,1,2-Tetrachloroethane	624
Tetrachloroethylene	624
1,1,2-Trichloroethane	624
1,1,1-Trichloroethane	624
Trichloroethylene	624
Vinyl Chloride	624
Cis-1,2-Dichloroethene	624
Trans-1,2-Dichloroethene	624
<b>TSS</b>	
Suspended Solids, Total	2540D
<b>BTEX</b>	
Benzene	624
Toluene	
Ethylbenzene	
Xylenes	

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ORIGIN ID:MSNA (608) 335-4198  
AMY BUSS

TRC ENVIRONMENTAL CORPORATION  
708 HEARTLAND TRAIL, SUITE 3000  
MADISON, WI 53717  
UNITED STATES US

SHIP DATE: 08 OCT 18  
ACT WGT: 11.00 LB  
CAD: 1099937207/NET4040

BILL SENDER

Part # 155749-494 R17Z 02/18/18

TO **SAMPLE RECEIVING**  
**TESTAMERICA**  
**2417 BOND ST**  
**CHICAGO DIVISION**  
**UNIVERSITY PARK IL 60484**



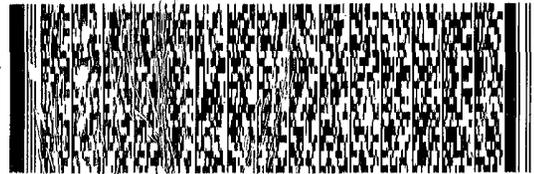
500-152822 Waybill

(708) 534-5208

REF: 292257 0000.0000

PU

DEPT:



**FedEx**  
Express



TUE - 09 OCT 10:30A  
PRIORITY OVERNIGHT

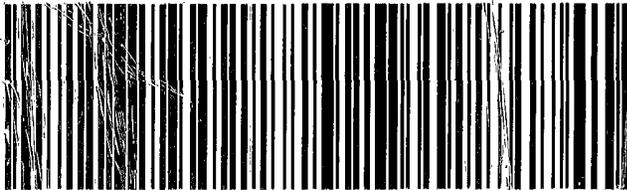
TRK# 7734 2406 3410  
0201

ASR

60484

**79 JOTA**

IL-US ORD



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# Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-152822-1

**Login Number: 152822**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-154350-1

Client Project/Site: MadisonKipp - GETS 292257

For:

TRC Environmental Corporation.

708 Heartland Trail

Suite 3000

Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:

11/15/2018 9:34:29 AM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

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**Job ID: 500-154350-1**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

**Job Narrative  
500-154350-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 11/6/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.3° C.

**GC/MS VOA**

The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (500-154350-1). Elevated reporting limits (RLs) are provided.

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



# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Client Sample ID: Influent

Lab Sample ID: 500-154350-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	210		5.0	2.0	ug/L	5		624	Total/NA
Trichloroethene	200		2.5	0.82	ug/L	5		624	Total/NA
Tetrachloroethene - DL	1500		50	19	ug/L	50		624	Total/NA

## Client Sample ID: Effluent

Lab Sample ID: 500-154350-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	11		1.0	0.41	ug/L	1		624	Total/NA
Tetrachloroethene	9.8		1.0	0.37	ug/L	1		624	Total/NA
Trichloroethene	3.0		0.50	0.16	ug/L	1		624	Total/NA
Xylenes, Total	0.65	J	1.0	0.40	ug/L	1		624	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 500-154350-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CHI

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-154350-1	Influent	Water	11/05/18 12:05	11/06/18 09:30
500-154350-2	Effluent	Water	11/05/18 12:08	11/06/18 09:30
500-154350-3	Trip Blank	Water	11/05/18 00:00	11/06/18 09:30

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Client Sample ID: Influent

Date Collected: 11/05/18 12:05

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-1

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.73		2.5	0.73	ug/L			11/13/18 18:00	5
Bromoform	<2.2		5.0	2.2	ug/L			11/13/18 18:00	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			11/13/18 18:00	5
Chloroform	<1.9		10	1.9	ug/L			11/13/18 18:00	5
<b>cis-1,2-Dichloroethene</b>	<b>210</b>		5.0	2.0	ug/L			11/13/18 18:00	5
Dichlorobromomethane	<1.9		5.0	1.9	ug/L			11/13/18 18:00	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			11/13/18 18:00	5
1,1-Dichloroethene	<2.0		5.0	2.0	ug/L			11/13/18 18:00	5
Ethylbenzene	<0.92		2.5	0.92	ug/L			11/13/18 18:00	5
Methyl bromide	<3.2		10	3.2	ug/L			11/13/18 18:00	5
Methyl chloride	<1.6		5.0	1.6	ug/L			11/13/18 18:00	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			11/13/18 18:00	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			11/13/18 18:00	5
Toluene	<0.76		2.5	0.76	ug/L			11/13/18 18:00	5
trans-1,2-Dichloroethene	<1.7		5.0	1.7	ug/L			11/13/18 18:00	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			11/13/18 18:00	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			11/13/18 18:00	5
<b>Trichloroethene</b>	<b>200</b>		2.5	0.82	ug/L			11/13/18 18:00	5
Vinyl chloride	<1.0		5.0	1.0	ug/L			11/13/18 18:00	5
Xylenes, Total	<2.0		5.0	2.0	ug/L			11/13/18 18:00	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		71 - 120					11/13/18 18:00	5
1,2-Dichloroethane-d4 (Surr)	89		71 - 127					11/13/18 18:00	5
Toluene-d8 (Surr)	95		75 - 120					11/13/18 18:00	5

### Method: 624 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Tetrachloroethene</b>	<b>1500</b>		50	19	ug/L			11/13/18 18:25	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		71 - 120					11/13/18 18:25	50
1,2-Dichloroethane-d4 (Surr)	85		71 - 127					11/13/18 18:25	50
Toluene-d8 (Surr)	95		75 - 120					11/13/18 18:25	50

## Client Sample ID: Effluent

Date Collected: 11/05/18 12:08

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/13/18 18:51	1
Bromoform	<0.45		1.0	0.45	ug/L			11/13/18 18:51	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/13/18 18:51	1
Chloroform	<0.37		2.0	0.37	ug/L			11/13/18 18:51	1
<b>cis-1,2-Dichloroethene</b>	<b>11</b>		1.0	0.41	ug/L			11/13/18 18:51	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			11/13/18 18:51	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/13/18 18:51	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/13/18 18:51	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/13/18 18:51	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Client Sample ID: Effluent

Date Collected: 11/05/18 12:08

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl bromide	<0.65		2.0	0.65	ug/L			11/13/18 18:51	1
Methyl chloride	<0.32		1.0	0.32	ug/L			11/13/18 18:51	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/13/18 18:51	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/13/18 18:51	1
<b>Tetrachloroethene</b>	<b>9.8</b>		1.0	0.37	ug/L			11/13/18 18:51	1
Toluene	<0.15		0.50	0.15	ug/L			11/13/18 18:51	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/13/18 18:51	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/13/18 18:51	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/13/18 18:51	1
<b>Trichloroethene</b>	<b>3.0</b>		0.50	0.16	ug/L			11/13/18 18:51	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/13/18 18:51	1
<b>Xylenes, Total</b>	<b>0.65 J</b>		1.0	0.40	ug/L			11/13/18 18:51	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	89		71 - 120					11/13/18 18:51	1
1,2-Dichloroethane-d4 (Surr)	91		71 - 127					11/13/18 18:51	1
Toluene-d8 (Surr)	91		75 - 120					11/13/18 18:51	1

## Client Sample ID: Trip Blank

Date Collected: 11/05/18 00:00

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-3

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/13/18 11:39	1
Bromoform	<0.45		1.0	0.45	ug/L			11/13/18 11:39	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/13/18 11:39	1
Chloroform	<0.37		2.0	0.37	ug/L			11/13/18 11:39	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/13/18 11:39	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			11/13/18 11:39	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/13/18 11:39	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/13/18 11:39	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/13/18 11:39	1
Methyl bromide	<0.65		2.0	0.65	ug/L			11/13/18 11:39	1
Methyl chloride	<0.32		1.0	0.32	ug/L			11/13/18 11:39	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/13/18 11:39	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/13/18 11:39	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/13/18 11:39	1
Toluene	<0.15		0.50	0.15	ug/L			11/13/18 11:39	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/13/18 11:39	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/13/18 11:39	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/13/18 11:39	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/13/18 11:39	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/13/18 11:39	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			11/13/18 11:39	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	83		71 - 120					11/13/18 11:39	1
1,2-Dichloroethane-d4 (Surr)	104		71 - 127					11/13/18 11:39	1
Toluene-d8 (Surr)	92		75 - 120					11/13/18 11:39	1

TestAmerica Chicago

# Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## GC/MS VOA

### Analysis Batch: 459884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-154350-1	Influent	Total/NA	Water	624	
500-154350-1 - DL	Influent	Total/NA	Water	624	
500-154350-2	Effluent	Total/NA	Water	624	
500-154350-3	Trip Blank	Total/NA	Water	624	
MB 500-459884/8	Method Blank	Total/NA	Water	624	
LCS 500-459884/6	Lab Control Sample	Total/NA	Water	624	
500-154350-2 MS	Effluent	Total/NA	Water	624	
500-154350-2 MSD	Effluent	Total/NA	Water	624	

# Surrogate Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (71-120)	DCA (71-127)	TOL (75-120)
500-154350-1	Influent	92	89	95
500-154350-1 - DL	Influent	96	85	95
500-154350-2	Effluent	89	91	91
500-154350-2 MS	Effluent	87	80	100
500-154350-2 MSD	Effluent	85	81	90
500-154350-3	Trip Blank	83	104	92
LCS 500-459884/6	Lab Control Sample	92	96	99
MB 500-459884/8	Method Blank	91	96	101

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-459884/8**

**Matrix: Water**

**Analysis Batch: 459884**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/13/18 11:14	1
Bromoform	<0.45		1.0	0.45	ug/L			11/13/18 11:14	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/13/18 11:14	1
Chloroform	<0.37		2.0	0.37	ug/L			11/13/18 11:14	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/13/18 11:14	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			11/13/18 11:14	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/13/18 11:14	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/13/18 11:14	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/13/18 11:14	1
Methyl bromide	<0.65		2.0	0.65	ug/L			11/13/18 11:14	1
Methyl chloride	<0.32		1.0	0.32	ug/L			11/13/18 11:14	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/13/18 11:14	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/13/18 11:14	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/13/18 11:14	1
Toluene	<0.15		0.50	0.15	ug/L			11/13/18 11:14	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/13/18 11:14	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/13/18 11:14	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/13/18 11:14	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/13/18 11:14	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/13/18 11:14	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			11/13/18 11:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		71 - 120		11/13/18 11:14	1
1,2-Dichloroethane-d4 (Surr)	96		71 - 127		11/13/18 11:14	1
Toluene-d8 (Surr)	101		75 - 120		11/13/18 11:14	1

**Lab Sample ID: LCS 500-459884/6**

**Matrix: Water**

**Analysis Batch: 459884**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	51.7		ug/L		103	37 - 151
Bromoform	50.0	47.8		ug/L		96	45 - 169
Carbon tetrachloride	50.0	59.3		ug/L		119	70 - 140
Chloroform	50.0	54.0		ug/L		108	51 - 138
cis-1,2-Dichloroethene	50.0	50.8		ug/L		102	70 - 130
Dichlorobromomethane	50.0	52.5		ug/L		105	35 - 155
1,2-Dichloroethane	50.0	49.9		ug/L		100	49 - 155
1,1-Dichloroethene	50.0	58.5		ug/L		117	10 - 234
Ethylbenzene	50.0	51.4		ug/L		103	37 - 162
Methyl bromide	50.0	44.8		ug/L		90	10 - 242
Methyl chloride	50.0	50.0		ug/L		100	10 - 273
m&p-Xylene	50.0	51.2		ug/L		102	
o-Xylene	50.0	50.6		ug/L		101	
1,1,2,2-Tetrachloroethane	50.0	47.3		ug/L		95	46 - 157
Tetrachloroethene	50.0	53.7		ug/L		107	64 - 148
Toluene	50.0	49.1		ug/L		98	47 - 150

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-459884/6**  
**Matrix: Water**  
**Analysis Batch: 459884**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	55.2		ug/L		110	54 - 156
1,1,1-Trichloroethane	50.0	57.5		ug/L		115	52 - 162
1,1,2-Trichloroethane	50.0	47.1		ug/L		94	52 - 150
Trichloroethene	50.0	53.6		ug/L		107	71 - 157
Vinyl chloride	50.0	54.2		ug/L		108	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		71 - 120
1,2-Dichloroethane-d4 (Surr)	96		71 - 127
Toluene-d8 (Surr)	99		75 - 120

**Lab Sample ID: 500-154350-2 MS**  
**Matrix: Water**  
**Analysis Batch: 459884**

**Client Sample ID: Effluent**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.15		50.0	47.7		ug/L		95	37 - 151
Bromoform	<0.45		50.0	43.3		ug/L		87	45 - 169
Carbon tetrachloride	<0.38		50.0	43.8		ug/L		88	70 - 140
Chloroform	<0.37		50.0	44.2		ug/L		88	51 - 138
cis-1,2-Dichloroethene	11		50.0	55.4		ug/L		89	70 - 130
Dichlorobromomethane	<0.37		50.0	46.4		ug/L		93	35 - 155
1,2-Dichloroethane	<0.39		50.0	38.3		ug/L		77	49 - 155
1,1-Dichloroethene	<0.39		50.0	50.3		ug/L		101	10 - 234
Ethylbenzene	<0.18		50.0	47.9		ug/L		96	37 - 162
Methyl bromide	<0.65		50.0	41.0		ug/L		82	10 - 242
Methyl chloride	<0.32		50.0	52.0		ug/L		104	10 - 273
m&p-Xylene	<0.40		50.0	44.6		ug/L		89	
o-Xylene	0.32	J	50.0	44.4		ug/L		88	
1,1,1,2-Tetrachloroethane	<0.40		50.0	47.4		ug/L		95	46 - 157
Tetrachloroethene	9.8		50.0	58.3		ug/L		97	64 - 148
Toluene	<0.15		50.0	49.0		ug/L		98	47 - 150
trans-1,2-Dichloroethene	<0.35		50.0	51.7		ug/L		103	54 - 156
1,1,1-Trichloroethane	<0.38		50.0	44.0		ug/L		88	52 - 162
1,1,2-Trichloroethane	<0.35		50.0	49.3		ug/L		99	52 - 150
Trichloroethene	3.0		50.0	52.5		ug/L		99	71 - 157
Vinyl chloride	<0.20		50.0	59.6		ug/L		119	10 - 251

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		71 - 120
1,2-Dichloroethane-d4 (Surr)	80		71 - 127
Toluene-d8 (Surr)	100		75 - 120

# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-154350-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 459884**

**Client Sample ID: Effluent**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.15		50.0	52.4		ug/L		105	37 - 151	9	20
Bromoform	<0.45		50.0	44.9		ug/L		90	45 - 169	4	20
Carbon tetrachloride	<0.38		50.0	45.1		ug/L		90	70 - 140	3	20
Chloroform	<0.37		50.0	46.2		ug/L		92	51 - 138	4	20
cis-1,2-Dichloroethene	11		50.0	57.5		ug/L		93	70 - 130	4	20
Dichlorobromomethane	<0.37		50.0	46.0		ug/L		92	35 - 155	1	20
1,2-Dichloroethane	<0.39		50.0	43.1		ug/L		86	49 - 155	12	20
1,1-Dichloroethene	<0.39		50.0	53.5		ug/L		107	10 - 234	6	20
Ethylbenzene	<0.18		50.0	47.9		ug/L		96	37 - 162	0	20
Methyl bromide	<0.65		50.0	45.0		ug/L		90	10 - 242	9	20
Methyl chloride	<0.32		50.0	58.7		ug/L		117	10 - 273	12	20
m&p-Xylene	<0.40		50.0	44.9		ug/L		90		0	
o-Xylene	0.32	J	50.0	47.7		ug/L		95		7	
1,1,2,2-Tetrachloroethane	<0.40		50.0	47.9		ug/L		96	46 - 157	1	20
Tetrachloroethene	9.8		50.0	53.1		ug/L		86	64 - 148	9	20
Toluene	<0.15		50.0	43.8		ug/L		88	47 - 150	11	20
trans-1,2-Dichloroethene	<0.35		50.0	54.2		ug/L		108	54 - 156	5	20
1,1,1-Trichloroethane	<0.38		50.0	44.2		ug/L		88	52 - 162	0	20
1,1,2-Trichloroethane	<0.35		50.0	44.2		ug/L		88	52 - 150	11	20
Trichloroethene	3.0		50.0	53.5		ug/L		101	71 - 157	2	20
Vinyl chloride	<0.20		50.0	65.0		ug/L		130	10 - 251	9	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	85		71 - 120
1,2-Dichloroethane-d4 (Surr)	81		71 - 127
Toluene-d8 (Surr)	90		75 - 120

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Client Sample ID: Influent

Date Collected: 11/05/18 12:05

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		5	459884	11/13/18 18:00	PMF	TAL CHI
Total/NA	Analysis	624	DL	50	459884	11/13/18 18:25	PMF	TAL CHI

## Client Sample ID: Effluent

Date Collected: 11/05/18 12:08

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	459884	11/13/18 18:51	PMF	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 11/05/18 00:00

Date Received: 11/06/18 09:30

## Lab Sample ID: 500-154350-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	459884	11/13/18 11:39	PMF	TAL CHI

### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-154350-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)	Bill To (optional)
Contact: <u>Andy Stehn</u>	Contact: _____
Company: <u>TRC</u>	Company: <u>Same</u>
Address: <u>708 Heartland Tr.</u>	Address: _____
Address: <u>Madison WZ 53717</u>	Address: _____
Phone: <u>(608) 846-3665</u>	Phone: _____
Fax: _____	Fax: _____
E-Mail: <u>astehn@trcsolutions.com</u>	PO#/Reference#: <u>117-375</u>

## Chain of Custody Record

Lab Job #: 500-154350  
Chain of Custody Number: 135976  
Page 1 of 1  
Temperature °C of Cooler: tid → 0.3

Client		Client Project #		Preservative		Parameter		Comments	
mKC/TRC		292257.000.000		1		VOC's		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Date		Time		Matrix	
GETS monitoring				11/5/18		12:05		3 W	
Project Location/State		Lab PM		11/5/18		12:08		3 W	
Madison WZ		Sandie Fredrick		-		-		1 W	
Sampler		J. Roelke							
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix			
1		Influent	11/5/18	12:05	3	W	X		
2		Effluent	11/5/18	12:08	3	W	X		
3		Trip Blank	-	-	1	W	X		



500-154350 COC

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days  5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other  
 Requested Due Date \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>Schm Roelke</u> Company: <u>TRC</u> Date: <u>11/5/18</u> Time: <u>14:45</u>	Received By: <u>Wendy Sancy</u> Company: <u>TRC</u> Date: <u>11/06/18</u> Time: <u>09:30</u>	Lab Courier: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Shipped: <u>Ex Priority</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: See Additional Sheet

Lab Comments: \_\_\_\_\_



500754350

Parameter	Method
<b>VOCs</b>	
Bromoform	624
Carbon Tetrachloride	624
Dichlorobromomethane	624
1,2-Dichloroethane	624
1,1-Dichloroethylene	624
Methyl Bromide	624
Methyl Chloride	624
1,1,2,2-Tetrachloroethane	624
Tetrachloroethylene	624
1,1,2-Trichloroethane	624
1,1,1-Trichloroethane	624
Trichloroethylene	624
Vinyl Chloride	624
Cis-1,2-Dichloroethene	624
Trans-1,2-Dichloroethene	624
<b>TSS</b>	
Suspended Solids, Total	2540D
<b>BTEX</b>	
Benzene	624
Toluene	
Ethylbenzene	
Xylenes	

ORIGIN ID:RRLA (262) 202-5955  
ANDREW STEHN  
TNC  
708 HEARTLAND TRAIL, SUITE 3000  
MADISON, WI 53717  
UNITED STATES US

SHIP DATE: 26OCT18  
ACTWGT: 25.00 LB MAN  
CAD: 525155/CAFE3211

TO

TESTAMERICA CHICAGO  
2417 BOND STREET

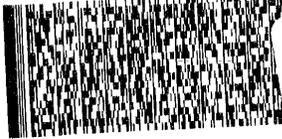
UNIVERSITY PARK IL 60484-3101

(708) 534-6200

REF:

DEPT:

RMA: 011111 011



RT 519  
ST 18

5 10:30  
A 0840  
11.06

FedEx

TRK# 7125 4939 0840  
0221

TUE - 06 NOV 10:30A  
PRIORITY OVERNIGHT

79 JOTA

60484  
IL-US ORD



WE11EP 11.06E RES 10/2020/PAK



500-154350 Waybill

EST. CT. PARTS / 104C

POSTED BY 0840 11.06

60484 IL-US ORD

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## Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-154350-1

**Login Number: 154350**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-156023-1

Client Project/Site: MadisonKipp - GETS 292257

For:

TRC Environmental Corporation.

708 Heartland Trail

Suite 3000

Madison, Wisconsin 53717

Attn: Andrew Stehn



Authorized for release by:

12/20/2018 7:07:18 AM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Case Narrative

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

**Job ID: 500-156023-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-156023-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/12/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

#### GC/MS VOA

The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (500-156023-1). Elevated reporting limits (RLs) are provided.

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

#### GC/MS Semi VOA

Method(s) 625 SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-563956 and analytical batch 490-564289.

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

#### General Chemistry

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

#### Organic Prep

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

# Detection Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Client Sample ID: Influent

Lab Sample ID: 500-156023-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	170		5.0	2.0	ug/L	5		624	Total/NA
Methyl chloride	1.7	J	5.0	1.6	ug/L	5		624	Total/NA
Trichloroethene	160		2.5	0.82	ug/L	5		624	Total/NA
Tetrachloroethene - DL	1500		50	19	ug/L	50		624	Total/NA
HEM (Oil & Grease)	2.2	J	5.2	1.4	mg/L	1		1664B	Total/NA
Chloride	140		10	8.5	mg/L	50		300.0	Total/NA

## Client Sample ID: Effluent

Lab Sample ID: 500-156023-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	16		1.0	0.41	ug/L	1		624	Total/NA
Tetrachloroethene	14		1.0	0.37	ug/L	1		624	Total/NA
Trichloroethene	3.9		0.50	0.16	ug/L	1		624	Total/NA
HEM (Oil & Grease)	1.9	J	5.2	1.4	mg/L	1		1664B	Total/NA
Chloride	230		10	8.5	mg/L	50		300.0	Total/NA
Total Suspended Solids	2.0	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 500-156023-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CHI
625 SIM	Semivolatile Organic Compounds GC/MS (SIM)	40CFR136A	TAL NSH
1664B	HEM and SGT-HEM	1664B	TAL CHI
300.0	Anions, Ion Chromatography	MCAWW	TAL CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI
SM 5210B	BOD, 5-Day	SM	TAL CHI
1664B	HEM and SGT-HEM (SPE)	1664B	TAL CHI
625	Liquid-Liquid Extraction	40CFR136A	TAL NSH

#### Protocol References:

1664B = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

#### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Sample Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-156023-1	Influent	Water	12/11/18 14:45	12/12/18 09:30
500-156023-2	Effluent	Water	12/11/18 14:25	12/12/18 09:30
500-156023-3	Trip Blank	Water	12/11/18 00:00	12/12/18 09:30

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# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Client Sample ID: Influent

Date Collected: 12/11/18 14:45

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-1

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.73		2.5	0.73	ug/L			12/16/18 22:27	5
Bromoform	<2.2		5.0	2.2	ug/L			12/16/18 22:27	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			12/16/18 22:27	5
Chloroform	<1.9		10	1.9	ug/L			12/16/18 22:27	5
<b>cis-1,2-Dichloroethene</b>	<b>170</b>		5.0	2.0	ug/L			12/16/18 22:27	5
Dichlorobromomethane	<1.9		5.0	1.9	ug/L			12/16/18 22:27	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			12/16/18 22:27	5
1,1-Dichloroethene	<2.0		5.0	2.0	ug/L			12/16/18 22:27	5
Ethylbenzene	<0.92		2.5	0.92	ug/L			12/16/18 22:27	5
Methyl bromide	<3.2		10	3.2	ug/L			12/16/18 22:27	5
<b>Methyl chloride</b>	<b>1.7 J</b>		5.0	1.6	ug/L			12/16/18 22:27	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			12/16/18 22:27	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			12/16/18 22:27	5
Toluene	<0.76		2.5	0.76	ug/L			12/16/18 22:27	5
trans-1,2-Dichloroethene	<1.7		5.0	1.7	ug/L			12/16/18 22:27	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			12/16/18 22:27	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			12/16/18 22:27	5
<b>Trichloroethene</b>	<b>160</b>		2.5	0.82	ug/L			12/16/18 22:27	5
Vinyl chloride	<1.0		5.0	1.0	ug/L			12/16/18 22:27	5
Xylenes, Total	<2.0		5.0	2.0	ug/L			12/16/18 22:27	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	106		71 - 120					12/16/18 22:27	5
1,2-Dichloroethane-d4 (Surr)	103		71 - 127					12/16/18 22:27	5
Toluene-d8 (Surr)	102		75 - 120					12/16/18 22:27	5

### Method: 624 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Tetrachloroethene</b>	<b>1500</b>		50	19	ug/L			12/16/18 22:54	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	110		71 - 120					12/16/18 22:54	50
1,2-Dichloroethane-d4 (Surr)	103		71 - 127					12/16/18 22:54	50
Toluene-d8 (Surr)	103		75 - 120					12/16/18 22:54	50

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.024		0.047	0.024	ug/L		12/14/18 18:47	12/17/18 21:07	1
Benzo[a]pyrene	<0.024		0.047	0.024	ug/L		12/14/18 18:47	12/17/18 21:07	1
Benzo[b]fluoranthene	<0.024		0.047	0.024	ug/L		12/14/18 18:47	12/17/18 21:07	1
Benzo[g,h,i]perylene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1
Benzo[k]fluoranthene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1
Chrysene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1
Dibenz(a,h)anthracene	<0.024		0.047	0.024	ug/L		12/14/18 18:47	12/17/18 21:07	1
Fluoranthene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1
Indeno[1,2,3-cd]pyrene	<0.024		0.047	0.024	ug/L		12/14/18 18:47	12/17/18 21:07	1
Naphthalene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1
Phenanthrene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1
Pyrene	<0.047		0.095	0.047	ug/L		12/14/18 18:47	12/17/18 21:07	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Client Sample ID: Influent

Date Collected: 12/11/18 14:45

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-1

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	78		27 - 120	12/14/18 18:47	12/17/18 21:07	1
Terphenyl-d14	76		13 - 120	12/14/18 18:47	12/17/18 21:07	1
2-Fluorobiphenyl (Surr)	58		10 - 120	12/14/18 18:47	12/17/18 21:07	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	2.2	J	5.2	1.4	mg/L		12/18/18 18:19	12/18/18 18:38	1
Chloride	140		10	8.5	mg/L			12/18/18 16:12	50
Total Suspended Solids	<1.9		5.0	1.9	mg/L			12/12/18 13:51	1
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			12/12/18 15:23	1

## Client Sample ID: Effluent

Date Collected: 12/11/18 14:25

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-2

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			12/17/18 00:58	1
Bromoform	<0.45		1.0	0.45	ug/L			12/17/18 00:58	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			12/17/18 00:58	1
Chloroform	<0.37		2.0	0.37	ug/L			12/17/18 00:58	1
cis-1,2-Dichloroethene	16		1.0	0.41	ug/L			12/17/18 00:58	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			12/17/18 00:58	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			12/17/18 00:58	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			12/17/18 00:58	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			12/17/18 00:58	1
Methyl bromide	<0.65		2.0	0.65	ug/L			12/17/18 00:58	1
Methyl chloride	<0.32		1.0	0.32	ug/L			12/17/18 00:58	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			12/17/18 00:58	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			12/17/18 00:58	1
Tetrachloroethene	14		1.0	0.37	ug/L			12/17/18 00:58	1
Toluene	<0.15		0.50	0.15	ug/L			12/17/18 00:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			12/17/18 00:58	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			12/17/18 00:58	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			12/17/18 00:58	1
Trichloroethene	3.9		0.50	0.16	ug/L			12/17/18 00:58	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			12/17/18 00:58	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			12/17/18 00:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		71 - 120		12/17/18 00:58	1
1,2-Dichloroethane-d4 (Surr)	107		71 - 127		12/17/18 00:58	1
Toluene-d8 (Surr)	103		75 - 120		12/17/18 00:58	1

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.024		0.048	0.024	ug/L		12/14/18 18:47	12/17/18 21:28	1
Benzo[a]pyrene	<0.024		0.048	0.024	ug/L		12/14/18 18:47	12/17/18 21:28	1
Benzo[b]fluoranthene	<0.024		0.048	0.024	ug/L		12/14/18 18:47	12/17/18 21:28	1
Benzo[g,h,i]perylene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1
Benzo[k]fluoranthene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Client Sample ID: Effluent

Date Collected: 12/11/18 14:25

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-2

Matrix: Water

### Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1
Dibenz(a,h)anthracene	<0.024		0.048	0.024	ug/L		12/14/18 18:47	12/17/18 21:28	1
Fluoranthene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1
Indeno[1,2,3-cd]pyrene	<0.024		0.048	0.024	ug/L		12/14/18 18:47	12/17/18 21:28	1
Naphthalene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1
Phenanthrene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1
Pyrene	<0.048		0.095	0.048	ug/L		12/14/18 18:47	12/17/18 21:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		27 - 120	12/14/18 18:47	12/17/18 21:28	1
Terphenyl-d14	70		13 - 120	12/14/18 18:47	12/17/18 21:28	1
2-Fluorobiphenyl (Surr)	44		10 - 120	12/14/18 18:47	12/17/18 21:28	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	1.9	J	5.2	1.4	mg/L		12/18/18 18:19	12/18/18 18:38	1
Chloride	230		10	8.5	mg/L			12/18/18 16:25	50
Total Suspended Solids	2.0	J	5.0	1.9	mg/L			12/13/18 11:19	1
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			12/12/18 16:23	1

## Client Sample ID: Trip Blank

Date Collected: 12/11/18 00:00

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-3

Matrix: Water

### Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			12/17/18 01:25	1
Bromoform	<0.45		1.0	0.45	ug/L			12/17/18 01:25	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			12/17/18 01:25	1
Chloroform	<0.37		2.0	0.37	ug/L			12/17/18 01:25	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			12/17/18 01:25	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			12/17/18 01:25	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			12/17/18 01:25	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			12/17/18 01:25	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			12/17/18 01:25	1
Methyl bromide	<0.65		2.0	0.65	ug/L			12/17/18 01:25	1
Methyl chloride	<0.32		1.0	0.32	ug/L			12/17/18 01:25	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			12/17/18 01:25	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			12/17/18 01:25	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			12/17/18 01:25	1
Toluene	<0.15		0.50	0.15	ug/L			12/17/18 01:25	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			12/17/18 01:25	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			12/17/18 01:25	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			12/17/18 01:25	1
Trichloroethene	<0.16		0.50	0.16	ug/L			12/17/18 01:25	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			12/17/18 01:25	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			12/17/18 01:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		71 - 120		12/17/18 01:25	1

TestAmerica Chicago

# Client Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

**Client Sample ID: Trip Blank**

**Date Collected: 12/11/18 00:00**

**Date Received: 12/12/18 09:30**

**Lab Sample ID: 500-156023-3**

**Matrix: Water**

**Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)**

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	103		71 - 127		12/17/18 01:25	1
Toluene-d8 (Surr)	103		75 - 120		12/17/18 01:25	1

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# Definitions/Glossary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## GC/MS VOA

### Analysis Batch: 464919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	624	
500-156023-1 - DL	Influent	Total/NA	Water	624	
500-156023-2	Effluent	Total/NA	Water	624	
500-156023-3	Trip Blank	Total/NA	Water	624	
MB 500-464919/29	Method Blank	Total/NA	Water	624	
LCS 500-464919/27	Lab Control Sample	Total/NA	Water	624	

## GC/MS Semi VOA

### Prep Batch: 563956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	625	
500-156023-2	Effluent	Total/NA	Water	625	
MB 490-563956/1-A	Method Blank	Total/NA	Water	625	
LCS 490-563956/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 490-563956/3-A	Lab Control Sample Dup	Total/NA	Water	625	

### Analysis Batch: 564289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	625 SIM	563956
500-156023-2	Effluent	Total/NA	Water	625 SIM	563956
MB 490-563956/1-A	Method Blank	Total/NA	Water	625 SIM	563956
LCS 490-563956/2-A	Lab Control Sample	Total/NA	Water	625 SIM	563956
LCSD 490-563956/3-A	Lab Control Sample Dup	Total/NA	Water	625 SIM	563956

## General Chemistry

### Analysis Batch: 464365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	SM 2540D	
MB 500-464365/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-464365/2	Lab Control Sample	Total/NA	Water	SM 2540D	

### Analysis Batch: 464420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	SM 5210B	
500-156023-2	Effluent	Total/NA	Water	SM 5210B	
USB 500-464420/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 500-464420/2	Lab Control Sample	Total/NA	Water	SM 5210B	
LCSD 500-464420/3	Lab Control Sample Dup	Total/NA	Water	SM 5210B	

### Analysis Batch: 464547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-2	Effluent	Total/NA	Water	SM 2540D	
MB 500-464547/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-464547/2	Lab Control Sample	Total/NA	Water	SM 2540D	

### Analysis Batch: 465276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	300.0	

TestAmerica Chicago

# QC Association Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## General Chemistry (Continued)

### Analysis Batch: 465276 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-2	Effluent	Total/NA	Water	300.0	
MB 500-465276/3	Method Blank	Total/NA	Water	300.0	
LCS 500-465276/4	Lab Control Sample	Total/NA	Water	300.0	

### Prep Batch: 465353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	1664B	
500-156023-2	Effluent	Total/NA	Water	1664B	
MB 500-465353/1-A	Method Blank	Total/NA	Water	1664B	
LCS 500-465353/2-A	Lab Control Sample	Total/NA	Water	1664B	

### Analysis Batch: 465354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-156023-1	Influent	Total/NA	Water	1664B	465353
500-156023-2	Effluent	Total/NA	Water	1664B	465353
MB 500-465353/1-A	Method Blank	Total/NA	Water	1664B	465353
LCS 500-465353/2-A	Lab Control Sample	Total/NA	Water	1664B	465353

# Surrogate Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (71-120)	DCA (71-127)	TOL (75-120)
500-156023-1	Influent	106	103	102
500-156023-1 - DL	Influent	110	103	103
500-156023-2	Effluent	108	107	103
500-156023-3	Trip Blank	107	103	103
LCS 500-464919/27	Lab Control Sample	104	99	105
MB 500-464919/29	Method Blank	108	102	101

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	NBZ (27-120)	TPHL (13-120)	FBP (10-120)
500-156023-1	Influent	78	76	58
500-156023-2	Effluent	59	70	44
LCS 490-563956/2-A	Lab Control Sample	73	76	55
LCSD 490-563956/3-A	Lab Control Sample Dup	57	65	43
MB 490-563956/1-A	Method Blank	67	70	52

#### Surrogate Legend

NBZ = Nitrobenzene-d5

TPHL = Terphenyl-d14

FBP = 2-Fluorobiphenyl (Surr)

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Method: 624 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-464919/29**

**Matrix: Water**

**Analysis Batch: 464919**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			12/16/18 19:19	1
Bromoform	<0.45		1.0	0.45	ug/L			12/16/18 19:19	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			12/16/18 19:19	1
Chloroform	<0.37		2.0	0.37	ug/L			12/16/18 19:19	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			12/16/18 19:19	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			12/16/18 19:19	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			12/16/18 19:19	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			12/16/18 19:19	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			12/16/18 19:19	1
Methyl bromide	<0.65		2.0	0.65	ug/L			12/16/18 19:19	1
Methyl chloride	<0.32		1.0	0.32	ug/L			12/16/18 19:19	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			12/16/18 19:19	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			12/16/18 19:19	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			12/16/18 19:19	1
Toluene	<0.15		0.50	0.15	ug/L			12/16/18 19:19	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			12/16/18 19:19	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			12/16/18 19:19	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			12/16/18 19:19	1
Trichloroethene	<0.16		0.50	0.16	ug/L			12/16/18 19:19	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			12/16/18 19:19	1
Xylenes, Total	<0.40		1.0	0.40	ug/L			12/16/18 19:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		71 - 120		12/16/18 19:19	1
1,2-Dichloroethane-d4 (Surr)	102		71 - 127		12/16/18 19:19	1
Toluene-d8 (Surr)	101		75 - 120		12/16/18 19:19	1

**Lab Sample ID: LCS 500-464919/27**

**Matrix: Water**

**Analysis Batch: 464919**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	50.6		ug/L		101	37 - 151
Bromoform	50.0	44.7		ug/L		89	45 - 169
Carbon tetrachloride	50.0	47.4		ug/L		95	70 - 140
Chloroform	50.0	49.6		ug/L		99	51 - 138
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	70 - 130
Dichlorobromomethane	50.0	46.1		ug/L		92	35 - 155
1,2-Dichloroethane	50.0	54.1		ug/L		108	49 - 155
1,1-Dichloroethene	50.0	51.1		ug/L		102	10 - 234
Ethylbenzene	50.0	50.3		ug/L		101	37 - 162
Methyl bromide	50.0	43.3		ug/L		87	10 - 242
Methyl chloride	50.0	46.8		ug/L		94	10 - 273
m&p-Xylene	50.0	50.5		ug/L		101	
o-Xylene	50.0	51.1		ug/L		102	
1,1,2,2-Tetrachloroethane	50.0	50.0		ug/L		100	46 - 157
Tetrachloroethene	50.0	54.4		ug/L		109	64 - 148
Toluene	50.0	52.9		ug/L		106	47 - 150

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-464919/27**  
**Matrix: Water**  
**Analysis Batch: 464919**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	50.9		ug/L		102	54 - 156
1,1,1-Trichloroethane	50.0	50.0		ug/L		100	52 - 162
1,1,2-Trichloroethane	50.0	53.4		ug/L		107	52 - 150
Trichloroethene	50.0	50.6		ug/L		101	71 - 157
Vinyl chloride	50.0	49.5		ug/L		99	10 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		71 - 120
1,2-Dichloroethane-d4 (Surr)	99		71 - 127
Toluene-d8 (Surr)	105		75 - 120

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM)

**Lab Sample ID: MB 490-563956/1-A**  
**Matrix: Water**  
**Analysis Batch: 564289**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 563956**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.025		0.050	0.025	ug/L		12/14/18 18:47	12/17/18 20:46	1
Benzo[a]pyrene	<0.025		0.050	0.025	ug/L		12/14/18 18:47	12/17/18 20:46	1
Benzo[b]fluoranthene	<0.025		0.050	0.025	ug/L		12/14/18 18:47	12/17/18 20:46	1
Benzo[g,h,i]perylene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1
Benzo[k]fluoranthene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1
Chrysene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1
Dibenz(a,h)anthracene	<0.025		0.050	0.025	ug/L		12/14/18 18:47	12/17/18 20:46	1
Fluoranthene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1
Indeno[1,2,3-cd]pyrene	<0.025		0.050	0.025	ug/L		12/14/18 18:47	12/17/18 20:46	1
Naphthalene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1
Phenanthrene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1
Pyrene	<0.050		0.10	0.050	ug/L		12/14/18 18:47	12/17/18 20:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		27 - 120	12/14/18 18:47	12/17/18 20:46	1
Terphenyl-d14	70		13 - 120	12/14/18 18:47	12/17/18 20:46	1
2-Fluorobiphenyl (Surr)	52		10 - 120	12/14/18 18:47	12/17/18 20:46	1

**Lab Sample ID: LCS 490-563956/2-A**  
**Matrix: Water**  
**Analysis Batch: 564289**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 563956**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	8.00	5.99		ug/L		75	33 - 143
Benzo[a]pyrene	8.00	5.30		ug/L		66	17 - 163
Benzo[b]fluoranthene	8.00	5.34		ug/L		67	24 - 159
Benzo[g,h,i]perylene	8.00	5.29		ug/L		66	10 - 219
Benzo[k]fluoranthene	8.00	5.33		ug/L		67	11 - 162
Chrysene	8.00	5.65		ug/L		71	17 - 168

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Method: 625 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCS 490-563956/2-A**  
**Matrix: Water**  
**Analysis Batch: 564289**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 563956**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz(a,h)anthracene	8.00	4.37		ug/L		55	10 - 227
Fluoranthene	8.00	5.57		ug/L		70	26 - 137
Indeno[1,2,3-cd]pyrene	8.00	5.57		ug/L		70	10 - 171
Naphthalene	8.00	4.86		ug/L		61	21 - 133
Phenanthrene	8.00	5.37		ug/L		67	54 - 120
Pyrene	8.00	5.55		ug/L		69	52 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	73		27 - 120
Terphenyl-d14	76		13 - 120
2-Fluorobiphenyl (Surr)	55		10 - 120

**Lab Sample ID: LCSD 490-563956/3-A**  
**Matrix: Water**  
**Analysis Batch: 564289**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 563956**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene	8.00	5.55		ug/L		69	33 - 143	8	30
Benzo[a]pyrene	8.00	4.92		ug/L		61	17 - 163	8	30
Benzo[b]fluoranthene	8.00	4.88		ug/L		61	24 - 159	9	30
Benzo[g,h,i]perylene	8.00	4.91		ug/L		61	10 - 219	7	30
Benzo[k]fluoranthene	8.00	4.88		ug/L		61	11 - 162	9	30
Chrysene	8.00	5.37		ug/L		67	17 - 168	5	30
Dibenz(a,h)anthracene	8.00	4.08		ug/L		51	10 - 227	7	30
Fluoranthene	8.00	5.19		ug/L		65	26 - 137	7	30
Indeno[1,2,3-cd]pyrene	8.00	5.17		ug/L		65	10 - 171	7	30
Naphthalene	8.00	4.17		ug/L		52	21 - 133	15	30
Phenanthrene	8.00	4.82		ug/L		60	54 - 120	11	30
Pyrene	8.00	5.19		ug/L		65	52 - 115	7	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	57		27 - 120
Terphenyl-d14	65		13 - 120
2-Fluorobiphenyl (Surr)	43		10 - 120

## Method: 1664B - HEM and SGT-HEM

**Lab Sample ID: MB 500-465353/1-A**  
**Matrix: Water**  
**Analysis Batch: 465354**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 465353**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<1.3		5.0	1.3	mg/L		12/18/18 18:19	12/18/18 18:38	1

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Method: 1664B - HEM and SGT-HEM (Continued)

**Lab Sample ID:** LCS 500-465353/2-A  
**Matrix:** Water  
**Analysis Batch:** 465354

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 465353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil & Grease)	40.0	34.30		mg/L		86	78 - 114

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID:** MB 500-465276/3  
**Matrix:** Water  
**Analysis Batch:** 465276

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.17		0.20	0.17	mg/L			12/18/18 13:27	1

**Lab Sample ID:** LCS 500-465276/4  
**Matrix:** Water  
**Analysis Batch:** 465276

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.00	3.07		mg/L		102	90 - 110

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID:** MB 500-464365/1  
**Matrix:** Water  
**Analysis Batch:** 464365

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			12/12/18 13:30	1

**Lab Sample ID:** LCS 500-464365/2  
**Matrix:** Water  
**Analysis Batch:** 464365

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

**Lab Sample ID:** MB 500-464547/1  
**Matrix:** Water  
**Analysis Batch:** 464547

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			12/13/18 11:15	1

**Lab Sample ID:** LCS 500-464547/2  
**Matrix:** Water  
**Analysis Batch:** 464547

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	197		mg/L		98	80 - 120

TestAmerica Chicago

# QC Sample Results

Client: TRC Environmental Corporation.  
 Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 500-464420/1  
 Matrix: Water  
 Analysis Batch: 464420

Client Sample ID: Method Blank  
 Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			12/12/18 14:10	1

Lab Sample ID: LCS 500-464420/2  
 Matrix: Water  
 Analysis Batch: 464420

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	222		mg/L		112	85 - 115

Lab Sample ID: LCSD 500-464420/3  
 Matrix: Water  
 Analysis Batch: 464420

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biochemical Oxygen Demand	198	210		mg/L		106	85 - 115	5	20

# Lab Chronicle

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Client Sample ID: Influent

Date Collected: 12/11/18 14:45

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		5	464919	12/16/18 22:27	JLC	TAL CHI
Total/NA	Analysis	624	DL	50	464919	12/16/18 22:54	JLC	TAL CHI
Total/NA	Prep	625			563956	12/14/18 18:47	KWS	TAL NSH
Total/NA	Analysis	625 SIM		1	564289	12/17/18 21:07	KJP	TAL NSH
Total/NA	Prep	1664B			465353	12/18/18 18:19	RES	TAL CHI
Total/NA	Analysis	1664B		1	465354	12/18/18 18:38	RES	TAL CHI
Total/NA	Analysis	300.0		50	465276	12/18/18 16:12	EAT	TAL CHI
Total/NA	Analysis	SM 2540D		1	464365	12/12/18 13:51 (Start) 12/12/18 13:52 (End)	SMO	TAL CHI
Total/NA	Analysis	SM 5210B		1	464420	12/12/18 15:23	JGM	TAL CHI

## Client Sample ID: Effluent

Date Collected: 12/11/18 14:25

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	464919	12/17/18 00:58	JLC	TAL CHI
Total/NA	Prep	625			563956	12/14/18 18:47	KWS	TAL NSH
Total/NA	Analysis	625 SIM		1	564289	12/17/18 21:28	KJP	TAL NSH
Total/NA	Prep	1664B			465353	12/18/18 18:19	RES	TAL CHI
Total/NA	Analysis	1664B		1	465354	12/18/18 18:38	RES	TAL CHI
Total/NA	Analysis	300.0		50	465276	12/18/18 16:25	EAT	TAL CHI
Total/NA	Analysis	SM 2540D		1	464547	12/13/18 11:19 (Start) 12/13/18 11:20 (End)	SMO	TAL CHI
Total/NA	Analysis	SM 5210B		1	464420	12/12/18 16:23	JGM	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 12/11/18 00:00

Date Received: 12/12/18 09:30

## Lab Sample ID: 500-156023-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	464919	12/17/18 01:25	JLC	TAL CHI

### Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

# Accreditation/Certification Summary

Client: TRC Environmental Corporation.  
Project/Site: MadisonKipp - GETS 292257

TestAmerica Job ID: 500-156023-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

## Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998020430	08-31-19

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional) Contact: <u>Andy Stehn</u> Company: <u>TRC</u> Address: <u>708 Heartland Trail Suite 3000</u> Address: <u>Madison, WI</u> Phone: <u>608-824-3665</u> Fax: <u>-</u> E-Mail: <u>astehn@trcsolutions.com</u>	Bill To (optional) Contact: <u>Same as report</u> Company: <u>Same as report</u> Address: <u>report</u> Phone: <u>-</u> Fax: <u>-</u> PO#/Reference#: <u>117375</u>
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## Chain of Custody Record

Lab Job #: 500-156023  
Chain of Custody Number: \_\_\_\_\_  
Page 1 of 1  
Temperature °C of Cooler: -0.1721

Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Preservative				Comments	
			Date	Time			8	2	1	8		
1		Influent	12/11/18	1445	8	W	X	X	X	X		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
2		Effluent	12/11/18	1425	8	W	X	X	X	X		
3		TRIP BLANK	11/29/18	-	1	W			X			



Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days  5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other  
 Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>Andy Stehn</u> Company: <u>TRC</u> Date: <u>12/11/18</u> Time: <u>16:00</u>	Received By: <u>FED EX</u> Company: _____ Date: <u>12/11/18</u> Time: <u>16:30</u>	Lab Courier: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: <u>John Selig</u> Company: <u>TAMU</u> Date: <u>12/12/18</u> Time: _____	Shipped: <u>EX Priority</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

<b>Matrix Key</b> WW - Wastewater SE - Sediment W - Water SO - Soil S - Soil L - Leachate SL - Sludge WI - Wipe MS - Miscellaneous DW - Drinking Water OL - Oil O - Other A - Air	Client Comments: <u>See attached Voc + PAH List</u>	Lab Comments:
--	--	---------------

TAL-4124-500 (1209)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Parameter	Method
<b>VOCs</b>	
Bromoform	624
Carbon Tetrachloride	624
Dichlorobromomethane	624
1,2-Dichloroethane	624
1,1-Dichloroethylene	624
Methyl Bromide	624
Methyl Chloride	624
1,1,2,2-Tetrachloroethane	624
Tetrachloroethylene	624
1,1,2-Trichloroethane	624
1,1,1-Trichloroethane	624
Trichloroethylene	624
Vinyl Chloride	624
Cis-1,2-Dichloroethene	624
Trans-1,2-Dichloroethene	624
<b>TSS</b>	
Suspended Solids, Total	2540D
<b>BTEX</b>	
Benzene	624
Toluene	
Ethylbenzene	
Xylenes	

<b>PAHs (Group of 10)</b>	
Benzo(a)anthracene	625 SIM
Benzo(b)fluoranthene	
Benzo(g,h,i)perylene	
Benzo(k)fluoranthene	
Chrysene	
Dibenzo(a,h)anthracene	
Fluoranthene	
Indeno(1,2,3-cd)pyrene	
Phenanthrene	
Pyrene	
<b>PAHs</b>	
Benzo(a)pyrene	625 SIM
Naphthalene	
<b>Oil and Grease</b>	
Oil and Grease	1664
<b>BOD<sub>5</sub></b>	
BOD <sub>5</sub>	5210B
<b>Anions</b>	
Chloride	300





## COOLER RECEIPT FORM



500-156023 Chain of Custody

Cooler Received/Opened On 12/13/2018 @ 10:10

Time Samples Removed From Cooler 12:30 Time Samples Placed In Storage 13:04 (2 Hour Window)

1. Tracking # 2320 (last 4 digits, FedEx) Courier: FedEx  
IR Gun ID 17960358 pH Strip Lot \_\_\_\_\_ Chlorine Strip Lot \_\_\_\_\_

2. Temperature of rep. sample or temp blank when opened: 11.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? 1 front YES...NO...NA  
If yes, how many and where: \_\_\_\_\_

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) \_\_\_\_\_

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # \_\_\_\_\_

I certify that I unloaded the cooler and answered questions 7-14 (initial) \_\_\_\_\_

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) \_\_\_\_\_

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) \_\_\_\_\_

I certify that I attached a label with the unique LIMS number to each container (initial) \_\_\_\_\_

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

<b>Client Information (Sub Contract Lab)</b> Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 2960 Foster Creighton Drive, City: Nashville State, Zip: TN, 37204 Phone: 615-726-0177(Tel) 615-726-3404(Fax) Email: Project Name: MadisonKipp - GETS 292257 Site:		Lab PM: Fredrick, Sandie J E-Mail: sandie.fredrick@testamericainc.com State of Origin: Wisconsin State Program - Wisconsin Accreditations Required (See note): State Program - Wisconsin								
Due Date Requested: 12/18/2018 TAT Requested (days): PO #: WO #: Project #: 50014136 SSSOW#:		JOC No: 500-114775.1 Page: Page 1 of 1 Job #: 500-156023-1 Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Other:								
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	625 SIM/625 Prep_LVI (MOD) Single compound	Analysis Requested	Total Number of containers	Special Instructions/Note:
Influent (500-156023-1)	12/11/18	14:45 Central	Water	Water	X	X			2	
Effluent (500-156023-2)	12/11/18	14:25 Central	Water	Water	X	X			2	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.										
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Special Instructions/QC Requirements: Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months										
Relinquished by: <i>M. Kipp</i> Date/Time: 12/12/18 1600 Company: TA		Received by: <i>J. Lewis</i> Date/Time: 12/13/18 Company: TA-NA		Method of Shipment:						
Relinquished by:		Received by:		Cooler Temperature(s) °C and Other Remarks: 1: 2						
Custody Seals Intact:		Custody Seal No.:								



## Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 500-156023-1

**Login Number: 156023**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Appendix D

## GETS Performance/Permit Monitoring Modifications

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## Stehn, Andrew

---

**From:** Stehn, Andrew  
**Sent:** Thursday, December 13, 2018 8:43 AM  
**To:** 'Moen, Trevor J - DNR'  
**Cc:** Vater, Katherine; Dietrich, Christopher A - DNR  
**Subject:** RE: Compliance Sample Plan Approval - WPDES Permit No. WI-0046566-07-0 - MKC

Trevor,

Thank you very much for the quick review and response. We appreciate your input and will proceed with monitoring as noted below.

Thanks,

**Andrew M Stehn, PE (WI)**

Senior Project Engineer



708 Heartland Trail, Suite 3000, Madison, WI 53717  
T: 608.826.3665 | F: 608.826.3941 | C: 608.807.8112

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---

**From:** Moen, Trevor J - DNR <Trevor.Moen@wisconsin.gov>  
**Sent:** Thursday, December 13, 2018 8:39 AM  
**To:** Stehn, Andrew <AStehn@trcsolutions.com>  
**Cc:** Vater, Katherine <KVater@trcsolutions.com>; Dietrich, Christopher A - DNR <christopher.dietrich@wisconsin.gov>  
**Subject:** RE: Compliance Sample Plan Approval - WPDES Permit No. WI-0046566-07-0 - MKC

Andrew,

To answer your questions:

- Yes a short report will be generated around the beginning of January 2019. Our DMR generator does this for all permits at that time.
- The Department agrees with your quarterly sampling plan. However, a monthly report will be available for flow rate, TSS, and for you to certify the visual inspection of potassium permanganate neutralization.
- Yes the eDMR is adjusted to only report required VOCs with no total.
- Yes a comment in the general remarks section will satisfy the reporting requirement for potassium permanganate neutralization. No noncompliance will be triggered if no result is entered for potassium permanganate.

Please contact me if you have any more questions.

Regards,

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Trevor J. Moen

Phone: (920) 424-7883

[Trevor.Moen@Wisconsin.gov](mailto:Trevor.Moen@Wisconsin.gov)

---

**From:** Stehn, Andrew <[AStehn@trcsolutions.com](mailto:AStehn@trcsolutions.com)>  
**Sent:** Wednesday, December 12, 2018 10:46 AM  
**To:** Moen, Trevor J - DNR <[Trevor.Moen@wisconsin.gov](mailto:Trevor.Moen@wisconsin.gov)>; Dietrich, Christopher A - DNR <[christopher.dietrich@wisconsin.gov](mailto:christopher.dietrich@wisconsin.gov)>  
**Cc:** Vater, Katherine <[KVater@trcsolutions.com](mailto:KVater@trcsolutions.com)>  
**Subject:** RE: Compliance Sample Plan Approval - WPDES Permit No. WI-0046566-07-0 - MKC

Chris and Trevor,

Thanks for the timely response on this request, much appreciated. In review of the below approval, I wanted to clarify a few items and make sure the WDNR is in concurrence.

- TRC collected one last round of the quarterly samples based on the previous requirements in December 2018. However, only a long report is available for completion on the switchboard, will a short report (with the quarterly parameters) be added for us to submit?
- The proposed 2019 (and going forward) quarterly sampling will completed in March, June, September, and December.
- In the past total VOCs was the summation of the VOCs that were required to be sampled. TRC will adjust the sampling program to only report required VOCs and not totals.
- Potassium Permanganate has historically been inspected visually for neutralization each month and not laboratory sampled. Photo documentation is collected and saved for use if requested. Based on this would it be possible for us to just add a note to the general remarks portion of the DMR form as we will not have a laboratory concentration to report?

Please let me know if you have any questions or need additional information.

Thanks,

**Andrew M Stehn, PE (WI)**

Senior Project Engineer



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---

**From:** Moen, Trevor J - DNR <[Trevor.Moen@wisconsin.gov](mailto:Trevor.Moen@wisconsin.gov)>  
**Sent:** Friday, December 07, 2018 11:44 AM  
**To:** Stehn, Andrew <[AStehn@trcsolutions.com](mailto:AStehn@trcsolutions.com)>  
**Cc:** Dietrich, Christopher A - DNR <[christopher.dietrich@wisconsin.gov](mailto:christopher.dietrich@wisconsin.gov)>; Hopfensperger, Alan A - DNR <[Alan.Hopfensperger@wisconsin.gov](mailto:Alan.Hopfensperger@wisconsin.gov)>; Vater, Katherine <[KVater@trcsolutions.com](mailto:KVater@trcsolutions.com)>; Tony Koblinski <[tkoblinski@madison-kipp.com](mailto:tkoblinski@madison-kipp.com)>; Matt Sill <[msill@madison-kipp.com](mailto:msill@madison-kipp.com)>; Schmoller, Michael R - DNR <[Michael.Schmoller@wisconsin.gov](mailto:Michael.Schmoller@wisconsin.gov)>; Weihemuller, Wendy - DNR <[Wendy.Weihemuller@wisconsin.gov](mailto:Wendy.Weihemuller@wisconsin.gov)>; George

Parrino <[gparrino@publichealthmdc.com](mailto:gparrino@publichealthmdc.com)>

**Subject:** Compliance Sample Plan Approval - WPDES Permit No. WI-0046566-07-0 - MKC

Hello Andrew,

This email serves as approval of the compliance sample plan for Madison Kipp Corporation under the Contaminated Groundwater from Remedial Action Operations General Permit (No. WI-0046566-07-0). The quarterly frequency for parameters will take effective on January 1, 2019. Monitoring for oil and grease and pH field have been removed. Monitoring for potassium permanganate and total VOCs have been added. Please be aware sampling for total VOCs is not required under the permit and is completely voluntary. However, if you do sample for total VOCs, the result shall be reported to the department. The sampling frequency for TSS has been changed from "Quarterly" to "Per Occurrence". TSS will appear on a monthly DMR, however, sampling is only required after system cleaning events. If no system cleaning event occurs in a month, please indicate that no sampling of TSS was conducted as no system cleaning occurred during the month. Since this request was submitted after the month of November 2018, sampling and reporting for all monthly parameters is still required for the month of November 2018.

Please contact me or Chris Dietrich (copied above) if you have any questions.

Regards,

*Trevor Moen*

**Trevor J. Moen, E.I.T.**

Wastewater Engineer – Bureau of Water Quality/Division of Environmental Management  
Wisconsin Department of Natural Resources

625 E County Rd Y STE 700

Oshkosh WI 54901-9731

Phone: (920) 424-7883

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December 6, 2018

Mr. Alan Hopfensperger  
Wisconsin Department of Natural Resources  
South Central Region  
3911 Fish Hatchery Road  
Fitchburg, WI 53711

Subject: WPDES Discharge Monitoring Report – Request for Change to Groundwater  
Extraction and Treatment System Monitoring Frequency  
Madison Kipp Corporation, Madison, Wisconsin

Dear Mr. Hopfensperger:

Madison-Kipp Corporation (MKC) is currently operating a groundwater extraction and treatment system (GETS) to remediate groundwater contaminated with volatile organic compounds, predominately tetrachloroethene (PCE). On January 12, 2015, MKC was issued a Wisconsin Pollutant Discharge Elimination System (WPDES) permit WI-0046566-06 (updated to WI-0046566-07-0 in July 2018) for Discharge of Contaminated Groundwater from Remediation Action Operations (General Permit). As of October 2018, the GETS has been in continuous operation for approximately thirty-four (34) months with system start-up being completed during the first six months (July 2015 – January 2016) of operation, and regular operation beginning in approximately January 2016. As part of the requirements for the WPDES permit, monthly samples are collected from the influent and effluent of the treatment system for volatile organic compounds (VOCs) and visual monitoring is conducted to verify potassium permanganate neutralization during treatment. In addition to VOCs, Oil and grease, biological oxygen demand (BOD), chloride, total suspended solids (TSS), and select polycyclic aromatic hydrocarbons (PAHs), are currently sampled on a quarterly basis. A discharge monitoring report, including results of the sampling, is submitted monthly online through the Wisconsin Department of Natural Resources' (WDNR) Web Access Management System.

TRC reviewed the updated July 2018 General Permit and discussed multiple parameters and sampling frequencies with the WDNR. Per Section 4.2.1.2 of the General Permit, the frequency of monitoring can be reduced from monthly to quarterly if select conditions are met. Specifically, Section 4.2.1.2 states: "If the discharge continues after the first 4 weeks, the permittee shall sample the discharge monthly. If the discharge continues beyond one year

Mr. Alan Hopfensperger  
Wisconsin Department of Natural Resources  
December 6, 2018  
Page 2

since the start date and the monitoring results have not exceeded any permit discharge limitations the department may approve in writing, a quarterly monitoring frequency.”

Based on the review of the current monitoring plan and the General Permit that has been implemented for the GETS system, TRC Environmental Corporation (TRC) on behalf of MKC, requests concurrence to modify the GETS discharge monitoring program as described in the below sections and outlined in Table 1.

### **Volatile Organic Compounds**

MKC has monitored the VOC concentrations present in the discharge from the GETS for close to three years during continuous operation, at least 34 samples have been collected, and these parameters have not been reported at concentrations higher than their corresponding effluent limits (Table 1). In addition, results from the effluent monitoring have been consistent and indicate that during normal operation, the GETS is capable of treating groundwater and discharging well below the permit limitations. Based on these results, TRC requests that VOC monitoring be reduced from monthly to quarterly.

### **Oil and Grease**

Table 1 shows that Oil and Grease has not been detected above its corresponding effluent limits of 10 milligrams per liter (mg/L) since the start of the system. The General Permit has limited context as to the requirements for sampling this parameter. Currently this parameter is sampled on a quarterly basis but TRC requests removing this parameter from the list based on results reported from the influent and effluent sampling. Over the past 34 months, both the influent and effluent concentrations for this parameter are generally reported: below the laboratory method detection limit; as an estimated value as the concentration is equal to or greater than the limit of detection, but less than the limit of quantitation; and/or noted in the method blank. The only anomaly was the influent sample collected in September 2017 which reported a concentration of 95.4 mg/L. However, the effluent concentration during that event was reported at a concentration of 2.2 mg/L with a qualifier noting that the concentration was equal to or greater than the limit of detection, but less than the limit of quantitation.

### **Biochemical Oxygen Demand and Chloride**

Per a discussion and approval from the WDNR (Attachment A), biochemical oxygen demand (BOD) and chloride will no longer be included as part of MKC’s discharge monitoring plan. Table 1 shows that neither parameter within the influent or effluent sample have been detected above the corresponding effluent limit of 395 mg/L.



Mr. Alan Hopfensperger  
Wisconsin Department of Natural Resources  
December 6, 2018  
Page 3

### **Total Suspended Solids**

Total suspended solids (TSS) has never been reported above its discharge limit of 40 mg/L. Section 4.2.1.3 of the General Permit states, "The total suspended solids monitoring, and limitations provided in Section 4.2.1 are only required at sites where there is a discharge of equipment cleaning wastewaters, or when groundwater is pumped from construction pits or trenches". For these reasons, TRC proposes to reduce the monitoring of TSS to occur only after system cleaning events because groundwater is not being pumped from construction pits or trenches at MKC. The sample to be analyzed will only be collected from the effluent side of the system following equipment cleaning events.

### **Polyaromatic hydrocarbons**

Polyaromatic hydrocarbons (PAHs) will continue to be monitored quarterly per approval from the WDNR (Attachment A).

### **Potassium Permanganate and Total Flow**

Potassium permanganate neutralization (visual inspection) will continue to be monitored monthly and total flow will be monitored daily per the WPDES permit requirements.

If you have any questions or comments related to this request, please contact Andrew Stehn at 608-826-3665 or at [astehn@trcsolutions.com](mailto:astehn@trcsolutions.com). We appreciate your assistance and look forward to discussing this modification as needed.

Sincerely,

TRC Environmental Corporation



Andrew Stehn, P.E.  
Senior Project Engineer



Katherine Vater, P.E.  
Project Manger

Tables:

Table 1: GETS WPDES Compliance Sample Results

Table 2: Modified GETS Monitoring Plan

Attachments:

A. WDNR Correspondence



Mr. Alan Hopfensperger  
Wisconsin Department of Natural Resources  
December 6, 2018  
Page 4

cc: Tony Koblinski – MKC (electronic)  
Matt Sill – MKC (electronic)  
Mike Schmoller – WDNR (electronic)  
Wendy Weihemuller – WDNR (electronic)  
Trevor Moen – WDNR (electronic)  
George Parrino – Madison Department of Health (electronic)



**Table 1**  
**Proposed GETS WPDES Compliance Sample Plan**  
**Madison-Kipp Corporation Site**  
**201 Waubesa Street, Madison, Wisconsin**

PARAMETER	DISCHARGE LIMIT	SAMPLE FREQUENCY <sup>(1)</sup>	SAMPLE TYPE
Flow	gal/day <sup>(4)</sup>	Daily	Total Daily
Potassium Permanganate	mg/L <sup>(4)</sup>	Monthly	Grab
VOCs	µg/L <sup>(5)</sup>	Quarterly	Grab
Benzene	50 µg/L	Quarterly	Grab
Total BTEX <sup>(2)</sup>	750 µg/L	Quarterly	Grab
Bromoform	120 µg/L	Quarterly	Grab
Carbon Tetrachloride	150 µg/L	Quarterly	Grab
Chloroform	120 µg/L	Quarterly	Grab
Dichlorobromomethane	120 µg/L	Quarterly	Grab
1,2-Dichloroethane	180 µg/L	Quarterly	Grab
1,1-Dichloroethylene	50 µg/L	Quarterly	Grab
Methyl Bromide	120 µg/L	Quarterly	Grab
Chlormethane	120 µg/L	Quarterly	Grab
1,1,2,2-Tetrachloroethane	50 µg/L	Quarterly	Grab
Tetrachloroethene	50 µg/L	Quarterly	Grab
1,1,2-Trichloroethane	50 µg/L	Quarterly	Grab
1,1,1-Trichloroethane	50 µg/L	Quarterly	Grab
Trichloroethylene	50 µg/L	Quarterly	Grab
Vinyl Chloride	10 µg/L	Quarterly	Grab
Benzo(a)pyrene	0.1 µg/L	Quarterly	Grab
Naphthalene	70 µg/L	Quarterly	Grab
PAHs Group of 10 <sup>(3)</sup>	0.1 µg/L	Quarterly	Grab
Total Suspended Solids (TSS) <sup>(6)</sup>	40 mg/L	Post Cleaning Event	Grab

**Notes:**

µg/L = Micrograms per liter

mg/L = Milligrams per liter

PAHs = Polynuclear Aromatic Hydrocarbons

VOCs = Volatile Organic Compounds

Updated by: A.Stehn 11/25/2018

Checked by: B. Wachholz 11/26/2018

**Footnotes:**

<sup>(1)</sup> The sampling frequency noted applies to both pre- and post-treatment for the GETS with the exception of TSS.

<sup>(2)</sup> Total BTEX is the sum of the benzene, toluene, ethylbenzene and xylene concentrations. If all compounds are below their corresponding laboratory detection limits, then the highest detection limit of the BTEX compounds was noted.

<sup>(3)</sup> PAH group of 10 (Polynuclear Aromatic Hydrocarbons) includes the sum of the following individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the PAH group compounds was noted.

<sup>(4)</sup> Madison Kipp/TRC will conduct visual monitoring for this compound.

<sup>(5)</sup> No effluent limit is established, refer to section 4 of the permit.

<sup>(6)</sup> Only effluent sample will be collected and analyzed for TSS.

**Table 2**  
**GETS WPDES Compliance Sample Results**  
**Madison-Kipp Corporation Site**  
**201 Waubesa Street, Madison, Wisconsin**

PARAMETER <sup>(3)</sup>	PERMIT DISCHARGE LIMITS	UNIT	LOCATION SAMPLE DATE																											
			INFLUENT 1/18/2016	EFFLUENT 1/18/2016	INFLUENT 2/8/2016	EFFLUENT 2/8/2016	INFLUENT 3/7/2016	EFFLUENT 3/7/2016	INFLUENT 4/6/2016	EFFLUENT 4/6/2016	INFLUENT 5/4/2016	EFFLUENT 5/4/2016	INFLUENT 6/7/2016	EFFLUENT 6/7/2016	INFLUENT 7/20/2016	EFFLUENT 7/20/2016	INFLUENT 8/8/2016	EFFLUENT 8/8/2016	INFLUENT 9/9/2016	EFFLUENT 9/9/2016	INFLUENT 10/10/2016	EFFLUENT 10/10/2016	INFLUENT 11/7/2016	EFFLUENT 11/7/2016	INFLUENT 12/7/2016	EFFLUENT 12/7/2016	INFLUENT 1/12/2017	EFFLUENT 1/12/2017		
<b>Miscellaneous</b>																														
Oil & Grease	10	mg/L	1.7 JB	2.5 JB	0.68 JB	<0.57	1.6 J B	0.87 J B F1	1.3 J	0.86 J	1.0 J B	1.1 J B	<1.5	<1.4	1.8 J	1.6 J F1	2.4 J B	1.5 J F1 B	<1.4	<1.4	<1.4	<1.4	2.4 J	<1.4	<1.4	<1.4	2.6 J B	3.1 J B		
Chloride	395	mg/L	110	140	100	110	100	100	100	100	100	100	100	98	100	70	110	110	110	110	110	110 B	110 B	120	120	110 B	100 B	110 B	110 B	
Total Suspended Solids	40	mg/L	<1.6	<1.6	<1.6	<1.6	2.0 J	<1.6	<1.6	5.0	<1.6	<1.6	<2.5	5.5	2.5 J	2.5 J	19	<2.5	<2.5	4.0 J	2.5 J	15	5.0	3.0 J	<2.5	<2.5	<2.5	<2.5		
Biological Oxygen Demand	20	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		
<b>VOCs</b>																														
1,1,1-Trichloroethane	50	µg/L	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<0.76	<0.38	<1.9	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38	<0.76	<0.38	<0.76	<0.38	<0.76	<0.38		
1,1,2,2-Tetrachloroethane	50	µg/L	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	<0.40		
1,1,2-Trichloroethane	50	µg/L	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<0.70	<0.35	<1.8	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35	<0.70	<0.35	<0.70	<0.35	<0.70	<0.35		
1,1-Dichloroethene	50	µg/L	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<0.78	<0.39	<0.78	<0.39		
1,2-Dichloroethane	180	µg/L	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<0.78	<0.39	<0.78	<0.39		
Benzene	50	µg/L	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.29	<0.15	<0.73	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	<0.15	<0.29	<0.15	<0.29	<0.15	<0.29	<0.15		
Bromodichloromethane	120	µg/L	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<0.74	<0.37	<1.9	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37	<0.74	<0.37	<0.74	<0.37	<0.74	<0.37		
Bromoform	120	µg/L	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<0.89	<0.45	<2.2	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45	<0.89	<0.45	<0.89	<0.45	<0.89	<0.45		
Bromomethane	NE	µg/L	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<1.3	<0.65	<3.2	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65	<1.3	<0.65	<1.3	<0.65	<1.3	<0.65		
Carbon Tetrachloride	150	µg/L	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<0.77	<0.38	<1.9	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38	<0.77	<0.38	<0.77	<0.38	<0.77	<0.38		
cis-1,2-Dichloroethene	NE	µg/L	14	18	<2.0	19	<2.0	19	<2.0	18	<2.0	17	<0.82	16	<2.0	18	<0.82	19	<2.0	19	<2.0	17	<2.0	22	<0.82	18	<0.82	14		
Chloromethane	NE	µg/L	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<0.64	<0.32	<1.6	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32	<0.64	<0.32	<0.64	<0.32	<0.64	<0.32		
Ethylbenzene	NE	µg/L	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.37	<0.18	<0.92	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18	<0.37	<0.18	<0.37	<0.18	<0.37	<0.18		
Tetrachloroethene	50	µg/L	2500	46	2300	43	2500	40	2000	34	1700	38	1500	36	1600	37	1200	35	1600	39	1600	32	1600	35	1700	28	1300	21		
Toluene	NE	µg/L	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.30	<0.15	<0.76	<0.15	<0.30	<0.15	<0.76	<0.15	<0.76	<0.15	0.93	<0.30	<0.15	<0.30	<0.15			
Total Xylenes	NE	µg/L	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	0.61 J	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	<0.40		
trans-1,2-Dichloroethene	NE	µg/L	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<0.70	<0.35	<1.7	<0.35	<0.70	<0.35	<1.7	<0.35	<1.7	<0.35	<0.70	<0.35	<0.70	<0.35	<0.70	<0.35		
Trichloroethene	50	µg/L	41	5.7	<0.82	6.4	<0.82	6.3	<0.82	5.6	<0.82	5.9	<0.33	5.4	<0.82	8.3	<0.33	7.2	<0.82	9.2	<0.82	5.8	<0.82	8.8	<0.33	6.5	0.68 J	5.5		
Vinyl chloride	10	µg/L	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<0.41	<0.20	<1.0	<0.20	<0.41	<0.20	<1.0	<0.20	<1.0	<0.20	<0.41	<0.20	<0.41	<0.20	<0.41	<0.20		
Total BTEX <sup>(1)</sup>	750	µg/L	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	0.61 J	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	0.93	<0.80	<0.40	<0.80	<0.40			
Total VOCs (includes BTEX)	NE	µg/L	2555	69.7	2300	68.4	2500	65.3	2000	58.21	1700	60.9	1500	57.4	1600	63.3	1200	61.2	1600	67.2	1600	54.8	1600	66.7	1700	52.5	1300.68	40.5		
<b>PAHs</b>																														
Benzo(a)anthracene	NE	µg/L	<0.024	<0.026	<0.024	<0.024	<0.024	<0.024*	<0.024	<0.023	<0.025 *	<0.023 *	<0.027	<0.026 *	<0.025 *	<0.024 *	<0.024 *	<0.025 *	<0.024	<0.024	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.024	<0.025	
Benzo(a)pyrene	0.1	µg/L	<0.024	<0.026	<0.024	<0.024	<0.024	<0.024	<0.024	<0.023	<0.025	<0.023	<0.027	<0.026	<0.025	<0.024	<0.024	<0.025	<0.024	<0.024	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.024	<0.025	
Benzo(b)fluoranthene	NE	µg/L	<0.024	<0.026	<0.024	<0.024	<0.024	<0.024	<0.024	<0.023	<0.025	<0.023	<0.027	<0.026	<0.025	<0.024	<0.024	<0.025	<0.024	<0.024	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.024	<0.025	
Benzo(g,h,i)perylene	NE	µg/L	<0.048	<0.052	<0.048	<0.048	<0.048	<0.048	<0.047	<0.046	<0.050	<0.046	<0.054	<0.052	<0.050	<0.048	<0.048	<0.050	<0.048	<0.048	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.048	<0.050		
Benzo(k)fluoranthene	NE	µg/L	<0.048	<0.052	<0.048	<0.048	<0.048	<0.048	<0.047	<0.046	<0.050	<0.046	<0.054	<0.052	<0.050	<0.048	<0.048	<0.050	<0.048	<0.048	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.048	<0.050		
Chrysene	NE	µg/L	<0.048	<0.052	<0.048	<0.048	<0.048	<0.048*	<0.047	<0.046	<0.050 *	<0.046 *	<0.054	<0.052 *	<0.050 *	<0.048 *	<0.048 *	<0.050 *	<0.048	<0.048	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.048	<0.050		
Dibenzo(a,h)anthracene	NE	µg/L	<0.024	<0.026	<0.024	<0.024	<0.024	<0.024	<0.024	<0.023	<0.025	<0.023	<0.027	<0.026	<0.025	<0.024	<0.024	<0.025	<0.024	<0.024	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.024	<0.025		
Fluoranthene	NE	µg/L	<0.048	<0.052	<0.048	<0.048	<0.048	<0.048	<0.047	<0.046	<0.050	<0.046	<0.054	<0.052	<0.050	<0.048	<0.048	<0.050	<0.048	<0.048	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.048	<0.050		
Indeno(1,2,3-cd)pyrene	NE	µg/L	<0.024	<0.026	<0.024	<0.024	<0.024	<0.024	<0.024	<0.023	<0.025	<0.023	<0.027	<0.026	<0.025	<0.024	<0.024	<0.025	<0.024	<0.024	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.024	<0.025		
Naphthalene	70	µg/L	<0.04																											

**Table 2**  
**GETS WPDES Compliance Sample Results**  
**Madison-Kipp Corporation Site**  
**201 Waubesa Street, Madison, Wisconsin**

PARAMETER <sup>(3)</sup>	PERMIT DISCHARGE LIMITS	UNIT	LOCATION SAMPLE DATE																							
			INFLUENT 2/8/2017	EFFLUENT 2/8/2017	INFLUENT 3/7/2017	EFFLUENT 3/7/2017	INFLUENT 4/6/2017	EFFLUENT 4/6/2017	INFLUENT 5/10/2017	EFFLUENT 5/10/2017	INFLUENT 6/7/2017	EFFLUENT 6/7/2017	INFLUENT 7/11/2017	EFFLUENT 7/11/2017	INFLUENT 8/15/2017	EFFLUENT 8/15/2017	INFLUENT 9/11/2017	EFFLUENT 9/11/2017	INFLUENT 10/5/2017	EFFLUENT 10/5/2017	INFLUENT 11/13/2017	EFFLUENT 11/13/2017	INFLUENT 12/8/2017	EFFLUENT 12/8/2017		
<b>Miscellaneous</b>																										
Oil & Grease	10	mg/L	3.0 J B	2.3 J B	2.2 J B	2.7 J B	<1.5	3.4 J B	--	--	3.0 J	2.6 J	--	--	--	--	95.4	2.2 J	--	--	--	--	2.7 J	2.3 J		
Chloride	395	mg/L	120	110	120	120	130	130	--	--	130	190	--	--	--	--	120	120	--	--	--	--	130	130		
Total Suspended Solids	40	mg/L	<2.5	<2.5	<2.5	<2.5	20	3.0 J	--	--	<1.9	3.5 J	--	--	--	--	<1.9	<1.9	--	--	--	2.0 J	<1.9	2.0 J		
Biological Oxygen Demand	20	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0		
<b>VOCs</b>																										
1,1,1-Trichloroethane	50	µg/L	<1.9	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38		
1,1,2,2-Tetrachloroethane	50	µg/L	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40		
1,1,2-Trichloroethane	50	µg/L	<1.8	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35		
1,1-Dichloroethene	50	µg/L	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39		
1,2-Dichloroethane	180	µg/L	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39		
Benzene	50	µg/L	<0.73	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	0.25 J	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15		
Bromodichloromethane	120	µg/L	<1.9	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37		
Bromoform	120	µg/L	<2.2	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45		
Bromomethane	NE	µg/L	<3.2	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65		
Carbon Tetrachloride	150	µg/L	<1.9	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38		
cis-1,2-Dichloroethene	NE	µg/L	<2.0	18	3.0	19	<2.0	18	<2.0	18	11	26	49	22	62	20	22	17	190	18	450	18	83	16		
Chloromethane	NE	µg/L	<1.6	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32	<1.9	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32		
Ethylbenzene	NE	µg/L	<0.92	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18		
Tetrachloroethene	50	µg/L	1500	29	1400	29	1600	26	1700	21	2200	31	1700	34	1800	32	1700	25	1700	23	1600	14	1600	26		
Toluene	NE	µg/L	<0.76	<0.15	<0.30	<0.15	<0.76	0.18 J	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15		
Total Xylenes	NE	µg/L	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40		
trans-1,2-Dichloroethene	NE	µg/L	<1.7	<0.35	<0.70	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	<1.7	<0.35	4.6 J	<0.35	<1.7	<0.35		
Trichloroethene	50	µg/L	<0.82	7.9	20	7.7	2.5	7.5	2.3 J	7.2	45	9.7	110	9.7	130	8.9	66	8.1	240	7.2	370	5.4	130	6.7		
Vinyl chloride	10	µg/L	<1.0	<0.20	<0.41	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	<1.0	<0.20	3.2	<0.20	<1.0	<0.20		
Total BTEX <sup>(1)</sup>	750	µg/L	<2.0	<0.40	<0.80	<0.40	<2.0	0.18 J	<2.0	0.25 J	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40		
Total VOCs (includes BTEX)	NE	µg/L	1500	54.9	1423	55.7	1602.5	51.68	1702.3	46.45	2256	66.7	1859	66	1992	61	1788	50.1	2130	48	2423.2	37.4	1813	48.7		
<b>PAHs</b>																										
Benzo(a)anthracene	NE	µg/L	<0.024	<0.024	<0.024	<0.024	<0.024	<0.025	--	--	<0.025	<0.025	--	--	--	--	<0.028	<0.026	--	--	--	--	<0.022	<0.025		
Benzo(a)pyrene	0.1	µg/L	<0.024	<0.024	<0.024	<0.024	<0.024	<0.025	<0.026	<0.025	<0.025	<0.025	--	--	--	--	<0.028	<0.026	--	--	--	--	0.056	<0.025		
Benzo(b)fluoranthene	NE	µg/L	<0.024	<0.024	<0.024	<0.024	<0.024	<0.025	--	--	<0.025	<0.025	--	--	--	--	<0.028	<0.026	--	--	--	--	0.063	<0.025		
Benzo(g,h,i)perylene	NE	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	0.059 J	<0.050		
Benzo(k)fluoranthene	NE	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	<0.045	<0.050		
Chrysene	NE	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	<0.045	<0.050		
Dibenzo(a,h)anthracene	NE	µg/L	<0.024	<0.024	<0.024	<0.024	<0.024	<0.025	--	--	<0.025	<0.025	--	--	--	--	<0.028	<0.026	--	--	--	--	<0.022	<0.025		
Fluoranthene	NE	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	0.087 J	0.058 J		
Indeno(1,2,3-cd)pyrene	NE	µg/L	<0.024	<0.024	<0.024	<0.024	<0.024	<0.025	--	--	<0.025	<0.025	--	--	--	--	<0.028	<0.026	--	--	--	--	0.044 J	<0.025		
Naphthalene	70	µg/L	<0.048	<0.048	<0.048	<0.048	0.12	<0.050	--	--	<0.050	0.14	--	--	--	--	<0.056	<0.052	--	--	--	--	0.054 J	0.073 J		
Phenanthrene	NE	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	0.26	0.41		
Pyrene	NE	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	0.052 J	<0.050		
PAHs Group of 10 Total <sup>(2)</sup>	0.1	µg/L	<0.048	<0.048	<0.048	<0.048	<0.048	<0.050	--	--	<0.050	<0.050	--	--	--	--	<0.056	<0.052	--	--	--	--	0.565	0.468		

Notes:  
 < = Less than  
 µg/L = Micrograms per liter  
 mg/L = Milligrams per liter  
 B = Compound was found in the blank and in the sample.  
 J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.  
 F1 = MS and/or MSD Recovery is outside acceptance limits.  
 \* = ISTD response or retention time outside of acceptable limits.  
 ND = Not Detected  
 NE = Not Established  
 -- = Not analyzed  
 PAHs = Polynuclear Aromatic Hydrocarbons  
 VOCs = Volatile Organic Compounds

Footnotes:  
<sup>(1)</sup> Total BTEX is the sum of the benzene, toluene, ethylbenzene and xylene concentrations. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the BTEX compounds was noted.  
<sup>(2)</sup> PAH group of 10 (Polynuclear Aromatic Hydrocarbons) include the sum of the following individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the PAH group compounds was noted.  
<sup>(3)</sup> The WDNR approved a modification to the GETS monitoring program for select constituents on April 27, 2017 and June 23, 2017. Following the approval, VOCs will be monitored on a monthly basis and all other constituents previously monitored will be completed on a quarterly basis.  
<sup>(4)</sup> Effluent sample was collected on 7/26/2018 after groundwater extraction well was replaced.

**Table 2**  
**GETS WPDES Compliance Sample Results**  
**Madison-Kipp Corporation Site**  
**201 Waubesa Street, Madison, Wisconsin**

PARAMETER <sup>(3)</sup>	PERMIT DISCHARGE LIMITS	UNIT	LOCATION SAMPLE DATE																			
			INFLUENT 1/8/2018	EFFLUENT 1/8/2018	INFLUENT 2/6/2018	EFFLUENT 2/6/2018	INFLUENT 3/8/2018	EFFLUENT 3/8/2018	INFLUENT 4/3/2018	EFFLUENT 4/3/2018	INFLUENT 5/1/2018	EFFLUENT 5/1/2018	INFLUENT 6/6/2018	EFFLUENT 6/6/2018	INFLUENT 7/9/2018	EFFLUENT 7/9/2018	INFLUENT 8/20/2018	EFFLUENT 8/20/2018	INFLUENT 9/4/2018	EFFLUENT 9/4/2018	INFLUENT 10/8/2018	EFFLUENT 10/8/2018
<b>Miscellaneous</b>																						
Oil & Grease	10	mg/L	--	--	--	--	<1.4	<1.4	--	--	--	--	<1.3	2.5 J B	--	--	--	--	<1.4	<1.4	--	--
Chloride	395	mg/L	--	--	--	--	130	160	--	--	--	--	130	120	--	--	--	--	260	260	--	--
Total Suspended Solids	40	mg/L	--	--	--	--	<1.9	<1.9	--	--	<1.9	<1.9	2.0 J	3.5 J	--	<1.9 <sup>(4)</sup>	--	--	2.0 J	2.5 J	--	--
Biological Oxygen Demand	20	mg/L	--	--	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0	--	--	--	--	<2.0	<2.0	--	--
<b>VOCs</b>																						
1,1,1-Trichloroethane	50	µg/L	<1.9	<0.38	<0.76	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<0.76	<0.38	<1.9	<0.38	<1.9	<0.38	<0.76	<0.38
1,1,2,2-Tetrachloroethane	50	µg/L	<2.0	<0.40	<0.80	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40
1,1,2-Trichloroethane	50	µg/L	<1.8	<0.35	<0.70	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35	<1.8	<0.35	<0.70	<0.35	<1.8	<0.35	<1.8	<0.35	<0.70	<0.35
1,1-Dichloroethene	50	µg/L	<2.0	<0.39	<0.78	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39
1,2-Dichloroethane	180	µg/L	<2.0	<0.39	<0.78	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39	<2.0	<0.39	<2.0	<0.39	<0.78	<0.39
Benzene	50	µg/L	<0.73	<0.15	<0.29	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	<0.15	<0.73	<0.15	<0.29	<0.15	<0.73	<0.15	<0.73	<0.15	<0.29	<0.15
Bromodichloromethane	120	µg/L	<1.9	<0.37	<0.74	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37	<1.9	<0.37	<0.74	<0.37	<1.9	<0.37	<1.9	<0.37	<0.74	<0.37
Bromoform	120	µg/L	<2.2	<0.45	<0.89	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45	<2.2	<0.45	<0.89	<0.45	<2.2	<0.45	<2.2	<0.45	<0.89	<0.45
Bromomethane	NE	µg/L	<3.2	<0.65	<1.3	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65	<3.2	<0.65	<1.3	<0.65	<3.2	<0.65	<3.2	<0.65	<1.3	<0.65
Carbon Tetrachloride	150	µg/L	<1.9	<0.38	<0.77	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38	<1.9	<0.38	<0.77	<0.38	<1.9	<0.38	<1.9	<0.38	<0.77	<0.38
cis-1,2-Dichloroethene	NE	µg/L	170	17	130	15	120	18	110	15	450	25	120	11	190	17	450	29	450	31	220	22
Chloromethane	NE	µg/L	<1.6	<0.32	<0.64	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32	<1.6	<0.32	<0.64	<0.32	<1.6	<0.32	<1.6	<0.32	<0.64	<0.32
Ethylbenzene	NE	µg/L	<0.92	<0.18	<0.37	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18	<0.92	<0.18	<0.37	<0.18	<0.92	<0.18	<0.92	<0.18	<0.37	<0.18
Tetrachloroethene	50	µg/L	1800	29	1700	21	1900	24	1700	20	1800	18	1700	15	1800	23	1500	18	1300	20	1800	31
Toluene	NE	µg/L	<0.76	<0.15	<0.30	<0.15	<0.30	0.16 J	<0.76	<0.15	<0.76	<0.15	<0.76	<0.15	<0.30	<0.15	2.3 J	0.28 J	<0.76	<0.15	<0.30	<0.15
Total Xylenes	NE	µg/L	<2.0	<0.40	<0.80	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	0.50 J
trans-1,2-Dichloroethene	NE	µg/L	<1.7	<0.35	<0.70	<0.35	<0.70	<0.35	<1.7	<0.35	5.8	<0.35	<1.7	<0.35	<0.70	<0.35	7.2	<0.35	7.2	<0.35	<0.70	<0.35
Trichloroethene	50	µg/L	210	6.8	180	5.3	180	7.0	160	5.4	370	7.3	170	4.2	210	5.7	300	7.4	290	7.6	220	7.7
Vinyl chloride	10	µg/L	<1.0	<0.20	<0.41	<0.20	<0.41	<0.20	<1.0	<0.20	3.6 J	<0.20	<1.0	<0.20	<0.41	<0.20	4.0 J	<0.20	2.9 J	<0.20	<0.41	<0.20
Total BTEX <sup>(1)</sup>	750	µg/L	<2.0	<0.40	<0.80	<0.40	<0.80	0.16 J	<2.0	<0.40	<2.0	<0.40	<2.0	<0.40	<0.80	<0.40	2.3 J	0.28 J	<2.0	<0.40	<0.80	0.50 J
Total VOCs (includes BTEX)	NE	µg/L	2180	52.8	2010	41.3	2200	49.16	1970	40.4	2629.4	50.3	1990	30.2	2200	45.7	2263.5	54.7	2050.1	58.6	2240	61.2
<b>PAHs</b>																						
Benzo(a)anthracene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--
Benzo(a)pyrene	0.1	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--
Benzo(b)fluoranthene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--
Benzo(g,h,i)perylene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--
Benzo(k)fluoranthene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--
Chrysene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--
Dibenzo(a,h)anthracene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--
Fluoranthene	NE	µg/L	<0.028	<0.030	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--
Indeno(1,2,3-cd)pyrene	NE	µg/L	<0.019	<0.020	--	--	<0.023	<0.026	--	--	--	--	<0.022	<0.022	--	--	--	--	<0.024	<0.024	--	--
Naphthalene	70	µg/L	<0.019	<0.020	--	--	<0.046	0.15	--	--	--	--	0.045 J	0.067 J	--	--	--	--	<0.047	<0.049	--	--
Phenanthrene	NE	µg/L	<0.028	<0.030	--	--	<0.046	<0.052	--	--	--	--	0.12	0.20	--	--	--	--	0.092 J B	0.075 J B	--	--
Pyrene	NE	µg/L	<0.019	<0.020	--	--	<0.046	<0.052	--	--	--	--	<0.043	<0.043	--	--	--	--	<0.047	<0.049	--	--
PAHs Group of 10 Total <sup>(2)</sup>	0.1	µg/L	<0.028	<0.030	--	--	<0.046	<0.052	--	--	--	--	0.12	0.20	--	--	--	--	0.092	0.075	--	--

Notes:

- < = Less than
- µg/L = Micrograms per liter
- mg/L = Milligrams per liter
- B = Compound was found in the blank and in the sample.
- J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.
- F1 = MS and/or MSD Recovery is outside acceptance limits.
- \* = ISTD response or retention time outside of acceptable limits.
- ND = Not Detected
- NE = Not Established
- = Not analyzed
- PAHs = Polynuclear Aromatic Hydrocarbons
- VOCs = Volatile Organic Compounds

Footnotes:

- <sup>(1)</sup> Total BTEX is the sum of the benzene, toluene, ethylbenzene and xylene concentrations. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the BTEX compounds was noted.
- <sup>(2)</sup> PAH group of 10 (Polynuclear Aromatic Hydrocarbons) include the sum of the following individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. If all compounds were below their corresponding laboratory detection limits, then the highest detection limit of the PAH group compounds was noted.
- <sup>(3)</sup> The WDNR approved a modification to the GETS monitoring program for select constituents on April 27, 2017 and June 23, 2017. Following the approval, VOCs will be monitored on a monthly basis and all other constituents previously monitored will be completed on a quarterly basis.
- <sup>(4)</sup> Effluent sample was collected on 7/26/2018 after groundwater extraction well was replaced.

Updated by: B. Wachholz 11/7/2018  
Checked by: L. Auner 11/26/2018

**Attachment A**  
**WDNR Correspondence**

## Stehn, Andrew

---

**From:** Moen, Trevor J - DNR <Trevor.Moen@wisconsin.gov>  
**Sent:** Tuesday, October 16, 2018 12:37 PM  
**To:** Stehn, Andrew  
**Cc:** Hopfensperger, Alan A - DNR  
**Subject:** RE: MKC - eDMR Submittal WPDES # FID#113125320

Andrew,

Methylene chloride has been changed to chloromethane (aka Methyl Chloride) in the eDMR for MKC for the month of September and moving forward.

Additionally, this message serves as confirmation that the information in your previous on August 21, 2018 is correct.

Please contact me if you have any questions.

Thanks,

*Trevor Moen*

**Trevor Moen, E.I.T.**  
Phone: (920) 424-7883  
[Trevor.Moen@Wisconsin.gov](mailto:Trevor.Moen@Wisconsin.gov)

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---

**From:** Stehn, Andrew <AStehn@trcsolutions.com>  
**Sent:** Tuesday, October 16, 2018 10:45 AM  
**To:** Moen, Trevor J - DNR <Trevor.Moen@wisconsin.gov>  
**Subject:** RE: MKC - eDMR Submittal WPDES # FID#113125320

Trevor,

As we continue to submit the eDMR for MKC (FID#113125320), I noticed that Methylene Chloride is a parameter listed on the eDMR. This is not a parameter we have historically analyzed for. Methyl Chloride however is monitored for and I was wondering if the eDMR form was incorrect based on our previous discussions. I will proceed with submitting the eDMR for the month of September with a note in the General Remarks section but wanted to bring this to your attention to see if the two parameters just needed to be adjusted on the form. In addition, can you confirm the below information based on our previous discussions is correct.

Thanks,

**Andrew M Stehn, PE (WI)**  
Senior Project Engineer



708 Heartland Trail, Suite 3000, Madison, WI 53717  
T: 608.826.3665 | F: 608.826.3941 | C: 608.807.8112

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---

**From:** Stehn, Andrew  
**Sent:** Tuesday, August 21, 2018 6:17 PM  
**To:** [Trevor.Moen@wisconsin.gov](mailto:Trevor.Moen@wisconsin.gov)  
**Cc:** Vater, Katherine <[KVater@trcsolutions.com](mailto:KVater@trcsolutions.com)>  
**Subject:** RE: MKC - eDMR Submittal WPDES # FID#113125320

Trevor,

Thanks for the update today on the eDMR. I just wanted to provide a brief summary of our discussion for records. Please review the summary below and provide feedback as needed.

Based on our discussion:

- trans-1,2,-dichloroethene, 1,1-dichloroethene, and Cis-1,2-dichloroethene are only required for groundwater discharge permits and based on Madison Kipp Corporation (MKC) discharging to a surface water source, these parameters do not need to be listed in the eDMR submittals.
- The eDMR does not allow for you to include a total VOC parameter so you have listed the required parameters based on the VOCs previously sampled at MKC with respect to the permit requirements.
- BOD is not listed on the eDMR as it is not required to be monitored for under MKC's Contaminated Groundwater from Remedial Actions Operations Permit.
- Chloride is not listed on the eDMR as it is not required to be monitored for under MKC's Contaminated Groundwater from Remedial Actions Operations Permit.
- Sodium Permanganate is visually monitored on a monthly basis and comments will be included in the general remarks section for each eDMR submittal.

Thanks,

**Andrew M Stehn, PE (WI)**  
Senior Project Engineer



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**From:** Stehn, Andrew  
**Sent:** Monday, August 20, 2018 2:30 PM  
**To:** [Trevor.Moen@wisconsin.gov](mailto:Trevor.Moen@wisconsin.gov)  
**Cc:** [Inna.Gurevic@wisconsin.gov](mailto:Inna.Gurevic@wisconsin.gov); Vater, Katherine <[KVater@trcsolutions.com](mailto:KVater@trcsolutions.com)>  
**Subject:** MKC - eDMR Submittal WPDES # FID#113125320

Trevor,

I left you a voicemail in reference to the eDMR for Madison Kipp Corporation. It appears since we spoke last week that the forms have been updated but are still different than what we have previously submitted. It appears select parameters are missing from the eDMR. I have noted below the parameters that are monitored during the monthly and

quarterly events and those highlighted are missing from the eDMR. I have included the blank DMR form we have submitted in the past (PDF: MKC DMR 06232017) and my coordination with the WDNR in reference to the sampling parameters and frequency (PDF: 2017-03-14\_WPDES DMR Request for Change to Groundwater Frequency and PDF: WDNR Follow up Benzo(a)pyrene).

In addition, I have attached the last monthly submittal (PDF: 2018-07-05\_MKC – May DMR 2018) and the last quarterly submittal (2018-13-06\_MKC – June 2018 DMR) for reference. I am looking to see if the online eDMR can be updated to reflect the specific parameters that we have been monitoring for. If you have any questions or need additional information, please feel free to contact me. I greatly appreciate the assistance with this and am available by phone to discuss.

The monthly DMR parameters at MKC are the following (highlighted have not been included with the eDMR):

- Flow
- Total BETX
- Sodium permanganate
- Benzene
- Total VOCs
- Vinyl chloride
- Trans-1,2-dichloroethene
- 1,1-dichloroethene
- Tetrachloroethene
- Cis-1,2-dichloroethene
- Trichloroethene

The quarterly DMR parameters at MKC are the following (highlighted have not been included with the eDMR):

- Oil & grease
- BOD<sub>5</sub>
- PAHs (Group of 10)
- Benzo(a)pyrene
- Naphthalene
- TSS
- Chloride

\*Note pH is listed and not a parameter we sample for.

Thanks,

**Andrew M Stehn, PE (WI)**

Senior Project Engineer



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## Stehn, Andrew

---

**From:** Stehn, Andrew  
**Sent:** Friday, June 23, 2017 8:36 AM  
**To:** 'James, Emily M - DNR'  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Emily,

Thank you very much for getting back to me on this. Going forward we will plan to monitor Benzo(a)pyrene on a quarterly basis as noted on the DMR form.

Thanks again,

**Andrew M Stehn**  
Project Engineer



TRC Environmental Corporation  
708 Heartland Trail Suite 3000, Madison, WI 53717  
T: 608.826.3665 | F: 608.826.3941 | C: 608.807.8112  
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---

**From:** James, Emily M - DNR [mailto:Emily.James@wisconsin.gov]  
**Sent:** Friday, June 23, 2017 8:00 AM  
**To:** Stehn, Andrew <AStehn@trcsolutions.com>  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Hi Andrew,

I hope you are well. I had a moment to review; please see the attached revised DMR. Let me know if you have any questions. I apologize for the delay.

Regards,  
Emily

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

**Emily James**

Phone: (414) 263-8635

[Emily.James@Wisconsin.gov](mailto:Emily.James@Wisconsin.gov)

---

**From:** Stehn, Andrew [mailto:AStehn@trcsolutions.com]  
**Sent:** Thursday, June 08, 2017 4:00 PM  
**To:** James, Emily M - DNR  
**Cc:** Vater, Katherine  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Emily,

Hope all is well. I just wanted to follow up with you and see if you have had a chance to further look into the below request. If you recall, TRC on behalf of Madison Kipp Corporation (MKC) requested a reduction in monitoring for select

parameters for MKC's groundwater extraction and treatment system. Last month, approval was granted to reduce PAH monitoring from monthly to quarterly with the exception of Benzo(a)pyrene. We are just looking to determine if Benzo(a)pyrene can also be reduced to quarterly or if this parameter needs to continue to be sampled on a monthly basis. Please let me know if you need further information for this request and thanks in advance for your assistance with this project.

Thanks,

**Andrew M Stehn**  
Project Engineer



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**From:** Stehn, Andrew  
**Sent:** Friday, May 05, 2017 2:33 PM  
**To:** 'James, Emily M - DNR' <[Emily.James@wisconsin.gov](mailto:Emily.James@wisconsin.gov)>  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Thanks Emily for getting back to me and updating the DMR form in such a timely manner, much appreciated. Feel free to contact me with any questions you have as you look further into the Benzo(a)pyrene request.

Thanks again.

**Andrew M Stehn**  
Project Engineer



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**From:** James, Emily M - DNR [<mailto:Emily.James@wisconsin.gov>]  
**Sent:** Friday, May 05, 2017 7:59 AM  
**To:** Stehn, Andrew <[AStehn@trcsolutions.com](mailto:AStehn@trcsolutions.com)>  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Andrew:

See revised DMR attached.

Emily

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Emily James

Phone: (414) 263-8635

[Emily.James@Wisconsin.gov](mailto:Emily.James@Wisconsin.gov)

---

**From:** Stehn, Andrew [<mailto:AStehn@trcsolutions.com>]  
**Sent:** Thursday, May 04, 2017 3:11 PM  
**To:** James, Emily M - DNR  
**Cc:** Alina Satkoski; Vater, Katherine  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Emily,

As noted in the voicemail I left a few minutes ago, in review of the new DMR form that was provided following the GETS monitoring modification request, the following items were observed:

- The permit number listed on the new DMR form has changed from 'WI-0046566-6' to 'WI-0046531-05-0';
- An indication of the type of wastewater discharge has been added to the DMR form and none of the items available for selection apply to the site operation;
- The Oil & Grease Effluent Limit has been adjusted from 10 mg/L to 15 mg/L;
- The Chloride Effluent Limit has been adjusted from 395 mg/L to 0.25 mg/L; and
- The potassium permanganate neutralization is not listed in the new form (this is completed by visual observation of the water clarity).

I have attached the new DMR form and the previous one for comparison purposes. As you review the Benzo(a)pyrene request based on our previous discussion this week, could you also take a look at the above observations and provide comments. We really appreciate your assistance with this review and if you have any questions, feel free to contact me by phone or email.

Thanks,

**Andrew M Stehn**  
Project Engineer



TRC Environmental Corporation  
708 Heartland Trail Suite 3000, Madison, WI 53717  
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---

**From:** James, Emily M - DNR [<mailto:Emily.James@wisconsin.gov>]  
**Sent:** Monday, May 01, 2017 10:49 AM  
**To:** Stehn, Andrew <[AStehn@trcsolutions.com](mailto:AStehn@trcsolutions.com)>  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Andrew,

See my responses below in red. Feel free to call me with any questions. I am (slowly) but surely transitioning out of this role and into a new one within the Department. Feel free to contact me in the future with any questions regarding this site until this position is filled. Thanks.

Regards,  
Emily

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Emily James

Phone: (414) 263-8635

[Emily.James@Wisconsin.gov](mailto:Emily.James@Wisconsin.gov)

---

**From:** Stehn, Andrew [<mailto:AStehn@trcsolutions.com>]  
**Sent:** Monday, May 01, 2017 10:38 AM  
**To:** James, Emily M - DNR  
**Cc:** Alina Satkoski; Hopfensperger, Alan A - DNR; Vater, Katherine  
**Subject:** RE: Madison Kipp Corporation - WPDES Permit WI Modification Request

Emily,

Thank you very much for reviewing the modified sampling for the GETS in operation at Madison-Kipp Corporation. I have two brief questions as we move forward with the new monitoring plan.

1. I just wanted to confirm that the WDNR is content with the quarterly sampling being completed during the months of March, June, September, and December each year going forward?  
**Yes.**
2. In addition, I noticed that approval was granted for quarterly monitoring of PAHs and naphthalene but noticed Benzo(a)pyrene is listed on the updated DMR form as a monthly constituent. Benzo(a)pyrene was also requested to be reduced to quarterly monitoring, and I just wanted to double check before we move forward with the modified sampling plan. Can you confirm if this parameter will require monthly monitoring or can we also assume quarterly sampling for this constituent?

**Oil and Grease, PAHs, BOD, Naphthalene, TSS, and Chloride have been reduced to quarterly sampling. Feel free to adjust you sampling plan as necessary. Benzo(a)pyrene sampling was not reduced.**

When you have a moment, could you please review my two questions and reply as needed. We appreciate the assistance and if you need any further information, please do not hesitate to contact me.

Thanks,

**Andrew M Stehn**  
Project Engineer



TRC Environmental Corporation  
708 Heartland Trail Suite 3000, Madison, WI 53717  
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----- Forwarded message -----

**From:** James, Emily M - DNR <[Emily.James@wisconsin.gov](mailto:Emily.James@wisconsin.gov)>  
**Date:** Thu, Apr 27, 2017 at 8:31 AM  
**Subject:** RE: FW: Madison Kipp Corporation - WPDES Permit WI Modification Request  
**To:** Alina Satkoski <[asatkoski@madison-kipp.com](mailto:asatkoski@madison-kipp.com)>  
**Cc:** "Hopfensperger, Alan A - DNR" <[Alan.Hopfensperger@wisconsin.gov](mailto:Alan.Hopfensperger@wisconsin.gov)>

Good morning, Alina.

Upon review of the request for reduced sampling, the Department grants reduced sampling for the following parameters from monthly sampling to quarterly sampling:

- Oil & Grease
- BOD
- PAHs
- Naphthalene
- TSS
- Chloride

See the attached updated Discharge Monitoring Report (DMR). Please let me know if you have any questions.

Regards,

Emily

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

**Emily James**

Phone: [\(414\) 263-8635](tel:(414)263-8635)

[Emily.James@Wisconsin.gov](mailto:Emily.James@Wisconsin.gov)

**From:** Alina Satkoski [mailto:[asatkoski@madison-kipp.com](mailto:asatkoski@madison-kipp.com)]

**Sent:** Thursday, April 20, 2017 10:00 AM

**To:** James, Emily M - DNR; Stehn, Andrew

**Subject:** Fwd: FW: Madison Kipp Corporation - WPDES Permit WI Modification Request

Hi Emily,

I was wondering if you had a chance to review the proposal to modify the sampling frequency at the GETS operating at our facility.

Please let me or Andy Stehn know if you need any further clarification on the proposal.

We are scheduled to sample the first week of May. Can we expect a decision by then?

Thanks,

Alina

---

**From:** Stehn, Andrew

**Sent:** Tuesday, March 14, 2017 12:18 PM

**To:** 'Emily.James@Wisconsin.gov' <[Emily.James@Wisconsin.gov](mailto:Emily.James@Wisconsin.gov)>; Schmoller, Michael R - DNR <[Michael.Schmoller@wisconsin.gov](mailto:Michael.Schmoller@wisconsin.gov)>; Weihemuller, Wendy - DNR <[Wendy.Weihemuller@wisconsin.gov](mailto:Wendy.Weihemuller@wisconsin.gov)>; Parrino, George <[gparrino@publichealthmdc.com](mailto:gparrino@publichealthmdc.com)>

**Cc:** 'Mark Sheppard' <[msheppard@madison-kipp.com](mailto:msheppard@madison-kipp.com)>; Krause, Tina <[TKrause@trcsolutions.com](mailto:TKrause@trcsolutions.com)>; Vater, Katherine <[KVater@trcsolutions.com](mailto:KVater@trcsolutions.com)>

**Subject:** Madison Kipp Corporation - WPDES Permit WI Modification Request

Emily,

As discussed in our phone call today, TRC spoke with James Brodzeller a few months ago (WDNR WPDES Permit Contact for MKC at the time) in reference to reducing the sampling frequency of select parameters for the groundwater extraction and treatment system (GETS) at Madison Kipp Corporation (WPDES Permit WI-0046566-06). At the time James had asked that we put together a letter requesting a modification to the monitoring frequency for review. Attached is a letter for your review and a hard copy will be submitted in the mail today. Please feel free to contact me with any questions you may have.

Thanks and have a great day!

**Andrew M Stehn**  
**Project Engineer**



TRC Environmental Corporation

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Alina Satkoski

Environmental and Safety Coordinator

Madison-Kipp Corporation

[asatkoski@madison-kipp.com](mailto:asatkoski@madison-kipp.com)

Office: [608-242-5200](tel:608-242-5200)

Cell: [518-265-7183](tel:518-265-7183)

--

Alina Satkoski

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Madison-Kipp Corporation

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Office: 608-242-5200

Cell: 518-265-7183



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**FOOTNOTES:**

- (1) Total BETX is the sum of the benzene, ethylbenzene, toluene and xylene concentrations.
- (2) PAH group of 10 (Polynuclear Aromatic Hydrocarbons) include the sum of the following individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene

**DIRECTIONS:**

- ☞ For "Outfall # and Description" enter the number of the outfall you are reporting (001 or 002, etc.) and the source of wastewater (petroleum contact, tank bottom water, scrap and waste storage area oily water, or secondary containment). Copy and use a new form for each outfall.
- ☞ Monitoring for a given parameter depends on if the discharge is to surface waters or groundwater, and petroleum category.
- ☞ The value entered must be the highest value of all samples analyzed for that day.
- ☞ For each quarter, indicate the month monitoring occurred next to "Month."
- ☞ Include as separate attachments to this form the annual reports for (a) waste oil and solids removed, and (b) tank bottom water disposal.

RETURN REPORT BY: **February 15, of the year following completion of monitoring**

RETURN TO: **Wastewater General Permits**  
**ATTN: Emily James**  
**Department of Natural Resources**  
**3911 Fish Hatchery Rd.**  
**Fitchburg, WI 53711**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment, (40 CFR 122.5). I also certify that the values being submitted are the actual values found in the samples; no values have been modified or changed in any manner. Wherever I believe a value being reported is inaccurate, I have added an explanation indicating the reasons why the value is inaccurate.

---

Signature of Person Completing Form

Date

---

Signature of Principal Exec. or Authorized Agent

Date

**Appendix E**

**Monthly SVE/GETS Influent and Effluent Vapor  
Laboratory Analytical Reports (on CD)**

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7/30/2018  
Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: MKC  
Project #: 292257.0000.0000  
Workorder #: 1807176R1

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 7/12/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1807176R1**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257.0000.0000 MKC
<b>DATE RECEIVED:</b>	07/12/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	07/23/2018		
<b>DATE REISSUED:</b>	07/30/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	Combined Influent	TO-15	8 "Hg	14.7 psi
02A	Combined Effluent	TO-15	8.6 "Hg	15.2 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 07/30/18

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1807176R1**

Two 1 Liter Summa Canister samples were received on July 12, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilutions were performed on sample Combined Influent and Combined Effluent due to the presence of high level target species.

The workorder was reissued on 07/30/18 to report results in ppbv and ug/m<sup>3</sup> as required by the project specifications.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: Combined Influent**

**Lab ID#: 1807176R1-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	6.8	8.5	17	22
cis-1,2-Dichloroethene	6.8	630	27	2500
Trichloroethene	6.8	500	36	2700
Tetrachloroethene	6.8	1600	46	11000

**Client Sample ID: Combined Effluent**

**Lab ID#: 1807176R1-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	2.8	8.6	7.3	22
cis-1,2-Dichloroethene	2.8	350	11	1400
Trichloroethene	2.8	360	15	2000
Tetrachloroethene	2.8	640	19	4400



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1807176R1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071315	Date of Collection:	7/9/18 1:25:00 PM
Dil. Factor:	13.6	Date of Analysis:	7/13/18 11:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	6.8	Not Detected	34	Not Detected
Freon 114	6.8	Not Detected	48	Not Detected
Chloromethane	68	Not Detected	140	Not Detected
Vinyl Chloride	6.8	8.5	17	22
Bromomethane	68	Not Detected	260	Not Detected
Chloroethane	27	Not Detected	72	Not Detected
Freon 11	6.8	Not Detected	38	Not Detected
Freon 113	6.8	Not Detected	52	Not Detected
1,1-Dichloroethene	6.8	Not Detected	27	Not Detected
Methylene Chloride	68	Not Detected	240	Not Detected
Methyl tert-butyl ether	27	Not Detected	98	Not Detected
1,1-Dichloroethane	6.8	Not Detected	28	Not Detected
cis-1,2-Dichloroethene	6.8	630	27	2500
Chloroform	6.8	Not Detected	33	Not Detected
1,1,1-Trichloroethane	6.8	Not Detected	37	Not Detected
Carbon Tetrachloride	6.8	Not Detected	43	Not Detected
Benzene	6.8	Not Detected	22	Not Detected
1,2-Dichloroethane	6.8	Not Detected	28	Not Detected
Trichloroethene	6.8	500	36	2700
1,2-Dichloropropane	6.8	Not Detected	31	Not Detected
cis-1,3-Dichloropropene	6.8	Not Detected	31	Not Detected
Toluene	6.8	Not Detected	26	Not Detected
trans-1,3-Dichloropropene	6.8	Not Detected	31	Not Detected
1,1,2-Trichloroethane	6.8	Not Detected	37	Not Detected
Tetrachloroethene	6.8	1600	46	11000
1,2-Dibromoethane (EDB)	6.8	Not Detected	52	Not Detected
Chlorobenzene	6.8	Not Detected	31	Not Detected
Ethyl Benzene	6.8	Not Detected	30	Not Detected
m,p-Xylene	6.8	Not Detected	30	Not Detected
o-Xylene	6.8	Not Detected	30	Not Detected
Styrene	6.8	Not Detected	29	Not Detected
1,1,2,2-Tetrachloroethane	6.8	Not Detected	47	Not Detected
1,3,5-Trimethylbenzene	6.8	Not Detected	33	Not Detected
1,2,4-Trimethylbenzene	6.8	Not Detected	33	Not Detected
1,3-Dichlorobenzene	6.8	Not Detected	41	Not Detected
1,4-Dichlorobenzene	6.8	Not Detected	41	Not Detected
alpha-Chlorotoluene	6.8	Not Detected	35	Not Detected
1,2-Dichlorobenzene	6.8	Not Detected	41	Not Detected
1,2,4-Trichlorobenzene	27	Not Detected	200	Not Detected
Hexachlorobutadiene	27	Not Detected	290	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1807176R1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071315	Date of Collection: 7/9/18 1:25:00 PM
Dil. Factor:	13.6	Date of Analysis: 7/13/18 11:55 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1807176R1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071317	Date of Collection:	7/9/18 1:35:00 PM
Dil. Factor:	5.70	Date of Analysis:	7/14/18 12:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.8	Not Detected	14	Not Detected
Freon 114	2.8	Not Detected	20	Not Detected
Chloromethane	28	Not Detected	59	Not Detected
Vinyl Chloride	2.8	8.6	7.3	22
Bromomethane	28	Not Detected	110	Not Detected
Chloroethane	11	Not Detected	30	Not Detected
Freon 11	2.8	Not Detected	16	Not Detected
Freon 113	2.8	Not Detected	22	Not Detected
1,1-Dichloroethene	2.8	Not Detected	11	Not Detected
Methylene Chloride	28	Not Detected	99	Not Detected
Methyl tert-butyl ether	11	Not Detected	41	Not Detected
1,1-Dichloroethane	2.8	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	2.8	350	11	1400
Chloroform	2.8	Not Detected	14	Not Detected
1,1,1-Trichloroethane	2.8	Not Detected	16	Not Detected
Carbon Tetrachloride	2.8	Not Detected	18	Not Detected
Benzene	2.8	Not Detected	9.1	Not Detected
1,2-Dichloroethane	2.8	Not Detected	12	Not Detected
Trichloroethene	2.8	360	15	2000
1,2-Dichloropropane	2.8	Not Detected	13	Not Detected
cis-1,3-Dichloropropene	2.8	Not Detected	13	Not Detected
Toluene	2.8	Not Detected	11	Not Detected
trans-1,3-Dichloropropene	2.8	Not Detected	13	Not Detected
1,1,2-Trichloroethane	2.8	Not Detected	16	Not Detected
Tetrachloroethene	2.8	640	19	4400
1,2-Dibromoethane (EDB)	2.8	Not Detected	22	Not Detected
Chlorobenzene	2.8	Not Detected	13	Not Detected
Ethyl Benzene	2.8	Not Detected	12	Not Detected
m,p-Xylene	2.8	Not Detected	12	Not Detected
o-Xylene	2.8	Not Detected	12	Not Detected
Styrene	2.8	Not Detected	12	Not Detected
1,1,2,2-Tetrachloroethane	2.8	Not Detected	20	Not Detected
1,3,5-Trimethylbenzene	2.8	Not Detected	14	Not Detected
1,2,4-Trimethylbenzene	2.8	Not Detected	14	Not Detected
1,3-Dichlorobenzene	2.8	Not Detected	17	Not Detected
1,4-Dichlorobenzene	2.8	Not Detected	17	Not Detected
alpha-Chlorotoluene	2.8	Not Detected	15	Not Detected
1,2-Dichlorobenzene	2.8	Not Detected	17	Not Detected
1,2,4-Trichlorobenzene	11	Not Detected	85	Not Detected
Hexachlorobutadiene	11	Not Detected	120	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1807176R1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071317	Date of Collection: 7/9/18 1:35:00 PM
Dil. Factor:	5.70	Date of Analysis: 7/14/18 12:46 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1807176R1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071305	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/13/18 10:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1807176R1-03A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 10:49 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1807176R1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 09:05 AM

Compound	%Recovery
Freon 12	104
Freon 114	110
Chloromethane	71
Vinyl Chloride	104
Bromomethane	106
Chloroethane	94
Freon 11	104
Freon 113	104
1,1-Dichloroethene	96
Methylene Chloride	88
Methyl tert-butyl ether	97
1,1-Dichloroethane	97
cis-1,2-Dichloroethene	102
Chloroform	102
1,1,1-Trichloroethane	101
Carbon Tetrachloride	110
Benzene	110
1,2-Dichloroethane	101
Trichloroethene	102
1,2-Dichloropropane	97
cis-1,3-Dichloropropene	101
Toluene	109
trans-1,3-Dichloropropene	108
1,1,2-Trichloroethane	105
Tetrachloroethene	116
1,2-Dibromoethane (EDB)	112
Chlorobenzene	109
Ethyl Benzene	118
m,p-Xylene	124
o-Xylene	122
Styrene	126
1,1,2,2-Tetrachloroethane	100
1,3,5-Trimethylbenzene	126
1,2,4-Trimethylbenzene	124
1,3-Dichlorobenzene	116
1,4-Dichlorobenzene	118
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	115
1,2,4-Trichlorobenzene	106
Hexachlorobutadiene	110

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 1807176R1-04A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 09:05 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCS

Lab ID#: 1807176R1-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 09:30 AM

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	111	70-130
Chloromethane	91	70-130
Vinyl Chloride	116	70-130
Bromomethane	113	70-130
Chloroethane	98	70-130
Freon 11	107	70-130
Freon 113	108	70-130
1,1-Dichloroethene	100	70-130
Methylene Chloride	90	70-130
Methyl tert-butyl ether	97	70-130
1,1-Dichloroethane	96	70-130
cis-1,2-Dichloroethene	92	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	106	70-130
Carbon Tetrachloride	120	70-130
Benzene	112	70-130
1,2-Dichloroethane	102	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	100	70-130
cis-1,3-Dichloropropene	115	70-130
Toluene	113	70-130
trans-1,3-Dichloropropene	110	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	113	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	109	70-130
Ethyl Benzene	122	70-130
m,p-Xylene	124	70-130
o-Xylene	122	70-130
Styrene	133 Q	70-130
1,1,2,2-Tetrachloroethane	100	70-130
1,3,5-Trimethylbenzene	126	70-130
1,2,4-Trimethylbenzene	128	70-130
1,3-Dichlorobenzene	115	70-130
1,4-Dichlorobenzene	119	70-130
alpha-Chlorotoluene	120	70-130
1,2-Dichlorobenzene	115	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	109	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1807176R1-05A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 09:30 AM

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCS D

Lab ID#: 1807176R1-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p071304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 09:55 AM

Compound	%Recovery	Method Limits
Freon 12	101	70-130
Freon 114	105	70-130
Chloromethane	88	70-130
Vinyl Chloride	98	70-130
Bromomethane	107	70-130
Chloroethane	93	70-130
Freon 11	101	70-130
Freon 113	98	70-130
1,1-Dichloroethene	95	70-130
Methylene Chloride	83	70-130
Methyl tert-butyl ether	93	70-130
1,1-Dichloroethane	91	70-130
cis-1,2-Dichloroethene	88	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	101	70-130
Carbon Tetrachloride	113	70-130
Benzene	107	70-130
1,2-Dichloroethane	98	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	96	70-130
cis-1,3-Dichloropropene	111	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	108	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	110	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	119	70-130
m,p-Xylene	122	70-130
o-Xylene	122	70-130
Styrene	131 Q	70-130
1,1,2,2-Tetrachloroethane	98	70-130
1,3,5-Trimethylbenzene	126	70-130
1,2,4-Trimethylbenzene	124	70-130
1,3-Dichlorobenzene	114	70-130
1,4-Dichlorobenzene	120	70-130
alpha-Chlorotoluene	118	70-130
1,2-Dichlorobenzene	113	70-130
1,2,4-Trichlorobenzene	102	70-130
Hexachlorobutadiene	106	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1807176R1-05AA

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/13/18 09:55 AM

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	109	70-130



9/7/2018  
Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: MKC  
Project #: 292257.0000..0000  
Workorder #: 1808564

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 8/24/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1808564**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257.0000..0000 MKC
<b>DATE RECEIVED:</b>	08/24/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	09/07/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	Combined Influent	TO-15	5.3 "Hg	15 psi
02A	Combined Effluent	TO-15	3.9 "Hg	15 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 09/07/18

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1808564**

Two 1 Liter Summa Canister samples were received on August 24, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples Combined Influent and Combined Effluent due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: Combined Influent**

**Lab ID#: 1808564-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	4.1	7.3	10	19
cis-1,2-Dichloroethene	4.1	860	16	3400
Trichloroethene	4.1	340	22	1800
Tetrachloroethene	4.1	520	28	3600

**Client Sample ID: Combined Effluent**

**Lab ID#: 1808564-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
cis-1,2-Dichloroethene	2.6	450	10	1800
Trichloroethene	2.6	290	14	1600
Tetrachloroethene	2.6	380	18	2600



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1808564-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090516	Date of Collection:	8/20/18 9:35:00 AM
Dil. Factor:	8.18	Date of Analysis:	9/5/18 07:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	4.1	Not Detected	20	Not Detected
Freon 114	4.1	Not Detected	28	Not Detected
Chloromethane	41	Not Detected	84	Not Detected
Vinyl Chloride	4.1	7.3	10	19
Bromomethane	41	Not Detected	160	Not Detected
Chloroethane	16	Not Detected	43	Not Detected
Freon 11	4.1	Not Detected	23	Not Detected
Freon 113	4.1	Not Detected	31	Not Detected
1,1-Dichloroethene	4.1	Not Detected	16	Not Detected
Methylene Chloride	41	Not Detected	140	Not Detected
Methyl tert-butyl ether	16	Not Detected	59	Not Detected
1,1-Dichloroethane	4.1	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	4.1	860	16	3400
Chloroform	4.1	Not Detected	20	Not Detected
1,1,1-Trichloroethane	4.1	Not Detected	22	Not Detected
Carbon Tetrachloride	4.1	Not Detected	26	Not Detected
Benzene	4.1	Not Detected	13	Not Detected
1,2-Dichloroethane	4.1	Not Detected	16	Not Detected
Trichloroethene	4.1	340	22	1800
1,2-Dichloropropane	4.1	Not Detected	19	Not Detected
cis-1,3-Dichloropropene	4.1	Not Detected	18	Not Detected
Toluene	4.1	Not Detected	15	Not Detected
trans-1,3-Dichloropropene	4.1	Not Detected	18	Not Detected
1,1,2-Trichloroethane	4.1	Not Detected	22	Not Detected
Tetrachloroethene	4.1	520	28	3600
1,2-Dibromoethane (EDB)	4.1	Not Detected	31	Not Detected
Chlorobenzene	4.1	Not Detected	19	Not Detected
Ethyl Benzene	4.1	Not Detected	18	Not Detected
m,p-Xylene	4.1	Not Detected	18	Not Detected
o-Xylene	4.1	Not Detected	18	Not Detected
Styrene	4.1	Not Detected	17	Not Detected
1,1,2,2-Tetrachloroethane	4.1	Not Detected	28	Not Detected
1,3,5-Trimethylbenzene	4.1	Not Detected	20	Not Detected
1,2,4-Trimethylbenzene	4.1	Not Detected	20	Not Detected
1,3-Dichlorobenzene	4.1	Not Detected	24	Not Detected
1,4-Dichlorobenzene	4.1	Not Detected	24	Not Detected
alpha-Chlorotoluene	4.1	Not Detected	21	Not Detected
1,2-Dichlorobenzene	4.1	Not Detected	24	Not Detected
1,2,4-Trichlorobenzene	16	Not Detected	120	Not Detected
Hexachlorobutadiene	16	Not Detected	170	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1808564-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090516	Date of Collection:	8/20/18 9:35:00 AM
Dil. Factor:	8.18	Date of Analysis:	9/5/18 07:24 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1808564-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090515	Date of Collection:	8/20/18 9:10:00 AM
Dil. Factor:	5.16	Date of Analysis:	9/5/18 06:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.6	Not Detected	13	Not Detected
Freon 114	2.6	Not Detected	18	Not Detected
Chloromethane	26	Not Detected	53	Not Detected
Vinyl Chloride	2.6	Not Detected	6.6	Not Detected
Bromomethane	26	Not Detected	100	Not Detected
Chloroethane	10	Not Detected	27	Not Detected
Freon 11	2.6	Not Detected	14	Not Detected
Freon 113	2.6	Not Detected	20	Not Detected
1,1-Dichloroethene	2.6	Not Detected	10	Not Detected
Methylene Chloride	26	Not Detected	90	Not Detected
Methyl tert-butyl ether	10	Not Detected	37	Not Detected
1,1-Dichloroethane	2.6	Not Detected	10	Not Detected
cis-1,2-Dichloroethene	2.6	450	10	1800
Chloroform	2.6	Not Detected	12	Not Detected
1,1,1-Trichloroethane	2.6	Not Detected	14	Not Detected
Carbon Tetrachloride	2.6	Not Detected	16	Not Detected
Benzene	2.6	Not Detected	8.2	Not Detected
1,2-Dichloroethane	2.6	Not Detected	10	Not Detected
Trichloroethene	2.6	290	14	1600
1,2-Dichloropropane	2.6	Not Detected	12	Not Detected
cis-1,3-Dichloropropene	2.6	Not Detected	12	Not Detected
Toluene	2.6	Not Detected	9.7	Not Detected
trans-1,3-Dichloropropene	2.6	Not Detected	12	Not Detected
1,1,2-Trichloroethane	2.6	Not Detected	14	Not Detected
Tetrachloroethene	2.6	380	18	2600
1,2-Dibromoethane (EDB)	2.6	Not Detected	20	Not Detected
Chlorobenzene	2.6	Not Detected	12	Not Detected
Ethyl Benzene	2.6	Not Detected	11	Not Detected
m,p-Xylene	2.6	Not Detected	11	Not Detected
o-Xylene	2.6	Not Detected	11	Not Detected
Styrene	2.6	Not Detected	11	Not Detected
1,1,2,2-Tetrachloroethane	2.6	Not Detected	18	Not Detected
1,3,5-Trimethylbenzene	2.6	Not Detected	13	Not Detected
1,2,4-Trimethylbenzene	2.6	Not Detected	13	Not Detected
1,3-Dichlorobenzene	2.6	Not Detected	16	Not Detected
1,4-Dichlorobenzene	2.6	Not Detected	16	Not Detected
alpha-Chlorotoluene	2.6	Not Detected	13	Not Detected
1,2-Dichlorobenzene	2.6	Not Detected	16	Not Detected
1,2,4-Trichlorobenzene	10	Not Detected	76	Not Detected
Hexachlorobutadiene	10	Not Detected	110	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1808564-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090515	Date of Collection:	8/20/18 9:10:00 AM
Dil. Factor:	5.16	Date of Analysis:	9/5/18 06:59 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1808564-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090505	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/5/18 11:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1808564-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090505	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/5/18 11:30 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1808564-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/5/18 09:23 AM

Compound	%Recovery
Freon 12	89
Freon 114	93
Chloromethane	81
Vinyl Chloride	91
Bromomethane	88
Chloroethane	74
Freon 11	92
Freon 113	93
1,1-Dichloroethene	79
Methylene Chloride	80
Methyl tert-butyl ether	78
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	87
Chloroform	87
1,1,1-Trichloroethane	93
Carbon Tetrachloride	97
Benzene	90
1,2-Dichloroethane	94
Trichloroethene	96
1,2-Dichloropropane	95
cis-1,3-Dichloropropene	94
Toluene	98
trans-1,3-Dichloropropene	92
1,1,2-Trichloroethane	96
Tetrachloroethene	105
1,2-Dibromoethane (EDB)	100
Chlorobenzene	100
Ethyl Benzene	94
m,p-Xylene	95
o-Xylene	94
Styrene	97
1,1,2,2-Tetrachloroethane	97
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	106
alpha-Chlorotoluene	98
1,2-Dichlorobenzene	106
1,2,4-Trichlorobenzene	100
Hexachlorobutadiene	104

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 1808564-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090502	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/5/18 09:23 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1808564-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/5/18 09:48 AM

Compound	%Recovery	Method Limits
Freon 12	90	70-130
Freon 114	97	70-130
Chloromethane	86	70-130
Vinyl Chloride	92	70-130
Bromomethane	90	70-130
Chloroethane	81	70-130
Freon 11	94	70-130
Freon 113	95	70-130
1,1-Dichloroethene	81	70-130
Methylene Chloride	81	70-130
Methyl tert-butyl ether	81	70-130
1,1-Dichloroethane	86	70-130
cis-1,2-Dichloroethene	82	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	95	70-130
Carbon Tetrachloride	102	70-130
Benzene	90	70-130
1,2-Dichloroethane	94	70-130
Trichloroethene	99	70-130
1,2-Dichloropropane	97	70-130
cis-1,3-Dichloropropene	100	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	107	70-130
1,2-Dibromoethane (EDB)	103	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	96	70-130
o-Xylene	98	70-130
Styrene	99	70-130
1,1,2,2-Tetrachloroethane	101	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	113	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	112	70-130
1,2,4-Trichlorobenzene	112	70-130
Hexachlorobutadiene	114	70-130

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1808564-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090503	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/5/18 09:48 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1808564-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/5/18 10:12 AM

Compound	%Recovery	Method Limits
Freon 12	88	70-130
Freon 114	93	70-130
Chloromethane	81	70-130
Vinyl Chloride	85	70-130
Bromomethane	89	70-130
Chloroethane	77	70-130
Freon 11	92	70-130
Freon 113	92	70-130
1,1-Dichloroethene	79	70-130
Methylene Chloride	79	70-130
Methyl tert-butyl ether	79	70-130
1,1-Dichloroethane	83	70-130
cis-1,2-Dichloroethene	80	70-130
Chloroform	89	70-130
1,1,1-Trichloroethane	93	70-130
Carbon Tetrachloride	100	70-130
Benzene	88	70-130
1,2-Dichloroethane	91	70-130
Trichloroethene	96	70-130
1,2-Dichloropropane	95	70-130
cis-1,3-Dichloropropene	98	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	98	70-130
Tetrachloroethene	104	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	94	70-130
o-Xylene	96	70-130
Styrene	97	70-130
1,1,2,2-Tetrachloroethane	100	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	107	70-130
1,4-Dichlorobenzene	112	70-130
alpha-Chlorotoluene	107	70-130
1,2-Dichlorobenzene	110	70-130
1,2,4-Trichlorobenzene	113	70-130
Hexachlorobutadiene	115	70-130

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1808564-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p090504	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/5/18 10:12 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager

Andy Stehn - TRC

Collected by: (Print and Sign)

Zeta Koelke

Company

TRC

AMOREW STEHN

Email

astehn@trcsolutions.com

Address

City

State

Zip

Phone

Fax

Project Name MKC

Project Info:

P.O. # 117373

Project # 292857, 0000-0000

Turn Around Time:

Normal

Rush

Lab Use Only

Pressurized by

Date

Pressurization Gas:

N<sub>2</sub> He specify

Lab I.D.

Field Sample I.D. (Location)

Can #

Date of Collection

Time of Collection

Analyses Requested

Canister Pressure/Vacuum

Initial

Final

Receipt

Final (g/s)

01A

Combined Zuffenot

1L 2586

8/20/18

0935

TD-15

-29

-6

02A

Combined E8 Zuffenot

1L 2759

8/20/18

0910

TD-15

-30

-6

Relinquished by: (signature) Date/Time

Ande Stehn

8/20/18 / 10:00

Received by: (signature)

Date/Time

CAIT 8/20/18 MID

Notes:

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Lab Shipper Name

Air Bill #

Temp (°C)

Condition

Custody Seals Intact?

Work Order #

Lab Use Only

FELIX

NA

Good

Yes  No  None

1808563

1808564

9/24/2018  
Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: MKC  
Project #: 292257.0000.0000  
Workorder #: 1809160

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 9/11/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1809160**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257.0000.0000 MKC
<b>DATE RECEIVED:</b>	09/11/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	09/24/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	Combined Influent	TO-15	7.0 "Hg	15 psi
02A	Combined Effluent	TO-15	7.5 "Hg	15 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 09/24/18

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1809160**

Two 1 Liter Summa Canister samples were received on September 11, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples Combined Influent and Combined Effluent due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: Combined Influent**

**Lab ID#: 1809160-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	3.3	12	8.4	32
cis-1,2-Dichloroethene	3.3	1200	13	4600
Trichloroethene	3.3	530	18	2800
Tetrachloroethene	3.3	880	22	6000

**Client Sample ID: Combined Effluent**

**Lab ID#: 1809160-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
cis-1,2-Dichloroethene	3.4	850	13	3400
Benzene	3.4	4.5	11	14
Trichloroethene	3.4	740	18	4000
Tetrachloroethene	3.4	1400	23	9200



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1809160-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091922	Date of Collection:	9/4/18 3:10:00 PM
Dil. Factor:	6.59	Date of Analysis:	9/19/18 11:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.3	Not Detected	16	Not Detected
Freon 114	3.3	Not Detected	23	Not Detected
Chloromethane	33	Not Detected	68	Not Detected
Vinyl Chloride	3.3	12	8.4	32
Bromomethane	33	Not Detected	130	Not Detected
Chloroethane	13	Not Detected	35	Not Detected
Freon 11	3.3	Not Detected	18	Not Detected
Freon 113	3.3	Not Detected	25	Not Detected
1,1-Dichloroethene	3.3	Not Detected	13	Not Detected
Methylene Chloride	33	Not Detected	110	Not Detected
Methyl tert-butyl ether	13	Not Detected	48	Not Detected
1,1-Dichloroethane	3.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	3.3	1200	13	4600
Chloroform	3.3	Not Detected	16	Not Detected
1,1,1-Trichloroethane	3.3	Not Detected	18	Not Detected
Carbon Tetrachloride	3.3	Not Detected	21	Not Detected
Benzene	3.3	Not Detected	10	Not Detected
1,2-Dichloroethane	3.3	Not Detected	13	Not Detected
Trichloroethene	3.3	530	18	2800
1,2-Dichloropropane	3.3	Not Detected	15	Not Detected
cis-1,3-Dichloropropene	3.3	Not Detected	15	Not Detected
Toluene	3.3	Not Detected	12	Not Detected
trans-1,3-Dichloropropene	3.3	Not Detected	15	Not Detected
1,1,2-Trichloroethane	3.3	Not Detected	18	Not Detected
Tetrachloroethene	3.3	880	22	6000
1,2-Dibromoethane (EDB)	3.3	Not Detected	25	Not Detected
Chlorobenzene	3.3	Not Detected	15	Not Detected
Ethyl Benzene	3.3	Not Detected	14	Not Detected
m,p-Xylene	3.3	Not Detected	14	Not Detected
o-Xylene	3.3	Not Detected	14	Not Detected
Styrene	3.3	Not Detected	14	Not Detected
1,1,2,2-Tetrachloroethane	3.3	Not Detected	23	Not Detected
1,3,5-Trimethylbenzene	3.3	Not Detected	16	Not Detected
1,2,4-Trimethylbenzene	3.3	Not Detected	16	Not Detected
1,3-Dichlorobenzene	3.3	Not Detected	20	Not Detected
1,4-Dichlorobenzene	3.3	Not Detected	20	Not Detected
alpha-Chlorotoluene	3.3	Not Detected	17	Not Detected
1,2-Dichlorobenzene	3.3	Not Detected	20	Not Detected
1,2,4-Trichlorobenzene	13	Not Detected	98	Not Detected
Hexachlorobutadiene	13	Not Detected	140	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1809160-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091922	Date of Collection:	9/4/18 3:10:00 PM
Dil. Factor:	6.59	Date of Analysis:	9/19/18 11:18 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	88	70-130



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1809160-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091923	Date of Collection:	9/4/18 3:00:00 PM
Dil. Factor:	6.73	Date of Analysis:	9/19/18 11:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.4	Not Detected	17	Not Detected
Freon 114	3.4	Not Detected	24	Not Detected
Chloromethane	34	Not Detected	69	Not Detected
Vinyl Chloride	3.4	Not Detected	8.6	Not Detected
Bromomethane	34	Not Detected	130	Not Detected
Chloroethane	13	Not Detected	36	Not Detected
Freon 11	3.4	Not Detected	19	Not Detected
Freon 113	3.4	Not Detected	26	Not Detected
1,1-Dichloroethene	3.4	Not Detected	13	Not Detected
Methylene Chloride	34	Not Detected	120	Not Detected
Methyl tert-butyl ether	13	Not Detected	48	Not Detected
1,1-Dichloroethane	3.4	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	3.4	850	13	3400
Chloroform	3.4	Not Detected	16	Not Detected
1,1,1-Trichloroethane	3.4	Not Detected	18	Not Detected
Carbon Tetrachloride	3.4	Not Detected	21	Not Detected
Benzene	3.4	4.5	11	14
1,2-Dichloroethane	3.4	Not Detected	14	Not Detected
Trichloroethene	3.4	740	18	4000
1,2-Dichloropropane	3.4	Not Detected	16	Not Detected
cis-1,3-Dichloropropene	3.4	Not Detected	15	Not Detected
Toluene	3.4	Not Detected	13	Not Detected
trans-1,3-Dichloropropene	3.4	Not Detected	15	Not Detected
1,1,2-Trichloroethane	3.4	Not Detected	18	Not Detected
Tetrachloroethene	3.4	1400	23	9200
1,2-Dibromoethane (EDB)	3.4	Not Detected	26	Not Detected
Chlorobenzene	3.4	Not Detected	15	Not Detected
Ethyl Benzene	3.4	Not Detected	15	Not Detected
m,p-Xylene	3.4	Not Detected	15	Not Detected
o-Xylene	3.4	Not Detected	15	Not Detected
Styrene	3.4	Not Detected	14	Not Detected
1,1,2,2-Tetrachloroethane	3.4	Not Detected	23	Not Detected
1,3,5-Trimethylbenzene	3.4	Not Detected	16	Not Detected
1,2,4-Trimethylbenzene	3.4	Not Detected	16	Not Detected
1,3-Dichlorobenzene	3.4	Not Detected	20	Not Detected
1,4-Dichlorobenzene	3.4	Not Detected	20	Not Detected
alpha-Chlorotoluene	3.4	Not Detected	17	Not Detected
1,2-Dichlorobenzene	3.4	Not Detected	20	Not Detected
1,2,4-Trichlorobenzene	13	Not Detected	100	Not Detected
Hexachlorobutadiene	13	Not Detected	140	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1809160-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091923	Date of Collection: 9/4/18 3:00:00 PM
Dil. Factor:	6.73	Date of Analysis: 9/19/18 11:43 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	88	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1809160-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091905	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/19/18 01:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1809160-03A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	17091905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 01:12 PM

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1809160-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 11:04 AM

Compound	%Recovery
Freon 12	97
Freon 114	98
Chloromethane	101
Vinyl Chloride	101
Bromomethane	101
Chloroethane	103
Freon 11	92
Freon 113	93
1,1-Dichloroethene	95
Methylene Chloride	96
Methyl tert-butyl ether	92
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	97
Chloroform	106
1,1,1-Trichloroethane	98
Carbon Tetrachloride	98
Benzene	108
1,2-Dichloroethane	102
Trichloroethene	106
1,2-Dichloropropane	106
cis-1,3-Dichloropropene	106
Toluene	106
trans-1,3-Dichloropropene	107
1,1,2-Trichloroethane	106
Tetrachloroethene	100
1,2-Dibromoethane (EDB)	103
Chlorobenzene	102
Ethyl Benzene	100
m,p-Xylene	100
o-Xylene	99
Styrene	98
1,1,2,2-Tetrachloroethane	107
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	81
Hexachlorobutadiene	82

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 1809160-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 11:04 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1809160-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 11:48 AM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	101	70-130
Chloromethane	108	70-130
Vinyl Chloride	106	70-130
Bromomethane	106	70-130
Chloroethane	106	70-130
Freon 11	93	70-130
Freon 113	94	70-130
1,1-Dichloroethene	95	70-130
Methylene Chloride	94	70-130
Methyl tert-butyl ether	92	70-130
1,1-Dichloroethane	99	70-130
cis-1,2-Dichloroethene	89	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	100	70-130
Carbon Tetrachloride	98	70-130
Benzene	108	70-130
1,2-Dichloroethane	98	70-130
Trichloroethene	111	70-130
1,2-Dichloropropane	108	70-130
cis-1,3-Dichloropropene	114	70-130
Toluene	108	70-130
trans-1,3-Dichloropropene	106	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	99	70-130
1,2-Dibromoethane (EDB)	105	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	101	70-130
o-Xylene	101	70-130
Styrene	102	70-130
1,1,2,2-Tetrachloroethane	107	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	102	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	102	70-130
alpha-Chlorotoluene	112	70-130
1,2-Dichlorobenzene	101	70-130
1,2,4-Trichlorobenzene	91	70-130
Hexachlorobutadiene	90	70-130

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1809160-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 11:48 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1809160-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 12:15 PM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	100	70-130
Chloromethane	110	70-130
Vinyl Chloride	106	70-130
Bromomethane	106	70-130
Chloroethane	107	70-130
Freon 11	93	70-130
Freon 113	94	70-130
1,1-Dichloroethene	95	70-130
Methylene Chloride	94	70-130
Methyl tert-butyl ether	93	70-130
1,1-Dichloroethane	100	70-130
cis-1,2-Dichloroethene	88	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	101	70-130
Carbon Tetrachloride	99	70-130
Benzene	107	70-130
1,2-Dichloroethane	100	70-130
Trichloroethene	110	70-130
1,2-Dichloropropane	106	70-130
cis-1,3-Dichloropropene	114	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	106	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	100	70-130
1,2-Dibromoethane (EDB)	106	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	103	70-130
o-Xylene	102	70-130
Styrene	104	70-130
1,1,2,2-Tetrachloroethane	108	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	116	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	95	70-130
Hexachlorobutadiene	95	70-130

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1809160-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17091904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/18 12:15 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	95	70-130



10/26/2018

Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: MKC  
Project #: 292257.0000.0000  
Workorder #: 1810316

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 10/15/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1810316**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257.0000.0000 MKC
<b>DATE RECEIVED:</b>	10/15/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	10/26/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	Combined Influent	TO-15	5.5 "Hg	15.2 psi
02A	Combined Effluent	TO-15	5.9 "Hg	14.9 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 10/26/18

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1810316**

Two 1 Liter Summa Canister samples were received on October 15, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples Combined Influent and Combined Effluent due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: Combined Influent**

**Lab ID#: 1810316-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	8.3	14	21	37
cis-1,2-Dichloroethene	8.3	650	33	2600
Trichloroethene	8.3	420	45	2200
Tetrachloroethene	8.3	1300	56	8900

**Client Sample ID: Combined Effluent**

**Lab ID#: 1810316-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	3.1	11	8.0	29
cis-1,2-Dichloroethene	3.1	360	12	1400
Trichloroethene	3.1	320	17	1700
Tetrachloroethene	3.1	880	21	6000



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1810316-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102216	Date of Collection:	10/8/18 13:40:00
Dil. Factor:	16.6	Date of Analysis:	10/23/18 12:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	8.3	Not Detected	41	Not Detected
Freon 114	8.3	Not Detected	58	Not Detected
Chloromethane	83	Not Detected	170	Not Detected
Vinyl Chloride	8.3	14	21	37
Bromomethane	83	Not Detected	320	Not Detected
Chloroethane	33	Not Detected	88	Not Detected
Freon 11	8.3	Not Detected	47	Not Detected
Freon 113	8.3	Not Detected	64	Not Detected
1,1-Dichloroethene	8.3	Not Detected	33	Not Detected
Methylene Chloride	83	Not Detected	290	Not Detected
Methyl tert-butyl ether	33	Not Detected	120	Not Detected
1,1-Dichloroethane	8.3	Not Detected	34	Not Detected
cis-1,2-Dichloroethene	8.3	650	33	2600
Chloroform	8.3	Not Detected	40	Not Detected
1,1,1-Trichloroethane	8.3	Not Detected	45	Not Detected
Carbon Tetrachloride	8.3	Not Detected	52	Not Detected
Benzene	8.3	Not Detected	26	Not Detected
1,2-Dichloroethane	8.3	Not Detected	34	Not Detected
Trichloroethene	8.3	420	45	2200
1,2-Dichloropropane	8.3	Not Detected	38	Not Detected
cis-1,3-Dichloropropene	8.3	Not Detected	38	Not Detected
Toluene	8.3	Not Detected	31	Not Detected
trans-1,3-Dichloropropene	8.3	Not Detected	38	Not Detected
1,1,2-Trichloroethane	8.3	Not Detected	45	Not Detected
Tetrachloroethene	8.3	1300	56	8900
1,2-Dibromoethane (EDB)	8.3	Not Detected	64	Not Detected
Chlorobenzene	8.3	Not Detected	38	Not Detected
Ethyl Benzene	8.3	Not Detected	36	Not Detected
m,p-Xylene	8.3	Not Detected	36	Not Detected
o-Xylene	8.3	Not Detected	36	Not Detected
Styrene	8.3	Not Detected	35	Not Detected
1,1,2,2-Tetrachloroethane	8.3	Not Detected	57	Not Detected
1,3,5-Trimethylbenzene	8.3	Not Detected	41	Not Detected
1,2,4-Trimethylbenzene	8.3	Not Detected	41	Not Detected
1,3-Dichlorobenzene	8.3	Not Detected	50	Not Detected
1,4-Dichlorobenzene	8.3	Not Detected	50	Not Detected
alpha-Chlorotoluene	8.3	Not Detected	43	Not Detected
1,2-Dichlorobenzene	8.3	Not Detected	50	Not Detected
1,2,4-Trichlorobenzene	33	Not Detected	250	Not Detected
Hexachlorobutadiene	33	Not Detected	350	Not Detected

Container Type: 1 Liter Summa Canister

Client Sample ID: Combined Influent

Lab ID#: 1810316-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102216	Date of Collection: 10/8/18 13:40:00
Dil. Factor:	16.6	Date of Analysis: 10/23/18 12:00 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1810316-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102215	Date of Collection:	10/8/18 13:50:00
Dil. Factor:	6.27	Date of Analysis:	10/22/18 11:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.1	Not Detected	16	Not Detected
Freon 114	3.1	Not Detected	22	Not Detected
Chloromethane	31	Not Detected	65	Not Detected
Vinyl Chloride	3.1	11	8.0	29
Bromomethane	31	Not Detected	120	Not Detected
Chloroethane	12	Not Detected	33	Not Detected
Freon 11	3.1	Not Detected	18	Not Detected
Freon 113	3.1	Not Detected	24	Not Detected
1,1-Dichloroethene	3.1	Not Detected	12	Not Detected
Methylene Chloride	31	Not Detected	110	Not Detected
Methyl tert-butyl ether	12	Not Detected	45	Not Detected
1,1-Dichloroethane	3.1	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	3.1	360	12	1400
Chloroform	3.1	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.1	Not Detected	17	Not Detected
Carbon Tetrachloride	3.1	Not Detected	20	Not Detected
Benzene	3.1	Not Detected	10	Not Detected
1,2-Dichloroethane	3.1	Not Detected	13	Not Detected
Trichloroethene	3.1	320	17	1700
1,2-Dichloropropane	3.1	Not Detected	14	Not Detected
cis-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
Toluene	3.1	Not Detected	12	Not Detected
trans-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
1,1,2-Trichloroethane	3.1	Not Detected	17	Not Detected
Tetrachloroethene	3.1	880	21	6000
1,2-Dibromoethane (EDB)	3.1	Not Detected	24	Not Detected
Chlorobenzene	3.1	Not Detected	14	Not Detected
Ethyl Benzene	3.1	Not Detected	14	Not Detected
m,p-Xylene	3.1	Not Detected	14	Not Detected
o-Xylene	3.1	Not Detected	14	Not Detected
Styrene	3.1	Not Detected	13	Not Detected
1,1,2,2-Tetrachloroethane	3.1	Not Detected	22	Not Detected
1,3,5-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,2,4-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,3-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.1	Not Detected	19	Not Detected
alpha-Chlorotoluene	3.1	Not Detected	16	Not Detected
1,2-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	93	Not Detected
Hexachlorobutadiene	12	Not Detected	130	Not Detected

Container Type: 1 Liter Summa Canister

Client Sample ID: Combined Effluent

Lab ID#: 1810316-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102215	Date of Collection: 10/8/18 13:50:00
Dil. Factor:	6.27	Date of Analysis: 10/22/18 11:37 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1810316-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102208	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/22/18 01:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: Lab Blank

Lab ID#: 1810316-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102208	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 01:03 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	117	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: CCV

Lab ID#: 1810316-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 09:40 AM

Compound	%Recovery
Freon 12	118
Freon 114	113
Chloromethane	119
Vinyl Chloride	106
Bromomethane	103
Chloroethane	94
Freon 11	122
Freon 113	107
1,1-Dichloroethene	102
Methylene Chloride	111
Methyl tert-butyl ether	111
1,1-Dichloroethane	113
cis-1,2-Dichloroethene	103
Chloroform	114
1,1,1-Trichloroethane	118
Carbon Tetrachloride	119
Benzene	104
1,2-Dichloroethane	125
Trichloroethene	110
1,2-Dichloropropane	97
cis-1,3-Dichloropropene	106
Toluene	103
trans-1,3-Dichloropropene	117
1,1,2-Trichloroethane	103
Tetrachloroethene	106
1,2-Dibromoethane (EDB)	108
Chlorobenzene	106
Ethyl Benzene	105
m,p-Xylene	106
o-Xylene	106
Styrene	103
1,1,2,2-Tetrachloroethane	96
1,3,5-Trimethylbenzene	104
1,2,4-Trimethylbenzene	108
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	114
1,2-Dichlorobenzene	105
1,2,4-Trichlorobenzene	105
Hexachlorobutadiene	110

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 1810316-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 09:40 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCS

Lab ID#: 1810316-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 10:05 AM

Compound	%Recovery	Method Limits
Freon 12	114	70-130
Freon 114	110	70-130
Chloromethane	113	70-130
Vinyl Chloride	105	70-130
Bromomethane	102	70-130
Chloroethane	95	70-130
Freon 11	116	70-130
Freon 113	102	70-130
1,1-Dichloroethene	99	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	107	70-130
1,1-Dichloroethane	104	70-130
cis-1,2-Dichloroethene	93	70-130
Chloroform	109	70-130
1,1,1-Trichloroethane	115	70-130
Carbon Tetrachloride	116	70-130
Benzene	101	70-130
1,2-Dichloroethane	119	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	93	70-130
cis-1,3-Dichloropropene	110	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	115	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	103	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	105	70-130
Ethyl Benzene	105	70-130
m,p-Xylene	109	70-130
o-Xylene	108	70-130
Styrene	115	70-130
1,1,2,2-Tetrachloroethane	98	70-130
1,3,5-Trimethylbenzene	111	70-130
1,2,4-Trimethylbenzene	115	70-130
1,3-Dichlorobenzene	108	70-130
1,4-Dichlorobenzene	110	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	108	70-130
Hexachlorobutadiene	113	70-130

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 1810316-05A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 10:05 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 1810316-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 10:30 AM

Compound	%Recovery	Method Limits
Freon 12	114	70-130
Freon 114	108	70-130
Chloromethane	110	70-130
Vinyl Chloride	105	70-130
Bromomethane	101	70-130
Chloroethane	97	70-130
Freon 11	116	70-130
Freon 113	102	70-130
1,1-Dichloroethene	99	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	107	70-130
1,1-Dichloroethane	104	70-130
cis-1,2-Dichloroethene	93	70-130
Chloroform	107	70-130
1,1,1-Trichloroethane	115	70-130
Carbon Tetrachloride	116	70-130
Benzene	102	70-130
1,2-Dichloroethane	123	70-130
Trichloroethene	112	70-130
1,2-Dichloropropane	98	70-130
cis-1,3-Dichloropropene	115	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	118	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	106	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	107	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	111	70-130
o-Xylene	112	70-130
Styrene	119	70-130
1,1,2,2-Tetrachloroethane	101	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	118	70-130
1,3-Dichlorobenzene	111	70-130
1,4-Dichlorobenzene	112	70-130
alpha-Chlorotoluene	130	70-130
1,2-Dichlorobenzene	110	70-130
1,2,4-Trichlorobenzene	114	70-130
Hexachlorobutadiene	116	70-130

Container Type: NA - Not Applicable

Client Sample ID: LCSD

Lab ID#: 1810316-05AA

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3102204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/22/18 10:30 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	106	70-130



11/27/2018

Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: MKC  
Project #: 292257.000.0000  
Workorder #: 1811195

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 11/9/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1811195**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257.000.0000 MKC
<b>DATE RECEIVED:</b>	11/09/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	11/27/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	Combined Influent	TO-15	8 "Hg	15.1 psi
02A	Combined Effluent	TO-15	5.5 "Hg	15.4 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 11/27/18  
 \_\_\_\_\_

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1811195**

Two 1 Liter Summa Canister samples were received on November 09, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples Combined Influent and Combined Effluent due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: Combined Influent**

**Lab ID#: 1811195-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	5.5	17	14	44
cis-1,2-Dichloroethene	5.5	920	22	3600
Trichloroethene	5.5	540	30	2900
Tetrachloroethene	5.5	1400	37	9300

**Client Sample ID: Combined Effluent**

**Lab ID#: 1811195-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	3.1	15	8.0	38
cis-1,2-Dichloroethene	3.1	430	12	1700
Trichloroethene	3.1	250	17	1300
Tetrachloroethene	3.1	680	21	4600



Air Toxics

Client Sample ID: Combined Influent

Lab ID#: 1811195-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111407	Date of Collection:	11/5/18 1:36:00 PM
Dil. Factor:	11.0	Date of Analysis:	11/14/18 12:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.5	Not Detected	27	Not Detected
Freon 114	5.5	Not Detected	38	Not Detected
Chloromethane	55	Not Detected	110	Not Detected
Vinyl Chloride	5.5	17	14	44
Bromomethane	55	Not Detected	210	Not Detected
Chloroethane	22	Not Detected	58	Not Detected
Freon 11	5.5	Not Detected	31	Not Detected
Freon 113	5.5	Not Detected	42	Not Detected
1,1-Dichloroethene	5.5	Not Detected	22	Not Detected
Methylene Chloride	55	Not Detected	190	Not Detected
Methyl tert-butyl ether	22	Not Detected	79	Not Detected
1,1-Dichloroethane	5.5	Not Detected	22	Not Detected
cis-1,2-Dichloroethene	5.5	920	22	3600
Chloroform	5.5	Not Detected	27	Not Detected
1,1,1-Trichloroethane	5.5	Not Detected	30	Not Detected
Carbon Tetrachloride	5.5	Not Detected	35	Not Detected
Benzene	5.5	Not Detected	18	Not Detected
1,2-Dichloroethane	5.5	Not Detected	22	Not Detected
Trichloroethene	5.5	540	30	2900
1,2-Dichloropropane	5.5	Not Detected	25	Not Detected
cis-1,3-Dichloropropene	5.5	Not Detected	25	Not Detected
Toluene	5.5	Not Detected	21	Not Detected
trans-1,3-Dichloropropene	5.5	Not Detected	25	Not Detected
1,1,2-Trichloroethane	5.5	Not Detected	30	Not Detected
Tetrachloroethene	5.5	1400	37	9300
1,2-Dibromoethane (EDB)	5.5	Not Detected	42	Not Detected
Chlorobenzene	5.5	Not Detected	25	Not Detected
Ethyl Benzene	5.5	Not Detected	24	Not Detected
m,p-Xylene	5.5	Not Detected	24	Not Detected
o-Xylene	5.5	Not Detected	24	Not Detected
Styrene	5.5	Not Detected	23	Not Detected
1,1,2,2-Tetrachloroethane	5.5	Not Detected	38	Not Detected
1,3,5-Trimethylbenzene	5.5	Not Detected	27	Not Detected
1,2,4-Trimethylbenzene	5.5	Not Detected	27	Not Detected
1,3-Dichlorobenzene	5.5	Not Detected	33	Not Detected
1,4-Dichlorobenzene	5.5	Not Detected	33	Not Detected
alpha-Chlorotoluene	5.5	Not Detected	28	Not Detected
1,2-Dichlorobenzene	5.5	Not Detected	33	Not Detected
1,2,4-Trichlorobenzene	22	Not Detected	160	Not Detected
Hexachlorobutadiene	22	Not Detected	230	Not Detected

Container Type: 1 Liter Summa Canister

**Client Sample ID: Combined Influent**
**Lab ID#: 1811195-01A**
**EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>3111407</b>	<b>Date of Collection: 11/5/18 1:36:00 PM</b>
<b>Dil. Factor:</b>	<b>11.0</b>	<b>Date of Analysis: 11/14/18 12:19 PM</b>

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: Combined Effluent

Lab ID#: 1811195-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111408	Date of Collection:	11/5/18 1:48:00 PM
Dil. Factor:	6.27	Date of Analysis:	11/14/18 12:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.1	Not Detected	16	Not Detected
Freon 114	3.1	Not Detected	22	Not Detected
Chloromethane	31	Not Detected	65	Not Detected
Vinyl Chloride	3.1	15	8.0	38
Bromomethane	31	Not Detected	120	Not Detected
Chloroethane	12	Not Detected	33	Not Detected
Freon 11	3.1	Not Detected	18	Not Detected
Freon 113	3.1	Not Detected	24	Not Detected
1,1-Dichloroethene	3.1	Not Detected	12	Not Detected
Methylene Chloride	31	Not Detected	110	Not Detected
Methyl tert-butyl ether	12	Not Detected	45	Not Detected
1,1-Dichloroethane	3.1	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	3.1	430	12	1700
Chloroform	3.1	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.1	Not Detected	17	Not Detected
Carbon Tetrachloride	3.1	Not Detected	20	Not Detected
Benzene	3.1	Not Detected	10	Not Detected
1,2-Dichloroethane	3.1	Not Detected	13	Not Detected
Trichloroethene	3.1	250	17	1300
1,2-Dichloropropane	3.1	Not Detected	14	Not Detected
cis-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
Toluene	3.1	Not Detected	12	Not Detected
trans-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
1,1,2-Trichloroethane	3.1	Not Detected	17	Not Detected
Tetrachloroethene	3.1	680	21	4600
1,2-Dibromoethane (EDB)	3.1	Not Detected	24	Not Detected
Chlorobenzene	3.1	Not Detected	14	Not Detected
Ethyl Benzene	3.1	Not Detected	14	Not Detected
m,p-Xylene	3.1	Not Detected	14	Not Detected
o-Xylene	3.1	Not Detected	14	Not Detected
Styrene	3.1	Not Detected	13	Not Detected
1,1,2,2-Tetrachloroethane	3.1	Not Detected	22	Not Detected
1,3,5-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,2,4-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,3-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.1	Not Detected	19	Not Detected
alpha-Chlorotoluene	3.1	Not Detected	16	Not Detected
1,2-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	93	Not Detected
Hexachlorobutadiene	12	Not Detected	130	Not Detected

Container Type: 1 Liter Summa Canister

Client Sample ID: Combined Effluent

Lab ID#: 1811195-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111408	Date of Collection: 11/5/18 1:48:00 PM
Dil. Factor:	6.27	Date of Analysis: 11/14/18 12:42 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1811195-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/18 10:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: Lab Blank

Lab ID#: 1811195-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111406	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 10:21 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV

Lab ID#: 1811195-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 08:43 AM

Compound	%Recovery
Freon 12	115
Freon 114	110
Chloromethane	119
Vinyl Chloride	103
Bromomethane	100
Chloroethane	92
Freon 11	121
Freon 113	105
1,1-Dichloroethene	102
Methylene Chloride	106
Methyl tert-butyl ether	110
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	101
Chloroform	111
1,1,1-Trichloroethane	117
Carbon Tetrachloride	123
Benzene	101
1,2-Dichloroethane	123
Trichloroethene	107
1,2-Dichloropropane	95
cis-1,3-Dichloropropene	106
Toluene	100
trans-1,3-Dichloropropene	112
1,1,2-Trichloroethane	99
Tetrachloroethene	103
1,2-Dibromoethane (EDB)	105
Chlorobenzene	103
Ethyl Benzene	104
m,p-Xylene	106
o-Xylene	106
Styrene	110
1,1,2,2-Tetrachloroethane	96
1,3,5-Trimethylbenzene	106
1,2,4-Trimethylbenzene	113
1,3-Dichlorobenzene	109
1,4-Dichlorobenzene	109
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	105
Hexachlorobutadiene	114

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 1811195-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 08:43 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	117	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: LCS

Lab ID#: 1811195-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 09:06 AM

Compound	%Recovery	Method Limits
Freon 12	116	70-130
Freon 114	114	70-130
Chloromethane	114	70-130
Vinyl Chloride	106	70-130
Bromomethane	102	70-130
Chloroethane	96	70-130
Freon 11	118	70-130
Freon 113	105	70-130
1,1-Dichloroethene	101	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	108	70-130
1,1-Dichloroethane	104	70-130
cis-1,2-Dichloroethene	95	70-130
Chloroform	109	70-130
1,1,1-Trichloroethane	116	70-130
Carbon Tetrachloride	120	70-130
Benzene	97	70-130
1,2-Dichloroethane	117	70-130
Trichloroethene	107	70-130
1,2-Dichloropropane	94	70-130
cis-1,3-Dichloropropene	108	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	112	70-130
1,1,2-Trichloroethane	98	70-130
Tetrachloroethene	101	70-130
1,2-Dibromoethane (EDB)	104	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	103	70-130
o-Xylene	105	70-130
Styrene	109	70-130
1,1,2,2-Tetrachloroethane	94	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	110	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	119	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	98	70-130
Hexachlorobutadiene	107	70-130

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 1811195-05A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 09:06 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 1811195-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 09:28 AM

Compound	%Recovery	Method Limits
Freon 12	116	70-130
Freon 114	110	70-130
Chloromethane	119	70-130
Vinyl Chloride	104	70-130
Bromomethane	101	70-130
Chloroethane	96	70-130
Freon 11	117	70-130
Freon 113	104	70-130
1,1-Dichloroethene	102	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	106	70-130
1,1-Dichloroethane	103	70-130
cis-1,2-Dichloroethene	91	70-130
Chloroform	108	70-130
1,1,1-Trichloroethane	115	70-130
Carbon Tetrachloride	117	70-130
Benzene	98	70-130
1,2-Dichloroethane	117	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	92	70-130
cis-1,3-Dichloropropene	110	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	113	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	102	70-130
1,2-Dibromoethane (EDB)	106	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	107	70-130
o-Xylene	105	70-130
Styrene	112	70-130
1,1,2,2-Tetrachloroethane	95	70-130
1,3,5-Trimethylbenzene	108	70-130
1,2,4-Trimethylbenzene	113	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	122	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	111	70-130

Container Type: NA - Not Applicable

Client Sample ID: LCSD

Lab ID#: 1811195-05AA

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/18 09:28 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	103	70-130



# Appendix F

## Groundwater Monitoring Laboratory

### Analytical Reports (on CD)

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2525 Advance Road  
Madison, WI 53718  
608.221.8700 Phone  
608.221.4889 Fax

October 30, 2018

Andrew Stehn  
TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison, WI 53717  
RE: Madison Kipp Corp. Semi-Annual Sampling

Enclosed are the analytical results for the samples received by the laboratory on the dates listed on the following page(s).

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

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

Sincerely,

Jessica Esser  
Project Manager

Certification List			Expires
ADEQ	Arkansas Department of Environmental Quality	17-065-0	09/26/2018
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2019
ILEPA	Illinois Secondary NELAP Accreditation	004366	04/30/2019
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2019
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2019
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2018
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2019
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2018-087	08/31/2019
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2018
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2019

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 PH.1  
Project Manager: Andrew Stehn

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MP-13 (163-167)	A184121-01	Water	10/09/2018	10/12/2018
MP-13 (135-139)	A184121-02	Water	10/09/2018	10/12/2018
MP-13 (121-125)	A184121-03	Water	10/09/2018	10/12/2018
MP-13 (102-106)	A184121-04	Water	10/09/2018	10/12/2018
MP-13 (081-085)	A184121-05	Water	10/09/2018	10/12/2018
MP-13 (067-071)	A184121-06	Water	10/09/2018	10/12/2018
MP-13 (044-048)	A184121-07	Water	10/09/2018	10/12/2018
MP-14 (170-178)	A184121-08	Water	10/09/2018	10/12/2018
MP-14 (135-140)	A184121-09	Water	10/09/2018	10/12/2018
MP-14 (100-105)	A184121-10	Water	10/09/2018	10/12/2018
MP-15 (177-187)	A184121-11	Water	10/09/2018	10/12/2018
MP-15 (142-146)	A184121-12	Water	10/09/2018	10/12/2018
MP-15 (120-125)	A184121-13	Water	10/09/2018	10/12/2018
MP-15 (100-105)	A184121-14	Water	10/09/2018	10/12/2018
MP-15 (088-092)	A184121-15	Water	10/09/2018	10/12/2018
MP-16 (175-179)	A184121-16	Water	10/08/2018	10/12/2018
MP-16 (140-144)	A184121-17	Water	10/08/2018	10/12/2018
MP-16 (106-116)	A184121-18	Water	10/08/2018	10/12/2018
MW-4S	A184121-19	Water	10/11/2018	10/12/2018
MW-4D	A184121-20	Water	10/11/2018	10/12/2018
MW-4D2	A184121-21	Water	10/11/2018	10/12/2018
MW-5D3	A184121-22	Water	10/11/2018	10/12/2018
MW-9D	A184121-23	Water	10/11/2018	10/12/2018
MW-9D2	A184121-24	Water	10/11/2018	10/12/2018
MW-25D	A184121-25	Water	10/10/2018	10/12/2018
MW-25D2	A184121-26	Water	10/10/2018	10/12/2018
MW-27D	A184121-27	Water	10/10/2018	10/12/2018
MW-27D2	A184121-28	Water	10/10/2018	10/12/2018
DUP-01	A184121-29	Water	10/10/2018	10/12/2018
DUP-02	A184121-30	Water	10/10/2018	10/12/2018
MW-3S	A184203-01	Water	10/12/2018	10/16/2018
MW-3D	A184203-02	Water	10/12/2018	10/16/2018
MW-3D2	A184203-03	Water	10/12/2018	10/16/2018
MW-3D3	A184203-04	Water	10/12/2018	10/16/2018

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-5S	A184203-05	Water	10/12/2018	10/16/2018
MW-5D	A184203-06	Water	10/12/2018	10/16/2018
MW-5D2	A184203-07	Water	10/12/2018	10/16/2018
MW-6S	A184203-08	Water	10/15/2018	10/16/2018
MW-6D	A184203-09	Water	10/15/2018	10/16/2018
MW-17	A184203-10	Water	10/15/2018	10/16/2018
MW-24	A184203-11	Water	10/15/2018	10/16/2018
DUP-03	A184203-12	Water	10/12/2018	10/16/2018
DUP-04	A184203-13	Water	10/15/2018	10/16/2018
MW-1	A184212-01	Water	10/16/2018	10/17/2018
MW-2S	A184212-02	Water	10/16/2018	10/17/2018
MW-2D	A184212-03	Water	10/16/2018	10/17/2018
MW-11S	A184212-04	Water	10/16/2018	10/17/2018
MW-28	A184212-05	Water	10/17/2018	10/17/2018
MW-29S	A184212-06	Water	10/16/2018	10/17/2018
MW-29D	A184212-07	Water	10/16/2018	10/17/2018
DUP-05	A184212-08	Water	10/16/2018	10/17/2018
FB-01	A184212-09	Water	10/17/2018	10/17/2018
Trip Blank	A184212-10	Water	10/17/2018	10/17/2018

### A184121 CASE NARRATIVE

#### **Sample Receipt Information:**

30 samples were received on 10/12/2018. Samples were received at 4.1 degrees Celsius. Samples were received in acceptable condition, with the exception of the label discrepancies noted below.

Samples A184121-04 and A184121-27 had discrepancies between the collection time on the chain of custody (COC) and the collection time on the container. Per the client, the COC collection time is correct.

TDS and TSS analysis was subcontracted to Pace Analytical in Green Bay, WI. Please see their appended report for quality control results.

Please see the COC document at the end of this report for additional information.

#### **Continuing Calibration Verification (CCV):**

CCV indicates a potential high bias for multiple analytes for the VOCs by method 8260 analysis. The upper control limits are 120% and 130%, and the recoveries ranged from 122% to 171%. Any associated detections are footnoted with an HC. For the samples where results were less than the reporting limit no further action is required.

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

### **A184203 CASE NARRATIVE**

#### **Sample Receipt Information:**

13 samples were received on 10/16/2018. Samples were received at 0.9, 1.8 and 3.1 degrees Celsius. Samples were received in acceptable condition, with the exception of the label discrepancies noted below.

Samples A184203-01 through A184203-03 had discrepancies between the collection time on the chain of custody (COC) and the collection time on the container. Per the client, the COC collection time is correct.

TDS and TSS analysis was subcontracted to Pace Analytical in Green Bay, WI. Please see their appended report for quality control results.

Please see the COC document at the end of this report for additional information.

#### **Laboratory Control Samples (LCS):**

The LCS recovery indicates a potential high bias for acetone, bromochloromethane and methylene chloride for samples A184203-02, A184203-03, A184203-04, A184203-08, A184203-12 and A184203-13. Samples are qualified with an E1 where results were detected for these compounds. Please see the quality control section of the report for more information. For the samples where results were less than the reporting limit no further action is required.

#### **Continuing Calibration Verification (CCV):**

CCV indicates a potential high bias for PCB-1248 for sample A184203-13. Sample was less than the reporting limit for this analyte so no further action is required.

CCV indicates a potential high bias for multiple analytes for the VOCs by method 8260 analysis. The upper control limits are 120% and 130%, and the recoveries ranged from 123% to 176%. Any associated detections are footnoted with an HC. For the samples where results were less than the reporting limit no further action is required.

### **A184212 CASE NARRATIVE**

#### **Sample Receipt Information:**

10 samples were received on 10/17/2018. Samples were received at 3.9 and 2.1 degrees Celsius. Samples were received in acceptable condition.

TDS and TSS analysis was subcontracted to Pace Analytical in Green Bay, WI. Please see their appended report for quality control results.

Please see the chain of custody (COC) document at the end of this report for additional information.

#### **Continuing Calibration Verification (CCV):**

CCV indicates a potential high bias for PCB-1248 for samples A184212-02 through A184212-09. Sample was less than the reporting limit for this analyte so no further action is required.

CCV indicates a potential high bias for multiple analytes for the VOCs by method 8260 analysis. The upper control limits are 120% and 130%, and the recoveries ranged from 124% to 153%. Any associated detections are footnoted with an HC. For the samples where results were less than the reporting limit no further action is required.

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (163-167)**

**Date Sampled**

**A184121-01 (Water)**

**10/09/2018 14:35**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
1,1,1,2-Tetrachloroethane	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1,1-Trichloroethane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1,2-Trichloroethane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1-Dichloroethane	ND	0.24	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1-Dichloroethene	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,1-Dichloropropene	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.090	4.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2,3-Trichloropropane	ND	0.30	2.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.15	4.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.50	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2-Dichlorobenzene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2-Dichloroethane	ND	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,2-Dichloropropane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,3-Dichlorobenzene	ND	0.19	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,3-Dichloropropane	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
1,4-Dichlorobenzene	ND	0.14	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
2,2-Dichloropropane	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
2-Butanone	ND	6.0	40	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
2-Chlorotoluene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
2-Hexanone	ND	1.9	40	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
4-Chlorotoluene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
4-Methyl-2-pentanone	ND	1.5	40	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Acetone	ND	6.8	40	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Benzene	ND	0.18	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Bromobenzene	ND	0.17	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Bromochloromethane	ND	0.62	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Bromodichloromethane	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Bromoform	ND	0.18	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Bromomethane	ND	1.2	10	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Carbon disulfide	ND	0.11	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Carbon tetrachloride	ND	0.076	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Chlorobenzene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Chloroethane	ND	0.50	10	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Chloroform	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Chloromethane	ND	0.32	4.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>5.8</b>	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	D
cis-1,3-Dichloropropene	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Dibromochloromethane	ND	0.18	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (163-167)**

**A184121-01 (Water)**

Date Sampled  
10/09/2018 14:35

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Dichlorodifluoromethane	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Diisopropyl Ether	ND	0.30	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Ethylbenzene	ND	0.11	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Hexachlorobutadiene	ND	0.26	4.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Isopropylbenzene	ND	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
m,p-Xylene	ND	0.11	2.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Methyl t-Butyl Ether	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Methylene chloride	ND	0.28	4.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Naphthalene	ND	0.18	10	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
n-Butyl Benzene	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
n-Hexane	ND	0.42	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
n-Propyl Benzene	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
o-Xylene	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
p-Isopropyltoluene	ND	0.17	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
sec-Butyl Benzene	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Styrene	ND	0.13	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
tert-Butylbenzene	ND	0.24	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
<b>Tetrachloroethene</b>	<b>60</b>	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	D
Tetrahydrofuran	ND	2.4	20	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Toluene	ND	0.11	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.19	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
<b>Trichloroethene</b>	<b>4.9</b>	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	D
Trichlorofluoromethane	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Vinyl chloride	ND	0.32	1.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
Xylenes, total	ND	0.23	3.0	ug/L	2	10/15/2018	10/17/2018 21:19	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			115 %	70.8-139		10/15/2018	10/17/2018 21:19	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			95.7 %	76.6-116		10/15/2018	10/17/2018 21:19	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			86.3 %	71.4-118		10/15/2018	10/17/2018 21:19	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (135-139)**

Date Sampled

**A184121-02 (Water)**

10/09/2018 15:01

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
<b>Acetone</b>	<b>280</b>	170	1000	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	HC, J, D
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
<b>Bromomethane</b>	<b>56</b>	30	250	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	HC, J, D
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
<b>Chloromethane</b>	<b>13</b>	8.0	100	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>150</b>	5.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (135-139)**

Date Sampled

**A184121-02 (Water)**

10/09/2018 15:01

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
<b>Tetrachloroethene</b>	<b>3800</b>	8.1	50	ug/L	100	10/15/2018	10/18/2018 12:13	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
<b>Trichloroethene</b>	<b>250</b>	3.1	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/16/2018 23:19	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			110 %	70.8-139		10/15/2018	10/16/2018 23:19	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			89.5 %	76.6-116		10/15/2018	10/16/2018 23:19	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			83.4 %	71.4-118		10/15/2018	10/16/2018 23:19	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (121-125)**

Date Sampled

**A184121-03 (Water)**

10/09/2018 15:21

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
<b>Acetone</b>	<b>180</b>	170	1000	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	HC, J, D
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
<b>Chloromethane</b>	<b>13</b>	8.0	100	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>67</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (121-125)**

Date Sampled

**A184121-03 (Water)**

10/09/2018 15:21

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
<b>Tetrachloroethene</b>	<b>1000</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
<b>Trichloroethene</b>	<b>110</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 01:06	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			118 %	70.8-139		10/15/2018	10/17/2018 01:06	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			90.1 %	76.6-116		10/15/2018	10/17/2018 01:06	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			81.4 %	71.4-118		10/15/2018	10/17/2018 01:06	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (102-106)**  
**A184121-04 (Water)**

**Date Sampled**  
**10/09/2018 15:39**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>Acetone</b>	<b>260</b>	170	1000	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	HC, J, D
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>Bromomethane</b>	<b>46</b>	30	250	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	HC, J, D
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>Chloromethane</b>	<b>14</b>	8.0	100	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>580</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (102-106)**

**A184121-04 (Water)**

Date Sampled  
10/09/2018 15:39

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>Tetrachloroethene</b>	<b>1200</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>trans-1,2-Dichloroethene</b>	<b>11</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	J, D
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>Trichloroethene</b>	<b>290</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
<b>Vinyl chloride</b>	<b>9.0</b>	8.0	25	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	HC, J, D
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 01:33	EPA 8260B	
Surrogate: Dibromofluoromethane			119 %	70.8-139		10/15/2018	10/17/2018 01:33	EPA 8260B	
Surrogate: Toluene-d8			90.5 %	76.6-116		10/15/2018	10/17/2018 01:33	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			83.2 %	71.4-118		10/15/2018	10/17/2018 01:33	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (081-085)**  
**A184121-05 (Water)**

**Date Sampled**  
**10/09/2018 15:58**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Chloromethane	ND	8.0	100	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>240</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (081-085)**

Date Sampled

**A184121-05 (Water)**

10/09/2018 15:58

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
<b>Tetrachloroethene</b>	<b>890</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
<b>Trichloroethene</b>	<b>150</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
<b>Vinyl chloride</b>	<b>15</b>	8.0	25	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	HC, J, D
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 17:15	EPA 8260B	
Surrogate: Dibromofluoromethane			115 %	70.8-139		10/15/2018	10/17/2018 17:15	EPA 8260B	
Surrogate: Toluene-d8			92.0 %	76.6-116		10/15/2018	10/17/2018 17:15	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			87.9 %	71.4-118		10/15/2018	10/17/2018 17:15	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (067-071)**

Date Sampled

**A184121-06 (Water)**

10/09/2018 16:16

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>Chloroform</b>	<b>0.65</b>	0.062	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	HC
Chloromethane	ND	0.16	2.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>14</b>	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (067-071)**

Date Sampled

**A184121-06 (Water)**

10/09/2018 16:16

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>Methylene chloride</b>	<b>0.51</b>	0.14	2.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>Tetrachloroethene</b>	<b>45</b>	0.081	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>Toluene</b>	<b>0.090</b>	0.053	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	J
<b>trans-1,2-Dichloroethene</b>	<b>0.26</b>	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	J
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>Trichloroethene</b>	<b>8.8</b>	0.062	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
<b>Vinyl chloride</b>	<b>0.37</b>	0.16	0.50	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	HC, J
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/17/2018 20:25	EPA 8260B	
Surrogate: Dibromofluoromethane			112 %	70.8-139		10/15/2018	10/17/2018 20:25	EPA 8260B	
Surrogate: Toluene-d8			90.9 %	76.6-116		10/15/2018	10/17/2018 20:25	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			85.0 %	71.4-118		10/15/2018	10/17/2018 20:25	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (044-048)**  
**A184121-07 (Water)**

Date Sampled  
10/09/2018 16:39

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>Acetone</b>	<b>4.7</b>	3.4	20	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	HC, J
<b>Benzene</b>	<b>0.090</b>	0.089	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	J
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>Chloroform</b>	<b>0.46</b>	0.062	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	J
Chloromethane	ND	0.16	2.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>26</b>	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-13 (044-048)**

Date Sampled

**A184121-07 (Water)**

10/09/2018 16:39

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>Methylene chloride</b>	<b>0.43</b>	0.14	2.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>Tetrachloroethene</b>	<b>140</b>	0.81	5.0	ug/L	10	10/15/2018	10/16/2018 18:49	EPA 8260B	D
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>trans-1,2-Dichloroethene</b>	<b>0.39</b>	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	J
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>Trichloroethene</b>	<b>45</b>	0.062	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	
<b>Vinyl chloride</b>	<b>0.47</b>	0.16	0.50	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	HC, J
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/18/2018 11:46	EPA 8260B	

Surrogate: Dibromofluoromethane

111 % 70.8-139

10/15/2018 10/18/2018 11:46

EPA 8260B

Surrogate: Toluene-d8

90.5 % 76.6-116

10/15/2018 10/18/2018 11:46

EPA 8260B

Surrogate: 4-Bromofluorobenzene

84.7 % 71.4-118

10/15/2018 10/18/2018 11:46

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-14 (170-178)**  
**A184121-08 (Water)**

**Date Sampled**  
**10/09/2018 12:57**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Chloromethane	ND	8.0	100	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>34</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-14 (170-178)**

Date Sampled

**A184121-08 (Water)**

10/09/2018 12:57

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
<b>Tetrachloroethene</b>	<b>920</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
<b>Trichloroethene</b>	<b>64</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 14:32	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			107 %	70.8-139		10/15/2018	10/17/2018 14:32	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			93.7 %	76.6-116		10/15/2018	10/17/2018 14:32	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			89.0 %	71.4-118		10/15/2018	10/17/2018 14:32	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-14 (135-140)**

Date Sampled

**A184121-09 (Water)**

10/09/2018 13:21

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	1.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.99	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1,2-Trichloroethane	ND	1.0	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	1.3	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1-Dichloroethane	ND	1.2	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1-Dichloroethene	ND	1.4	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,1-Dichloropropene	ND	1.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.45	20	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2,3-Trichloropropane	ND	1.5	10	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.77	20	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.60	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	2.5	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	1.3	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2-Dichlorobenzene	ND	0.76	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2-Dichloroethane	ND	0.78	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,2-Dichloropropane	ND	1.0	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.75	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,3-Dichlorobenzene	ND	0.96	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,3-Dichloropropane	ND	1.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
1,4-Dichlorobenzene	ND	0.70	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
2,2-Dichloropropane	ND	1.4	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
2-Butanone	ND	30	200	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
2-Chlorotoluene	ND	0.75	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
2-Hexanone	ND	9.5	200	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
4-Chlorotoluene	ND	0.73	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
4-Methyl-2-pentanone	ND	7.7	200	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Acetone	ND	34	200	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Benzene	ND	0.89	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Bromobenzene	ND	0.84	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Bromochloromethane	ND	3.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Bromodichloromethane	ND	0.77	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Bromoform	ND	0.88	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Bromomethane	ND	5.9	50	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Carbon disulfide	ND	0.53	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Carbon tetrachloride	ND	0.38	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Chlorobenzene	ND	0.73	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Chloroethane	ND	2.5	50	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Chloroform	ND	0.62	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
<b>Chloromethane</b>	<b>3.3</b>	1.6	20	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>17</b>	1.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	D
cis-1,3-Dichloropropene	ND	0.61	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Dibromochloromethane	ND	0.91	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-14 (135-140)**

Date Sampled

**A184121-09 (Water)**

10/09/2018 13:21

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	1.4	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Dichlorodifluoromethane	ND	1.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Diisopropyl Ether	ND	1.5	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Ethylbenzene	ND	0.54	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Hexachlorobutadiene	ND	1.3	20	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Isopropylbenzene	ND	0.81	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
m,p-Xylene	ND	0.57	10	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Methyl t-Butyl Ether	ND	1.4	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Methylene chloride	ND	1.4	20	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Naphthalene	ND	0.88	50	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
n-Butyl Benzene	ND	1.4	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
n-Hexane	ND	2.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
n-Propyl Benzene	ND	1.0	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
o-Xylene	ND	0.58	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
p-Isopropyltoluene	ND	0.85	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
sec-Butyl Benzene	ND	1.3	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Styrene	ND	0.65	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
tert-Butylbenzene	ND	1.2	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
<b>Tetrachloroethene</b>	<b>370</b>	0.81	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	D
Tetrahydrofuran	ND	12	100	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Toluene	ND	0.53	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
trans-1,2-Dichloroethene	ND	1.1	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.96	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
<b>Trichloroethene</b>	<b>29</b>	0.62	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	D
Trichlorofluoromethane	ND	1.3	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Vinyl chloride	ND	1.6	5.0	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
Xylenes, total	ND	1.2	15	ug/L	10	10/15/2018	10/16/2018 19:43	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			120 %	70.8-139		10/15/2018	10/16/2018 19:43	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			94.1 %	76.6-116		10/15/2018	10/16/2018 19:43	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			85.1 %	71.4-118		10/15/2018	10/16/2018 19:43	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-14 (100-105)**

**A184121-10 (Water)**

Date Sampled  
10/09/2018 13:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
<b>Chloromethane</b>	<b>0.60</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-14 (100-105)**

Date Sampled

**A184121-10 (Water)**

10/09/2018 13:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
<b>Methylene chloride</b>	<b>0.44</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	J
<b>Naphthalene</b>	<b>0.20</b>	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	B, J
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.47</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	J
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
<b>Toluene</b>	<b>0.060</b>	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	J
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 10:14	EPA 8260B	
Surrogate: Dibromofluoromethane			109 %	70.8-139		10/15/2018	10/16/2018 10:14	EPA 8260B	
Surrogate: Toluene-d8			96.7 %	76.6-116		10/15/2018	10/16/2018 10:14	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			90.5 %	71.4-118		10/15/2018	10/16/2018 10:14	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (177-187)**

**A184121-11 (Water)**

Date Sampled  
10/09/2018 09:23

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
<b>Acetone</b>	<b>5.4</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
<b>Carbon disulfide</b>	<b>0.080</b>	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	J
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
<b>Chloromethane</b>	<b>0.66</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>0.50</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (177-187)**

Date Sampled

**A184121-11 (Water)**

10/09/2018 09:23

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
<b>Methylene chloride</b>	<b>0.29</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	J
<b>Naphthalene</b>	<b>0.15</b>	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	B, J
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
<b>Tetrachloroethene</b>	<b>8.5</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
<b>Trichloroethene</b>	<b>0.89</b>	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 10:41	EPA 8260B	
Surrogate: Dibromofluoromethane			110 %	70.8-139		10/15/2018	10/16/2018 10:41	EPA 8260B	
Surrogate: Toluene-d8			96.7 %	76.6-116		10/15/2018	10/16/2018 10:41	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			90.8 %	71.4-118		10/15/2018	10/16/2018 10:41	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (142-146)**  
**A184121-12 (Water)**

**Date Sampled**  
**10/09/2018 09:51**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
<b>Chloromethane</b>	<b>14</b>	8.0	100	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>160</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (142-146)**

Date Sampled

**A184121-12 (Water)**

10/09/2018 09:51

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
<b>Tetrachloroethene</b>	<b>1900</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
<b>Trichloroethene</b>	<b>160</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 15:00	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			113 %	70.8-139		10/15/2018	10/17/2018 15:00	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			93.9 %	76.6-116		10/15/2018	10/17/2018 15:00	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			90.8 %	71.4-118		10/15/2018	10/17/2018 15:00	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (120-125)**  
**A184121-13 (Water)**

**Date Sampled**  
**10/09/2018 10:28**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Chloromethane	ND	8.0	100	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>85</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (120-125)**

Date Sampled

**A184121-13 (Water)**

10/09/2018 10:28

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
<b>Tetrachloroethene</b>	<b>1700</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
<b>Trichloroethene</b>	<b>110</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 18:09	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			121 %	70.8-139		10/15/2018	10/17/2018 18:09	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			92.6 %	76.6-116		10/15/2018	10/17/2018 18:09	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			86.8 %	71.4-118		10/15/2018	10/17/2018 18:09	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (100-105)**  
**A184121-14 (Water)**

**Date Sampled**  
**10/09/2018 10:57**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
<b>Chloromethane</b>	<b>17</b>	8.0	100	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>69</b>	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (100-105)**

Date Sampled

**A184121-14 (Water)**

10/09/2018 10:57

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
<b>Tetrachloroethene</b>	<b>990</b>	4.1	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
<b>Trichloroethene</b>	<b>80</b>	3.1	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/15/2018	10/17/2018 15:27	EPA 8260B	
Surrogate: Dibromofluoromethane			113 %	70.8-139		10/15/2018	10/17/2018 15:27	EPA 8260B	
Surrogate: Toluene-d8			92.7 %	76.6-116		10/15/2018	10/17/2018 15:27	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			90.8 %	71.4-118		10/15/2018	10/17/2018 15:27	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (088-092)**

Date Sampled

**A184121-15 (Water)**

10/09/2018 11:28

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
<b>Chloromethane</b>	<b>0.29</b>	0.16	2.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>12</b>	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-15 (088-092)**

Date Sampled

**A184121-15 (Water)**

10/09/2018 11:28

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
<b>Dichlorodifluoromethane</b>	<b>0.16</b>	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	B, J
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
<b>Methylene chloride</b>	<b>0.23</b>	0.14	2.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
<b>Tetrachloroethene</b>	<b>120</b>	0.81	5.0	ug/L	10	10/15/2018	10/16/2018 20:11	EPA 8260B	D
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
<b>Trichloroethene</b>	<b>10</b>	0.062	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	
<b>Vinyl chloride</b>	<b>0.19</b>	0.16	0.50	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	HC, J
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/17/2018 21:45	EPA 8260B	

Surrogate: Dibromofluoromethane

113 % 70.8-139

10/15/2018 10/17/2018 21:45

EPA 8260B

Surrogate: Toluene-d8

92.3 % 76.6-116

10/15/2018 10/17/2018 21:45

EPA 8260B

Surrogate: 4-Bromofluorobenzene

83.3 % 71.4-118

10/15/2018 10/17/2018 21:45

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-16 (175-179)**  
**A184121-16 (Water)**

**Date Sampled**  
**10/08/2018 15:16**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
<b>Acetone</b>	<b>3.8</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
<b>Carbon disulfide</b>	<b>0.11</b>	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	J
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
<b>Chloromethane</b>	<b>0.61</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-16 (175-179)**

Date Sampled  
10/08/2018 15:16

**A184121-16 (Water)**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
<b>Methylene chloride</b>	<b>0.15</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
<b>Tetrachloroethene</b>	<b>2.5</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
<b>Trichloroethene</b>	<b>0.40</b>	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	J
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 13:51	EPA 8260B	
Surrogate: Dibromofluoromethane			116 %	70.8-139		10/15/2018	10/16/2018 13:51	EPA 8260B	
Surrogate: Toluene-d8			93.1 %	76.6-116		10/15/2018	10/16/2018 13:51	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			88.9 %	71.4-118		10/15/2018	10/16/2018 13:51	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-16 (140-144)**

Date Sampled

**A184121-17 (Water)**

10/08/2018 15:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
<b>Acetone</b>	<b>5.5</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
<b>Chloromethane</b>	<b>0.59</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>2.0</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-16 (140-144)**

Date Sampled

**A184121-17 (Water)**

10/08/2018 15:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
<b>Methylene chloride</b>	<b>0.25</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
<b>Tetrachloroethene</b>	<b>28</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
<b>Trichloroethene</b>	<b>6.1</b>	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 14:18	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			117 %	70.8-139		10/15/2018	10/16/2018 14:18	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			94.8 %	76.6-116		10/15/2018	10/16/2018 14:18	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			90.2 %	71.4-118		10/15/2018	10/16/2018 14:18	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-16 (106-116)**  
**A184121-18 (Water)**

**Date Sampled**  
**10/08/2018 16:25**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
<b>Acetone</b>	<b>3.6</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
<b>Chloromethane</b>	<b>0.65</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>5.1</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MP-16 (106-116)**

Date Sampled

**A184121-18 (Water)**

10/08/2018 16:25

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
<b>Methylene chloride</b>	<b>0.24</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
<b>Tetrachloroethene</b>	<b>53</b>	0.16	1.0	ug/L	2	10/15/2018	10/16/2018 15:39	EPA 8260B	D
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
<b>Trichloroethene</b>	<b>6.6</b>	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 15:12	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			116 %	70.8-139		10/15/2018	10/16/2018 15:12	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			92.5 %	76.6-116		10/15/2018	10/16/2018 15:12	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			86.9 %	71.4-118		10/15/2018	10/16/2018 15:12	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-4S**  
**A184121-19 (Water)**

Date Sampled  
10/11/2018 11:03

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810221**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/15/2018	10/16/2018 01:55	EPA 8082A	
<i>Surrogate: Tetrachloro-meta-xylene</i>			113 %	68.8-135		10/15/2018	10/16/2018 01:55	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl</i>			120 %	82.2-139		10/15/2018	10/16/2018 01:55	EPA 8082A	

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

Total Dissolved Solids	1750	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:29	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33479**

Total Suspended Solids	ND	0.95	2.0	mg/L	1	10/17/2018	10/17/2018 10:43	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-4D**  
**A184121-20 (Water)**

Date Sampled  
10/11/2018 12:51

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810221**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/15/2018	10/16/2018 02:20	EPA 8082A	
<i>Surrogate: Tetrachloro-meta-xylene</i>			101 %	68.8-135		10/15/2018	10/16/2018 02:20	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl</i>			113 %	82.2-139		10/15/2018	10/16/2018 02:20	EPA 8082A	

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

Total Dissolved Solids	600	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:29	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33479**

Total Suspended Solids	ND	0.95	2.0	mg/L	1	10/17/2018	10/17/2018 10:43	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-4D2**  
**A184121-21 (Water)**

**Date Sampled**  
**10/11/2018 10:21**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
<b>Bromomethane</b>	<b>1.1</b>	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	J
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
<b>Chloromethane</b>	<b>0.67</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-4D2**  
**A184121-21 (Water)**

Date Sampled  
10/11/2018 10:21

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
<b>Methylene chloride</b>	<b>0.35</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.24</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	J
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 12:57	EPA 8260B	
Surrogate: Dibromofluoromethane			119 %	70.8-139		10/15/2018	10/16/2018 12:57	EPA 8260B	
Surrogate: Toluene-d8			94.2 %	76.6-116		10/15/2018	10/16/2018 12:57	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			91.2 %	71.4-118		10/15/2018	10/16/2018 12:57	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D3**  
**A184121-22 (Water)**

Date Sampled  
10/11/2018 14:58

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
<b>Acetone</b>	<b>4.6</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
<b>Chloromethane</b>	<b>0.56</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D3**  
**A184121-22 (Water)**

Date Sampled  
10/11/2018 14:58

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
<b>Methylene chloride</b>	<b>0.29</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 13:24	EPA 8260B	
Surrogate: Dibromofluoromethane			119 %	70.8-139		10/15/2018	10/16/2018 13:24	EPA 8260B	
Surrogate: Toluene-d8			93.7 %	76.6-116		10/15/2018	10/16/2018 13:24	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			88.9 %	71.4-118		10/15/2018	10/16/2018 13:24	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-9D**  
**A184121-23 (Water)**

Date Sampled  
10/11/2018 14:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
<b>Acetone</b>	<b>10</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
<b>Chloromethane</b>	<b>0.57</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-9D**  
**A184121-23 (Water)**

Date Sampled  
10/11/2018 14:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
<b>Dichlorodifluoromethane</b>	<b>0.13</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	J
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
<b>Methylene chloride</b>	<b>0.56</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	J
<b>Naphthalene</b>	<b>0.13</b>	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	B, J
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
<b>Toluene</b>	<b>0.060</b>	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	J
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
<b>Trichlorofluoromethane</b>	<b>0.61</b>	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 11:08	EPA 8260B	
Surrogate: Dibromofluoromethane			110 %	70.8-139		10/15/2018	10/16/2018 11:08	EPA 8260B	
Surrogate: Toluene-d8			94.8 %	76.6-116		10/15/2018	10/16/2018 11:08	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			89.3 %	71.4-118		10/15/2018	10/16/2018 11:08	EPA 8260B	

TRC Environmental Corporation, Inc.  
 708 Heartland Trail, Ste 3000  
 Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
 Project Number: 292257 Ph. 1  
 Project Manager: Andrew Stehn

**MW-9D2**  
**A184121-24 (Water)**

**Date Sampled**  
**10/11/2018 14:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Acetone</b>	<b>6.7</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	HC, J
<b>Benzene</b>	<b>0.14</b>	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	J
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Chloromethane</b>	<b>0.58</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>53</b>	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 15:54	EPA 8260B	D
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-9D2**  
**A184121-24 (Water)**

Date Sampled  
10/11/2018 14:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Dichlorodifluoromethane</b>	<b>0.62</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Methyl t-Butyl Ether</b>	<b>54</b>	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 15:54	EPA 8260B	D
<b>Methylene chloride</b>	<b>0.29</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Tetrachloroethene</b>	<b>74</b>	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 15:54	EPA 8260B	D
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>trans-1,2-Dichloroethene</b>	<b>0.90</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Trichloroethene</b>	<b>19</b>	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<b>Vinyl chloride</b>	<b>1.4</b>	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	HC
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 14:45	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			<i>123 %</i>	<i>70.8-139</i>		<i>10/15/2018</i>	<i>10/16/2018 14:45</i>	<i>EPA 8260B</i>	
<i>Surrogate: Toluene-d8</i>			<i>97.9 %</i>	<i>76.6-116</i>		<i>10/15/2018</i>	<i>10/16/2018 14:45</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>			<i>90.9 %</i>	<i>71.4-118</i>		<i>10/15/2018</i>	<i>10/16/2018 14:45</i>	<i>EPA 8260B</i>	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-25D**  
**A184121-25 (Water)**

Date Sampled  
10/10/2018 12:32

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
<b>Acetone</b>	<b>3.7</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
<b>Bromomethane</b>	<b>0.72</b>	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	J
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
<b>Chloromethane</b>	<b>0.65</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-25D**  
**A184121-25 (Water)**

Date Sampled  
10/10/2018 12:32

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
<b>Methylene chloride</b>	<b>0.54</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	J
<b>Naphthalene</b>	<b>0.13</b>	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	B, J
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.33</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	J
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 11:35	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			<i>115 %</i>	<i>70.8-139</i>		<i>10/15/2018</i>	<i>10/16/2018 11:35</i>	<i>EPA 8260B</i>	
<i>Surrogate: Toluene-d8</i>			<i>96.5 %</i>	<i>76.6-116</i>		<i>10/15/2018</i>	<i>10/16/2018 11:35</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>			<i>91.4 %</i>	<i>71.4-118</i>		<i>10/15/2018</i>	<i>10/16/2018 11:35</i>	<i>EPA 8260B</i>	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-25D2**  
**A184121-26 (Water)**

Date Sampled  
10/10/2018 10:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
<b>Acetone</b>	<b>4.9</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
<b>Chloromethane</b>	<b>0.57</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-25D2**  
**A184121-26 (Water)**

Date Sampled  
10/10/2018 10:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
<b>Methylene chloride</b>	<b>0.31</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 12:02	EPA 8260B	

Surrogate: Dibromofluoromethane			118 %	70.8-139		10/15/2018	10/16/2018 12:02	EPA 8260B	
Surrogate: Toluene-d8			96.9 %	76.6-116		10/15/2018	10/16/2018 12:02	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			91.6 %	71.4-118		10/15/2018	10/16/2018 12:02	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-27D**  
**A184121-27 (Water)**

Date Sampled  
10/10/2018 16:44

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	M
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
<b>Acetone</b>	<b>3.8</b>	3.4	20	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
<b>Chloromethane</b>	<b>0.57</b>	0.16	2.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>0.20</b>	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	J
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-27D**  
**A184121-27 (Water)**

Date Sampled  
10/10/2018 16:44

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810218**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
<b>Methylene chloride</b>	<b>0.36</b>	0.14	2.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	M
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.27</b>	0.081	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	J
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
<b>Trichloroethene</b>	<b>0.61</b>	0.062	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/16/2018 16:06	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			119 %	70.8-139		10/15/2018	10/16/2018 16:06	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			93.8 %	76.6-116		10/15/2018	10/16/2018 16:06	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			87.9 %	71.4-118		10/15/2018	10/16/2018 16:06	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-27D2**  
**A184121-28 (Water)**

**Date Sampled**  
**10/10/2018 15:26**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	M
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	M
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Chloromethane	ND	0.16	2.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>13</b>	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-27D2**  
**A184121-28 (Water)**

Date Sampled  
10/10/2018 15:26

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
<b>Methylene chloride</b>	<b>0.33</b>	0.14	2.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	M
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
<b>Tetrachloroethene</b>	<b>26</b>	0.081	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	M
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
<b>Toluene</b>	<b>0.060</b>	0.053	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	J
<b>trans-1,2-Dichloroethene</b>	<b>0.29</b>	0.11	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	J
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
<b>Trichloroethene</b>	<b>22</b>	0.062	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	M
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/18/2018 10:25	EPA 8260B	

Surrogate: Dibromofluoromethane

110 % 70.8-139

10/15/2018 10/18/2018 10:25

EPA 8260B

Surrogate: Toluene-d8

91.2 % 76.6-116

10/15/2018 10/18/2018 10:25

EPA 8260B

Surrogate: 4-Bromofluorobenzene

85.8 % 71.4-118

10/15/2018 10/18/2018 10:25

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-01**  
**A184121-29 (Water)**

**Date Sampled**  
**10/10/2018 00:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Chloromethane	ND	0.16	2.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-01**

**A184121-29 (Water)**

Date Sampled  
**10/10/2018 00:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
<b>Methylene chloride</b>	<b>0.42</b>	0.14	2.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.36</b>	0.081	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	J
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/15/2018	10/17/2018 19:58	EPA 8260B	
Surrogate: Dibromofluoromethane			112 %	70.8-139		10/15/2018	10/17/2018 19:58	EPA 8260B	
Surrogate: Toluene-d8			90.3 %	76.6-116		10/15/2018	10/17/2018 19:58	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			87.2 %	71.4-118		10/15/2018	10/17/2018 19:58	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-02**  
**A184121-30 (Water)**

Date Sampled  
10/10/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

1,1,1,2-Tetrachloroethane	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1,1-Trichloroethane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1,2-Trichloroethane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1-Dichloroethane	ND	0.24	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1-Dichloroethene	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,1-Dichloropropene	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.090	4.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2,3-Trichloropropane	ND	0.30	2.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.15	4.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.50	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2-Dichlorobenzene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2-Dichloroethane	ND	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,2-Dichloropropane	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,3-Dichlorobenzene	ND	0.19	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,3-Dichloropropane	ND	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
1,4-Dichlorobenzene	ND	0.14	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
2,2-Dichloropropane	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
2-Butanone	ND	6.0	40	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
2-Chlorotoluene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
2-Hexanone	ND	1.9	40	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
4-Chlorotoluene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
4-Methyl-2-pentanone	ND	1.5	40	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Acetone	ND	6.8	40	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Benzene	ND	0.18	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Bromobenzene	ND	0.17	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Bromochloromethane	ND	0.62	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Bromodichloromethane	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Bromoform	ND	0.18	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Bromomethane	ND	1.2	10	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Carbon disulfide	ND	0.11	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Carbon tetrachloride	ND	0.076	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Chlorobenzene	ND	0.15	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Chloroethane	ND	0.50	10	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Chloroform	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Chloromethane	ND	0.32	4.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>cis-1,2-Dichloroethene</b>	<b>54</b>	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	D
cis-1,3-Dichloropropene	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Dibromochloromethane	ND	0.18	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-02**  
**A184121-30 (Water)**

Date Sampled  
10/10/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810219**

Dibromomethane	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>Dichlorodifluoromethane</b>	<b>0.78</b>	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	B, J, D
Diisopropyl Ether	ND	0.30	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Ethylbenzene	ND	0.11	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Hexachlorobutadiene	ND	0.26	4.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Isopropylbenzene	ND	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
m,p-Xylene	ND	0.11	2.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>Methyl t-Butyl Ether</b>	<b>54</b>	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	D
Methylene chloride	ND	0.28	4.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Naphthalene	ND	0.18	10	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
n-Butyl Benzene	ND	0.28	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
n-Hexane	ND	0.42	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
n-Propyl Benzene	ND	0.20	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
o-Xylene	ND	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
p-Isopropyltoluene	ND	0.17	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
sec-Butyl Benzene	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Styrene	ND	0.13	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
tert-Butylbenzene	ND	0.24	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>Tetrachloroethene</b>	<b>78</b>	0.16	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	D
Tetrahydrofuran	ND	2.4	20	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Toluene	ND	0.11	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>trans-1,2-Dichloroethene</b>	<b>0.96</b>	0.22	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	J, D
trans-1,3-Dichloropropene	ND	0.19	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>Trichloroethene</b>	<b>21</b>	0.12	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	D
Trichlorofluoromethane	ND	0.26	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
<b>Vinyl chloride</b>	<b>2.0</b>	0.32	1.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	HC, D
Xylenes, total	ND	0.23	3.0	ug/L	2	10/15/2018	10/17/2018 20:52	EPA 8260B	
Surrogate: Dibromofluoromethane			116 %	70.8-139		10/15/2018	10/17/2018 20:52	EPA 8260B	
Surrogate: Toluene-d8			92.8 %	76.6-116		10/15/2018	10/17/2018 20:52	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			85.1 %	71.4-118		10/15/2018	10/17/2018 20:52	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3S**  
**A184203-01 (Water)**

**Date Sampled**  
**10/12/2018 15:51**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
<b>Chloromethane</b>	<b>17</b>	8.0	100	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>21</b>	5.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	D, J
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3S**  
**A184203-01 (Water)**

**Date Sampled**  
**10/12/2018 15:51**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

Dibromomethane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
<b>Tetrachloroethene</b>	<b>1100</b>	4.1	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
<b>Trichloroethene</b>	<b>73</b>	3.1	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/17/2018	10/18/2018 17:38	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			127 %	70.8-139		10/17/2018	10/18/2018 17:38	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			89.4 %	76.6-116		10/17/2018	10/18/2018 17:38	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			82.2 %	71.4-118		10/17/2018	10/18/2018 17:38	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D**  
**A184203-02 (Water)**

Date Sampled  
10/12/2018 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 01:20	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

102 % 68.8-135

10/18/2018 10/19/2018 01:20

EPA 8082A

Surrogate: Decachlorobiphenyl

109 % 82.2-139

10/18/2018 10/19/2018 01:20

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
<b>Benzene</b>	<b>0.15</b>	0.089	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	J
Bromobenzene	ND	0.084	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D**  
**A184203-02 (Water)**

Date Sampled  
10/12/2018 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

Bromoform	ND	0.088	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
<b>Chloroform</b>	<b>0.31</b>	0.062	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	J
<b>Chloromethane</b>	<b>0.35</b>	0.16	2.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	J
<b>cis-1,2-Dichloroethene</b>	<b>39</b>	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
<b>Methylene chloride</b>	<b>0.25</b>	0.14	2.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	E1, J
Naphthalene	ND	0.088	5.0	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
<b>Tetrachloroethene</b>	<b>260</b>	0.81	5.0	ug/L	10	10/17/2018	10/23/2018 21:23	EPA 8260B	D
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
<b>Toluene</b>	<b>0.060</b>	0.053	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	J
<b>trans-1,2-Dichloroethene</b>	<b>0.90</b>	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
<b>Trichloroethene</b>	<b>32</b>	0.062	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/17/2018	10/18/2018 13:34	EPA 8260B	

Surrogate: Dibromofluoromethane

122 % 70.8-139

10/17/2018 10/18/2018 13:34

EPA 8260B

Surrogate: Toluene-d8

89.9 % 76.6-116

10/17/2018 10/18/2018 13:34

EPA 8260B

Surrogate: 4-Bromofluorobenzene

84.7 % 71.4-118

10/17/2018 10/18/2018 13:34

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D**

**A184203-02 (Water)**

**Date Sampled**  
10/12/2018 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

<b>Total Dissolved Solids</b>	<b>1090</b>	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:32	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

<b>Total Suspended Solids</b>	<b>9.0</b>	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D2**  
**A184203-03 (Water)**

Date Sampled  
10/12/2018 15:40

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
<b>Chloroform</b>	<b>0.18</b>	0.062	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	HC, J
<b>Chloromethane</b>	<b>0.41</b>	0.16	2.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	J
<b>cis-1,2-Dichloroethene</b>	<b>30</b>	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D2**  
**A184203-03 (Water)**

Date Sampled  
10/12/2018 15:40

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
<b>Dichlorodifluoromethane</b>	<b>1.0</b>	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
<b>Methylene chloride</b>	<b>0.21</b>	0.14	2.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	E1, J
Naphthalene	ND	0.088	5.0	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
<b>Tetrachloroethene</b>	<b>490</b>	1.6	10	ug/L	20	10/17/2018	10/23/2018 20:30	EPA 8260B	D
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
<b>trans-1,2-Dichloroethene</b>	<b>0.48</b>	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	J
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
<b>Trichloroethene</b>	<b>39</b>	0.062	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/17/2018	10/18/2018 14:29	EPA 8260B	
Surrogate: Dibromofluoromethane			123 %	70.8-139		10/17/2018	10/18/2018 14:29	EPA 8260B	
Surrogate: Toluene-d8			90.0 %	76.6-116		10/17/2018	10/18/2018 14:29	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			84.4 %	71.4-118		10/17/2018	10/18/2018 14:29	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D3**  
**A184203-04 (Water)**

**Date Sampled**  
**10/12/2018 14:29**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	M
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	M
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
<b>Chloromethane</b>	<b>0.35</b>	0.16	2.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-3D3**  
**A184203-04 (Water)**

Date Sampled  
10/12/2018 14:29

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
<b>Methylene chloride</b>	<b>0.24</b>	0.14	2.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	E1, J
Naphthalene	ND	0.088	5.0	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	M
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.50</b>	0.081	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/17/2018	10/18/2018 15:22	EPA 8260B	
Surrogate: Dibromofluoromethane			119 %	70.8-139		10/17/2018	10/18/2018 15:22	EPA 8260B	
Surrogate: Toluene-d8			90.1 %	76.6-116		10/17/2018	10/18/2018 15:22	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			82.0 %	71.4-118		10/17/2018	10/18/2018 15:22	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5S**  
**A184203-05 (Water)**

**Date Sampled**  
**10/12/2018 10:50**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 01:45	EPA 8082A	
<i>Surrogate: Tetrachloro-meta-xylene</i>			89.4 %	68.8-135		10/18/2018	10/19/2018 01:45	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl</i>			96.5 %	82.2-139		10/18/2018	10/19/2018 01:45	EPA 8082A	

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

1,1,1,2-Tetrachloroethane	ND	0.22	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1,1-Trichloroethane	ND	0.20	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.20	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1,2-Trichloroethane	ND	0.20	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.26	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1-Dichloroethane	ND	0.24	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1-Dichloroethene	ND	0.28	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,1-Dichloropropene	ND	0.22	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.090	4.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2,3-Trichloropropane	ND	0.30	2.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.15	4.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.12	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.50	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.26	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2-Dichlorobenzene	ND	0.15	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2-Dichloroethane	ND	0.16	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,2-Dichloropropane	ND	0.20	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.15	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,3-Dichlorobenzene	ND	0.19	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,3-Dichloropropane	ND	0.22	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
1,4-Dichlorobenzene	ND	0.14	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
2,2-Dichloropropane	ND	0.28	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
2-Butanone	ND	6.0	40	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
2-Chlorotoluene	ND	0.15	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
2-Hexanone	ND	1.9	40	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
4-Chlorotoluene	ND	0.15	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
4-Methyl-2-pentanone	ND	1.5	40	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Acetone	ND	6.8	40	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Benzene	ND	0.18	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Bromobenzene	ND	0.17	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Bromochloromethane	ND	0.62	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Bromodichloromethane	ND	0.15	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5S**  
**A184203-05 (Water)**

Date Sampled  
10/12/2018 10:50

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

Bromoform	ND	0.18	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Bromomethane	ND	1.2	10	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Carbon disulfide	ND	0.11	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Carbon tetrachloride	ND	0.076	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Chlorobenzene	ND	0.15	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Chloroethane	ND	0.50	10	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Chloroform	ND	0.12	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
<b>Chloromethane</b>	<b>0.76</b>	0.32	4.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	B, J, D
cis-1,2-Dichloroethene	ND	0.22	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.12	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Dibromochloromethane	ND	0.18	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Dibromomethane	ND	0.28	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Dichlorodifluoromethane	ND	0.22	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Diisopropyl Ether	ND	0.30	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Ethylbenzene	ND	0.11	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Hexachlorobutadiene	ND	0.26	4.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Isopropylbenzene	ND	0.16	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
m,p-Xylene	ND	0.11	2.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Methyl t-Butyl Ether	ND	0.28	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
<b>Methylene chloride</b>	<b>0.38</b>	0.28	4.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	J, D
Naphthalene	ND	0.18	10	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
n-Butyl Benzene	ND	0.28	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
n-Hexane	ND	0.42	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
n-Propyl Benzene	ND	0.20	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
o-Xylene	ND	0.12	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
p-Isopropyltoluene	ND	0.17	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
sec-Butyl Benzene	ND	0.26	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Styrene	ND	0.13	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
tert-Butylbenzene	ND	0.24	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
<b>Tetrachloroethene</b>	<b>55</b>	0.16	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	D
Tetrahydrofuran	ND	2.4	20	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Toluene	ND	0.11	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.22	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.19	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
<b>Trichloroethene</b>	<b>0.22</b>	0.12	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	J, D
Trichlorofluoromethane	ND	0.26	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Vinyl chloride	ND	0.32	1.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	
Xylenes, total	ND	0.23	3.0	ug/L	2	10/17/2018	10/18/2018 17:11	EPA 8260B	

Surrogate: Dibromofluoromethane

122 % 70.8-139

10/17/2018 10/18/2018 17:11

EPA 8260B

Surrogate: Toluene-d8

90.2 % 76.6-116

10/17/2018 10/18/2018 17:11

EPA 8260B

Surrogate: 4-Bromofluorobenzene

83.2 % 71.4-118

10/17/2018 10/18/2018 17:11

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5S**

**A184203-05 (Water)**

**Date Sampled**  
10/12/2018 10:50

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

Total Dissolved Solids	784	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:32	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

Total Suspended Solids	ND	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D**  
**A184203-06 (Water)**

**Date Sampled**  
**10/12/2018 11:39**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 02:10	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

109 % 68.8-135

10/18/2018 10/19/2018 02:10

EPA 8082A

Surrogate: Decachlorobiphenyl

114 % 82.2-139

10/18/2018 10/19/2018 02:10

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	0.55	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1,1-Trichloroethane	ND	0.50	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.50	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1,2-Trichloroethane	ND	0.50	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.65	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1-Dichloroethane	ND	0.60	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1-Dichloroethene	ND	0.70	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,1-Dichloropropene	ND	0.55	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.23	10	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2,3-Trichloropropane	ND	0.75	5.0	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.39	10	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.30	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	1.3	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.65	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2-Dichlorobenzene	ND	0.38	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2-Dichloroethane	ND	0.39	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,2-Dichloropropane	ND	0.50	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.38	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,3-Dichlorobenzene	ND	0.48	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,3-Dichloropropane	ND	0.55	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
1,4-Dichlorobenzene	ND	0.35	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
2,2-Dichloropropane	ND	0.70	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
2-Butanone	ND	15	100	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
2-Chlorotoluene	ND	0.38	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
2-Hexanone	ND	4.8	100	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
4-Chlorotoluene	ND	0.37	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
4-Methyl-2-pentanone	ND	3.9	100	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Acetone	ND	17	100	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Benzene	ND	0.45	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Bromobenzene	ND	0.42	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Bromochloromethane	ND	1.6	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Bromodichloromethane	ND	0.39	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D**  
**A184203-06 (Water)**

Date Sampled  
10/12/2018 11:39

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Bromoform	ND	0.44	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Bromomethane	ND	3.0	25	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Carbon disulfide	ND	0.27	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Carbon tetrachloride	ND	0.19	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Chlorobenzene	ND	0.37	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Chloroethane	ND	1.3	25	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Chloroform	ND	0.31	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
<b>Chloromethane</b>	<b>1.7</b>	0.80	10	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	B, HC, J, D
<b>cis-1,2-Dichloroethene</b>	<b>12</b>	0.55	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	D
cis-1,3-Dichloropropene	ND	0.31	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Dibromochloromethane	ND	0.46	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Dibromomethane	ND	0.70	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Dichlorodifluoromethane	ND	0.55	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Diisopropyl Ether	ND	0.75	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Ethylbenzene	ND	0.27	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Hexachlorobutadiene	ND	0.65	10	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Isopropylbenzene	ND	0.41	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
m,p-Xylene	ND	0.29	5.0	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Methyl t-Butyl Ether	ND	0.70	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Methylene chloride	ND	0.70	10	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Naphthalene	ND	0.44	25	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
n-Butyl Benzene	ND	0.70	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
n-Hexane	ND	1.1	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
n-Propyl Benzene	ND	0.50	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
o-Xylene	ND	0.29	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
p-Isopropyltoluene	ND	0.43	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
sec-Butyl Benzene	ND	0.65	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Styrene	ND	0.33	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
tert-Butylbenzene	ND	0.60	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
<b>Tetrachloroethene</b>	<b>150</b>	0.41	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	D
Tetrahydrofuran	ND	6.0	50	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Toluene	ND	0.27	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.55	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.48	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
<b>Trichloroethene</b>	<b>7.8</b>	0.31	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	D
Trichlorofluoromethane	ND	0.65	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Vinyl chloride	ND	0.80	2.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Xylenes, total	ND	0.58	7.5	ug/L	5	10/19/2018	10/23/2018 20:56	EPA 8260B	
Surrogate: Dibromofluoromethane			114 %	70.8-139		10/19/2018	10/23/2018 20:56	EPA 8260B	
Surrogate: Toluene-d8			86.8 %	76.6-116		10/19/2018	10/23/2018 20:56	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			82.9 %	71.4-118		10/19/2018	10/23/2018 20:56	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D**

**A184203-06 (Water)**

**Date Sampled**  
10/12/2018 11:39

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

Total Dissolved Solids	708	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:32	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

Total Suspended Solids	ND	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D2**  
**A184203-07 (Water)**

**Date Sampled**  
**10/12/2018 10:17**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
<b>Chloromethane</b>	<b>15</b>	8.0	100	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	B, J, D
<b>cis-1,2-Dichloroethene</b>	<b>10</b>	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	J, D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-5D2**  
**A184203-07 (Water)**

Date Sampled  
10/12/2018 10:17

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

Dibromomethane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
<b>Tetrachloroethene</b>	<b>1900</b>	4.1	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
<b>Trichloroethene</b>	<b>25</b>	3.1	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/17/2018	10/18/2018 18:32	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			125 %	70.8-139		10/17/2018	10/18/2018 18:32	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			89.0 %	76.6-116		10/17/2018	10/18/2018 18:32	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			83.2 %	71.4-118		10/17/2018	10/18/2018 18:32	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-6S**  
**A184203-08 (Water)**

**Date Sampled**  
**10/15/2018 12:12**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 02:34	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

107 % 68.8-135

10/18/2018 10/19/2018 02:34

EPA 8082A

Surrogate: Decachlorobiphenyl

116 % 82.2-139

10/18/2018 10/19/2018 02:34

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
<b>Benzene</b>	<b>0.10</b>	0.089	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	J
Bromobenzene	ND	0.084	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-6S**  
**A184203-08 (Water)**

Date Sampled  
10/15/2018 12:12

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

Bromoform	ND	0.088	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
<b>Chloromethane</b>	<b>0.50</b>	0.16	2.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
<b>Methylene chloride</b>	<b>0.29</b>	0.14	2.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	E1, J
Naphthalene	ND	0.088	5.0	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
<b>Tetrachloroethene</b>	<b>0.10</b>	0.081	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	J
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/17/2018	10/23/2018 18:14	EPA 8260B	

Surrogate: Dibromofluoromethane

110 % 70.8-139

10/17/2018 10/23/2018 18:14

EPA 8260B

Surrogate: Toluene-d8

88.3 % 76.6-116

10/17/2018 10/23/2018 18:14

EPA 8260B

Surrogate: 4-Bromofluorobenzene

87.2 % 71.4-118

10/17/2018 10/23/2018 18:14

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-6S**

**A184203-08 (Water)**

Date Sampled  
10/15/2018 12:12

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

<b>Total Dissolved Solids</b>	<b>3940</b>	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:32	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

<b>Total Suspended Solids</b>	<b>1.0</b>	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	Ja
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-6D**  
**A184203-09 (Water)**

Date Sampled  
10/15/2018 13:04

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 03:00	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

98.5 % 68.8-135

10/18/2018 10/19/2018 03:00

EPA 8082A

Surrogate: Decachlorobiphenyl

101 % 82.2-139

10/18/2018 10/19/2018 03:00

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>1,2,4-Trimethylbenzene</b>	<b>90</b>	3.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	D
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	X
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>Benzene</b>	<b>1500</b>	4.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	D
Bromobenzene	ND	4.2	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-6D**  
**A184203-09 (Water)**

Date Sampled  
10/15/2018 13:04

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

Bromoform	ND	4.4	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>Chloromethane</b>	<b>14</b>	8.0	100	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	B, HC, J, D
<b>cis-1,2-Dichloroethene</b>	<b>8.5</b>	5.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Dibromomethane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>Ethylbenzene</b>	<b>34</b>	2.7	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	D
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>Isopropylbenzene</b>	<b>17</b>	4.1	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
<b>m,p-Xylene</b>	<b>53</b>	2.9	50	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	D
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	X
Methylene chloride	ND	7.0	100	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	M
<b>Naphthalene</b>	<b>41</b>	4.4	250	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>n-Propyl Benzene</b>	<b>16</b>	5.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
<b>o-Xylene</b>	<b>3.0</b>	2.9	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Tetrachloroethene	ND	4.1	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Tetrahydrofuran	ND	60	500	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	X
<b>Toluene</b>	<b>92</b>	2.7	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	D
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>Trichloroethene</b>	<b>20</b>	3.1	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	
<b>Xylenes, total</b>	<b>56</b>	5.8	75	ug/L	50	10/17/2018	10/18/2018 21:41	EPA 8260B	J, D
Surrogate: Dibromofluoromethane			121 %	70.8-139		10/17/2018	10/18/2018 21:41	EPA 8260B	
Surrogate: Toluene-d8			93.8 %	76.6-116		10/17/2018	10/18/2018 21:41	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			86.9 %	71.4-118		10/17/2018	10/18/2018 21:41	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-6D**

**A184203-09 (Water)**

**Date Sampled**  
10/15/2018 13:04

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

<b>Total Dissolved Solids</b>	<b>1000</b>	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:31	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

<b>Total Suspended Solids</b>	<b>13.4</b>	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	
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TRC Environmental Corporation, Inc.  
 708 Heartland Trail, Ste 3000  
 Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
 Project Number: 292257 Ph. 1  
 Project Manager: Andrew Stehn

**MW-17**  
**A184203-10 (Water)**

**Date Sampled**  
**10/15/2018 15:50**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
<b>Chloroform</b>	<b>7.0</b>	3.1	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	HC, J, D
<b>Chloromethane</b>	<b>19</b>	8.0	100	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	B, J, D
cis-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-17**  
**A184203-10 (Water)**

Date Sampled  
10/15/2018 15:50

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810241**

Dibromomethane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
<b>Tetrachloroethene</b>	<b>880</b>	4.1	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
<b>Trichloroethene</b>	<b>63</b>	3.1	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/17/2018	10/18/2018 18:05	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			128 %	70.8-139		10/17/2018	10/18/2018 18:05	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			89.6 %	76.6-116		10/17/2018	10/18/2018 18:05	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			82.4 %	71.4-118		10/17/2018	10/18/2018 18:05	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-24**  
**A184203-11 (Water)**

Date Sampled  
10/15/2018 17:16

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 04:14	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

118 % 68.8-135

10/18/2018 10/19/2018 04:14

EPA 8082A

Surrogate: Decachlorobiphenyl

123 % 82.2-139

10/18/2018 10/19/2018 04:14

EPA 8082A

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

Total Dissolved Solids	2120	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:31	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

Total Suspended Solids	1.8	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	Ja
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-03**  
**A184203-12 (Water)**

Date Sampled  
10/12/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

1,1,1,2-Tetrachloroethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1,1-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1,2-Trichloroethane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1-Dichloroethane	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1-Dichloroethene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,1-Dichloropropene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.3	100	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2,3-Trichloropropane	ND	7.5	50	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2,4-Trichlorobenzene	ND	3.9	100	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2,4-Trimethylbenzene	ND	3.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2-Dichlorobenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2-Dichloroethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,2-Dichloropropane	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,3,5-Trimethylbenzene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,3-Dichlorobenzene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,3-Dichloropropane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
1,4-Dichlorobenzene	ND	3.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
2,2-Dichloropropane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
2-Butanone	ND	150	1000	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
2-Chlorotoluene	ND	3.8	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
2-Hexanone	ND	48	1000	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
4-Chlorotoluene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Acetone	ND	170	1000	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Benzene	ND	4.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Bromobenzene	ND	4.2	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Bromochloromethane	ND	16	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Bromodichloromethane	ND	3.9	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Bromoform	ND	4.4	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Bromomethane	ND	30	250	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Carbon disulfide	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Carbon tetrachloride	ND	1.9	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Chloroethane	ND	13	250	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Chloroform	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
<b>Chloromethane</b>	<b>17</b>	8.0	100	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	J, D
<b>cis-1,2-Dichloroethene</b>	<b>27</b>	5.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	D
cis-1,3-Dichloropropene	ND	3.1	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Dibromochloromethane	ND	4.6	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-03**

**A184203-12 (Water)**

**Date Sampled**  
**10/12/2018 00:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

Dibromomethane	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Diisopropyl Ether	ND	7.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Ethylbenzene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Hexachlorobutadiene	ND	6.5	100	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Isopropylbenzene	ND	4.1	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
m,p-Xylene	ND	2.9	50	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Methyl t-Butyl Ether	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Naphthalene	ND	4.4	250	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
n-Butyl Benzene	ND	7.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
n-Hexane	ND	11	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
n-Propyl Benzene	ND	5.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
o-Xylene	ND	2.9	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
p-Isopropyltoluene	ND	4.3	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
sec-Butyl Benzene	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Styrene	ND	3.3	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
tert-Butylbenzene	ND	6.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
<b>Tetrachloroethene</b>	<b>480</b>	4.1	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	D
Tetrahydrofuran	ND	60	500	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Toluene	ND	2.7	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
<b>Trichloroethene</b>	<b>38</b>	3.1	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	D
Trichlorofluoromethane	ND	6.5	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Vinyl chloride	ND	8.0	25	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
Xylenes, total	ND	5.8	75	ug/L	50	10/17/2018	10/18/2018 12:40	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			115 %	70.8-139		10/17/2018	10/18/2018 12:40	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			89.4 %	76.6-116		10/17/2018	10/18/2018 12:40	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			84.0 %	71.4-118		10/17/2018	10/18/2018 12:40	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-04**  
**A184203-13 (Water)**

**Date Sampled**  
**10/15/2018 00:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 06:19	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

102 % 68.8-135

10/18/2018 10/19/2018 06:19

EPA 8082A

Surrogate: Decachlorobiphenyl

113 % 82.2-139

10/18/2018 10/19/2018 06:19

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
<b>Acetone</b>	<b>13</b>	3.4	20	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	B, E1, HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-04**  
**A184203-13 (Water)**

Date Sampled  
10/15/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810240**

Bromoform	ND	0.088	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
<b>Chloromethane</b>	<b>0.50</b>	0.16	2.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
<b>Methylene chloride</b>	<b>0.35</b>	0.14	2.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	E1, J
Naphthalene	ND	0.088	5.0	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
<b>Toluene</b>	<b>0.070</b>	0.053	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	J
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/17/2018	10/27/2018 10:37	EPA 8260B	
Surrogate: Dibromofluoromethane			109 %	70.8-139		10/17/2018	10/27/2018 10:37	EPA 8260B	
Surrogate: Toluene-d8			90.1 %	76.6-116		10/17/2018	10/27/2018 10:37	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			89.8 %	71.4-118		10/17/2018	10/27/2018 10:37	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-04**

**A184203-13 (Water)**

Date Sampled  
10/15/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33484**

<b>Total Dissolved Solids</b>	<b>3940</b>	8.7	20.0	mg/L	1	10/17/2018	10/17/2018 16:31	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33498**

<b>Total Suspended Solids</b>	<b>1.2</b>	0.95	2.0	mg/L	1	10/18/2018	10/18/2018 14:39	SM 2540D	Ja
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-1**  
**A184212-01 (Water)**

**Date Sampled**  
**10/16/2018 15:24**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	M
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	X
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	X
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	X
Acetone	ND	3.4	20	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	M, X
Benzene	ND	0.089	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
<b>Chloromethane</b>	<b>0.25</b>	0.16	2.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	B, J
<b>cis-1,2-Dichloroethene</b>	<b>4.0</b>	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-1**  
**A184212-01 (Water)**

Date Sampled  
10/16/2018 15:24

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	M
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Methylene chloride	ND	0.14	2.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Naphthalene	ND	0.088	5.0	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	M
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
<b>Tetrachloroethene</b>	<b>3.8</b>	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	X
Toluene	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
<b>trans-1,2-Dichloroethene</b>	<b>0.13</b>	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	J
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
<b>Trichloroethene</b>	<b>2.2</b>	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/19/2018	10/19/2018 13:18	EPA 8260B	
Surrogate: Dibromofluoromethane			106 %	70.8-139		10/19/2018	10/19/2018 13:18	EPA 8260B	
Surrogate: Toluene-d8			84.8 %	76.6-116		10/19/2018	10/19/2018 13:18	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			78.3 %	71.4-118		10/19/2018	10/19/2018 13:18	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-2S**  
**A184212-02 (Water)**

Date Sampled  
10/16/2018 13:47

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 06:44	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

109 % 68.8-135

10/18/2018 10/19/2018 06:44

EPA 8082A

Surrogate: Decachlorobiphenyl

116 % 82.2-139

10/18/2018 10/19/2018 06:44

EPA 8082A

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33531**

Total Dissolved Solids	376	8.7	20.0	mg/L	1	10/22/2018	10/22/2018 13:57	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-2D**  
**A184212-03 (Water)**

Date Sampled  
10/16/2018 12:08

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 07:08	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

109 % 68.8-135

10/18/2018 10/19/2018 07:08

EPA 8082A

Surrogate: Decachlorobiphenyl

118 % 82.2-139

10/18/2018 10/19/2018 07:08

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-2D**  
**A184212-03 (Water)**

Date Sampled  
10/16/2018 12:08

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Bromoform	ND	0.088	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
<b>Chloromethane</b>	<b>0.31</b>	0.16	2.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
<b>Methylene chloride</b>	<b>0.27</b>	0.14	2.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
<b>Tetrachloroethene</b>	<b>20</b>	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/19/2018	10/19/2018 12:51	EPA 8260B	

Surrogate: Dibromofluoromethane

105 % 70.8-139

10/19/2018 10/19/2018 12:51

EPA 8260B

Surrogate: Toluene-d8

85.5 % 76.6-116

10/19/2018 10/19/2018 12:51

EPA 8260B

Surrogate: 4-Bromofluorobenzene

80.4 % 71.4-118

10/19/2018 10/19/2018 12:51

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-2D**

**A184212-03 (Water)**

**Date Sampled**  
10/16/2018 12:08

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33531**

Total Dissolved Solids	1220	8.7	20.0	mg/L	1	10/22/2018	10/22/2018 13:58	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-11S**  
**A184212-04 (Water)**

Date Sampled  
10/16/2018 11:38

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 07:33	EPA 8082A	
<i>Surrogate: Tetrachloro-meta-xylene</i>			112 %	68.8-135		10/18/2018	10/19/2018 07:33	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl</i>			122 %	82.2-139		10/18/2018	10/19/2018 07:33	EPA 8082A	

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33531**

Total Dissolved Solids	1810	8.7	20.0	mg/L	1	10/22/2018	10/22/2018 13:58	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-28**  
**A184212-05 (Water)**

**Date Sampled**  
**10/17/2018 11:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 07:58	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

100 % 68.8-135

10/18/2018 10/19/2018 07:58

EPA 8082A

Surrogate: Decachlorobiphenyl

108 % 82.2-139

10/18/2018 10/19/2018 07:58

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	1.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.99	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1,2-Trichloroethane	ND	1.0	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	1.3	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1-Dichloroethane	ND	1.2	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1-Dichloroethene	ND	1.4	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,1-Dichloropropene	ND	1.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.45	20	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2,3-Trichloropropane	ND	1.5	10	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.77	20	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.60	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	2.5	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	1.3	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2-Dichlorobenzene	ND	0.76	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2-Dichloroethane	ND	0.78	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,2-Dichloropropane	ND	1.0	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.75	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,3-Dichlorobenzene	ND	0.96	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,3-Dichloropropane	ND	1.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
1,4-Dichlorobenzene	ND	0.70	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
2,2-Dichloropropane	ND	1.4	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
2-Butanone	ND	30	200	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
2-Chlorotoluene	ND	0.75	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
2-Hexanone	ND	9.5	200	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
4-Chlorotoluene	ND	0.73	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
4-Methyl-2-pentanone	ND	7.7	200	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Acetone	ND	34	200	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Benzene	ND	0.89	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Bromobenzene	ND	0.84	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Bromochloromethane	ND	3.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Bromodichloromethane	ND	0.77	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-28**  
**A184212-05 (Water)**

Date Sampled  
10/17/2018 11:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Bromoform	ND	0.88	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Bromomethane	ND	5.9	50	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Carbon disulfide	ND	0.53	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Carbon tetrachloride	ND	0.38	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Chlorobenzene	ND	0.73	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Chloroethane	ND	2.5	50	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Chloroform	ND	0.62	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
<b>Chloromethane</b>	<b>3.0</b>	1.6	20	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	B, J, D
cis-1,2-Dichloroethene	ND	1.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.61	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Dibromochloromethane	ND	0.91	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Dibromomethane	ND	1.4	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Dichlorodifluoromethane	ND	1.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Diisopropyl Ether	ND	1.5	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Ethylbenzene	ND	0.54	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Hexachlorobutadiene	ND	1.3	20	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Isopropylbenzene	ND	0.81	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
m,p-Xylene	ND	0.57	10	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Methyl t-Butyl Ether	ND	1.4	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Methylene chloride	ND	1.4	20	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Naphthalene	ND	0.88	50	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
n-Butyl Benzene	ND	1.4	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
n-Hexane	ND	2.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
n-Propyl Benzene	ND	1.0	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
o-Xylene	ND	0.58	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
p-Isopropyltoluene	ND	0.85	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
sec-Butyl Benzene	ND	1.3	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Styrene	ND	0.65	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
tert-Butylbenzene	ND	1.2	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
<b>Tetrachloroethene</b>	<b>420</b>	0.81	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	D
Tetrahydrofuran	ND	12	100	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Toluene	ND	0.53	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
trans-1,2-Dichloroethene	ND	1.1	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.96	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Trichloroethene	ND	0.62	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Trichlorofluoromethane	ND	1.3	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Vinyl chloride	ND	1.6	5.0	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Xylenes, total	ND	1.2	15	ug/L	10	10/19/2018	10/19/2018 14:12	EPA 8260B	
Surrogate: Dibromofluoromethane			111 %	70.8-139		10/19/2018	10/19/2018 14:12	EPA 8260B	
Surrogate: Toluene-d8			83.7 %	76.6-116		10/19/2018	10/19/2018 14:12	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			77.1 %	71.4-118		10/19/2018	10/19/2018 14:12	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-28**

**A184212-05 (Water)**

**Date Sampled**  
10/17/2018 11:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33550**

Total Dissolved Solids	1570	8.7	20.0	mg/L	1	10/24/2018	10/24/2018 16:12	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-29S**  
**A184212-06 (Water)**

Date Sampled  
10/16/2018 15:58

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 08:23	EPA 8082A	
<i>Surrogate: Tetrachloro-meta-xylene</i>			119 %	68.8-135		10/18/2018	10/19/2018 08:23	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl</i>			130 %	82.2-139		10/18/2018	10/19/2018 08:23	EPA 8082A	

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33531**

Total Dissolved Solids	740	8.7	20.0	mg/L	1	10/22/2018	10/22/2018 13:58	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**MW-29D**  
**A184212-07 (Water)**

Date Sampled  
10/16/2018 14:27

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 08:48	EPA 8082A	
<i>Surrogate: Tetrachloro-meta-xylene</i>			116 %	68.8-135		10/18/2018	10/19/2018 08:48	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl</i>			127 %	82.2-139		10/18/2018	10/19/2018 08:48	EPA 8082A	

**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33531**

Total Dissolved Solids	746	8.7	20.0	mg/L	1	10/22/2018	10/22/2018 13:58	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-05**  
**A184212-08 (Water)**

Date Sampled  
10/16/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 09:13	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

116 % 68.8-135

10/18/2018 10/19/2018 09:13

EPA 8082A

Surrogate: Decachlorobiphenyl

125 % 82.2-139

10/18/2018 10/19/2018 09:13

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Acetone	ND	3.4	20	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Benzene	ND	0.089	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-05**  
**A184212-08 (Water)**

Date Sampled  
10/16/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Bromoform	ND	0.088	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
<b>Chloromethane</b>	<b>0.25</b>	0.16	2.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
<b>Methylene chloride</b>	<b>0.27</b>	0.14	2.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
<b>Tetrachloroethene</b>	<b>18</b>	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/19/2018	10/19/2018 13:45	EPA 8260B	
Surrogate: Dibromofluoromethane			109 %	70.8-139		10/19/2018	10/19/2018 13:45	EPA 8260B	
Surrogate: Toluene-d8			83.0 %	76.6-116		10/19/2018	10/19/2018 13:45	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			78.2 %	71.4-118		10/19/2018	10/19/2018 13:45	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**DUP-05**

**A184212-08 (Water)**

Date Sampled  
10/16/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33531**

Total Dissolved Solids	1220	8.7	20.0	mg/L	1	10/22/2018	10/22/2018 13:58	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**FB-01**  
**A184212-09 (Water)**

**Date Sampled**  
**10/17/2018 12:05**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Polychlorinated Biphenyls by EPA Method 8082**

**Preparation Batch:A810251**

PCB-1016	ND	0.0072	0.13	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
PCB-1221	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
PCB-1232	ND	0.0042	0.13	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
PCB-1242	ND	0.013	0.13	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
PCB-1248	ND	0.011	0.13	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
PCB-1254	ND	0.010	0.13	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
PCB-1260	ND	0.012	0.13	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	
Total PCBs	ND	0.026	0.25	ug/L	1	10/18/2018	10/19/2018 09:38	EPA 8082A	

Surrogate: Tetrachloro-meta-xylene

108 % 68.8-135

10/18/2018 10/19/2018 09:38

EPA 8082A

Surrogate: Decachlorobiphenyl

117 % 82.2-139

10/18/2018 10/19/2018 09:38

EPA 8082A

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Acetone	4.7	3.4	20	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**FB-01**  
**A184212-09 (Water)**

Date Sampled  
10/17/2018 12:05

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Bromoform	ND	0.088	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
<b>Chloroform</b>	<b>0.13</b>	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	HC, J
<b>Chloromethane</b>	<b>0.18</b>	0.16	2.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
<b>Methylene chloride</b>	<b>0.14</b>	0.14	2.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/19/2018	10/19/2018 12:24	EPA 8260B	

Surrogate: Dibromofluoromethane

103 % 70.8-139

10/19/2018 10/19/2018 12:24

EPA 8260B

Surrogate: Toluene-d8

83.4 % 76.6-116

10/19/2018 10/19/2018 12:24

EPA 8260B

Surrogate: 4-Bromofluorobenzene

78.8 % 71.4-118

10/19/2018 10/19/2018 12:24

EPA 8260B

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**FB-01**  
**A184212-09 (Water)**

**Date Sampled**  
**10/17/2018 12:05**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical-Green Bay, WI**

**SM 2540C**

**Preparation Batch:WET 33550**

Total Dissolved Solids	ND	8.7	20.0	mg/L	1	10/24/2018	10/24/2018 16:12	SM 2540C	
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**SM 2540D**

**Preparation Batch:WET 33530**

Total Suspended Solids	ND	0.68	1.4	mg/L	1	10/22/2018	10/22/2018 13:09	SM 2540D	
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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Trip Blank**  
**A184212-10 (Water)**

**Date Sampled**  
**10/17/2018 00:00**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2,3-Trichloropropane	ND	0.15	1.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	0.25	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
2-Butanone	ND	3.0	20	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
4-Methyl-2-pentanone	ND	0.77	20	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
<b>Acetone</b>	<b>5.1</b>	3.4	20	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	HC, J
Benzene	ND	0.089	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Bromomethane	ND	0.59	5.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Chloroethane	ND	0.25	5.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
<b>Chloromethane</b>	<b>0.25</b>	0.16	2.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	B, J
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Trip Blank**  
**A184212-10 (Water)**

Date Sampled  
10/17/2018 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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**Pace Analytical - Madison**

**Volatile Organic Compounds by Method 8260 - Purge and Trap**

**Preparation Batch:A810256**

Dibromomethane	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Dichlorodifluoromethane	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Methyl t-Butyl Ether	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
<b>Methylene chloride</b>	<b>0.17</b>	0.14	2.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	J
Naphthalene	ND	0.088	5.0	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
o-Xylene	ND	0.058	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Tetrahydrofuran	ND	1.2	10	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Toluene	ND	0.053	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Trichlorofluoromethane	ND	0.13	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
Xylenes, total	ND	0.12	1.5	ug/L	1	10/19/2018	10/19/2018 11:57	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>			102 %	70.8-139		10/19/2018	10/19/2018 11:57	EPA 8260B	
<i>Surrogate: Toluene-d8</i>			83.5 %	76.6-116		10/19/2018	10/19/2018 11:57	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			80.2 %	71.4-118		10/19/2018	10/19/2018 11:57	EPA 8260B	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810221 - EPA 3511**

**Blank (A810221-BLK1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 01:30

PCB-1016	ND	0.13	ug/L							
PCB-1221	ND	0.25	ug/L							
PCB-1232	ND	0.13	ug/L							
PCB-1242	ND	0.13	ug/L							
PCB-1248	ND	0.13	ug/L							
PCB-1254	ND	0.13	ug/L							
PCB-1260	ND	0.13	ug/L							
Total PCBs	ND	0.25	ug/L							
Surrogate: Tetrachloro-meta-xylene	0.822		ug/L	0.7500		110	68.8-135			
Surrogate: Decachlorobiphenyl	0.962		ug/L	0.7500		128	82.2-139			

**LCS (A810221-BS1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 00:41

PCB-1254	15.8	0.13	ug/L	12.50		127	70-130			
Surrogate: Tetrachloro-meta-xylene	0.858		ug/L	0.7500		114	68.8-135			
Surrogate: Decachlorobiphenyl	0.983		ug/L	0.7500		131	82.2-139			

**LCS Dup (A810221-BSD1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 01:05

PCB-1254	15.0	0.13	ug/L	12.50		120	70-130	5.57	20	
Surrogate: Tetrachloro-meta-xylene	0.800		ug/L	0.7500		107	68.8-135			
Surrogate: Decachlorobiphenyl	0.898		ug/L	0.7500		120	82.2-139			

**Batch A810251 - EPA 3511**

**Blank (A810251-BLK1)**

Prepared: 10/18/2018 Analyzed: 10/19/2018 00:55

PCB-1016	ND	0.13	ug/L							
PCB-1221	ND	0.25	ug/L							
PCB-1232	ND	0.13	ug/L							
PCB-1242	ND	0.13	ug/L							
PCB-1248	ND	0.13	ug/L							
PCB-1254	ND	0.13	ug/L							
PCB-1260	ND	0.13	ug/L							
Total PCBs	ND	0.25	ug/L							
Surrogate: Tetrachloro-meta-xylene	0.827		ug/L	0.7500		110	68.8-135			
Surrogate: Decachlorobiphenyl	0.923		ug/L	0.7500		123	82.2-139			

**LCS (A810251-BS1)**

Prepared: 10/18/2018 Analyzed: 10/19/2018 00:30

PCB-1242	15.7	0.13	ug/L	12.50		125	70-130			
Surrogate: Tetrachloro-meta-xylene	0.828		ug/L	0.7500		110	68.8-135			
Surrogate: Decachlorobiphenyl	0.930		ug/L	0.7500		124	82.2-139			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810251 - EPA 3511**

**Matrix Spike (A810251-MS1)**

Source: A184203-09

Prepared: 10/18/2018 Analyzed: 10/19/2018 03:24

PCB-1242	14.3	0.13	ug/L	12.50	ND	114	60-140			
Surrogate: Tetrachloro-meta-xylene	0.688		ug/L	0.7500		91.8	68.8-135			
Surrogate: Decachlorobiphenyl	0.740		ug/L	0.7500		98.6	82.2-139			

**Matrix Spike Dup (A810251-MSD1)**

Source: A184203-09

Prepared: 10/18/2018 Analyzed: 10/19/2018 03:49

PCB-1242	16.0	0.13	ug/L	12.50	ND	128	60-140	10.9	20	
Surrogate: Tetrachloro-meta-xylene	0.792		ug/L	0.7500		106	68.8-135			
Surrogate: Decachlorobiphenyl	0.815		ug/L	0.7500		109	82.2-139			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

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Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**Blank (A810218-BLK1)**

Prepared: 10/15/2018 Analyzed: 10/15/2018 16:36

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,1-Trichloroethane	ND	0.50	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,2-Trichloroethane	ND	0.50	ug/L							
1,1,2-Trichlorotrifluoroethane	ND	0.50	ug/L							
1,1-Dichloroethane	ND	0.50	ug/L							
1,1-Dichloroethene	ND	0.50	ug/L							
1,1-Dichloropropene	ND	0.50	ug/L							
1,2,3-Trichlorobenzene	0.080	2.0	ug/L							J
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	0.10	2.0	ug/L							J
1,2,4-Trimethylbenzene	ND	0.50	ug/L							
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							
1,2-Dibromoethane (EDB)	ND	0.50	ug/L							
1,2-Dichlorobenzene	ND	0.50	ug/L							
1,2-Dichloroethane	ND	0.50	ug/L							
1,2-Dichloropropane	ND	0.50	ug/L							
1,3,5-Trimethylbenzene	ND	0.50	ug/L							
1,3-Dichlorobenzene	ND	0.50	ug/L							
1,3-Dichloropropane	ND	0.50	ug/L							
1,4-Dichlorobenzene	ND	0.50	ug/L							
2,2-Dichloropropane	ND	0.50	ug/L							
2-Butanone	ND	20	ug/L							
2-Chlorotoluene	ND	0.50	ug/L							
2-Hexanone	ND	20	ug/L							
4-Chlorotoluene	ND	0.50	ug/L							
4-Methyl-2-pentanone	ND	20	ug/L							
Acetone	ND	20	ug/L							
Benzene	ND	0.50	ug/L							
Bromobenzene	ND	0.50	ug/L							
Bromochloromethane	ND	0.50	ug/L							
Bromodichloromethane	ND	0.50	ug/L							
Bromoform	ND	0.50	ug/L							
Bromomethane	0.70	5.0	ug/L							J
Carbon disulfide	ND	0.50	ug/L							
Carbon tetrachloride	ND	0.50	ug/L							
Chlorobenzene	ND	0.50	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	0.50	ug/L							
Chloromethane	0.43	2.0	ug/L							J
cis-1,2-Dichloroethene	ND	0.50	ug/L							
cis-1,3-Dichloropropene	ND	0.50	ug/L							
Dibromochloromethane	ND	0.50	ug/L							
Dibromomethane	ND	0.50	ug/L							
Dichlorodifluoromethane	ND	0.50	ug/L							
Diisopropyl Ether	ND	0.50	ug/L							
Ethylbenzene	ND	0.50	ug/L							
Hexachlorobutadiene	ND	2.0	ug/L							

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**Blank (A810218-BLK1)**

Prepared: 10/15/2018 Analyzed: 10/15/2018 16:36

Isopropylbenzene	ND	0.50	ug/L							
m,p-Xylene	ND	1.0	ug/L							
Methyl t-Butyl Ether	ND	0.50	ug/L							
Methylene chloride	ND	2.0	ug/L							
Naphthalene	0.17	5.0	ug/L							J
n-Butyl Benzene	ND	0.50	ug/L							
n-Hexane	ND	0.50	ug/L							
n-Propyl Benzene	ND	0.50	ug/L							
o-Xylene	ND	0.50	ug/L							
p-Isopropyltoluene	ND	0.50	ug/L							
sec-Butyl Benzene	ND	0.50	ug/L							
Styrene	ND	0.50	ug/L							
tert-Butylbenzene	ND	0.50	ug/L							
Tetrachloroethene	ND	0.50	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	0.50	ug/L							
trans-1,2-Dichloroethene	ND	0.50	ug/L							
trans-1,3-Dichloropropene	ND	0.50	ug/L							
Trichloroethene	ND	0.50	ug/L							
Trichlorofluoromethane	ND	0.50	ug/L							
Vinyl chloride	ND	0.50	ug/L							
Xylenes, total	ND	1.5	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	<i>10.2</i>		<i>ug/L</i>	<i>10.00</i>		<i>102</i>	<i>70.8-139</i>			
<i>Surrogate: Toluene-d8</i>	<i>9.55</i>		<i>ug/L</i>	<i>10.00</i>		<i>95.5</i>	<i>76.6-116</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>9.10</i>		<i>ug/L</i>	<i>10.00</i>		<i>91.0</i>	<i>71.4-118</i>			

**LCS (A810218-BS1)**

Prepared: 10/15/2018 Analyzed: 10/15/2018 17:03

1,1,1,2-Tetrachloroethane	4.89	0.50	ug/L	5.000		97.8	78-131			
1,1,1-Trichloroethane	5.18	0.50	ug/L	5.000		104	68.9-152			
1,1,2,2-Tetrachloroethane	5.04	0.50	ug/L	5.000		101	66.3-131			
1,1,2-Trichloroethane	5.02	0.50	ug/L	5.000		100	79.2-123			
1,1,2-Trichlorotrifluoroethane	5.02	0.50	ug/L	5.000		100	47.3-196			
1,1-Dichloroethane	5.30	0.50	ug/L	5.000		106	73.2-144			
1,1-Dichloroethene	4.98	0.50	ug/L	5.000		99.6	47.7-175			
1,1-Dichloropropene	4.94	0.50	ug/L	5.000		98.8	79.4-126			
1,2,3-Trichlorobenzene	4.71	2.0	ug/L	5.000		94.2	74-121			
1,2,3-Trichloropropane	5.02	1.0	ug/L	5.000		100	72.5-135			
1,2,4-Trichlorobenzene	4.68	2.0	ug/L	5.000		93.6	74.6-118			
1,2,4-Trimethylbenzene	4.86	0.50	ug/L	5.000		97.2	86.3-119			
1,2-Dibromo-3-chloropropane	5.03	0.50	ug/L	5.000		101	53-136			
1,2-Dibromoethane (EDB)	4.91	0.50	ug/L	5.000		98.2	79.5-121			
1,2-Dichlorobenzene	4.92	0.50	ug/L	5.000		98.4	87.2-115			
1,2-Dichloroethane	5.34	0.50	ug/L	5.000		107	72.9-149			
1,2-Dichloropropane	5.07	0.50	ug/L	5.000		101	79.1-122			
1,3,5-Trimethylbenzene	4.86	0.50	ug/L	5.000		97.2	85.7-120			
1,3-Dichlorobenzene	4.84	0.50	ug/L	5.000		96.8	88.5-114			
1,3-Dichloropropane	4.93	0.50	ug/L	5.000		98.6	79.7-123			
1,4-Dichlorobenzene	4.91	0.50	ug/L	5.000		98.2	87.5-112			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**LCS (A810218-BS1)**

Prepared: 10/15/2018 Analyzed: 10/15/2018 17:03

2,2-Dichloropropane	4.77	0.50	ug/L	5.000		95.4	70.3-142			
2-Butanone	49.0	20	ug/L	50.00		98.1	52.6-151			
2-Chlorotoluene	4.93	0.50	ug/L	5.000		98.6	86.2-117			
2-Hexanone	50.1	20	ug/L	50.00		100	50.7-153			
4-Chlorotoluene	4.83	0.50	ug/L	5.000		96.6	85.8-118			
4-Methyl-2-pentanone	51.0	20	ug/L	50.00		102	58.8-151			
Acetone	50.0	20	ug/L	50.00		99.9	34.7-197			
Benzene	5.15	0.50	ug/L	5.000		103	78.6-127			
Bromobenzene	4.88	0.50	ug/L	5.000		97.6	84.1-113			
Bromochloromethane	5.07	0.50	ug/L	5.000		101	81-132			
Bromodichloromethane	5.08	0.50	ug/L	5.000		102	78.7-132			
Bromoform	4.86	0.50	ug/L	5.000		97.2	68.6-133			
Bromomethane	4.13	5.0	ug/L	5.000		82.6	37.4-199			J
Carbon disulfide	5.15	0.50	ug/L	5.000		103	37-182			
Carbon tetrachloride	5.30	0.50	ug/L	5.000		106	69.3-140			
Chlorobenzene	4.95	0.50	ug/L	5.000		99.0	89.7-112			
Chloroethane	4.87	5.0	ug/L	5.000		97.4	47.6-184			J
Chloroform	5.19	0.50	ug/L	5.000		104	69.9-148			
Chloromethane	5.12	2.0	ug/L	5.000		102	56.3-169			
cis-1,2-Dichloroethene	5.05	0.50	ug/L	5.000		101	80.1-124			
cis-1,3-Dichloropropene	4.83	0.50	ug/L	5.000		96.6	70.9-123			
Dibromochloromethane	4.93	0.50	ug/L	5.000		98.6	78.6-127			
Dibromomethane	4.88	0.50	ug/L	5.000		97.6	78.5-135			
Dichlorodifluoromethane	5.05	0.50	ug/L	5.000		101	68.9-158			
Diisopropyl Ether	5.08	0.50	ug/L	5.000		102	67.3-134			
Ethylbenzene	4.84	0.50	ug/L	5.000		96.8	86.3-118			
Hexachlorobutadiene	4.85	2.0	ug/L	5.000		97.0	60.2-149			
Isopropylbenzene	4.88	0.50	ug/L	5.000		97.6	86.9-117			
m,p-Xylene	9.71	1.0	ug/L	10.00		97.1	88.5-116			
Methyl t-Butyl Ether	5.07	0.50	ug/L	5.000		101	63.1-141			
Methylene chloride	5.32	2.0	ug/L	5.000		106	67.8-143			
Naphthalene	4.54	5.0	ug/L	5.000		90.8	46.9-134			J
n-Butyl Benzene	4.95	0.50	ug/L	5.000		99.0	83.8-119			
n-Hexane	5.19	0.50	ug/L	5.000		104	57.7-142			
n-Propyl Benzene	4.88	0.50	ug/L	5.000		97.6	83.4-121			
o-Xylene	4.86	0.50	ug/L	5.000		97.2	86.1-113			
p-Isopropyltoluene	4.89	0.50	ug/L	5.000		97.8	87.4-115			
sec-Butyl Benzene	4.99	0.50	ug/L	5.000		99.8	84.9-119			
Styrene	4.88	0.50	ug/L	5.000		97.6	84.9-117			
tert-Butylbenzene	4.93	0.50	ug/L	5.000		98.6	79.1-120			
Tetrachloroethene	4.78	0.50	ug/L	5.000		95.6	80.5-118			
Tetrahydrofuran	25.3	10	ug/L	25.00		101	35.5-156			
Toluene	4.85	0.50	ug/L	5.000		97.0	83.8-115			
trans-1,2-Dichloroethene	4.99	0.50	ug/L	5.000		99.8	78.3-128			
trans-1,3-Dichloropropene	4.75	0.50	ug/L	5.000		95.0	78.3-119			
Trichloroethene	4.90	0.50	ug/L	5.000		98.0	82.6-121			
Trichlorofluoromethane	5.43	0.50	ug/L	5.000		109	47.9-196			
Vinyl chloride	5.23	0.50	ug/L	5.000		105	53-177			

TRC Environmental Corporation, Inc.  
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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**LCS (A810218-BS1)**

Prepared: 10/15/2018 Analyzed: 10/15/2018 17:03

Surrogate: Dibromofluoromethane	5.22		ug/L	5.000		104	70.8-139			
Surrogate: Toluene-d8	5.00		ug/L	5.000		100	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.68		ug/L	5.000		93.6	71.4-118			

**Matrix Spike (A810218-MS1)**

Source: A184121-27

Prepared: 10/15/2018 Analyzed: 10/16/2018 16:33

1,1,1,2-Tetrachloroethane	5.14	0.50	ug/L	5.000	ND	103	78.4-135			
1,1,1-Trichloroethane	5.93	0.50	ug/L	5.000	ND	119	68.4-158			
1,1,2,2-Tetrachloroethane	5.79	0.50	ug/L	5.000	ND	116	64.7-135			
1,1,2-Trichloroethane	5.57	0.50	ug/L	5.000	ND	111	76.2-132			
1,1,2-Trichlorotrifluoroethane	6.61	0.50	ug/L	5.000	ND	132	51.7-199			
1,1-Dichloroethane	6.66	0.50	ug/L	5.000	ND	133	69-149			
1,1-Dichloroethene	6.46	0.50	ug/L	5.000	ND	129	49.3-178			
1,1-Dichloropropene	5.29	0.50	ug/L	5.000	ND	106	75.8-126			
1,2,3-Trichlorobenzene	4.61	2.0	ug/L	5.000	ND	92.2	73.3-124			
1,2,3-Trichloropropane	6.03	1.0	ug/L	5.000	ND	121	70.6-141			
1,2,4-Trichlorobenzene	4.19	2.0	ug/L	5.000	ND	83.8	70.8-121			
1,2,4-Trimethylbenzene	4.18	0.50	ug/L	5.000	ND	83.6	85.3-120			M
1,2-Dibromo-3-chloropropane	5.43	0.50	ug/L	5.000	ND	109	50.6-138			
1,2-Dibromoethane (EDB)	5.40	0.50	ug/L	5.000	ND	108	75.9-124			
1,2-Dichlorobenzene	5.00	0.50	ug/L	5.000	ND	100	87.1-115			
1,2-Dichloroethane	6.99	0.50	ug/L	5.000	ND	140	74-155			
1,2-Dichloropropane	5.51	0.50	ug/L	5.000	ND	110	85.9-119			
1,3,5-Trimethylbenzene	4.40	0.50	ug/L	5.000	ND	88.0	85.3-120			
1,3-Dichlorobenzene	4.78	0.50	ug/L	5.000	ND	95.6	87.6-115			
1,3-Dichloropropane	5.43	0.50	ug/L	5.000	ND	109	79.8-125			
1,4-Dichlorobenzene	4.86	0.50	ug/L	5.000	ND	97.2	86.3-113			
2,2-Dichloropropane	4.35	0.50	ug/L	5.000	ND	87.0	71.4-142			
2-Butanone	66.6	20	ug/L	50.00	ND	133	45.3-165			
2-Chlorotoluene	4.86	0.50	ug/L	5.000	ND	97.2	86.6-117			
2-Hexanone	60.7	20	ug/L	50.00	ND	121	45.9-161			
4-Chlorotoluene	4.76	0.50	ug/L	5.000	ND	95.2	86.1-119			
4-Methyl-2-pentanone	60.5	20	ug/L	50.00	ND	121	53.4-160			
Acetone	91.4	20	ug/L	50.00	3.83	175	39.4-199			
Benzene	6.02	0.50	ug/L	5.000	ND	120	75.1-132			
Bromobenzene	4.94	0.50	ug/L	5.000	ND	98.8	83.5-113			
Bromochloromethane	6.13	0.50	ug/L	5.000	ND	123	79.1-136			
Bromodichloromethane	5.24	0.50	ug/L	5.000	ND	105	77-138			
Bromoform	5.06	0.50	ug/L	5.000	ND	101	66.6-136			
Bromomethane	4.41	5.0	ug/L	5.000	ND	88.2	45.8-193			J
Carbon disulfide	5.96	0.50	ug/L	5.000	ND	119	39.7-182			
Carbon tetrachloride	5.95	0.50	ug/L	5.000	ND	119	71.8-143			
Chlorobenzene	5.05	0.50	ug/L	5.000	ND	101	89.6-112			
Chloroethane	6.43	5.0	ug/L	5.000	ND	129	49.5-188			
Chloroform	6.40	0.50	ug/L	5.000	ND	128	67.3-154			
Chloromethane	5.90	2.0	ug/L	5.000	0.570	107	54.7-167			
cis-1,2-Dichloroethene	5.89	0.50	ug/L	5.000	0.200	114	73.6-131			
cis-1,3-Dichloropropene	4.55	0.50	ug/L	5.000	ND	91.0	67-125			
Dibromochloromethane	5.17	0.50	ug/L	5.000	ND	103	79-128			

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Project Number: 292257 Ph. 1  
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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**Matrix Spike (A810218-MS1)**

Source: A184121-27

Prepared: 10/15/2018 Analyzed: 10/16/2018 16:33

Dibromomethane	5.52	0.50	ug/L	5.000	ND	110	80.9-136			
Dichlorodifluoromethane	5.89	0.50	ug/L	5.000	ND	118	70.9-150			
Diisopropyl Ether	5.90	0.50	ug/L	5.000	ND	118	59.9-139			
Ethylbenzene	4.71	0.50	ug/L	5.000	ND	94.2	87.1-117			
Hexachlorobutadiene	4.42	2.0	ug/L	5.000	ND	88.4	59.6-155			
Isopropylbenzene	4.60	0.50	ug/L	5.000	ND	92.0	87.3-117			
m,p-Xylene	9.22	1.0	ug/L	10.00	ND	92.2	87.5-116			
Methyl t-Butyl Ether	6.48	0.50	ug/L	5.000	ND	130	55.9-151			
Methylene chloride	7.03	2.0	ug/L	5.000	0.360	133	63.1-149			
Naphthalene	4.60	5.0	ug/L	5.000	ND	92.0	41.3-137			J
n-Butyl Benzene	4.31	0.50	ug/L	5.000	ND	86.2	82.1-121			
n-Hexane	5.67	0.50	ug/L	5.000	ND	113	50-148			
n-Propyl Benzene	4.68	0.50	ug/L	5.000	ND	93.6	83.4-121			
o-Xylene	4.60	0.50	ug/L	5.000	ND	92.0	84.5-113			
p-Isopropyltoluene	4.53	0.50	ug/L	5.000	ND	90.6	87.3-114			
sec-Butyl Benzene	4.71	0.50	ug/L	5.000	ND	94.2	84.9-118			
Styrene	3.54	0.50	ug/L	5.000	ND	70.8	79.2-121			M
tert-Butylbenzene	4.85	0.50	ug/L	5.000	ND	97.0	79.3-119			
Tetrachloroethene	4.60	0.50	ug/L	5.000	0.270	86.6	78.4-121			
Tetrahydrofuran	33.2	10	ug/L	25.00	ND	133	27-163			
Toluene	4.79	0.50	ug/L	5.000	ND	95.8	81.7-117			
trans-1,2-Dichloroethene	5.79	0.50	ug/L	5.000	ND	116	71.3-135			
trans-1,3-Dichloropropene	4.67	0.50	ug/L	5.000	ND	93.4	76-122			
Trichloroethene	5.36	0.50	ug/L	5.000	0.610	95.0	70.4-133			
Trichlorofluoromethane	6.66	0.50	ug/L	5.000	ND	133	50.7-199			
Vinyl chloride	6.21	0.50	ug/L	5.000	ND	124	55.4-172			
Surrogate: Dibromofluoromethane	6.26		ug/L	5.000		125	70.8-139			
Surrogate: Toluene-d8	4.91		ug/L	5.000		98.2	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.66		ug/L	5.000		93.2	71.4-118			

**Matrix Spike Dup (A810218-MSD1)**

Source: A184121-27

Prepared: 10/15/2018 Analyzed: 10/16/2018 17:01

1,1,1,2-Tetrachloroethane	4.95	0.50	ug/L	5.000	ND	99.0	78.4-135	3.77	20	
1,1,1-Trichloroethane	5.94	0.50	ug/L	5.000	ND	119	68.4-158	0.168	20	
1,1,2,2-Tetrachloroethane	5.58	0.50	ug/L	5.000	ND	112	64.7-135	3.69	20	
1,1,2-Trichloroethane	5.09	0.50	ug/L	5.000	ND	102	76.2-132	9.01	20	
1,1,2-Trichlorotrifluoroethane	6.45	0.50	ug/L	5.000	ND	129	51.7-199	2.45	20	
1,1-Dichloroethane	6.57	0.50	ug/L	5.000	ND	131	69-149	1.36	20	
1,1-Dichloroethene	6.02	0.50	ug/L	5.000	ND	120	49.3-178	7.05	20	
1,1-Dichloropropene	5.38	0.50	ug/L	5.000	ND	108	75.8-126	1.69	20	
1,2,3-Trichlorobenzene	4.44	2.0	ug/L	5.000	ND	88.8	73.3-124	3.76	20	
1,2,3-Trichloropropane	5.59	1.0	ug/L	5.000	ND	112	70.6-141	7.57	20	
1,2,4-Trichlorobenzene	4.10	2.0	ug/L	5.000	ND	82.0	70.8-121	2.17	20	
1,2,4-Trimethylbenzene	4.17	0.50	ug/L	5.000	ND	83.4	85.3-120	0.240	20	M
1,2-Dibromo-3-chloropropane	5.07	0.50	ug/L	5.000	ND	101	50.6-138	6.86	20	
1,2-Dibromoethane (EDB)	5.06	0.50	ug/L	5.000	ND	101	75.9-124	6.50	20	
1,2-Dichlorobenzene	5.02	0.50	ug/L	5.000	ND	100	87.1-115	0.399	20	
1,2-Dichloroethane	6.48	0.50	ug/L	5.000	ND	130	74-155	7.57	20	
1,2-Dichloropropane	5.28	0.50	ug/L	5.000	ND	106	85.9-119	4.26	20	

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**  
**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**Matrix Spike Dup (A810218-MSD1)**

Source: A184121-27

Prepared: 10/15/2018 Analyzed: 10/16/2018 17:01

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,3,5-Trimethylbenzene	4.34	0.50	ug/L	5.000	ND	86.8	85.3-120	1.37	20	
1,3-Dichlorobenzene	4.77	0.50	ug/L	5.000	ND	95.4	87.6-115	0.209	20	
1,3-Dichloropropane	5.22	0.50	ug/L	5.000	ND	104	79.8-125	3.94	20	
1,4-Dichlorobenzene	4.74	0.50	ug/L	5.000	ND	94.8	86.3-113	2.50	20	
2,2-Dichloropropane	4.27	0.50	ug/L	5.000	ND	85.4	71.4-142	1.86	20	
2-Butanone	57.1	20	ug/L	50.00	ND	114	45.3-165	15.5	20	
2-Chlorotoluene	4.93	0.50	ug/L	5.000	ND	98.6	86.6-117	1.43	20	
2-Hexanone	54.7	20	ug/L	50.00	ND	109	45.9-161	10.3	20	
4-Chlorotoluene	4.74	0.50	ug/L	5.000	ND	94.8	86.1-119	0.421	20	
4-Methyl-2-pentanone	53.0	20	ug/L	50.00	ND	106	53.4-160	13.3	20	
Acetone	75.3	20	ug/L	50.00	3.83	143	39.4-199	19.3	20	
Benzene	5.81	0.50	ug/L	5.000	ND	116	75.1-132	3.55	20	
Bromobenzene	4.95	0.50	ug/L	5.000	ND	99.0	83.5-113	0.202	20	
Bromochloromethane	5.86	0.50	ug/L	5.000	ND	117	79.1-136	4.50	20	
Bromodichloromethane	5.14	0.50	ug/L	5.000	ND	103	77-138	1.93	20	
Bromoform	4.70	0.50	ug/L	5.000	ND	94.0	66.6-136	7.38	20	
Bromomethane	5.04	5.0	ug/L	5.000	ND	101	45.8-193	13.3	20	
Carbon disulfide	6.07	0.50	ug/L	5.000	ND	121	39.7-182	1.83	20	
Carbon tetrachloride	5.95	0.50	ug/L	5.000	ND	119	71.8-143	0.00	20	
Chlorobenzene	5.00	0.50	ug/L	5.000	ND	100	89.6-112	0.995	20	
Chloroethane	6.06	5.0	ug/L	5.000	ND	121	49.5-188	5.92	20	
Chloroform	6.20	0.50	ug/L	5.000	ND	124	67.3-154	3.17	20	
Chloromethane	6.09	2.0	ug/L	5.000	0.570	110	54.7-167	3.17	20	
cis-1,2-Dichloroethene	5.74	0.50	ug/L	5.000	0.200	111	73.6-131	2.58	20	
cis-1,3-Dichloropropene	4.38	0.50	ug/L	5.000	ND	87.6	67-125	3.81	20	
Dibromochloromethane	4.97	0.50	ug/L	5.000	ND	99.4	79-128	3.94	20	
Dibromomethane	5.12	0.50	ug/L	5.000	ND	102	80.9-136	7.52	20	
Dichlorodifluoromethane	6.06	0.50	ug/L	5.000	ND	121	70.9-150	2.85	20	
Diisopropyl Ether	5.67	0.50	ug/L	5.000	ND	113	59.9-139	3.98	20	
Ethylbenzene	4.70	0.50	ug/L	5.000	ND	94.0	87.1-117	0.213	20	
Hexachlorobutadiene	4.56	2.0	ug/L	5.000	ND	91.2	59.6-155	3.12	20	
Isopropylbenzene	4.63	0.50	ug/L	5.000	ND	92.6	87.3-117	0.650	20	
m,p-Xylene	9.02	1.0	ug/L	10.00	ND	90.2	87.5-116	2.19	20	
Methyl t-Butyl Ether	5.97	0.50	ug/L	5.000	ND	119	55.9-151	8.19	20	
Methylene chloride	6.65	2.0	ug/L	5.000	0.360	126	63.1-149	5.56	20	
Naphthalene	4.39	5.0	ug/L	5.000	ND	87.8	41.3-137	4.67	20	J
n-Butyl Benzene	4.33	0.50	ug/L	5.000	ND	86.6	82.1-121	0.463	20	
n-Hexane	5.82	0.50	ug/L	5.000	ND	116	50-148	2.61	20	
n-Propyl Benzene	4.79	0.50	ug/L	5.000	ND	95.8	83.4-121	2.32	20	
o-Xylene	4.57	0.50	ug/L	5.000	ND	91.4	84.5-113	0.654	20	
p-Isopropyltoluene	4.48	0.50	ug/L	5.000	ND	89.6	87.3-114	1.11	20	
sec-Butyl Benzene	4.87	0.50	ug/L	5.000	ND	97.4	84.9-118	3.34	20	
Styrene	3.17	0.50	ug/L	5.000	ND	63.4	79.2-121	11.0	20	M
tert-Butylbenzene	4.94	0.50	ug/L	5.000	ND	98.8	79.3-119	1.84	20	
Tetrachloroethene	4.71	0.50	ug/L	5.000	0.270	88.8	78.4-121	2.36	20	
Tetrahydrofuran	28.4	10	ug/L	25.00	ND	114	27-163	15.6	20	
Toluene	4.73	0.50	ug/L	5.000	ND	94.6	81.7-117	1.26	20	
trans-1,2-Dichloroethene	5.74	0.50	ug/L	5.000	ND	115	71.3-135	0.867	20	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810218 - EPA 5030B**

**Matrix Spike Dup (A810218-MSD1)**

Source: A184121-27

Prepared: 10/15/2018 Analyzed: 10/16/2018 17:01

trans-1,3-Dichloropropene	4.46	0.50	ug/L	5.000	ND	89.2	76-122	4.60	20	
Trichloroethene	5.38	0.50	ug/L	5.000	0.610	95.4	70.4-133	0.372	20	
Trichlorofluoromethane	6.36	0.50	ug/L	5.000	ND	127	50.7-199	4.61	20	
Vinyl chloride	6.10	0.50	ug/L	5.000	ND	122	55.4-172	1.79	20	
<i>Surrogate: Dibromofluoromethane</i>	6.05		ug/L	5.000		121	70.8-139			
<i>Surrogate: Toluene-d8</i>	4.73		ug/L	5.000		94.6	76.6-116			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.53		ug/L	5.000		90.6	71.4-118			

**Batch A810219 - EPA 5030B**

**Blank (A810219-BLK1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 18:22

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,1-Trichloroethane	ND	0.50	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,2-Trichloroethane	ND	0.50	ug/L							
1,1,2-Trichlorotrifluoroethane	ND	0.50	ug/L							
1,1-Dichloroethane	ND	0.50	ug/L							
1,1-Dichloroethene	ND	0.50	ug/L							
1,1-Dichloropropene	ND	0.50	ug/L							
1,2,3-Trichlorobenzene	ND	2.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	0.50	ug/L							
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							
1,2-Dibromoethane (EDB)	ND	0.50	ug/L							
1,2-Dichlorobenzene	ND	0.50	ug/L							
1,2-Dichloroethane	ND	0.50	ug/L							
1,2-Dichloropropane	ND	0.50	ug/L							
1,3,5-Trimethylbenzene	ND	0.50	ug/L							
1,3-Dichlorobenzene	ND	0.50	ug/L							
1,3-Dichloropropane	ND	0.50	ug/L							
1,4-Dichlorobenzene	ND	0.50	ug/L							
2,2-Dichloropropane	ND	0.50	ug/L							
2-Butanone	ND	20	ug/L							
2-Chlorotoluene	ND	0.50	ug/L							
2-Hexanone	ND	20	ug/L							
4-Chlorotoluene	ND	0.50	ug/L							
4-Methyl-2-pentanone	ND	20	ug/L							
Acetone	ND	20	ug/L							
Benzene	ND	0.50	ug/L							
Bromobenzene	ND	0.50	ug/L							
Bromochloromethane	ND	0.50	ug/L							
Bromodichloromethane	ND	0.50	ug/L							
Bromoform	ND	0.50	ug/L							
Bromomethane	ND	5.0	ug/L							
Carbon disulfide	ND	0.50	ug/L							
Carbon tetrachloride	ND	0.50	ug/L							
Chlorobenzene	ND	0.50	ug/L							

TRC Environmental Corporation, Inc.  
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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810219 - EPA 5030B**

**Blank (A810219-BLK1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 18:22

Chloroethane	ND	5.0	ug/L							
Chloroform	ND	0.50	ug/L							
Chloromethane	0.40	2.0	ug/L							J
cis-1,2-Dichloroethene	ND	0.50	ug/L							
cis-1,3-Dichloropropene	ND	0.50	ug/L							
Dibromochloromethane	ND	0.50	ug/L							
Dibromomethane	ND	0.50	ug/L							
Dichlorodifluoromethane	ND	0.50	ug/L							
Diisopropyl Ether	ND	0.50	ug/L							
Ethylbenzene	ND	0.50	ug/L							
Hexachlorobutadiene	ND	2.0	ug/L							
Isopropylbenzene	ND	0.50	ug/L							
m,p-Xylene	ND	1.0	ug/L							
Methyl t-Butyl Ether	ND	0.50	ug/L							
Methylene chloride	ND	2.0	ug/L							
Naphthalene	ND	5.0	ug/L							
n-Butyl Benzene	ND	0.50	ug/L							
n-Hexane	ND	0.50	ug/L							
n-Propyl Benzene	ND	0.50	ug/L							
o-Xylene	ND	0.50	ug/L							
p-Isopropyltoluene	ND	0.50	ug/L							
sec-Butyl Benzene	ND	0.50	ug/L							
Styrene	ND	0.50	ug/L							
tert-Butylbenzene	ND	0.50	ug/L							
Tetrachloroethene	ND	0.50	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	0.50	ug/L							
trans-1,2-Dichloroethene	ND	0.50	ug/L							
trans-1,3-Dichloropropene	ND	0.50	ug/L							
Trichloroethene	ND	0.50	ug/L							
Trichlorofluoromethane	ND	0.50	ug/L							
Vinyl chloride	ND	0.50	ug/L							
Xylenes, total	ND	1.5	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	<i>11.1</i>		<i>ug/L</i>	<i>10.00</i>		<i>111</i>	<i>70.8-139</i>			
<i>Surrogate: Toluene-d8</i>	<i>9.31</i>		<i>ug/L</i>	<i>10.00</i>		<i>93.1</i>	<i>76.6-116</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>8.56</i>		<i>ug/L</i>	<i>10.00</i>		<i>85.6</i>	<i>71.4-118</i>			

**LCS (A810219-BS1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 22:25

1,1,1,2-Tetrachloroethane	4.99	0.50	ug/L	5.000		99.8	78-131			
1,1,1-Trichloroethane	6.26	0.50	ug/L	5.000		125	68.9-152			
1,1,2,2-Tetrachloroethane	5.48	0.50	ug/L	5.000		110	66.3-131			
1,1,2-Trichloroethane	5.17	0.50	ug/L	5.000		103	79.2-123			
1,1,2-Trichlorotrifluoroethane	8.43	0.50	ug/L	5.000		169	47.3-196			
1,1-Dichloroethane	7.11	0.50	ug/L	5.000		142	73.2-144			
1,1-Dichloroethene	8.02	0.50	ug/L	5.000		160	47.7-175			
1,1-Dichloropropene	5.64	0.50	ug/L	5.000		113	79.4-126			
1,2,3-Trichlorobenzene	4.40	2.0	ug/L	5.000		88.0	74-121			
1,2,3-Trichloropropane	5.64	1.0	ug/L	5.000		113	72.5-135			

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810219 - EPA 5030B**

**LCS (A810219-BS1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 22:25

1,2,4-Trichlorobenzene	3.96	2.0	ug/L	5.000		79.2	74.6-118			
1,2,4-Trimethylbenzene	4.85	0.50	ug/L	5.000		97.0	86.3-119			
1,2-Dibromo-3-chloropropane	4.47	0.50	ug/L	5.000		89.4	53-136			
1,2-Dibromoethane (EDB)	4.89	0.50	ug/L	5.000		97.8	79.5-121			
1,2-Dichlorobenzene	5.13	0.50	ug/L	5.000		103	87.2-115			
1,2-Dichloroethane	6.98	0.50	ug/L	5.000		140	72.9-149			
1,2-Dichloropropane	5.53	0.50	ug/L	5.000		111	79.1-122			
1,3,5-Trimethylbenzene	4.86	0.50	ug/L	5.000		97.2	85.7-120			
1,3-Dichlorobenzene	4.95	0.50	ug/L	5.000		99.0	88.5-114			
1,3-Dichloropropane	5.26	0.50	ug/L	5.000		105	79.7-123			
1,4-Dichlorobenzene	5.06	0.50	ug/L	5.000		101	87.5-112			
2,2-Dichloropropane	4.77	0.50	ug/L	5.000		95.4	70.3-142			
2-Butanone	56.0	20	ug/L	50.00		112	52.6-151			
2-Chlorotoluene	5.06	0.50	ug/L	5.000		101	86.2-117			
2-Hexanone	47.5	20	ug/L	50.00		95.1	50.7-153			
4-Chlorotoluene	5.12	0.50	ug/L	5.000		102	85.8-118			
4-Methyl-2-pentanone	48.7	20	ug/L	50.00		97.4	58.8-151			
Acetone	86.1	20	ug/L	50.00		172	34.7-197			
Benzene	5.97	0.50	ug/L	5.000		119	78.6-127			
Bromobenzene	4.86	0.50	ug/L	5.000		97.2	84.1-113			
Bromochloromethane	6.17	0.50	ug/L	5.000		123	81-132			
Bromodichloromethane	5.27	0.50	ug/L	5.000		105	78.7-132			
Bromoform	4.29	0.50	ug/L	5.000		85.8	68.6-133			
Bromomethane	9.80	5.0	ug/L	5.000		196	37.4-199			
Carbon disulfide	6.51	0.50	ug/L	5.000		130	37-182			
Carbon tetrachloride	6.18	0.50	ug/L	5.000		124	69.3-140			
Chlorobenzene	5.04	0.50	ug/L	5.000		101	89.7-112			
Chloroethane	8.21	5.0	ug/L	5.000		164	47.6-184			
Chloroform	6.55	0.50	ug/L	5.000		131	69.9-148			
Chloromethane	6.77	2.0	ug/L	5.000		135	56.3-169			
cis-1,2-Dichloroethene	5.77	0.50	ug/L	5.000		115	80.1-124			
cis-1,3-Dichloropropene	4.30	0.50	ug/L	5.000		86.0	70.9-123			
Dibromochloromethane	4.87	0.50	ug/L	5.000		97.4	78.6-127			
Dibromomethane	5.23	0.50	ug/L	5.000		105	78.5-135			
Dichlorodifluoromethane	6.49	0.50	ug/L	5.000		130	68.9-158			
Diisopropyl Ether	5.57	0.50	ug/L	5.000		111	67.3-134			
Ethylbenzene	4.82	0.50	ug/L	5.000		96.4	86.3-118			
Hexachlorobutadiene	4.51	2.0	ug/L	5.000		90.2	60.2-149			
Isopropylbenzene	4.63	0.50	ug/L	5.000		92.6	86.9-117			
m,p-Xylene	9.37	1.0	ug/L	10.00		93.7	88.5-116			
Methyl t-Butyl Ether	5.73	0.50	ug/L	5.000		115	63.1-141			
Methylene chloride	6.65	2.0	ug/L	5.000		133	67.8-143			
Naphthalene	4.27	5.0	ug/L	5.000		85.4	46.9-134			J
n-Butyl Benzene	4.48	0.50	ug/L	5.000		89.6	83.8-119			
n-Hexane	6.19	0.50	ug/L	5.000		124	57.7-142			
n-Propyl Benzene	4.93	0.50	ug/L	5.000		98.6	83.4-121			
o-Xylene	4.63	0.50	ug/L	5.000		92.6	86.1-113			
p-Isopropyltoluene	4.71	0.50	ug/L	5.000		94.2	87.4-115			

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810219 - EPA 5030B**

**LCS (A810219-BS1)**

Prepared: 10/15/2018 Analyzed: 10/16/2018 22:25

sec-Butyl Benzene	5.00	0.50	ug/L	5.000		100	84.9-119			
Styrene	4.63	0.50	ug/L	5.000		92.6	84.9-117			
tert-Butylbenzene	5.08	0.50	ug/L	5.000		102	79.1-120			
Tetrachloroethene	4.41	0.50	ug/L	5.000		88.2	80.5-118			
Tetrahydrofuran	26.2	10	ug/L	25.00		105	35.5-156			
Toluene	4.74	0.50	ug/L	5.000		94.8	83.8-115			
trans-1,2-Dichloroethene	6.09	0.50	ug/L	5.000		122	78.3-128			
trans-1,3-Dichloropropene	4.28	0.50	ug/L	5.000		85.6	78.3-119			
Trichloroethene	4.99	0.50	ug/L	5.000		99.8	82.6-121			
Trichlorofluoromethane	8.71	0.50	ug/L	5.000		174	47.9-196			
Vinyl chloride	7.79	0.50	ug/L	5.000		156	53-177			
<i>Surrogate: Dibromofluoromethane</i>	6.23		ug/L	5.000		125	70.8-139			
<i>Surrogate: Toluene-d8</i>	4.96		ug/L	5.000		99.2	76.6-116			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.57		ug/L	5.000		91.4	71.4-118			

**Matrix Spike (A810219-MS1)**

Source: A184121-28

Prepared: 10/15/2018 Analyzed: 10/18/2018 10:52

1,1,1,2-Tetrachloroethane	5.12	0.50	ug/L	5.000	ND	102	78.4-135			
1,1,1-Trichloroethane	5.92	0.50	ug/L	5.000	ND	118	68.4-158			
1,1,2,2-Tetrachloroethane	5.50	0.50	ug/L	5.000	ND	110	64.7-135			
1,1,2-Trichloroethane	6.32	0.50	ug/L	5.000	ND	126	76.2-132			
1,1,2-Trichlorotrifluoroethane	6.51	0.50	ug/L	5.000	ND	130	51.7-199			
1,1-Dichloroethane	6.08	0.50	ug/L	5.000	ND	122	69-149			
1,1-Dichloroethene	6.22	0.50	ug/L	5.000	ND	124	49.3-178			
1,1-Dichloropropene	5.43	0.50	ug/L	5.000	ND	109	75.8-126			
1,2,3-Trichlorobenzene	4.42	2.0	ug/L	5.000	ND	88.4	73.3-124			
1,2,3-Trichloropropane	5.43	1.0	ug/L	5.000	ND	109	70.6-141			
1,2,4-Trichlorobenzene	4.20	2.0	ug/L	5.000	ND	84.0	70.8-121			
1,2,4-Trimethylbenzene	4.38	0.50	ug/L	5.000	ND	87.6	85.3-120			
1,2-Dibromo-3-chloropropane	4.70	0.50	ug/L	5.000	ND	94.0	50.6-138			
1,2-Dibromoethane (EDB)	5.01	0.50	ug/L	5.000	ND	100	75.9-124			
1,2-Dichlorobenzene	5.09	0.50	ug/L	5.000	ND	102	87.1-115			
1,2-Dichloroethane	6.24	0.50	ug/L	5.000	ND	125	74-155			
1,2-Dichloropropane	5.33	0.50	ug/L	5.000	ND	107	85.9-119			
1,3,5-Trimethylbenzene	4.50	0.50	ug/L	5.000	ND	90.0	85.3-120			
1,3-Dichlorobenzene	4.92	0.50	ug/L	5.000	ND	98.4	87.6-115			
1,3-Dichloropropane	5.18	0.50	ug/L	5.000	ND	104	79.8-125			
1,4-Dichlorobenzene	4.94	0.50	ug/L	5.000	ND	98.8	86.3-113			
2,2-Dichloropropane	4.64	0.50	ug/L	5.000	ND	92.8	71.4-142			
2-Butanone	53.5	20	ug/L	50.00	ND	107	45.3-165			
2-Chlorotoluene	4.94	0.50	ug/L	5.000	ND	98.8	86.6-117			
2-Hexanone	50.5	20	ug/L	50.00	ND	101	45.9-161			
4-Chlorotoluene	4.90	0.50	ug/L	5.000	ND	98.0	86.1-119			
4-Methyl-2-pentanone	51.9	20	ug/L	50.00	ND	104	53.4-160			
Acetone	69.5	20	ug/L	50.00	ND	139	39.4-199			
Benzene	5.60	0.50	ug/L	5.000	ND	112	75.1-132			
Bromobenzene	4.78	0.50	ug/L	5.000	ND	95.6	83.5-113			
Bromochloromethane	5.77	0.50	ug/L	5.000	ND	115	79.1-136			
Bromodichloromethane	5.37	0.50	ug/L	5.000	ND	107	77-138			

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810219 - EPA 5030B**

<b>Matrix Spike (A810219-MS1)</b>	<b>Source: A184121-28</b>		Prepared: 10/15/2018		Analyzed: 10/18/2018 10:52					
Bromoform	4.82	0.50	ug/L	5.000	ND	96.4	66.6-136			
Bromomethane	5.52	5.0	ug/L	5.000	ND	110	45.8-193			
Carbon disulfide	5.79	0.50	ug/L	5.000	ND	116	39.7-182			
Carbon tetrachloride	5.93	0.50	ug/L	5.000	ND	119	71.8-143			
Chlorobenzene	5.01	0.50	ug/L	5.000	ND	100	89.6-112			
Chloroethane	6.75	5.0	ug/L	5.000	ND	135	49.5-188			
Chloroform	5.99	0.50	ug/L	5.000	ND	120	67.3-154			
Chloromethane	5.67	2.0	ug/L	5.000	ND	113	54.7-167			
cis-1,2-Dichloroethene	18.4	0.50	ug/L	5.000	12.7	114	73.6-131			
cis-1,3-Dichloropropene	4.39	0.50	ug/L	5.000	ND	87.8	67-125			
Dibromochloromethane	5.07	0.50	ug/L	5.000	ND	101	79-128			
Dibromomethane	5.34	0.50	ug/L	5.000	ND	107	80.9-136			
Dichlorodifluoromethane	5.80	0.50	ug/L	5.000	ND	116	70.9-150			
Diisopropyl Ether	5.27	0.50	ug/L	5.000	ND	105	59.9-139			
Ethylbenzene	4.75	0.50	ug/L	5.000	ND	95.0	87.1-117			
Hexachlorobutadiene	4.80	2.0	ug/L	5.000	ND	96.0	59.6-155			
Isopropylbenzene	4.63	0.50	ug/L	5.000	ND	92.6	87.3-117			
m,p-Xylene	9.35	1.0	ug/L	10.00	ND	93.5	87.5-116			
Methyl t-Butyl Ether	5.28	0.50	ug/L	5.000	ND	106	55.9-151			
Methylene chloride	6.68	2.0	ug/L	5.000	0.330	127	63.1-149			
Naphthalene	4.09	5.0	ug/L	5.000	ND	81.8	41.3-137			J
n-Butyl Benzene	4.57	0.50	ug/L	5.000	ND	91.4	82.1-121			
n-Hexane	5.22	0.50	ug/L	5.000	ND	104	50-148			
n-Propyl Benzene	4.90	0.50	ug/L	5.000	ND	98.0	83.4-121			
o-Xylene	4.52	0.50	ug/L	5.000	ND	90.4	84.5-113			
p-Isopropyltoluene	4.65	0.50	ug/L	5.000	ND	93.0	87.3-114			
sec-Butyl Benzene	4.92	0.50	ug/L	5.000	ND	98.4	84.9-118			
Styrene	3.89	0.50	ug/L	5.000	ND	77.8	79.2-121			M
tert-Butylbenzene	4.86	0.50	ug/L	5.000	ND	97.2	79.3-119			
Tetrachloroethene	29.8	0.50	ug/L	5.000	25.6	84.8	78.4-121			
Tetrahydrofuran	24.5	10	ug/L	25.00	ND	97.9	27-163			
Toluene	4.90	0.50	ug/L	5.000	0.0600	96.8	81.7-117			
trans-1,2-Dichloroethene	5.90	0.50	ug/L	5.000	0.290	112	71.3-135			
trans-1,3-Dichloropropene	4.45	0.50	ug/L	5.000	ND	89.0	76-122			
Trichloroethene	26.9	0.50	ug/L	5.000	22.3	92.2	70.4-133			
Trichlorofluoromethane	6.67	0.50	ug/L	5.000	ND	133	50.7-199			
Vinyl chloride	6.34	0.50	ug/L	5.000	ND	127	55.4-172			
<i>Surrogate: Dibromofluoromethane</i>	<i>5.81</i>		<i>ug/L</i>	<i>5.000</i>		<i>116</i>	<i>70.8-139</i>			
<i>Surrogate: Toluene-d8</i>	<i>5.16</i>		<i>ug/L</i>	<i>5.000</i>		<i>103</i>	<i>76.6-116</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>4.72</i>		<i>ug/L</i>	<i>5.000</i>		<i>94.4</i>	<i>71.4-118</i>			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

### Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control

#### Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch A810219 - EPA 5030B

##### Matrix Spike Dup (A810219-MSD1)

Source: A184121-28

Prepared: 10/15/2018 Analyzed: 10/18/2018 11:19

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	5.01	0.50	ug/L	5.000	ND	100	78.4-135	2.17	20	
1,1,1-Trichloroethane	5.79	0.50	ug/L	5.000	ND	116	68.4-158	2.22	20	
1,1,2,2-Tetrachloroethane	5.22	0.50	ug/L	5.000	ND	104	64.7-135	5.22	20	
1,1,2-Trichloroethane	6.02	0.50	ug/L	5.000	ND	120	76.2-132	4.86	20	
1,1,2-Trichlorotrifluoroethane	6.39	0.50	ug/L	5.000	ND	128	51.7-199	1.86	20	
1,1-Dichloroethane	6.16	0.50	ug/L	5.000	ND	123	69-149	1.31	20	
1,1-Dichloroethene	5.92	0.50	ug/L	5.000	ND	118	49.3-178	4.94	20	
1,1-Dichloropropene	5.16	0.50	ug/L	5.000	ND	103	75.8-126	5.10	20	
1,2,3-Trichlorobenzene	4.51	2.0	ug/L	5.000	ND	90.2	73.3-124	2.02	20	
1,2,3-Trichloropropane	5.13	1.0	ug/L	5.000	ND	103	70.6-141	5.68	20	
1,2,4-Trichlorobenzene	4.13	2.0	ug/L	5.000	ND	82.6	70.8-121	1.68	20	
1,2,4-Trimethylbenzene	4.00	0.50	ug/L	5.000	ND	80.0	85.3-120	9.07	20	M
1,2-Dibromo-3-chloropropane	4.60	0.50	ug/L	5.000	ND	92.0	50.6-138	2.15	20	
1,2-Dibromoethane (EDB)	4.98	0.50	ug/L	5.000	ND	99.6	75.9-124	0.601	20	
1,2-Dichlorobenzene	5.00	0.50	ug/L	5.000	ND	100	87.1-115	1.78	20	
1,2-Dichloroethane	6.08	0.50	ug/L	5.000	ND	122	74-155	2.60	20	
1,2-Dichloropropane	5.45	0.50	ug/L	5.000	ND	109	85.9-119	2.23	20	
1,3,5-Trimethylbenzene	4.22	0.50	ug/L	5.000	ND	84.4	85.3-120	6.42	20	M
1,3-Dichlorobenzene	4.90	0.50	ug/L	5.000	ND	98.0	87.6-115	0.407	20	
1,3-Dichloropropane	5.17	0.50	ug/L	5.000	ND	103	79.8-125	0.193	20	
1,4-Dichlorobenzene	4.90	0.50	ug/L	5.000	ND	98.0	86.3-113	0.813	20	
2,2-Dichloropropane	4.49	0.50	ug/L	5.000	ND	89.8	71.4-142	3.29	20	
2-Butanone	48.4	20	ug/L	50.00	ND	96.7	45.3-165	10.0	20	
2-Chlorotoluene	4.92	0.50	ug/L	5.000	ND	98.4	86.6-117	0.406	20	
2-Hexanone	48.1	20	ug/L	50.00	ND	96.1	45.9-161	4.99	20	
4-Chlorotoluene	4.98	0.50	ug/L	5.000	ND	99.6	86.1-119	1.62	20	
4-Methyl-2-pentanone	49.7	20	ug/L	50.00	ND	99.5	53.4-160	4.31	20	
Acetone	67.4	20	ug/L	50.00	ND	135	39.4-199	2.97	20	
Benzene	5.66	0.50	ug/L	5.000	ND	113	75.1-132	1.07	20	
Bromobenzene	4.87	0.50	ug/L	5.000	ND	97.4	83.5-113	1.87	20	
Bromochloromethane	5.93	0.50	ug/L	5.000	ND	119	79.1-136	2.74	20	
Bromodichloromethane	5.45	0.50	ug/L	5.000	ND	109	77-138	1.48	20	
Bromoform	4.82	0.50	ug/L	5.000	ND	96.4	66.6-136	0.00	20	
Bromomethane	5.60	5.0	ug/L	5.000	ND	112	45.8-193	1.44	20	
Carbon disulfide	5.80	0.50	ug/L	5.000	ND	116	39.7-182	0.173	20	
Carbon tetrachloride	5.67	0.50	ug/L	5.000	ND	113	71.8-143	4.48	20	
Chlorobenzene	5.04	0.50	ug/L	5.000	ND	101	89.6-112	0.597	20	
Chloroethane	6.40	5.0	ug/L	5.000	ND	128	49.5-188	5.32	20	
Chloroform	5.98	0.50	ug/L	5.000	ND	120	67.3-154	0.167	20	
Chloromethane	6.07	2.0	ug/L	5.000	ND	121	54.7-167	6.81	20	
cis-1,2-Dichloroethene	18.1	0.50	ug/L	5.000	12.7	108	73.6-131	1.86	20	
cis-1,3-Dichloropropene	4.51	0.50	ug/L	5.000	ND	90.2	67-125	2.70	20	
Dibromochloromethane	4.99	0.50	ug/L	5.000	ND	99.8	79-128	1.59	20	
Dibromomethane	5.31	0.50	ug/L	5.000	ND	106	80.9-136	0.563	20	
Dichlorodifluoromethane	5.71	0.50	ug/L	5.000	ND	114	70.9-150	1.56	20	
Diisopropyl Ether	5.33	0.50	ug/L	5.000	ND	107	59.9-139	1.13	20	
Ethylbenzene	4.75	0.50	ug/L	5.000	ND	95.0	87.1-117	0.00	20	
Hexachlorobutadiene	4.63	2.0	ug/L	5.000	ND	92.6	59.6-155	3.61	20	

TRC Environmental Corporation, Inc.  
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Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810219 - EPA 5030B**

**Matrix Spike Dup (A810219-MSD1)**

Source: A184121-28

Prepared: 10/15/2018 Analyzed: 10/18/2018 11:19

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Isopropylbenzene	4.67	0.50	ug/L	5.000	ND	93.4	87.3-117	0.860	20	
m,p-Xylene	9.28	1.0	ug/L	10.00	ND	92.8	87.5-116	0.751	20	
Methyl t-Butyl Ether	5.24	0.50	ug/L	5.000	ND	105	55.9-151	0.760	20	
Methylene chloride	6.66	2.0	ug/L	5.000	0.330	127	63.1-149	0.300	20	
Naphthalene	3.89	5.0	ug/L	5.000	ND	77.8	41.3-137	5.01	20	J
n-Butyl Benzene	4.50	0.50	ug/L	5.000	ND	90.0	82.1-121	1.54	20	
n-Hexane	5.26	0.50	ug/L	5.000	ND	105	50-148	0.763	20	
n-Propyl Benzene	4.87	0.50	ug/L	5.000	ND	97.4	83.4-121	0.614	20	
o-Xylene	4.55	0.50	ug/L	5.000	ND	91.0	84.5-113	0.662	20	
p-Isopropyltoluene	4.55	0.50	ug/L	5.000	ND	91.0	87.3-114	2.17	20	
sec-Butyl Benzene	4.80	0.50	ug/L	5.000	ND	96.0	84.9-118	2.47	20	
Styrene	3.53	0.50	ug/L	5.000	ND	70.6	79.2-121	9.70	20	M
tert-Butylbenzene	4.89	0.50	ug/L	5.000	ND	97.8	79.3-119	0.615	20	
Tetrachloroethene	28.3	0.50	ug/L	5.000	25.6	54.2	78.4-121	5.27	20	M
Tetrahydrofuran	24.0	10	ug/L	25.00	ND	95.8	27-163	2.15	20	
Toluene	5.01	0.50	ug/L	5.000	0.0600	99.0	81.7-117	2.22	20	
trans-1,2-Dichloroethene	5.85	0.50	ug/L	5.000	0.290	111	71.3-135	0.851	20	
trans-1,3-Dichloropropene	4.38	0.50	ug/L	5.000	ND	87.6	76-122	1.59	20	
Trichloroethene	25.3	0.50	ug/L	5.000	22.3	59.8	70.4-133	6.20	20	M
Trichlorofluoromethane	6.67	0.50	ug/L	5.000	ND	133	50.7-199	0.00	20	
Vinyl chloride	6.34	0.50	ug/L	5.000	ND	127	55.4-172	0.00	20	
Surrogate: Dibromofluoromethane	5.83		ug/L	5.000		117	70.8-139			
Surrogate: Toluene-d8	5.17		ug/L	5.000		103	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.55		ug/L	5.000		91.0	71.4-118			

**Batch A810240 - EPA 5030B**

**Blank (A810240-BLK1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 09:58

Analyte	Result	Limit of Quantitation	Units
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L
1,1,1-Trichloroethane	ND	0.50	ug/L
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L
1,1,2-Trichloroethane	ND	0.50	ug/L
1,1,2-Trichlorotrifluoroethane	ND	0.50	ug/L
1,1-Dichloroethane	ND	0.50	ug/L
1,1-Dichloroethene	ND	0.50	ug/L
1,1-Dichloropropene	ND	0.50	ug/L
1,2,3-Trichlorobenzene	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	2.0	ug/L
1,2,4-Trimethylbenzene	ND	0.50	ug/L
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L
1,2-Dibromoethane (EDB)	ND	0.50	ug/L
1,2-Dichlorobenzene	ND	0.50	ug/L
1,2-Dichloroethane	ND	0.50	ug/L
1,2-Dichloropropane	ND	0.50	ug/L
1,3,5-Trimethylbenzene	ND	0.50	ug/L
1,3-Dichlorobenzene	ND	0.50	ug/L
1,3-Dichloropropane	ND	0.50	ug/L

TRC Environmental Corporation, Inc.  
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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810240 - EPA 5030B**

**Blank (A810240-BLK1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 09:58

1,4-Dichlorobenzene	ND	0.50	ug/L							
2,2-Dichloropropane	ND	0.50	ug/L							
2-Butanone	ND	20	ug/L							
2-Chlorotoluene	ND	0.50	ug/L							
2-Hexanone	ND	20	ug/L							
4-Chlorotoluene	ND	0.50	ug/L							
4-Methyl-2-pentanone	ND	20	ug/L							
Acetone	ND	20	ug/L							
Benzene	ND	0.50	ug/L							
Bromobenzene	ND	0.50	ug/L							
Bromochloromethane	ND	0.50	ug/L							
Bromodichloromethane	ND	0.50	ug/L							
Bromoform	ND	0.50	ug/L							
Bromomethane	ND	5.0	ug/L							
Carbon disulfide	ND	0.50	ug/L							
Carbon tetrachloride	ND	0.50	ug/L							
Chlorobenzene	ND	0.50	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	0.50	ug/L							
Chloromethane	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	0.50	ug/L							
cis-1,3-Dichloropropene	ND	0.50	ug/L							
Dibromochloromethane	ND	0.50	ug/L							
Dibromomethane	ND	0.50	ug/L							
Dichlorodifluoromethane	ND	0.50	ug/L							
Diisopropyl Ether	ND	0.50	ug/L							
Ethylbenzene	ND	0.50	ug/L							
Hexachlorobutadiene	ND	2.0	ug/L							
Isopropylbenzene	ND	0.50	ug/L							
m,p-Xylene	ND	1.0	ug/L							
Methyl t-Butyl Ether	ND	0.50	ug/L							
Methylene chloride	ND	2.0	ug/L							
Naphthalene	ND	5.0	ug/L							
n-Butyl Benzene	ND	0.50	ug/L							
n-Hexane	ND	0.50	ug/L							
n-Propyl Benzene	ND	0.50	ug/L							
o-Xylene	ND	0.50	ug/L							
p-Isopropyltoluene	ND	0.50	ug/L							
sec-Butyl Benzene	ND	0.50	ug/L							
Styrene	ND	0.50	ug/L							
tert-Butylbenzene	ND	0.50	ug/L							
Tetrachloroethene	ND	0.50	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	0.50	ug/L							
trans-1,2-Dichloroethene	ND	0.50	ug/L							
trans-1,3-Dichloropropene	ND	0.50	ug/L							
Trichloroethene	ND	0.50	ug/L							
Trichlorofluoromethane	ND	0.50	ug/L							

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**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810240 - EPA 5030B**

**Blank (A810240-BLK1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 09:58

Vinyl chloride	ND	0.50	ug/L							
Xylenes, total	ND	1.5	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	11.1		ug/L	10.00		111	70.8-139			
<i>Surrogate: Toluene-d8</i>	9.27		ug/L	10.00		92.7	76.6-116			
<i>Surrogate: 4-Bromofluorobenzene</i>	8.62		ug/L	10.00		86.2	71.4-118			

**LCS (A810240-BS1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 20:47

1,1,1,2-Tetrachloroethane	5.07	0.50	ug/L	5.000		101	78-131			
1,1,1-Trichloroethane	6.48	0.50	ug/L	5.000		130	68.9-152			
1,1,2,2-Tetrachloroethane	6.05	0.50	ug/L	5.000		121	66.3-131			
1,1,2-Trichloroethane	5.83	0.50	ug/L	5.000		117	79.2-123			
1,1,2-Trichlorotrifluoroethane	7.72	0.50	ug/L	5.000		154	47.3-196			
1,1-Dichloroethane	7.05	0.50	ug/L	5.000		141	73.2-144			
1,1-Dichloroethene	7.29	0.50	ug/L	5.000		146	47.7-175			
1,1-Dichloropropene	5.70	0.50	ug/L	5.000		114	79.4-126			
1,2,3-Trichlorobenzene	4.71	2.0	ug/L	5.000		94.2	74-121			
1,2,3-Trichloropropane	6.21	1.0	ug/L	5.000		124	72.5-135			
1,2,4-Trichlorobenzene	3.95	2.0	ug/L	5.000		79.0	74.6-118			
1,2,4-Trimethylbenzene	4.75	0.50	ug/L	5.000		95.0	86.3-119			
1,2-Dibromo-3-chloropropane	5.57	0.50	ug/L	5.000		111	53-136			
1,2-Dibromoethane (EDB)	5.25	0.50	ug/L	5.000		105	79.5-121			
1,2-Dichlorobenzene	5.12	0.50	ug/L	5.000		102	87.2-115			
1,2-Dichloroethane	7.28	0.50	ug/L	5.000		146	72.9-149			
1,2-Dichloropropane	5.68	0.50	ug/L	5.000		114	79.1-122			
1,3,5-Trimethylbenzene	4.75	0.50	ug/L	5.000		95.0	85.7-120			
1,3-Dichlorobenzene	4.89	0.50	ug/L	5.000		97.8	88.5-114			
1,3-Dichloropropane	5.47	0.50	ug/L	5.000		109	79.7-123			
1,4-Dichlorobenzene	4.90	0.50	ug/L	5.000		98.0	87.5-112			
2,2-Dichloropropane	4.73	0.50	ug/L	5.000		94.6	70.3-142			
2-Butanone	70.9	20	ug/L	50.00		142	52.6-151			
2-Chlorotoluene	4.74	0.50	ug/L	5.000		94.8	86.2-117			
2-Hexanone	60.4	20	ug/L	50.00		121	50.7-153			
4-Chlorotoluene	4.96	0.50	ug/L	5.000		99.2	85.8-118			
4-Methyl-2-pentanone	63.0	20	ug/L	50.00		126	58.8-151			
Acetone	105	20	ug/L	50.00		210	34.7-197			
Benzene	6.06	0.50	ug/L	5.000		121	78.6-127			
Bromobenzene	4.80	0.50	ug/L	5.000		96.0	84.1-113			
Bromochloromethane	6.72	0.50	ug/L	5.000		134	81-132			
Bromodichloromethane	5.71	0.50	ug/L	5.000		114	78.7-132			
Bromoform	5.33	0.50	ug/L	5.000		107	68.6-133			
Bromomethane	6.83	5.0	ug/L	5.000		137	37.4-199			
Carbon disulfide	6.28	0.50	ug/L	5.000		126	37-182			
Carbon tetrachloride	6.51	0.50	ug/L	5.000		130	69.3-140			
Chlorobenzene	5.07	0.50	ug/L	5.000		101	89.7-112			
Chloroethane	7.80	5.0	ug/L	5.000		156	47.6-184			
Chloroform	6.87	0.50	ug/L	5.000		137	69.9-148			
Chloromethane	6.82	2.0	ug/L	5.000		136	56.3-169			
cis-1,2-Dichloroethene	5.66	0.50	ug/L	5.000		113	80.1-124			

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Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810240 - EPA 5030B**

**LCS (A810240-BS1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 20:47

cis-1,3-Dichloropropene	4.16	0.50	ug/L	5.000		83.2	70.9-123			
Dibromochloromethane	5.29	0.50	ug/L	5.000		106	78.6-127			
Dibromomethane	5.91	0.50	ug/L	5.000		118	78.5-135			
Dichlorodifluoromethane	6.34	0.50	ug/L	5.000		127	68.9-158			
Diisopropyl Ether	5.55	0.50	ug/L	5.000		111	67.3-134			
Ethylbenzene	4.60	0.50	ug/L	5.000		92.0	86.3-118			
Hexachlorobutadiene	4.51	2.0	ug/L	5.000		90.2	60.2-149			
Isopropylbenzene	4.46	0.50	ug/L	5.000		89.2	86.9-117			
m,p-Xylene	9.54	1.0	ug/L	10.00		95.4	88.5-116			
Methyl t-Butyl Ether	5.85	0.50	ug/L	5.000		117	63.1-141			
Methylene chloride	7.26	2.0	ug/L	5.000		145	67.8-143			
Naphthalene	4.35	5.0	ug/L	5.000		87.0	46.9-134			J
n-Butyl Benzene	4.24	0.50	ug/L	5.000		84.8	83.8-119			
n-Hexane	5.45	0.50	ug/L	5.000		109	57.7-142			
n-Propyl Benzene	4.62	0.50	ug/L	5.000		92.4	83.4-121			
o-Xylene	4.41	0.50	ug/L	5.000		88.2	86.1-113			
p-Isopropyltoluene	4.52	0.50	ug/L	5.000		90.4	87.4-115			
sec-Butyl Benzene	4.66	0.50	ug/L	5.000		93.2	84.9-119			
Styrene	4.80	0.50	ug/L	5.000		96.0	84.9-117			
tert-Butylbenzene	4.60	0.50	ug/L	5.000		92.0	79.1-120			
Tetrachloroethene	4.49	0.50	ug/L	5.000		89.8	80.5-118			
Tetrahydrofuran	31.9	10	ug/L	25.00		127	35.5-156			
Toluene	4.97	0.50	ug/L	5.000		99.4	83.8-115			
trans-1,2-Dichloroethene	6.06	0.50	ug/L	5.000		121	78.3-128			
trans-1,3-Dichloropropene	4.32	0.50	ug/L	5.000		86.4	78.3-119			
Trichloroethene	4.90	0.50	ug/L	5.000		98.0	82.6-121			
Trichlorofluoromethane	8.05	0.50	ug/L	5.000		161	47.9-196			
Vinyl chloride	7.66	0.50	ug/L	5.000		153	53-177			
Surrogate: Dibromofluoromethane	6.62		ug/L	5.000		132	70.8-139			
Surrogate: Toluene-d8	5.37		ug/L	5.000		107	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.46		ug/L	5.000		89.2	71.4-118			

**Matrix Spike (A810240-MS1)**

Source: A184203-04

Prepared: 10/17/2018 Analyzed: 10/18/2018 15:49

1,1,1,2-Tetrachloroethane	5.02	0.50	ug/L	5.000	ND	100	78.4-135			
1,1,1-Trichloroethane	6.06	0.50	ug/L	5.000	ND	121	68.4-158			
1,1,2,2-Tetrachloroethane	5.89	0.50	ug/L	5.000	ND	118	64.7-135			
1,1,2-Trichloroethane	5.61	0.50	ug/L	5.000	ND	112	76.2-132			
1,1,2-Trichlorotrifluoroethane	6.90	0.50	ug/L	5.000	ND	138	51.7-199			
1,1-Dichloroethane	6.37	0.50	ug/L	5.000	ND	127	69-149			
1,1-Dichloroethene	6.48	0.50	ug/L	5.000	ND	130	49.3-178			
1,1-Dichloropropene	5.56	0.50	ug/L	5.000	ND	111	75.8-126			
1,2,3-Trichlorobenzene	4.74	2.0	ug/L	5.000	ND	94.8	73.3-124			
1,2,3-Trichloropropane	5.89	1.0	ug/L	5.000	ND	118	70.6-141			
1,2,4-Trichlorobenzene	4.36	2.0	ug/L	5.000	ND	87.2	70.8-121			
1,2,4-Trimethylbenzene	4.56	0.50	ug/L	5.000	ND	91.2	85.3-120			
1,2-Dibromo-3-chloropropane	5.68	0.50	ug/L	5.000	ND	114	50.6-138			
1,2-Dibromoethane (EDB)	5.39	0.50	ug/L	5.000	ND	108	75.9-124			
1,2-Dichlorobenzene	5.15	0.50	ug/L	5.000	ND	103	87.1-115			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
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### Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control

#### Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch A810240 - EPA 5030B

Matrix Spike (A810240-MS1)	Source: A184203-04		Prepared: 10/17/2018		Analyzed: 10/18/2018 15:49		
1,2-Dichloroethane	6.36	0.50	ug/L	5.000	ND	127	74-155
1,2-Dichloropropane	5.35	0.50	ug/L	5.000	ND	107	85.9-119
1,3,5-Trimethylbenzene	4.44	0.50	ug/L	5.000	ND	88.8	85.3-120
1,3-Dichlorobenzene	5.01	0.50	ug/L	5.000	ND	100	87.6-115
1,3-Dichloropropane	5.29	0.50	ug/L	5.000	ND	106	79.8-125
1,4-Dichlorobenzene	4.90	0.50	ug/L	5.000	ND	98.0	86.3-113
2,2-Dichloropropane	4.45	0.50	ug/L	5.000	ND	89.0	71.4-142
2-Butanone	59.3	20	ug/L	50.00	ND	119	45.3-165
2-Chlorotoluene	4.95	0.50	ug/L	5.000	ND	99.0	86.6-117
2-Hexanone	59.2	20	ug/L	50.00	ND	118	45.9-161
4-Chlorotoluene	5.11	0.50	ug/L	5.000	ND	102	86.1-119
4-Methyl-2-pentanone	60.7	20	ug/L	50.00	ND	121	53.4-160
Acetone	87.1	20	ug/L	50.00	ND	174	39.4-199
Benzene	5.66	0.50	ug/L	5.000	ND	113	75.1-132
Bromobenzene	4.85	0.50	ug/L	5.000	ND	97.0	83.5-113
Bromochloromethane	6.02	0.50	ug/L	5.000	ND	120	79.1-136
Bromodichloromethane	5.54	0.50	ug/L	5.000	ND	111	77-138
Bromoform	5.24	0.50	ug/L	5.000	ND	105	66.6-136
Bromomethane	5.13	5.0	ug/L	5.000	ND	103	45.8-193
Carbon disulfide	6.07	0.50	ug/L	5.000	ND	121	39.7-182
Carbon tetrachloride	6.41	0.50	ug/L	5.000	ND	128	71.8-143
Chlorobenzene	5.07	0.50	ug/L	5.000	ND	101	89.6-112
Chloroethane	6.76	5.0	ug/L	5.000	ND	135	49.5-188
Chloroform	6.23	0.50	ug/L	5.000	ND	125	67.3-154
Chloromethane	5.91	2.0	ug/L	5.000	0.350	111	54.7-167
cis-1,2-Dichloroethene	5.28	0.50	ug/L	5.000	ND	106	73.6-131
cis-1,3-Dichloropropene	4.21	0.50	ug/L	5.000	ND	84.2	67-125
Dibromochloromethane	5.21	0.50	ug/L	5.000	ND	104	79-128
Dibromomethane	5.60	0.50	ug/L	5.000	ND	112	80.9-136
Dichlorodifluoromethane	6.25	0.50	ug/L	5.000	ND	125	70.9-150
Diisopropyl Ether	5.03	0.50	ug/L	5.000	ND	101	59.9-139
Ethylbenzene	4.78	0.50	ug/L	5.000	ND	95.6	87.1-117
Hexachlorobutadiene	5.09	2.0	ug/L	5.000	ND	102	59.6-155
Isopropylbenzene	4.59	0.50	ug/L	5.000	ND	91.8	87.3-117
m,p-Xylene	9.49	1.0	ug/L	10.00	ND	94.9	87.5-116
Methyl t-Butyl Ether	5.26	0.50	ug/L	5.000	ND	105	55.9-151
Methylene chloride	6.74	2.0	ug/L	5.000	0.240	130	63.1-149
Naphthalene	4.67	5.0	ug/L	5.000	ND	93.4	41.3-137
n-Butyl Benzene	5.00	0.50	ug/L	5.000	ND	100	82.1-121
n-Hexane	5.41	0.50	ug/L	5.000	ND	108	50-148
n-Propyl Benzene	4.81	0.50	ug/L	5.000	ND	96.2	83.4-121
o-Xylene	4.47	0.50	ug/L	5.000	ND	89.4	84.5-113
p-Isopropyltoluene	4.58	0.50	ug/L	5.000	ND	91.6	87.3-114
sec-Butyl Benzene	4.87	0.50	ug/L	5.000	ND	97.4	84.9-118
Styrene	4.16	0.50	ug/L	5.000	ND	83.2	79.2-121
tert-Butylbenzene	4.73	0.50	ug/L	5.000	ND	94.6	79.3-119
Tetrachloroethene	5.29	0.50	ug/L	5.000	0.500	95.8	78.4-121
Tetrahydrofuran	28.4	10	ug/L	25.00	ND	113	27-163

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TRC Environmental Corporation, Inc.  
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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810240 - EPA 5030B**

**Matrix Spike (A810240-MS1)**

Source: A184203-04

Prepared: 10/17/2018 Analyzed: 10/18/2018 15:49

Toluene	4.89	0.50	ug/L	5.000	ND	97.8	81.7-117			
trans-1,2-Dichloroethene	5.64	0.50	ug/L	5.000	ND	113	71.3-135			
trans-1,3-Dichloropropene	4.39	0.50	ug/L	5.000	ND	87.8	76-122			
Trichloroethene	5.05	0.50	ug/L	5.000	ND	101	70.4-133			
Trichlorofluoromethane	6.88	0.50	ug/L	5.000	ND	138	50.7-199			
Vinyl chloride	6.85	0.50	ug/L	5.000	ND	137	55.4-172			
<i>Surrogate: Dibromofluoromethane</i>	6.00		ug/L	5.000		120	70.8-139			
<i>Surrogate: Toluene-d8</i>	5.32		ug/L	5.000		106	76.6-116			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.61		ug/L	5.000		92.2	71.4-118			

**Matrix Spike Dup (A810240-MSD1)**

Source: A184203-04

Prepared: 10/17/2018 Analyzed: 10/18/2018 16:17

1,1,1,2-Tetrachloroethane	5.09	0.50	ug/L	5.000	ND	102	78.4-135	1.38	20	
1,1,1-Trichloroethane	5.98	0.50	ug/L	5.000	ND	120	68.4-158	1.33	20	
1,1,2,2-Tetrachloroethane	6.04	0.50	ug/L	5.000	ND	121	64.7-135	2.51	20	
1,1,2-Trichloroethane	5.70	0.50	ug/L	5.000	ND	114	76.2-132	1.59	20	
1,1,2-Trichlorotrifluoroethane	6.55	0.50	ug/L	5.000	ND	131	51.7-199	5.20	20	
1,1-Dichloroethane	6.46	0.50	ug/L	5.000	ND	129	69-149	1.40	20	
1,1-Dichloroethene	6.36	0.50	ug/L	5.000	ND	127	49.3-178	1.87	20	
1,1-Dichloropropene	5.50	0.50	ug/L	5.000	ND	110	75.8-126	1.08	20	
1,2,3-Trichlorobenzene	4.64	2.0	ug/L	5.000	ND	92.8	73.3-124	2.13	20	
1,2,3-Trichloropropane	6.18	1.0	ug/L	5.000	ND	124	70.6-141	4.81	20	
1,2,4-Trichlorobenzene	4.39	2.0	ug/L	5.000	ND	87.8	70.8-121	0.686	20	
1,2,4-Trimethylbenzene	4.21	0.50	ug/L	5.000	ND	84.2	85.3-120	7.98	20	M
1,2-Dibromo-3-chloropropane	6.06	0.50	ug/L	5.000	ND	121	50.6-138	6.47	20	
1,2-Dibromoethane (EDB)	5.35	0.50	ug/L	5.000	ND	107	75.9-124	0.745	20	
1,2-Dichlorobenzene	5.09	0.50	ug/L	5.000	ND	102	87.1-115	1.17	20	
1,2-Dichloroethane	6.74	0.50	ug/L	5.000	ND	135	74-155	5.80	20	
1,2-Dichloropropane	5.40	0.50	ug/L	5.000	ND	108	85.9-119	0.930	20	
1,3,5-Trimethylbenzene	4.11	0.50	ug/L	5.000	ND	82.2	85.3-120	7.72	20	M
1,3-Dichlorobenzene	4.86	0.50	ug/L	5.000	ND	97.2	87.6-115	3.04	20	
1,3-Dichloropropane	5.58	0.50	ug/L	5.000	ND	112	79.8-125	5.34	20	
1,4-Dichlorobenzene	4.83	0.50	ug/L	5.000	ND	96.6	86.3-113	1.44	20	
2,2-Dichloropropane	4.41	0.50	ug/L	5.000	ND	88.2	71.4-142	0.903	20	
2-Butanone	67.9	20	ug/L	50.00	ND	136	45.3-165	13.5	20	
2-Chlorotoluene	4.73	0.50	ug/L	5.000	ND	94.6	86.6-117	4.55	20	
2-Hexanone	62.3	20	ug/L	50.00	ND	125	45.9-161	5.05	20	
4-Chlorotoluene	4.83	0.50	ug/L	5.000	ND	96.6	86.1-119	5.63	20	
4-Methyl-2-pentanone	64.8	20	ug/L	50.00	ND	130	53.4-160	6.60	20	
Acetone	91.9	20	ug/L	50.00	ND	184	39.4-199	5.40	20	
Benzene	5.78	0.50	ug/L	5.000	ND	116	75.1-132	2.10	20	
Bromobenzene	4.85	0.50	ug/L	5.000	ND	97.0	83.5-113	0.00	20	
Bromochloromethane	6.50	0.50	ug/L	5.000	ND	130	79.1-136	7.67	20	
Bromodichloromethane	5.60	0.50	ug/L	5.000	ND	112	77-138	1.08	20	
Bromoform	5.51	0.50	ug/L	5.000	ND	110	66.6-136	5.02	20	
Bromomethane	5.90	5.0	ug/L	5.000	ND	118	45.8-193	14.0	20	
Carbon disulfide	5.97	0.50	ug/L	5.000	ND	119	39.7-182	1.66	20	
Carbon tetrachloride	6.04	0.50	ug/L	5.000	ND	121	71.8-143	5.94	20	
Chlorobenzene	5.05	0.50	ug/L	5.000	ND	101	89.6-112	0.395	20	

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810240 - EPA 5030B**

**Matrix Spike Dup (A810240-MSD1)**

Source: A184203-04

Prepared: 10/17/2018 Analyzed: 10/18/2018 16:17

Chloroethane	6.74	5.0	ug/L	5.000	ND	135	49.5-188	0.296	20	
Chloroform	6.30	0.50	ug/L	5.000	ND	126	67.3-154	1.12	20	
Chloromethane	5.88	2.0	ug/L	5.000	0.350	111	54.7-167	0.509	20	
cis-1,2-Dichloroethene	5.56	0.50	ug/L	5.000	ND	111	73.6-131	5.17	20	
cis-1,3-Dichloropropene	4.31	0.50	ug/L	5.000	ND	86.2	67-125	2.35	20	
Dibromochloromethane	5.35	0.50	ug/L	5.000	ND	107	79-128	2.65	20	
Dibromomethane	5.74	0.50	ug/L	5.000	ND	115	80.9-136	2.47	20	
Dichlorodifluoromethane	5.85	0.50	ug/L	5.000	ND	117	70.9-150	6.61	20	
Diisopropyl Ether	5.57	0.50	ug/L	5.000	ND	111	59.9-139	10.2	20	
Ethylbenzene	4.58	0.50	ug/L	5.000	ND	91.6	87.1-117	4.27	20	
Hexachlorobutadiene	4.73	2.0	ug/L	5.000	ND	94.6	59.6-155	7.33	20	
Isopropylbenzene	4.48	0.50	ug/L	5.000	ND	89.6	87.3-117	2.43	20	
m,p-Xylene	9.20	1.0	ug/L	10.00	ND	92.0	87.5-116	3.10	20	
Methyl t-Butyl Ether	5.93	0.50	ug/L	5.000	ND	119	55.9-151	12.0	20	
Methylene chloride	7.04	2.0	ug/L	5.000	0.240	136	63.1-149	4.35	20	
Naphthalene	4.88	5.0	ug/L	5.000	ND	97.6	41.3-137	4.40	20	J
n-Butyl Benzene	4.55	0.50	ug/L	5.000	ND	91.0	82.1-121	9.42	20	
n-Hexane	5.16	0.50	ug/L	5.000	ND	103	50-148	4.73	20	
n-Propyl Benzene	4.58	0.50	ug/L	5.000	ND	91.6	83.4-121	4.90	20	
o-Xylene	4.30	0.50	ug/L	5.000	ND	86.0	84.5-113	3.88	20	
p-Isopropyltoluene	4.34	0.50	ug/L	5.000	ND	86.8	87.3-114	5.38	20	M
sec-Butyl Benzene	4.64	0.50	ug/L	5.000	ND	92.8	84.9-118	4.84	20	
Styrene	4.05	0.50	ug/L	5.000	ND	81.0	79.2-121	2.68	20	
tert-Butylbenzene	4.55	0.50	ug/L	5.000	ND	91.0	79.3-119	3.88	20	
Tetrachloroethene	5.06	0.50	ug/L	5.000	0.500	91.2	78.4-121	4.44	20	
Tetrahydrofuran	31.6	10	ug/L	25.00	ND	126	27-163	10.8	20	
Toluene	5.00	0.50	ug/L	5.000	ND	100	81.7-117	2.22	20	
trans-1,2-Dichloroethene	5.67	0.50	ug/L	5.000	ND	113	71.3-135	0.531	20	
trans-1,3-Dichloropropene	4.54	0.50	ug/L	5.000	ND	90.8	76-122	3.36	20	
Trichloroethene	4.94	0.50	ug/L	5.000	ND	98.8	70.4-133	2.20	20	
Trichlorofluoromethane	6.66	0.50	ug/L	5.000	ND	133	50.7-199	3.25	20	
Vinyl chloride	6.16	0.50	ug/L	5.000	ND	123	55.4-172	10.6	20	
Surrogate: Dibromofluoromethane	6.14		ug/L	5.000		123	70.8-139			
Surrogate: Toluene-d8	5.14		ug/L	5.000		103	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.56		ug/L	5.000		91.2	71.4-118			

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

**Blank (A810241-BLK1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 16:44

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,1-Trichloroethane	ND	0.50	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,2-Trichloroethane	ND	0.50	ug/L							
1,1,2-Trichlorotrifluoroethane	ND	0.50	ug/L							
1,1-Dichloroethane	ND	0.50	ug/L							
1,1-Dichloroethene	ND	0.50	ug/L							
1,1-Dichloropropene	ND	0.50	ug/L							
1,2,3-Trichlorobenzene	ND	2.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	0.50	ug/L							
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							
1,2-Dibromoethane (EDB)	ND	0.50	ug/L							
1,2-Dichlorobenzene	ND	0.50	ug/L							
1,2-Dichloroethane	ND	0.50	ug/L							
1,2-Dichloropropane	ND	0.50	ug/L							
1,3,5-Trimethylbenzene	ND	0.50	ug/L							
1,3-Dichlorobenzene	ND	0.50	ug/L							
1,3-Dichloropropane	ND	0.50	ug/L							
1,4-Dichlorobenzene	ND	0.50	ug/L							
2,2-Dichloropropane	ND	0.50	ug/L							
2-Butanone	ND	20	ug/L							
2-Chlorotoluene	ND	0.50	ug/L							
2-Hexanone	ND	20	ug/L							
4-Chlorotoluene	ND	0.50	ug/L							
4-Methyl-2-pentanone	ND	20	ug/L							
Acetone	ND	20	ug/L							
Benzene	ND	0.50	ug/L							
Bromobenzene	ND	0.50	ug/L							
Bromochloromethane	ND	0.50	ug/L							
Bromodichloromethane	ND	0.50	ug/L							
Bromoform	ND	0.50	ug/L							
Bromomethane	ND	5.0	ug/L							
Carbon disulfide	ND	0.50	ug/L							
Carbon tetrachloride	ND	0.50	ug/L							
Chlorobenzene	ND	0.50	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	0.50	ug/L							
Chloromethane	0.52	2.0	ug/L							
cis-1,2-Dichloroethene	ND	0.50	ug/L							
cis-1,3-Dichloropropene	ND	0.50	ug/L							
Dibromochloromethane	ND	0.50	ug/L							
Dibromomethane	ND	0.50	ug/L							
Dichlorodifluoromethane	ND	0.50	ug/L							
Diisopropyl Ether	ND	0.50	ug/L							
Ethylbenzene	ND	0.50	ug/L							
Hexachlorobutadiene	ND	2.0	ug/L							

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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

**Blank (A810241-BLK1)**

Prepared: 10/17/2018 Analyzed: 10/18/2018 16:44

Isopropylbenzene	ND	0.50	ug/L							
m,p-Xylene	ND	1.0	ug/L							
Methyl t-Butyl Ether	ND	0.50	ug/L							
Methylene chloride	ND	2.0	ug/L							
Naphthalene	ND	5.0	ug/L							
n-Butyl Benzene	ND	0.50	ug/L							
n-Hexane	ND	0.50	ug/L							
n-Propyl Benzene	ND	0.50	ug/L							
o-Xylene	ND	0.50	ug/L							
p-Isopropyltoluene	ND	0.50	ug/L							
sec-Butyl Benzene	ND	0.50	ug/L							
Styrene	ND	0.50	ug/L							
tert-Butylbenzene	ND	0.50	ug/L							
Tetrachloroethene	ND	0.50	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	0.50	ug/L							
trans-1,2-Dichloroethene	ND	0.50	ug/L							
trans-1,3-Dichloropropene	ND	0.50	ug/L							
Trichloroethene	ND	0.50	ug/L							
Trichlorofluoromethane	ND	0.50	ug/L							
Vinyl chloride	ND	0.50	ug/L							
Xylenes, total	ND	1.5	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	<i>11.8</i>		<i>ug/L</i>	<i>10.00</i>		<i>118</i>	<i>70.8-139</i>			
<i>Surrogate: Toluene-d8</i>	<i>9.08</i>		<i>ug/L</i>	<i>10.00</i>		<i>90.8</i>	<i>76.6-116</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>8.52</i>		<i>ug/L</i>	<i>10.00</i>		<i>85.2</i>	<i>71.4-118</i>			

**LCS (A810241-BS1)**

Prepared: 10/17/2018 Analyzed: 10/23/2018 19:08

1,1,1,2-Tetrachloroethane	5.38	0.50	ug/L	5.000		108	78-131			
1,1,1-Trichloroethane	5.89	0.50	ug/L	5.000		118	68.9-152			
1,1,2,2-Tetrachloroethane	5.42	0.50	ug/L	5.000		108	66.3-131			
1,1,2-Trichloroethane	5.51	0.50	ug/L	5.000		110	79.2-123			
1,1,2-Trichlorotrifluoroethane	6.86	0.50	ug/L	5.000		137	47.3-196			
1,1-Dichloroethane	6.07	0.50	ug/L	5.000		121	73.2-144			
1,1-Dichloroethene	6.71	0.50	ug/L	5.000		134	47.7-175			
1,1-Dichloropropene	5.33	0.50	ug/L	5.000		107	79.4-126			
1,2,3-Trichlorobenzene	4.56	2.0	ug/L	5.000		91.2	74-121			
1,2,3-Trichloropropane	5.39	1.0	ug/L	5.000		108	72.5-135			
1,2,4-Trichlorobenzene	4.30	2.0	ug/L	5.000		86.0	74.6-118			
1,2,4-Trimethylbenzene	4.92	0.50	ug/L	5.000		98.4	86.3-119			
1,2-Dibromo-3-chloropropane	5.41	0.50	ug/L	5.000		108	53-136			
1,2-Dibromoethane (EDB)	5.18	0.50	ug/L	5.000		104	79.5-121			
1,2-Dichlorobenzene	4.99	0.50	ug/L	5.000		99.8	87.2-115			
1,2-Dichloroethane	6.41	0.50	ug/L	5.000		128	72.9-149			
1,2-Dichloropropane	5.23	0.50	ug/L	5.000		105	79.1-122			
1,3,5-Trimethylbenzene	4.87	0.50	ug/L	5.000		97.4	85.7-120			
1,3-Dichlorobenzene	4.85	0.50	ug/L	5.000		97.0	88.5-114			
1,3-Dichloropropane	5.04	0.50	ug/L	5.000		101	79.7-123			
1,4-Dichlorobenzene	4.86	0.50	ug/L	5.000		97.2	87.5-112			

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

**LCS (A810241-BS1)**

Prepared: 10/17/2018 Analyzed: 10/23/2018 19:08

2,2-Dichloropropane	5.28	0.50	ug/L	5.000		106	70.3-142			
2-Butanone	56.7	20	ug/L	50.00		113	52.6-151			
2-Chlorotoluene	4.75	0.50	ug/L	5.000		95.0	86.2-117			
2-Hexanone	60.0	20	ug/L	50.00		120	50.7-153			
4-Chlorotoluene	4.95	0.50	ug/L	5.000		99.0	85.8-118			
4-Methyl-2-pentanone	62.6	20	ug/L	50.00		125	58.8-151			
Acetone	78.0	20	ug/L	50.00		156	34.7-197			
Benzene	5.44	0.50	ug/L	5.000		109	78.6-127			
Bromobenzene	4.69	0.50	ug/L	5.000		93.8	84.1-113			
Bromochloromethane	5.75	0.50	ug/L	5.000		115	81-132			
Bromodichloromethane	5.63	0.50	ug/L	5.000		113	78.7-132			
Bromoform	5.33	0.50	ug/L	5.000		107	68.6-133			
Bromomethane	5.27	5.0	ug/L	5.000		105	37.4-199			
Carbon disulfide	5.75	0.50	ug/L	5.000		115	37-182			
Carbon tetrachloride	6.44	0.50	ug/L	5.000		129	69.3-140			
Chlorobenzene	5.05	0.50	ug/L	5.000		101	89.7-112			
Chloroethane	6.12	5.0	ug/L	5.000		122	47.6-184			
Chloroform	5.93	0.50	ug/L	5.000		119	69.9-148			
Chloromethane	5.97	2.0	ug/L	5.000		119	56.3-169			
cis-1,2-Dichloroethene	5.07	0.50	ug/L	5.000		101	80.1-124			
cis-1,3-Dichloropropene	4.57	0.50	ug/L	5.000		91.4	70.9-123			
Dibromochloromethane	5.26	0.50	ug/L	5.000		105	78.6-127			
Dibromomethane	5.65	0.50	ug/L	5.000		113	78.5-135			
Dichlorodifluoromethane	6.04	0.50	ug/L	5.000		121	68.9-158			
Diisopropyl Ether	5.02	0.50	ug/L	5.000		100	67.3-134			
Ethylbenzene	4.95	0.50	ug/L	5.000		99.0	86.3-118			
Hexachlorobutadiene	5.11	2.0	ug/L	5.000		102	60.2-149			
Isopropylbenzene	4.85	0.50	ug/L	5.000		97.0	86.9-117			
m,p-Xylene	10.0	1.0	ug/L	10.00		100	88.5-116			
Methyl t-Butyl Ether	5.34	0.50	ug/L	5.000		107	63.1-141			
Methylene chloride	6.28	2.0	ug/L	5.000		126	67.8-143			
Naphthalene	4.36	5.0	ug/L	5.000		87.2	46.9-134			J
n-Butyl Benzene	4.78	0.50	ug/L	5.000		95.6	83.8-119			
n-Hexane	5.12	0.50	ug/L	5.000		102	57.7-142			
n-Propyl Benzene	4.79	0.50	ug/L	5.000		95.8	83.4-121			
o-Xylene	4.81	0.50	ug/L	5.000		96.2	86.1-113			
p-Isopropyltoluene	4.73	0.50	ug/L	5.000		94.6	87.4-115			
sec-Butyl Benzene	4.84	0.50	ug/L	5.000		96.8	84.9-119			
Styrene	5.23	0.50	ug/L	5.000		105	84.9-117			
tert-Butylbenzene	4.57	0.50	ug/L	5.000		91.4	79.1-120			
Tetrachloroethene	4.67	0.50	ug/L	5.000		93.4	80.5-118			
Tetrahydrofuran	27.9	10	ug/L	25.00		111	35.5-156			
Toluene	5.13	0.50	ug/L	5.000		103	83.8-115			
trans-1,2-Dichloroethene	5.48	0.50	ug/L	5.000		110	78.3-128			
trans-1,3-Dichloropropene	4.65	0.50	ug/L	5.000		93.0	78.3-119			
Trichloroethene	5.06	0.50	ug/L	5.000		101	82.6-121			
Trichlorofluoromethane	7.18	0.50	ug/L	5.000		144	47.9-196			
Vinyl chloride	6.53	0.50	ug/L	5.000		131	53-177			

TRC Environmental Corporation, Inc.  
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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

**LCS (A810241-BS1)**

Prepared: 10/17/2018 Analyzed: 10/23/2018 19:08

Surrogate: Dibromofluoromethane	5.83		ug/L	5.000		117	70.8-139			
Surrogate: Toluene-d8	5.38		ug/L	5.000		108	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.69		ug/L	5.000		93.8	71.4-118			

**Matrix Spike (A810241-MS1)**

Source: A184203-09

Prepared: 10/17/2018 Analyzed: 10/18/2018 22:08

1,1,1,2-Tetrachloroethane	258	25	ug/L	250.0	ND	103	78.4-135			
1,1,1-Trichloroethane	319	25	ug/L	250.0	ND	127	68.4-158			
1,1,2,2-Tetrachloroethane	295	25	ug/L	250.0	ND	118	64.7-135			
1,1,2-Trichloroethane	274	25	ug/L	250.0	ND	110	76.2-132			
1,1,2-Trichlorotrifluoroethane	385	25	ug/L	250.0	ND	154	51.7-199			
1,1-Dichloroethane	346	25	ug/L	250.0	ND	138	69-149			
1,1-Dichloroethene	348	25	ug/L	250.0	ND	139	49.3-178			
1,1-Dichloropropene	292	25	ug/L	250.0	ND	117	75.8-126			
1,2,3-Trichlorobenzene	230	100	ug/L	250.0	ND	91.8	73.3-124			
1,2,3-Trichloropropane	301	50	ug/L	250.0	ND	120	70.6-141			
1,2,4-Trichlorobenzene	209	100	ug/L	250.0	ND	83.4	70.8-121			
1,2,4-Trimethylbenzene	387	25	ug/L	250.0	90.0	119	85.3-120			
1,2-Dibromo-3-chloropropane	263	25	ug/L	250.0	ND	105	50.6-138			
1,2-Dibromoethane (EDB)	258	25	ug/L	250.0	ND	103	75.9-124			
1,2-Dichlorobenzene	269	25	ug/L	250.0	ND	108	87.1-115			
1,2-Dichloroethane	344	25	ug/L	250.0	ND	137	74-155			
1,2-Dichloropropane	297	25	ug/L	250.0	ND	119	85.9-119			
1,3,5-Trimethylbenzene	261	25	ug/L	250.0	ND	104	85.3-120			
1,3-Dichlorobenzene	257	25	ug/L	250.0	ND	103	87.6-115			
1,3-Dichloropropane	273	25	ug/L	250.0	ND	109	79.8-125			
1,4-Dichlorobenzene	253	25	ug/L	250.0	ND	101	86.3-113			
2,2-Dichloropropane	234	25	ug/L	250.0	ND	93.4	71.4-142			
2-Butanone	2860	1000	ug/L	2500	ND	115	45.3-165			
2-Chlorotoluene	263	25	ug/L	250.0	ND	105	86.6-117			
2-Hexanone	2600	1000	ug/L	2500	ND	104	45.9-161			
4-Chlorotoluene	267	25	ug/L	250.0	ND	107	86.1-119			
4-Methyl-2-pentanone	2740	1000	ug/L	2500	ND	110	53.4-160			
Acetone	4090	1000	ug/L	2500	ND	164	39.4-199			
Benzene	1840	25	ug/L	250.0	1510	131	75.1-132			
Bromobenzene	249	25	ug/L	250.0	ND	99.4	83.5-113			
Bromochloromethane	319	25	ug/L	250.0	ND	128	79.1-136			
Bromodichloromethane	276	25	ug/L	250.0	ND	110	77-138			
Bromoform	242	25	ug/L	250.0	ND	96.6	66.6-136			
Bromomethane	403	250	ug/L	250.0	ND	161	45.8-193			
Carbon disulfide	313	25	ug/L	250.0	ND	125	39.7-182			
Carbon tetrachloride	308	25	ug/L	250.0	ND	123	71.8-143			
Chlorobenzene	258	25	ug/L	250.0	ND	103	89.6-112			
Chloroethane	392	250	ug/L	250.0	ND	157	49.5-188			
Chloroform	340	25	ug/L	250.0	ND	136	67.3-154			
Chloromethane	337	100	ug/L	250.0	14.0	129	54.7-167			
cis-1,2-Dichloroethene	296	25	ug/L	250.0	8.50	115	73.6-131			
cis-1,3-Dichloropropene	221	25	ug/L	250.0	ND	88.2	67-125			
Dibromochloromethane	260	25	ug/L	250.0	ND	104	79-128			

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

<b>Matrix Spike (A810241-MS1)</b>	<b>Source: A184203-09</b>		Prepared: 10/17/2018		Analyzed: 10/18/2018 22:08					
Dibromomethane	277	25	ug/L	250.0	ND	111	80.9-136			
Dichlorodifluoromethane	305	25	ug/L	250.0	ND	122	70.9-150			
Diisopropyl Ether	289	25	ug/L	250.0	ND	115	59.9-139			
Ethylbenzene	291	25	ug/L	250.0	34.0	103	87.1-117			
Hexachlorobutadiene	235	100	ug/L	250.0	ND	94.0	59.6-155			
Isopropylbenzene	263	25	ug/L	250.0	16.5	98.6	87.3-117			
m,p-Xylene	565	50	ug/L	500.0	53.0	102	87.5-116			
Methyl t-Butyl Ether	295	25	ug/L	250.0	ND	118	55.9-151			
Methylene chloride	402	100	ug/L	250.0	ND	161	63.1-149			M
Naphthalene	274	250	ug/L	250.0	40.5	93.2	41.3-137			
n-Butyl Benzene	232	25	ug/L	250.0	ND	92.8	82.1-121			
n-Hexane	289	25	ug/L	250.0	ND	116	50-148			
n-Propyl Benzene	276	25	ug/L	250.0	16.0	104	83.4-121			
o-Xylene	243	25	ug/L	250.0	3.00	95.8	84.5-113			
p-Isopropyltoluene	246	25	ug/L	250.0	ND	98.2	87.3-114			
sec-Butyl Benzene	263	25	ug/L	250.0	ND	105	84.9-118			
Styrene	248	25	ug/L	250.0	ND	99.2	79.2-121			
tert-Butylbenzene	264	25	ug/L	250.0	ND	106	79.3-119			
Tetrachloroethene	233	25	ug/L	250.0	ND	93.0	78.4-121			
Tetrahydrofuran	1350	500	ug/L	1250	ND	108	27-163			
Toluene	354	25	ug/L	250.0	91.5	105	81.7-117			
trans-1,2-Dichloroethene	297	25	ug/L	250.0	ND	119	71.3-135			
trans-1,3-Dichloropropene	233	25	ug/L	250.0	ND	93.2	76-122			
Trichloroethene	279	25	ug/L	250.0	19.5	104	70.4-133			
Trichlorofluoromethane	415	25	ug/L	250.0	ND	166	50.7-199			
Vinyl chloride	378	25	ug/L	250.0	ND	151	55.4-172			
<i>Surrogate: Dibromofluoromethane</i>	321		ug/L	250.0		128	70.8-139			
<i>Surrogate: Toluene-d8</i>	270		ug/L	250.0		108	76.6-116			
<i>Surrogate: 4-Bromofluorobenzene</i>	236		ug/L	250.0		94.4	71.4-118			

<b>Matrix Spike Dup (A810241-MSD1)</b>	<b>Source: A184203-09</b>		Prepared: 10/17/2018		Analyzed: 10/23/2018 21:50					
1,1,1,2-Tetrachloroethane	266	25	ug/L	250.0	ND	106	78.4-135	3.06	20	
1,1,1-Trichloroethane	316	25	ug/L	250.0	ND	126	68.4-158	0.788	20	
1,1,2,2-Tetrachloroethane	244	25	ug/L	250.0	ND	97.6	64.7-135	18.9	20	
1,1,2-Trichloroethane	264	25	ug/L	250.0	ND	105	76.2-132	3.91	20	
1,1,2-Trichlorotrifluoroethane	404	25	ug/L	250.0	ND	161	51.7-199	4.82	20	
1,1-Dichloroethane	321	25	ug/L	250.0	ND	128	69-149	7.50	20	
1,1-Dichloroethene	387	25	ug/L	250.0	ND	155	49.3-178	10.8	20	
1,1-Dichloropropene	276	25	ug/L	250.0	ND	110	75.8-126	5.81	20	
1,2,3-Trichlorobenzene	224	100	ug/L	250.0	ND	89.4	73.3-124	2.65	20	
1,2,3-Trichloropropane	251	50	ug/L	250.0	ND	100	70.6-141	18.1	20	
1,2,4-Trichlorobenzene	214	100	ug/L	250.0	ND	85.4	70.8-121	2.37	20	
1,2,4-Trimethylbenzene	380	25	ug/L	250.0	90.0	116	85.3-120	1.83	20	
1,2-Dibromo-3-chloropropane	228	25	ug/L	250.0	ND	91.0	50.6-138	14.3	20	
1,2-Dibromoethane (EDB)	237	25	ug/L	250.0	ND	94.6	75.9-124	8.50	20	
1,2-Dichlorobenzene	247	25	ug/L	250.0	ND	98.6	87.1-115	8.73	20	
1,2-Dichloroethane	331	25	ug/L	250.0	ND	132	74-155	3.86	20	
1,2-Dichloropropane	274	25	ug/L	250.0	ND	110	85.9-119	7.89	20	

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

**Matrix Spike Dup (A810241-MSD1)**

Source: A184203-09

Prepared: 10/17/2018

Analyzed: 10/23/2018 21:50

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,3,5-Trimethylbenzene	251	25	ug/L	250.0	ND	100	85.3-120	3.91	20	
1,3-Dichlorobenzene	251	25	ug/L	250.0	ND	100	87.6-115	2.37	20	
1,3-Dichloropropane	244	25	ug/L	250.0	ND	97.6	79.8-125	11.0	20	
1,4-Dichlorobenzene	241	25	ug/L	250.0	ND	96.2	86.3-113	5.07	20	
2,2-Dichloropropane	273	25	ug/L	250.0	ND	109	71.4-142	15.4	20	
2-Butanone	2270	1000	ug/L	2500	ND	90.8	45.3-165	23.1	20	X
2-Chlorotoluene	245	25	ug/L	250.0	ND	97.8	86.6-117	7.29	20	
2-Hexanone	2220	1000	ug/L	2500	ND	88.8	45.9-161	15.8	20	
4-Chlorotoluene	272	25	ug/L	250.0	ND	109	86.1-119	1.86	20	
4-Methyl-2-pentanone	2430	1000	ug/L	2500	ND	97.3	53.4-160	12.1	20	
Acetone	3430	1000	ug/L	2500	ND	137	39.4-199	17.6	20	
Benzene	1810	25	ug/L	250.0	1510	118	75.1-132	1.67	20	
Bromobenzene	230	25	ug/L	250.0	ND	91.8	83.5-113	7.95	20	
Bromochloromethane	284	25	ug/L	250.0	ND	114	79.1-136	11.6	20	
Bromodichloromethane	277	25	ug/L	250.0	ND	111	77-138	0.362	20	
Bromoform	235	25	ug/L	250.0	ND	94.0	66.6-136	2.73	20	
Bromomethane	406	250	ug/L	250.0	ND	162	45.8-193	0.743	20	
Carbon disulfide	290	25	ug/L	250.0	ND	116	39.7-182	7.47	20	
Carbon tetrachloride	306	25	ug/L	250.0	ND	122	71.8-143	0.653	20	
Chlorobenzene	250	25	ug/L	250.0	ND	99.8	89.6-112	3.35	20	
Chloroethane	378	250	ug/L	250.0	ND	151	49.5-188	3.64	20	
Chloroform	312	25	ug/L	250.0	ND	125	67.3-154	8.60	20	
Chloromethane	322	100	ug/L	250.0	14.0	123	54.7-167	4.40	20	
cis-1,2-Dichloroethene	267	25	ug/L	250.0	8.50	103	73.6-131	10.3	20	
cis-1,3-Dichloropropene	223	25	ug/L	250.0	ND	89.0	67-125	0.903	20	
Dibromochloromethane	245	25	ug/L	250.0	ND	98.0	79-128	5.75	20	
Dibromomethane	263	25	ug/L	250.0	ND	105	80.9-136	5.00	20	
Dichlorodifluoromethane	311	25	ug/L	250.0	ND	124	70.9-150	1.79	20	
Diisopropyl Ether	241	25	ug/L	250.0	ND	96.2	59.9-139	18.1	20	
Ethylbenzene	290	25	ug/L	250.0	34.0	102	87.1-117	0.345	20	
Hexachlorobutadiene	249	100	ug/L	250.0	ND	99.4	59.6-155	5.58	20	
Isopropylbenzene	270	25	ug/L	250.0	16.5	101	87.3-117	2.63	20	
m,p-Xylene	589	50	ug/L	500.0	53.0	107	87.5-116	4.16	20	
Methyl t-Butyl Ether	238	25	ug/L	250.0	ND	95.0	55.9-151	21.4	20	X
Methylene chloride	349	100	ug/L	250.0	ND	139	63.1-149	14.1	20	
Naphthalene	230	250	ug/L	250.0	40.5	75.8	41.3-137	17.3	20	J
n-Butyl Benzene	254	25	ug/L	250.0	ND	102	82.1-121	9.05	20	
n-Hexane	255	25	ug/L	250.0	ND	102	50-148	12.5	20	
n-Propyl Benzene	264	25	ug/L	250.0	16.0	99.0	83.4-121	4.63	20	
o-Xylene	239	25	ug/L	250.0	3.00	94.4	84.5-113	1.45	20	
p-Isopropyltoluene	242	25	ug/L	250.0	ND	96.8	87.3-114	1.44	20	
sec-Butyl Benzene	260	25	ug/L	250.0	ND	104	84.9-118	1.34	20	
Styrene	256	25	ug/L	250.0	ND	102	79.2-121	3.17	20	
tert-Butylbenzene	246	25	ug/L	250.0	ND	98.2	79.3-119	7.26	20	
Tetrachloroethene	239	25	ug/L	250.0	ND	95.4	78.4-121	2.55	20	
Tetrahydrofuran	994	500	ug/L	1250	ND	79.5	27-163	30.7	20	X
Toluene	368	25	ug/L	250.0	91.5	110	81.7-117	3.74	20	
trans-1,2-Dichloroethene	273	25	ug/L	250.0	ND	109	71.3-135	8.44	20	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810241 - EPA 5030B**

**Matrix Spike Dup (A810241-MSD1)**

Source: A184203-09

Prepared: 10/17/2018 Analyzed: 10/23/2018 21:50

trans-1,3-Dichloropropene	225	25	ug/L	250.0	ND	89.8	76-122	3.72	20	
Trichloroethene	268	25	ug/L	250.0	19.5	99.2	70.4-133	4.03	20	
Trichlorofluoromethane	435	25	ug/L	250.0	ND	174	50.7-199	4.71	20	
Vinyl chloride	362	25	ug/L	250.0	ND	145	55.4-172	4.33	20	
Surrogate: Dibromofluoromethane	296		ug/L	250.0		118	70.8-139			
Surrogate: Toluene-d8	268		ug/L	250.0		107	76.6-116			
Surrogate: 4-Bromofluorobenzene	227		ug/L	250.0		90.8	71.4-118			

**Batch A810256 - EPA 5030B**

**Blank (A810256-BLK1)**

Prepared: 10/19/2018 Analyzed: 10/19/2018 16:44

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,1-Trichloroethane	ND	0.50	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,2-Trichloroethane	ND	0.50	ug/L							
1,1,2-Trichlorotrifluoroethane	ND	0.50	ug/L							
1,1-Dichloroethane	ND	0.50	ug/L							
1,1-Dichloroethene	ND	0.50	ug/L							
1,1-Dichloropropene	ND	0.50	ug/L							
1,2,3-Trichlorobenzene	ND	2.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	0.50	ug/L							
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							
1,2-Dibromoethane (EDB)	ND	0.50	ug/L							
1,2-Dichlorobenzene	ND	0.50	ug/L							
1,2-Dichloroethane	ND	0.50	ug/L							
1,2-Dichloropropane	ND	0.50	ug/L							
1,3,5-Trimethylbenzene	ND	0.50	ug/L							
1,3-Dichlorobenzene	ND	0.50	ug/L							
1,3-Dichloropropane	ND	0.50	ug/L							
1,4-Dichlorobenzene	ND	0.50	ug/L							
2,2-Dichloropropane	ND	0.50	ug/L							
2-Butanone	ND	20	ug/L							
2-Chlorotoluene	ND	0.50	ug/L							
2-Hexanone	ND	20	ug/L							
4-Chlorotoluene	ND	0.50	ug/L							
4-Methyl-2-pentanone	ND	20	ug/L							
Acetone	ND	20	ug/L							
Benzene	ND	0.50	ug/L							
Bromobenzene	ND	0.50	ug/L							
Bromochloromethane	ND	0.50	ug/L							
Bromodichloromethane	ND	0.50	ug/L							
Bromoform	ND	0.50	ug/L							
Bromomethane	ND	5.0	ug/L							
Carbon disulfide	ND	0.50	ug/L							
Carbon tetrachloride	ND	0.50	ug/L							
Chlorobenzene	ND	0.50	ug/L							

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**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810256 - EPA 5030B**

**Blank (A810256-BLK1)**

Prepared: 10/19/2018 Analyzed: 10/19/2018 16:44

Chloroethane	ND	5.0	ug/L							
Chloroform	ND	0.50	ug/L							
Chloromethane	0.27	2.0	ug/L							J
cis-1,2-Dichloroethene	ND	0.50	ug/L							
cis-1,3-Dichloropropene	ND	0.50	ug/L							
Dibromochloromethane	ND	0.50	ug/L							
Dibromomethane	ND	0.50	ug/L							
Dichlorodifluoromethane	ND	0.50	ug/L							
Diisopropyl Ether	ND	0.50	ug/L							
Ethylbenzene	ND	0.50	ug/L							
Hexachlorobutadiene	ND	2.0	ug/L							
Isopropylbenzene	ND	0.50	ug/L							
m,p-Xylene	ND	1.0	ug/L							
Methyl t-Butyl Ether	ND	0.50	ug/L							
Methylene chloride	ND	2.0	ug/L							
Naphthalene	ND	5.0	ug/L							
n-Butyl Benzene	ND	0.50	ug/L							
n-Hexane	ND	0.50	ug/L							
n-Propyl Benzene	ND	0.50	ug/L							
o-Xylene	ND	0.50	ug/L							
p-Isopropyltoluene	ND	0.50	ug/L							
sec-Butyl Benzene	ND	0.50	ug/L							
Styrene	ND	0.50	ug/L							
tert-Butylbenzene	ND	0.50	ug/L							
Tetrachloroethene	ND	0.50	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	0.50	ug/L							
trans-1,2-Dichloroethene	ND	0.50	ug/L							
trans-1,3-Dichloropropene	ND	0.50	ug/L							
Trichloroethene	ND	0.50	ug/L							
Trichlorofluoromethane	ND	0.50	ug/L							
Vinyl chloride	ND	0.50	ug/L							
Xylenes, total	ND	1.5	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	<i>11.0</i>		<i>ug/L</i>	<i>10.00</i>		<i>110</i>	<i>70.8-139</i>			
<i>Surrogate: Toluene-d8</i>	<i>8.27</i>		<i>ug/L</i>	<i>10.00</i>		<i>82.7</i>	<i>76.6-116</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>8.05</i>		<i>ug/L</i>	<i>10.00</i>		<i>80.5</i>	<i>71.4-118</i>			

**LCS (A810256-BS1)**

Prepared: 10/19/2018 Analyzed: 10/23/2018 18:41

1,1,1,2-Tetrachloroethane	5.28	0.50	ug/L	5.000		106	78-131			
1,1,1-Trichloroethane	6.00	0.50	ug/L	5.000		120	68.9-152			
1,1,2,2-Tetrachloroethane	4.89	0.50	ug/L	5.000		97.8	66.3-131			
1,1,2-Trichloroethane	5.32	0.50	ug/L	5.000		106	79.2-123			
1,1,2-Trichlorotrifluoroethane	7.22	0.50	ug/L	5.000		144	47.3-196			
1,1-Dichloroethane	6.06	0.50	ug/L	5.000		121	73.2-144			
1,1-Dichloroethene	6.82	0.50	ug/L	5.000		136	47.7-175			
1,1-Dichloropropene	5.33	0.50	ug/L	5.000		107	79.4-126			
1,2,3-Trichlorobenzene	4.51	2.0	ug/L	5.000		90.2	74-121			
1,2,3-Trichloropropane	4.87	1.0	ug/L	5.000		97.4	72.5-135			

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Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810256 - EPA 5030B**

**LCS (A810256-BS1)**

Prepared: 10/19/2018 Analyzed: 10/23/2018 18:41

1,2,4-Trichlorobenzene	4.31	2.0	ug/L	5.000		86.2	74.6-118			
1,2,4-Trimethylbenzene	5.15	0.50	ug/L	5.000		103	86.3-119			
1,2-Dibromo-3-chloropropane	4.44	0.50	ug/L	5.000		88.8	53-136			
1,2-Dibromoethane (EDB)	4.85	0.50	ug/L	5.000		97.0	79.5-121			
1,2-Dichlorobenzene	4.99	0.50	ug/L	5.000		99.8	87.2-115			
1,2-Dichloroethane	6.08	0.50	ug/L	5.000		122	72.9-149			
1,2-Dichloropropane	5.15	0.50	ug/L	5.000		103	79.1-122			
1,3,5-Trimethylbenzene	5.06	0.50	ug/L	5.000		101	85.7-120			
1,3-Dichlorobenzene	4.98	0.50	ug/L	5.000		99.6	88.5-114			
1,3-Dichloropropane	4.81	0.50	ug/L	5.000		96.2	79.7-123			
1,4-Dichlorobenzene	4.84	0.50	ug/L	5.000		96.8	87.5-112			
2,2-Dichloropropane	5.22	0.50	ug/L	5.000		104	70.3-142			
2-Butanone	47.4	20	ug/L	50.00		94.9	52.6-151			
2-Chlorotoluene	4.84	0.50	ug/L	5.000		96.8	86.2-117			
2-Hexanone	50.4	20	ug/L	50.00		101	50.7-153			
4-Chlorotoluene	4.86	0.50	ug/L	5.000		97.2	85.8-118			
4-Methyl-2-pentanone	53.1	20	ug/L	50.00		106	58.8-151			
Acetone	63.3	20	ug/L	50.00		127	34.7-197			
Benzene	5.30	0.50	ug/L	5.000		106	78.6-127			
Bromobenzene	4.56	0.50	ug/L	5.000		91.2	84.1-113			
Bromochloromethane	5.27	0.50	ug/L	5.000		105	81-132			
Bromodichloromethane	5.49	0.50	ug/L	5.000		110	78.7-132			
Bromoform	5.08	0.50	ug/L	5.000		102	68.6-133			
Bromomethane	5.61	5.0	ug/L	5.000		112	37.4-199			
Carbon disulfide	5.67	0.50	ug/L	5.000		113	37-182			
Carbon tetrachloride	6.14	0.50	ug/L	5.000		123	69.3-140			
Chlorobenzene	5.13	0.50	ug/L	5.000		103	89.7-112			
Chloroethane	6.40	5.0	ug/L	5.000		128	47.6-184			
Chloroform	5.94	0.50	ug/L	5.000		119	69.9-148			
Chloromethane	6.04	2.0	ug/L	5.000		121	56.3-169			
cis-1,2-Dichloroethene	4.98	0.50	ug/L	5.000		99.6	80.1-124			
cis-1,3-Dichloropropene	4.31	0.50	ug/L	5.000		86.2	70.9-123			
Dibromochloromethane	5.14	0.50	ug/L	5.000		103	78.6-127			
Dibromomethane	5.22	0.50	ug/L	5.000		104	78.5-135			
Dichlorodifluoromethane	6.17	0.50	ug/L	5.000		123	68.9-158			
Diisopropyl Ether	4.67	0.50	ug/L	5.000		93.4	67.3-134			
Ethylbenzene	5.08	0.50	ug/L	5.000		102	86.3-118			
Hexachlorobutadiene	5.22	2.0	ug/L	5.000		104	60.2-149			
Isopropylbenzene	5.05	0.50	ug/L	5.000		101	86.9-117			
m,p-Xylene	10.6	1.0	ug/L	10.00		106	88.5-116			
Methyl t-Butyl Ether	4.75	0.50	ug/L	5.000		95.0	63.1-141			
Methylene chloride	5.90	2.0	ug/L	5.000		118	67.8-143			
Naphthalene	3.85	5.0	ug/L	5.000		77.0	46.9-134			
n-Butyl Benzene	5.09	0.50	ug/L	5.000		102	83.8-119			
n-Hexane	5.12	0.50	ug/L	5.000		102	57.7-142			
n-Propyl Benzene	4.97	0.50	ug/L	5.000		99.4	83.4-121			
o-Xylene	4.93	0.50	ug/L	5.000		98.6	86.1-113			
p-Isopropyltoluene	4.97	0.50	ug/L	5.000		99.4	87.4-115			

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TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
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Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810256 - EPA 5030B**

**LCS (A810256-BS1)**

Prepared: 10/19/2018 Analyzed: 10/23/2018 18:41

sec-Butyl Benzene	5.03	0.50	ug/L	5.000		101	84.9-119			
Styrene	5.34	0.50	ug/L	5.000		107	84.9-117			
tert-Butylbenzene	4.70	0.50	ug/L	5.000		94.0	79.1-120			
Tetrachloroethene	4.89	0.50	ug/L	5.000		97.8	80.5-118			
Tetrahydrofuran	22.8	10	ug/L	25.00		91.2	35.5-156			
Toluene	5.16	0.50	ug/L	5.000		103	83.8-115			
trans-1,2-Dichloroethene	5.30	0.50	ug/L	5.000		106	78.3-128			
trans-1,3-Dichloropropene	4.46	0.50	ug/L	5.000		89.2	78.3-119			
Trichloroethene	5.00	0.50	ug/L	5.000		100	82.6-121			
Trichlorofluoromethane	7.44	0.50	ug/L	5.000		149	47.9-196			
Vinyl chloride	6.28	0.50	ug/L	5.000		126	53-177			
<i>Surrogate: Dibromofluoromethane</i>	5.76		ug/L	5.000		115	70.8-139			
<i>Surrogate: Toluene-d8</i>	5.38		ug/L	5.000		108	76.6-116			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.70		ug/L	5.000		94.0	71.4-118			

**Matrix Spike (A810256-MS1)**

Source: A184212-01

Prepared: 10/19/2018 Analyzed: 10/19/2018 15:49

1,1,1,2-Tetrachloroethane	5.09	0.50	ug/L	5.000	ND	102	78.4-135			
1,1,1-Trichloroethane	5.55	0.50	ug/L	5.000	ND	111	68.4-158			
1,1,2,2-Tetrachloroethane	6.11	0.50	ug/L	5.000	ND	122	64.7-135			
1,1,2-Trichloroethane	5.83	0.50	ug/L	5.000	ND	117	76.2-132			
1,1,2-Trichlorotrifluoroethane	6.41	0.50	ug/L	5.000	ND	128	51.7-199			
1,1-Dichloroethane	6.13	0.50	ug/L	5.000	ND	123	69-149			
1,1-Dichloroethene	6.15	0.50	ug/L	5.000	ND	123	49.3-178			
1,1-Dichloropropene	5.27	0.50	ug/L	5.000	ND	105	75.8-126			
1,2,3-Trichlorobenzene	4.66	2.0	ug/L	5.000	ND	93.2	73.3-124			
1,2,3-Trichloropropane	6.15	1.0	ug/L	5.000	ND	123	70.6-141			
1,2,4-Trichlorobenzene	4.20	2.0	ug/L	5.000	ND	84.0	70.8-121			
1,2,4-Trimethylbenzene	4.30	0.50	ug/L	5.000	ND	86.0	85.3-120			
1,2-Dibromo-3-chloropropane	6.03	0.50	ug/L	5.000	ND	121	50.6-138			
1,2-Dibromoethane (EDB)	5.52	0.50	ug/L	5.000	ND	110	75.9-124			
1,2-Dichlorobenzene	4.87	0.50	ug/L	5.000	ND	97.4	87.1-115			
1,2-Dichloroethane	6.40	0.50	ug/L	5.000	ND	128	74-155			
1,2-Dichloropropane	5.31	0.50	ug/L	5.000	ND	106	85.9-119			
1,3,5-Trimethylbenzene	4.13	0.50	ug/L	5.000	ND	82.6	85.3-120			M
1,3-Dichlorobenzene	4.75	0.50	ug/L	5.000	ND	95.0	87.6-115			
1,3-Dichloropropane	5.47	0.50	ug/L	5.000	ND	109	79.8-125			
1,4-Dichlorobenzene	4.73	0.50	ug/L	5.000	ND	94.6	86.3-113			
2,2-Dichloropropane	5.01	0.50	ug/L	5.000	ND	100	71.4-142			
2-Butanone	78.6	20	ug/L	50.00	ND	157	45.3-165			
2-Chlorotoluene	4.50	0.50	ug/L	5.000	ND	90.0	86.6-117			
2-Hexanone	77.3	20	ug/L	50.00	ND	155	45.9-161			
4-Chlorotoluene	4.67	0.50	ug/L	5.000	ND	93.4	86.1-119			
4-Methyl-2-pentanone	76.1	20	ug/L	50.00	ND	152	53.4-160			
Acetone	117	20	ug/L	50.00	ND	233	39.4-199			M
Benzene	5.56	0.50	ug/L	5.000	ND	111	75.1-132			
Bromobenzene	4.53	0.50	ug/L	5.000	ND	90.6	83.5-113			
Bromochloromethane	6.16	0.50	ug/L	5.000	ND	123	79.1-136			
Bromodichloromethane	5.37	0.50	ug/L	5.000	ND	107	77-138			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810256 - EPA 5030B**

<b>Matrix Spike (A810256-MS1)</b>	<b>Source: A184212-01</b>		Prepared: 10/19/2018		Analyzed: 10/19/2018 15:49					
Bromoform	5.50	0.50	ug/L	5.000	ND	110	66.6-136			
Bromomethane	6.19	5.0	ug/L	5.000	ND	124	45.8-193			
Carbon disulfide	5.96	0.50	ug/L	5.000	ND	119	39.7-182			
Carbon tetrachloride	5.66	0.50	ug/L	5.000	ND	113	71.8-143			
Chlorobenzene	4.91	0.50	ug/L	5.000	ND	98.2	89.6-112			
Chloroethane	6.82	5.0	ug/L	5.000	ND	136	49.5-188			
Chloroform	5.92	0.50	ug/L	5.000	ND	118	67.3-154			
Chloromethane	6.01	2.0	ug/L	5.000	0.250	115	54.7-167			
cis-1,2-Dichloroethene	9.61	0.50	ug/L	5.000	3.96	113	73.6-131			
cis-1,3-Dichloropropene	4.49	0.50	ug/L	5.000	ND	89.8	67-125			
Dibromochloromethane	5.34	0.50	ug/L	5.000	ND	107	79-128			
Dibromomethane	5.73	0.50	ug/L	5.000	ND	115	80.9-136			
Dichlorodifluoromethane	5.82	0.50	ug/L	5.000	ND	116	70.9-150			
Diisopropyl Ether	5.03	0.50	ug/L	5.000	ND	101	59.9-139			
Ethylbenzene	4.52	0.50	ug/L	5.000	ND	90.4	87.1-117			
Hexachlorobutadiene	4.43	2.0	ug/L	5.000	ND	88.6	59.6-155			
Isopropylbenzene	4.30	0.50	ug/L	5.000	ND	86.0	87.3-117			M
m,p-Xylene	9.15	1.0	ug/L	10.00	ND	91.5	87.5-116			
Methyl t-Butyl Ether	5.72	0.50	ug/L	5.000	ND	114	55.9-151			
Methylene chloride	6.60	2.0	ug/L	5.000	ND	132	63.1-149			
Naphthalene	4.70	5.0	ug/L	5.000	ND	94.0	41.3-137			J
n-Butyl Benzene	4.34	0.50	ug/L	5.000	ND	86.8	82.1-121			
n-Hexane	5.23	0.50	ug/L	5.000	ND	105	50-148			
n-Propyl Benzene	4.37	0.50	ug/L	5.000	ND	87.4	83.4-121			
o-Xylene	4.35	0.50	ug/L	5.000	ND	87.0	84.5-113			
p-Isopropyltoluene	4.24	0.50	ug/L	5.000	ND	84.8	87.3-114			M
sec-Butyl Benzene	4.32	0.50	ug/L	5.000	ND	86.4	84.9-118			
Styrene	4.20	0.50	ug/L	5.000	ND	84.0	79.2-121			
tert-Butylbenzene	4.24	0.50	ug/L	5.000	ND	84.8	79.3-119			
Tetrachloroethene	8.45	0.50	ug/L	5.000	3.81	92.8	78.4-121			
Tetrahydrofuran	37.3	10	ug/L	25.00	ND	149	27-163			
Toluene	4.83	0.50	ug/L	5.000	ND	96.6	81.7-117			
trans-1,2-Dichloroethene	5.69	0.50	ug/L	5.000	0.130	111	71.3-135			
trans-1,3-Dichloropropene	4.74	0.50	ug/L	5.000	ND	94.8	76-122			
Trichloroethene	6.94	0.50	ug/L	5.000	2.21	94.6	70.4-133			
Trichlorofluoromethane	6.58	0.50	ug/L	5.000	ND	132	50.7-199			
Vinyl chloride	6.69	0.50	ug/L	5.000	ND	134	55.4-172			
<i>Surrogate: Dibromofluoromethane</i>	<i>5.70</i>		<i>ug/L</i>	<i>5.000</i>		<i>114</i>	<i>70.8-139</i>			
<i>Surrogate: Toluene-d8</i>	<i>5.02</i>		<i>ug/L</i>	<i>5.000</i>		<i>100</i>	<i>76.6-116</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>4.44</i>		<i>ug/L</i>	<i>5.000</i>		<i>88.8</i>	<i>71.4-118</i>			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810256 - EPA 5030B**

**Matrix Spike Dup (A810256-MSD1)**

Source: A184212-01

Prepared: 10/19/2018

Analyzed: 10/19/2018 16:17

1,1,1,2-Tetrachloroethane	5.03	0.50	ug/L	5.000	ND	101	78.4-135	1.19	20	
1,1,1-Trichloroethane	5.74	0.50	ug/L	5.000	ND	115	68.4-158	3.37	20	
1,1,2,2-Tetrachloroethane	5.53	0.50	ug/L	5.000	ND	111	64.7-135	9.97	20	
1,1,2-Trichloroethane	5.41	0.50	ug/L	5.000	ND	108	76.2-132	7.47	20	
1,1,2-Trichlorotrifluoroethane	6.38	0.50	ug/L	5.000	ND	128	51.7-199	0.469	20	
1,1-Dichloroethane	6.15	0.50	ug/L	5.000	ND	123	69-149	0.326	20	
1,1-Dichloroethene	6.17	0.50	ug/L	5.000	ND	123	49.3-178	0.325	20	
1,1-Dichloropropene	5.32	0.50	ug/L	5.000	ND	106	75.8-126	0.944	20	
1,2,3-Trichlorobenzene	4.63	2.0	ug/L	5.000	ND	92.6	73.3-124	0.646	20	
1,2,3-Trichloropropane	5.56	1.0	ug/L	5.000	ND	111	70.6-141	10.1	20	
1,2,4-Trichlorobenzene	4.24	2.0	ug/L	5.000	ND	84.8	70.8-121	0.948	20	
1,2,4-Trimethylbenzene	4.34	0.50	ug/L	5.000	ND	86.8	85.3-120	0.926	20	
1,2-Dibromo-3-chloropropane	5.07	0.50	ug/L	5.000	ND	101	50.6-138	17.3	20	
1,2-Dibromoethane (EDB)	5.13	0.50	ug/L	5.000	ND	103	75.9-124	7.32	20	
1,2-Dichlorobenzene	5.01	0.50	ug/L	5.000	ND	100	87.1-115	2.83	20	
1,2-Dichloroethane	6.25	0.50	ug/L	5.000	ND	125	74-155	2.37	20	
1,2-Dichloropropane	5.14	0.50	ug/L	5.000	ND	103	85.9-119	3.25	20	
1,3,5-Trimethylbenzene	4.29	0.50	ug/L	5.000	ND	85.8	85.3-120	3.80	20	
1,3-Dichlorobenzene	4.87	0.50	ug/L	5.000	ND	97.4	87.6-115	2.49	20	
1,3-Dichloropropane	5.27	0.50	ug/L	5.000	ND	105	79.8-125	3.72	20	
1,4-Dichlorobenzene	4.71	0.50	ug/L	5.000	ND	94.2	86.3-113	0.424	20	
2,2-Dichloropropane	5.23	0.50	ug/L	5.000	ND	105	71.4-142	4.30	20	
2-Butanone	63.5	20	ug/L	50.00	ND	127	45.3-165	21.3	20	X
2-Chlorotoluene	4.55	0.50	ug/L	5.000	ND	91.0	86.6-117	1.10	20	
2-Hexanone	60.5	20	ug/L	50.00	ND	121	45.9-161	24.3	20	X
4-Chlorotoluene	4.74	0.50	ug/L	5.000	ND	94.8	86.1-119	1.49	20	
4-Methyl-2-pentanone	61.2	20	ug/L	50.00	ND	122	53.4-160	21.7	20	X
Acetone	85.7	20	ug/L	50.00	ND	171	39.4-199	30.5	20	X
Benzene	5.55	0.50	ug/L	5.000	ND	111	75.1-132	0.180	20	
Bromobenzene	4.48	0.50	ug/L	5.000	ND	89.6	83.5-113	1.11	20	
Bromochloromethane	6.00	0.50	ug/L	5.000	ND	120	79.1-136	2.63	20	
Bromodichloromethane	5.29	0.50	ug/L	5.000	ND	106	77-138	1.50	20	
Bromoform	5.17	0.50	ug/L	5.000	ND	103	66.6-136	6.19	20	
Bromomethane	5.09	5.0	ug/L	5.000	ND	102	45.8-193	19.5	20	
Carbon disulfide	6.04	0.50	ug/L	5.000	ND	121	39.7-182	1.33	20	
Carbon tetrachloride	5.91	0.50	ug/L	5.000	ND	118	71.8-143	4.32	20	
Chlorobenzene	5.03	0.50	ug/L	5.000	ND	101	89.6-112	2.41	20	
Chloroethane	6.94	5.0	ug/L	5.000	ND	139	49.5-188	1.74	20	
Chloroform	6.04	0.50	ug/L	5.000	ND	121	67.3-154	2.01	20	
Chloromethane	5.82	2.0	ug/L	5.000	0.250	111	54.7-167	3.21	20	
cis-1,2-Dichloroethene	9.90	0.50	ug/L	5.000	3.96	119	73.6-131	2.97	20	
cis-1,3-Dichloropropene	4.43	0.50	ug/L	5.000	ND	88.6	67-125	1.35	20	
Dibromochloromethane	5.15	0.50	ug/L	5.000	ND	103	79-128	3.62	20	
Dibromomethane	5.35	0.50	ug/L	5.000	ND	107	80.9-136	6.86	20	
Dichlorodifluoromethane	6.05	0.50	ug/L	5.000	ND	121	70.9-150	3.88	20	
Diisopropyl Ether	5.12	0.50	ug/L	5.000	ND	102	59.9-139	1.77	20	
Ethylbenzene	4.63	0.50	ug/L	5.000	ND	92.6	87.1-117	2.40	20	
Hexachlorobutadiene	4.59	2.0	ug/L	5.000	ND	91.8	59.6-155	3.55	20	

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

**Volatile Organic Compounds by Method 8260 - Purge and Trap - Quality Control**

**Pace Analytical - Madison**

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch A810256 - EPA 5030B**

**Matrix Spike Dup (A810256-MSD1)**

Source: A184212-01

Prepared: 10/19/2018 Analyzed: 10/19/2018 16:17

Isopropylbenzene	4.39	0.50	ug/L	5.000	ND	87.8	87.3-117	2.07	20	
m,p-Xylene	9.53	1.0	ug/L	10.00	ND	95.3	87.5-116	4.07	20	
Methyl t-Butyl Ether	5.39	0.50	ug/L	5.000	ND	108	55.9-151	5.94	20	
Methylene chloride	6.46	2.0	ug/L	5.000	ND	129	63.1-149	2.14	20	
Naphthalene	4.27	5.0	ug/L	5.000	ND	85.4	41.3-137	9.59	20	J
n-Butyl Benzene	4.42	0.50	ug/L	5.000	ND	88.4	82.1-121	1.83	20	
n-Hexane	5.40	0.50	ug/L	5.000	ND	108	50-148	3.20	20	
n-Propyl Benzene	4.50	0.50	ug/L	5.000	ND	90.0	83.4-121	2.93	20	
o-Xylene	4.50	0.50	ug/L	5.000	ND	90.0	84.5-113	3.39	20	
p-Isopropyltoluene	4.43	0.50	ug/L	5.000	ND	88.6	87.3-114	4.38	20	
sec-Butyl Benzene	4.45	0.50	ug/L	5.000	ND	89.0	84.9-118	2.96	20	
Styrene	4.33	0.50	ug/L	5.000	ND	86.6	79.2-121	3.05	20	
tert-Butylbenzene	4.27	0.50	ug/L	5.000	ND	85.4	79.3-119	0.705	20	
Tetrachloroethene	8.92	0.50	ug/L	5.000	3.81	102	78.4-121	5.41	20	
Tetrahydrofuran	29.3	10	ug/L	25.00	ND	117	27-163	24.0	20	X
Toluene	4.75	0.50	ug/L	5.000	ND	95.0	81.7-117	1.67	20	
trans-1,2-Dichloroethene	5.73	0.50	ug/L	5.000	0.130	112	71.3-135	0.701	20	
trans-1,3-Dichloropropene	4.75	0.50	ug/L	5.000	ND	95.0	76-122	0.211	20	
Trichloroethene	7.08	0.50	ug/L	5.000	2.21	97.4	70.4-133	2.00	20	
Trichlorofluoromethane	6.66	0.50	ug/L	5.000	ND	133	50.7-199	1.21	20	
Vinyl chloride	6.67	0.50	ug/L	5.000	ND	133	55.4-172	0.299	20	
Surrogate: Dibromofluoromethane	5.68		ug/L	5.000		114	70.8-139			
Surrogate: Toluene-d8	5.04		ug/L	5.000		101	76.6-116			
Surrogate: 4-Bromofluorobenzene	4.58		ug/L	5.000		91.6	71.4-118			

TRC Environmental Corporation, Inc.  
708 Heartland Trail, Ste 3000  
Madison WI, 53717

Project: Madison Kipp Corp. Semi-Annual Sampling  
Project Number: 292257 Ph. 1  
Project Manager: Andrew Stehn

### Notes and Definitions

- X Precision for the matrix spike duplicate, laboratory control sample duplicate or lab duplicate was outside of control limits.
- M The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory control limits.
- Ja Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- J Analyte was detected but is below the reporting limit. The concentration is estimated.
- HC Results may be biased high because of high continuing calibration verification (CCV).
- E1 Estimated value because of quality control sample exceedances.
- D Data reported from a dilution
- B Analyte is also detected in the associated method blank.
  
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
- RPD Relative Percent Difference



**Pace Analytical - ECCS Division**  
 2525 Advance Road  
 Madison, WI 53718  
 608-221-8700 (phone)  
 608-221-4889 (fax)

# CHAIN OF CUSTODY

No. 10072

Page: 1 of 3

Project Number: 292257 PH.1      PO Number: 118039					Lab Work Order #: A184121				Report To:														
Project Name: Madison Kipp Semi-Annual Sampling					Preservation Codes				Company:														
Project Location (City, State): Madison, WI					Analyses Requested: B A A A				Address 1:														
Turn Around (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush					<table border="1" style="width:100%; text-align: center;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Matrix</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Total # of Containers</td> <td>VOL</td> <td>PUB</td> <td>TSS</td> <td>TDS</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				Matrix	Total # of Containers	VOL	PUB	TSS	TDS					Address 2:				
Matrix	Total # of Containers	VOL	PUB	TSS					TDS														
If Rush, Report Due Date:									E-mail Address:														
Sampled By (Print): Wesley Braga									Invoice To:														
Sample Description					<table border="1" style="width:100%; text-align: center;"> <tr> <th colspan="2">Collection</th> <th rowspan="2">Matrix</th> <th rowspan="2">Total # of Containers</th> <th rowspan="2">VOL</th> <th rowspan="2">PUB</th> <th rowspan="2">TSS</th> <th rowspan="2">TDS</th> <th rowspan="2"></th> <th rowspan="2"></th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> </table>				Collection		Matrix	Total # of Containers	VOL	PUB	TSS	TDS			Date	Time	Company:		
									Collection										Matrix	Total # of Containers	VOL	PUB	TSS
Date	Time																						
									Address 1:														
									Address 2:														
									Comments														
									Lab ID														
									Lab Receipt Time														
MP-13 (163-167)					10/9/18 1435 W 3 X				01														
MP-13 (135-139)					10/9/18 1501 W 3 X				02														
MP-13 (121-125)					10/9/18 1521 W 3 X				03														
MP-13 (102-106)					10/9/18 1539 W 3 X				TIME ON VALS READS 13:39. cm 04														
MP-13 (081-085)					10/9/18 1558 W 3 X				05														
MP-13 (067-071)					10/9/18 1616 W 3 X				06														
MP-13 (044-048)					10/9/18 1639 W 3 X				07														
MP-14 (170-178)					10/9/18 1257 W 3 X				08														
MP-14 (135-140)					10/9/18 1321 W 3 X				09														
MP-14 (100-105)					10/9/18 1346 W 3 X				10														
<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)		<b>Other Comments:</b>		Relinquished By: <i>Andrew St</i> Date: 10/12/18 Time: 10:50		Relinquished By: Date: Time:		Received By: <i>Kari-Anne Kelly</i> Date: 10/12/18 Time: 10:50		Received By: Date: Time:													
<b>Matrix Codes</b> A=Air S=Soil W=Water O=Other				Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Shipped Via: <i>Hand Del.</i>		Receipt Temp: 4.1°C		Thermometer # Exp. Date: 160142274 1/12/19		Temp Blank: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N											



**Pace Analytical - ECCS Division**  
 2525 Advance Road  
 Madison, WI 53718  
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# CHAIN OF CUSTODY

No. 10073

Page: 2 of 3

Project Number: 292257 Ph.1      PO Number: 118039					Lab Work Order #: A184121				Report To:				
Project Name: Madison Kipp Semi-Annual Sampling					Preservation Codes				Company:				
Project Location (City, State):					B	A	A	A	Address 1:				
Turn Around (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush					Analyses Requested				Address 2:				
If Rush, Report Due Date:									E-mail Address:				
Sampled By (Print): Wesley Braga									Invoice To:				
Sample Description					Matrix	Total # of Containers	VOL	PCB	TSS	TDS	Company:		
											Collection		Address 1:
		Date	Time							Address 2:			
MP-15 (177-187)		10/9/18	0923	W	3	X					Comments	Lab ID	Lab Receipt Time
MP-15 (142-146)		10/9/18	0951	W	3	X						11	
MP-15 (120-125)		10/9/18	1028	W	3	X						12	
MP-15 (100-105)		10/9/18	1057	W	3	X						13	
MP-15 (088-092)		10/9/18	1128	W	3	X						14	
MP-16 (175-179)		10/8/18	1516	W	3	<						15	
MP-16 (140-144)		10/8/18	1546	W	3	X						16	
MP-16 (106-116)		10/8/18	1625	W	3	X						17	
MW-4S		10/11/18	1103	W	4		X	X	X			18	
MW-4D		10/11/18	1251	W	4		X	X	X			19	
<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)  <b>Matrix Codes</b> A=Air S=Soil W=Water O=Other		<b>Other Comments:</b>			Relinquished By: <i>[Signature]</i>		Date: 10/12/18	Time: 10:50	Received By: <i>[Signature]</i>		Date: 10/12/18	Time: 10:50	
		Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Shipped Via: <i>[Signature]</i>		Receipt Temp: 4.1°C		Thermometer #/ Exp. Date: 160142274 1/12/19		Temp Blank: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N			



**Pace Analytical - ECCS Division**  
 2525 Advance Road  
 Madison, WI 53718  
 608-221-8700 (phone)  
 608-221-4889 (fax)

# CHAIN OF CUSTODY

No. 10074

Page: 3 of 3

Project Number: 292257 PH. 1 PO Number: 118039					Lab Work Order #: A184121				Report To:				
Project Name: Madison Kipp Semi-Annual Sampling					Preservation Codes				Company:				
Project Location (City, State): Madison, WI					Analyses Requested				Address 1:				
Turn Around (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush					B	A	A	A	Address 2:				
If Rush, Report Due Date:									E-mail Address:				
Sampled By (Print): Wesley Braga					Matrix	Total # of Containers	VOC	PCB	TSS	TDS	Invoice To:		
Sample Description													
											Address 1:		
											Address 2:		
											Comments	Lab ID	Lab Receipt Time
MW-4D2						3	X					21	
MW-5D3						3	X					22	
MW-9D						3	X					23	
MW-9D2						3	X					24	
MW-25D						3	X					25	
MW-25D2						3	X					26	
MW-27D						3	X				MS/MSD	27	
MW-27D2						3	X					28	
DUP-01						3	X					29	
PUP-02						3	X					30	
<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)		<b>Other Comments:</b>		Relinquished By: <i>[Signature]</i> Date: 10/12/18 Time: 1050		Received By: <i>[Signature]</i> Date: 10/12/18 Time: 10:50							
<b>Matrix Codes</b> A=Air S=Soil W=Water O=Other				Relinquished By: Date: Time:		Received By: Date: Time:							
				Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Shipped Via: <i>[Signature]</i> Receipt Temp: 4.1°C		Thermometer #/ Exp. Date: 160142274 1/12/19		Temp Blank: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N			



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# CHAIN OF CUSTODY

No. 10075

Page: 1 of 2

Project Number: 292257 Ph.1				PO Number: 118039				Lab Work Order #: A184203				Report To:					
Project Name: Madison, Kiap Semi-Annual Sampling				Project Location (City, State): Madison, WI				Preservation Codes				Company:					
Turn Around (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush				If Rush, Report Due Date:				Analyses Requested				Address 1:					
Sampled By (Print): Wesley Bragan				Matrix				Total # of Containers				Address 2:					
Sample Description		Collection		Matrix	Total # of Containers	VOC	PCB	TSS	TDS					Comments	Lab ID	Lab Receipt Time	
		Date	Time														
MW-3S		10/12/18	1351	W		X								TIME ON VIAL: 15:51 cm	01		
MW-3D		10/12/18	1429	W		X	X	X	X					TIME ON VIAL: 14:30	02		
MW-3D2		10/12/18	1340	W		X								TIME ON VIAL: 15:40	03		
MW-3D3		10/12/18	1429	W		X								MS/MSD	04		
MW-5S		10/12/18	1050	W		X	X	X	X						05		
MW-5D		10/12/18	1139	W		X	X	X	X						06		
MW-5D2		10/12/18	1017	W		X									07		
MW-6S		10/15/18	1212	W		X	X	X	X						08		
MW-6D		10/15/18	1304	W		X	X	X	X					MS/MSD	09		
MW-17		10/15/18	1550	W		X									10		
<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)		<b>Other Comments:</b>		Relinquished By: <i>Wesley Bragan</i>				Date: 10/16/18		Time: 1002		Received By: <i>[Signature]</i>		Date: 10/16/18		Time: 10:02	
<b>Matrix Codes</b> A=Air S=Soil W=Water O=Other				Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact				Shipped Via: WALKIN		Receipt Temp: 0.9, 1.8, 3.1°C		Thermometer #/ Exp. Date: 160142274 1/12/19		Temp Blank: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N			



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# CHAIN OF CUSTODY

No. 10082

Page: 2 of 2

Project Number: 292257 Ph.1				PO Number: 118039				Lab Work Order #: A184203				Report To:																																														
Project Name: Madison Kipp Semi-Annual Sampling				Project Location (City, State): Madison, WI				Preservation Codes				Company:																																														
Turn Around (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush				If Rush, Report Due Date:				Analyses Requested				Address 1:																																														
Sampled By (Print): Wesley Braga				Matrix				Total # of Containers				Address 2:																																														
Sample Description		Collection		Matrix	Total # of Containers	VOC	PCB	TDS	TSS					Comments	Lab ID	Lab Receipt Time																																										
Date	Time																																																									
MW-24	10/15/18	1716	W				X	X	X						11																																											
DUP-03	10/12/18	-	W			X									12																																											
DUP-04	10/15/18	-	W			X	X	X	X						13																																											
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="3" style="width:15%;"> <b>Preservation Codes</b>            A=None B=HCL C=H<sub>2</sub>SO<sub>4</sub>            D=HNO<sub>3</sub> E=EnCore F=Methanol            G=NaOH O=Other (Indicate)   <b>Matrix Codes</b>            A=Air S=Soil W=Water O=Other         </td> <td rowspan="3" style="width:15%;"> <b>Other Comments:</b> </td> <td colspan="4">Relinquished By: <i>Wesley Braga</i></td> <td colspan="2">Date: 10/10/18</td> <td colspan="2">Time: 100Z</td> <td colspan="2">Received By: <i>[Signature]</i></td> <td colspan="2">Date: 10/16/18</td> <td colspan="2">Time: 10:02</td> </tr> <tr> <td colspan="4">Relinquished By:</td> <td colspan="2">Date:</td> <td colspan="2">Time:</td> <td colspan="2">Received By:</td> <td colspan="2">Date:</td> <td colspan="2">Time:</td> </tr> <tr> <td colspan="4">Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</td> <td colspan="2">Shipped Via: WALK IN</td> <td colspan="2">Receipt Temp: 0.9, 1.8, 3.1°C</td> <td colspan="2">Thermometer #/ Exp. Date: 160142274 1/12/19</td> <td colspan="2">Temp Blank: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N</td> </tr> </table>																	<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)  <b>Matrix Codes</b> A=Air S=Soil W=Water O=Other	<b>Other Comments:</b>	Relinquished By: <i>Wesley Braga</i>				Date: 10/10/18		Time: 100Z		Received By: <i>[Signature]</i>		Date: 10/16/18		Time: 10:02		Relinquished By:				Date:		Time:		Received By:		Date:		Time:		Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact				Shipped Via: WALK IN		Receipt Temp: 0.9, 1.8, 3.1°C		Thermometer #/ Exp. Date: 160142274 1/12/19		Temp Blank: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)  <b>Matrix Codes</b> A=Air S=Soil W=Water O=Other	<b>Other Comments:</b>	Relinquished By: <i>Wesley Braga</i>				Date: 10/10/18		Time: 100Z		Received By: <i>[Signature]</i>		Date: 10/16/18		Time: 10:02																																												
		Relinquished By:				Date:		Time:		Received By:		Date:		Time:																																												
		Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact				Shipped Via: WALK IN		Receipt Temp: 0.9, 1.8, 3.1°C		Thermometer #/ Exp. Date: 160142274 1/12/19		Temp Blank: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N																																														



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# CHAIN OF CUSTODY

No. 10077

Page: of:

Project Number: 292257 Ph.1				PO Number: 118039				Lab Work Order #: A184212				Report To:																															
Project Name: Madison Kipp Semi-Annual Sampling								Preservation Codes				Company:																															
Project Location (City, State): Madison, WI								Analyses Requested				Address 1:																															
Turn Around (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush				Matrix				Total # of Containers				VOC				PCB				TSS				TDS				Invoice To:															
If Rush, Report Due Date:																												Company:															
Sampled By (Print): Wesley Braga																												Address 1:															
Sample Description																												Collection				Date				Time				Address 2:			
																				Comments				Lab ID		Lab Receipt Time																	
Mw-1				10/16/18				1524				W				3				X												01											
Mw-2S				10/16/18				1347				W				4								X				X				X								02			
Mw-2D				10/16/18				1208				W				7				X				X				X				X								03			
Mw-11S				10/16/18				1138				W				4								X				X				X								04			
Mw-2B				10/17/18				1100				W				7				X				X				X				X								05			
Mw-29S				10/16/18				1558				W				4								X				X				X								06			
Mw-29D				10/16/18				1427				W				4								X				X				Y								07			
DUP-05				10/16/18				-				W				7				X				X				X				X								08			
FB-01				10/17/18				1205				W				7				X				X				X				X								09			
Trip Blank				-				-				W				3				X																				10			
<b>Preservation Codes</b> A=None B=HCL C=H <sub>2</sub> SO <sub>4</sub> D=HNO <sub>3</sub> E=EnCore F=Methanol G=NaOH O=Other (Indicate)				<b>Other Comments:</b>				Relinquished By: Wesley Braga Date: 10/17/18 Time: 1445				Received By: [Signature] Date: 10/17/18 Time: 1500				Relinquished By: [Signature] Date: Time:				Received By: [Signature] Date: Time:				Custody Seal: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact				Shipped Via: WALK-IN				Receipt Temp: 3.9 + 2.1°C				Thermometer #/ Exp. Date: 160142274 1/12/19				Temp Blank: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N			

October 19, 2018

Jessica Esser  
Pace Analytical Madison  
2525 Advance Road  
Madison, WI 53718

RE: Project: A184121 MADISON KIPP CORP.  
Pace Project No.: 40177739

Dear Jessica Esser:

Enclosed are the analytical results for sample(s) received by the laboratory on October 16, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40177739001	A184121-19	Water	10/11/18 11:03	10/16/18 12:05
40177739002	A184121-20	Water	10/11/18 12:51	10/16/18 12:05

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40177739001	A184121-19	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177739002	A184121-20	SM 2540C	KTS	1
		SM 2540D	KTS	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

---

**Sample: A184121-19**      **Lab ID: 40177739001**      Collected: 10/11/18 11:03      Received: 10/16/18 12:05      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1750</b>	mg/L	20.0	8.7	1		10/17/18 16:29		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.95</b>	mg/L	2.0	0.95	1		10/17/18 10:43		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

**Sample: A184121-20**      **Lab ID: 40177739002**      Collected: 10/11/18 12:51      Received: 10/16/18 12:05      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>600</b>	mg/L	20.0	8.7	1		10/17/18 16:29		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.95</b>	mg/L	2.0	0.95	1		10/17/18 10:43		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

QC Batch: 303548

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 40177739001, 40177739002

METHOD BLANK: 1772986

Matrix: Water

Associated Lab Samples: 40177739001, 40177739002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/17/18 16:26	

LABORATORY CONTROL SAMPLE: 1772987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	615	554	90	80-120	

SAMPLE DUPLICATE: 1773055

Parameter	Units	40177836005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	1	5	

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: A184121 MADISON KIPP CORP.  
Pace Project No.: 40177739

QC Batch: 303463 Analysis Method: SM 2540D  
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids  
Associated Lab Samples: 40177739001, 40177739002

METHOD BLANK: 1772477 Matrix: Water  
Associated Lab Samples: 40177739001, 40177739002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	10/17/18 10:43	

LABORATORY CONTROL SAMPLE: 1772478

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	104	104	80-120	

SAMPLE DUPLICATE: 1772479

Parameter	Units	40177696001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	<0.95	<0.95		5	

SAMPLE DUPLICATE: 1772480

Parameter	Units	40177745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	290	323	11	5	R1

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: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

---

### DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: A184121 MADISON KIPP CORP.

Pace Project No.: 40177739

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40177739001	A184121-19	SM 2540C	303548		
40177739002	A184121-20	SM 2540C	303548		
40177739001	A184121-19	SM 2540D	303463		
40177739002	A184121-20	SM 2540D	303463		

### REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER

Pace Analytical - Madison

A184121

TZ

4017739

SENDING LABORATORY:

Pace Analytical - Madison  
2525 Advance Road  
Madison, WI 53718  
Phone: 608.221.8700  
Fax: 608,221,4889  
Project Manager: Jessica Esser

RECEIVING LABORATORY:

Pace Analytical  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302  
Phone : (920) 469-2436  
Fax: (920) 469-8827

Turn around Time:  Normal 10/26/18

Project Name: Madison Kipp Corp. Semi-Annual Sampling

Rush

		Laboratory ID	Comments
Lab ID: A184121-19	Water	01	
2540D - Suspended Solids		Sampled: 10/11/2018 11:03	
Subcontracted Analysis - Pace			Dissolved Solids, Total
Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to			
Lab ID: A184121-20	Water	002	
2540D - Suspended Solids		Sampled: 10/11/2018 12:51	
Subcontracted Analysis - Pace			Dissolved Solids, Total
Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to			

Released By CW/MLK Date 10/15/18 Received By \_\_\_\_\_ Date \_\_\_\_\_

Released By Speedee Date 10/16/18 1205 Received By [Signature] Date 10/16/18 1205

4017739

**Sample Preservation Receipt Form**

Client Name: Pace Madison

Project # 4017729

Page 1202

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Pace Lab #	Glass							Plastic							Vials				Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)				
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN									
001																																			2.5 / 5 / 10
002																																			2.5 / 5 / 10
003																																			2.5 / 5 / 10
004																																			2.5 / 5 / 10
005																																			2.5 / 5 / 10
006																																			2.5 / 5 / 10
007																																			2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

<b>AG1U</b> 1 liter amber glass	<b>BP1U</b> 1 liter plastic unpres	<b>DG9A</b> 40 mL amber ascorbic	<b>JGFU</b> 4 oz amber jar unpres
<b>AG1H</b> 1 liter amber glass HCL	<b>BP2N</b> 500 mL plastic HNO3	<b>DG9T</b> 40 mL amber Na Thio	<b>WGFU</b> 4 oz clear jar unpres
<b>AG4S</b> 125 mL amber glass H2SO4	<b>BP2Z</b> 500 mL plastic NaOH, Znact	<b>VG9U</b> 40 mL clear vial unpres	<b>WPFU</b> 4 oz plastic jar unpres
<b>AG4U</b> 120 mL amber glass unpres	<b>BP3U</b> 250 mL plastic unpres	<b>VG9H</b> 40 mL clear vial HCL	
<b>AG5U</b> 100 mL amber glass unpres	<b>BP3C</b> 250 mL plastic NaOH	<b>VG9M</b> 40 mL clear vial MeOH	<b>SP5T</b> 120 mL plastic Na Thiosulfate
<b>AG2S</b> 500 mL amber glass H2SO4	<b>BP3N</b> 250 mL plastic HNO3	<b>VG9D</b> 40 mL clear vial DI	<b>ZPLC</b> ziploc bag
<b>BG3U</b> 250 mL clear glass unpres	<b>BP3S</b> 250 mL plastic H2SO4		<b>GN:</b>

### Sample Condition Upon Receipt Form (SCUR)

Project #: \_\_\_\_\_

Client Name: Pace Madison

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waitco  
 Client  Pace Other: \_\_\_\_\_

UNIFORM  
**WO#: 40177739**  
  
 40177739

Tracking #: SP 20142303 28815 61781

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - 71    Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature    Uncorr: 4    ICorr: 4

Temp Blank Present:  yes  no    Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 10/16/18  
 Initials: \_\_\_\_\_

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°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. <u>No time</u>
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4. <u>IRWO</u>
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments

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

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

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review: AP for DM    Date: 10/16/18

October 22, 2018

Jessica Esser  
Pace Analytical Madison  
2525 Advance Road  
Madison, WI 53718

RE: Project: A184203 MADISON KIPP CORP.  
Pace Project No.: 40177836

Dear Jessica Esser:

Enclosed are the analytical results for sample(s) received by the laboratory on October 17, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40177836001	A184203-02	Water	10/12/18 14:29	10/17/18 11:55
40177836002	A184203-05	Water	10/12/18 10:50	10/17/18 11:55
40177836003	A184203-06	Water	10/12/18 11:39	10/17/18 11:55
40177836004	A184203-08	Water	10/15/18 12:12	10/17/18 11:55
40177836005	A184203-09	Water	10/15/18 13:04	10/17/18 11:55
40177836006	A184203-11	Water	10/15/18 17:16	10/17/18 11:55
40177836007	A184203-13	Water	10/15/18 00:00	10/17/18 11:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40177836001	A184203-02	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177836002	A184203-05	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177836003	A184203-06	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177836004	A184203-08	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177836005	A184203-09	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177836006	A184203-11	SM 2540C	KTS	1
		SM 2540D	KTS	1
40177836007	A184203-13	SM 2540C	KTS	1
		SM 2540D	KTS	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

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**Sample: A184203-02**      **Lab ID: 40177836001**      Collected: 10/12/18 14:29      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1090</b>	mg/L	20.0	8.7	1		10/17/18 16:32		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>9.0</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

**Sample: A184203-05**      **Lab ID: 40177836002**      Collected: 10/12/18 10:50      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>784</b>	mg/L	20.0	8.7	1		10/17/18 16:32		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.95</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

**Sample: A184203-06**      **Lab ID: 40177836003**      Collected: 10/12/18 11:39      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>708</b>	mg/L	20.0	8.7	1		10/17/18 16:32		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.95</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

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### ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

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**Sample: A184203-08**      **Lab ID: 40177836004**      Collected: 10/15/18 12:12      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>3940</b>	mg/L	20.0	8.7	1		10/17/18 16:32		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>1.0J</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

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### ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

**Sample: A184203-09**      **Lab ID: 40177836005**      Collected: 10/15/18 13:04      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1000</b>	mg/L	20.0	8.7	1		10/17/18 16:31		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>13.4</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

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### ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

**Sample: A184203-11**      **Lab ID: 40177836006**      Collected: 10/15/18 17:16      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>2120</b>	mg/L	20.0	8.7	1		10/17/18 16:31		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>1.8J</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

**Sample: A184203-13**      **Lab ID: 40177836007**      Collected: 10/15/18 00:00      Received: 10/17/18 11:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>3940</b>	mg/L	20.0	8.7	1		10/17/18 16:31		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>1.2J</b>	mg/L	2.0	0.95	1		10/18/18 14:39		

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### QUALITY CONTROL DATA

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

QC Batch: 303548

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 40177836001, 40177836002, 40177836003, 40177836004, 40177836005, 40177836006, 40177836007

METHOD BLANK: 1772986

Matrix: Water

Associated Lab Samples: 40177836001, 40177836002, 40177836003, 40177836004, 40177836005, 40177836006, 40177836007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/17/18 16:26	

LABORATORY CONTROL SAMPLE: 1772987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	615	554	90	80-120	

SAMPLE DUPLICATE: 1773055

Parameter	Units	40177836005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	1	5	

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: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

QC Batch: 303650

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 40177836001, 40177836002, 40177836003, 40177836004, 40177836005, 40177836006, 40177836007

METHOD BLANK: 1773639

Matrix: Water

Associated Lab Samples: 40177836001, 40177836002, 40177836003, 40177836004, 40177836005, 40177836006, 40177836007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	10/18/18 14:39	

LABORATORY CONTROL SAMPLE: 1773640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	98.0	98	80-120	

SAMPLE DUPLICATE: 1773641

Parameter	Units	40177836005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	13.4	13.8	3	5	

SAMPLE DUPLICATE: 1773642

Parameter	Units	40177860002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	45.8	43.3	6	5	R1

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: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

---

### DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: A184203 MADISON KIPP CORP.

Pace Project No.: 40177836

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40177836001	A184203-02	SM 2540C	303548		
40177836002	A184203-05	SM 2540C	303548		
40177836003	A184203-06	SM 2540C	303548		
40177836004	A184203-08	SM 2540C	303548		
40177836005	A184203-09	SM 2540C	303548		
40177836006	A184203-11	SM 2540C	303548		
40177836007	A184203-13	SM 2540C	303548		
40177836001	A184203-02	SM 2540D	303650		
40177836002	A184203-05	SM 2540D	303650		
40177836003	A184203-06	SM 2540D	303650		
40177836004	A184203-08	SM 2540D	303650		
40177836005	A184203-09	SM 2540D	303650		
40177836006	A184203-11	SM 2540D	303650		
40177836007	A184203-13	SM 2540D	303650		

### REPORT OF LABORATORY ANALYSIS

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**SUBCONTRACT ORDER**

**Pace Analytical - Madison**

**A184203**

40177836

**SENDING LABORATORY:**

**RECEIVING LABORATORY:**

Pace Analytical - Madison  
2525 Advance Road  
Madison, WI 53718  
Phone: 608.221.8700  
Fax: 608,221,4889  
Project Manager: Jessica Esser

Pace Analytical  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302  
Phone :(920) 469-2436  
Fax: (920) 469-8827

Turn around Time: X Normal 10/30/18  
       Rush

Project Name: Madison Kipp Corp. Semi-Annual Sampling

		Laboratory ID	Comments
Lab ID: A184203-02	Water	001	
2540D - Suspended Solids Subcontracted Analysis - Pace Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to			Dissolved Solids, Total
Lab ID: A184203-05	Water	002	
2540D - Suspended Solids Subcontracted Analysis - Pace Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to			Dissolved Solids, Total
Lab ID: A184203-06	Water	003	
2540D - Suspended Solids Subcontracted Analysis - Pace Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to			Dissolved Solids, Total
Lab ID: A184203-08	Water	004	
2540D - Suspended Solids Subcontracted Analysis - Pace Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to			Dissolved Solids, Total
Lab ID: A184203-09	Water	005	
2540D - Suspended Solids Subcontracted Analysis - Pace Containers Supplied: 14_1000mL Plastic Cool t 14_1000mL Plastic Cool t 14_1000mL Plastic Cool t 14_250mL Plastic Cool to 14_250mL Plastic Cool to			Dissolved Solids, Total

Released By: Kari-An Hillis Date: 10/16/18  
 Received By: Susan K. Ulye Date: 10/17/18  
 Released By: Spee Dee Date: 10/17/18 1155  
 Received By: Spee Dee Date: 10/17/18 1155

40177836



SUBCONTRACT ORDER

Pace Analytical - Madison

A184203

40177836

		Laboratory ID		Comments
Lab ID: A184203-11	Water	Sampled: 10/15/2018 17:16	006	
2540D - Suspended Solids				
Subcontracted Analysis - Pace				Dissolved Solids, Total
<i>Containers Supplied:</i>				
14_1000mL Plastic Cool t 14_250mL Plastic Cool to				
Lab ID: A184203-13	Water	Sampled: 10/15/2018 00:00	007	
2540D - Suspended Solids				
Subcontracted Analysis - Pace				Dissolved Solids, Total
<i>Containers Supplied:</i>				
14_1000mL Plastic Cool t 14_250mL Plastic Cool to				

Released By: Kraig Am Kiehl Date: 10/16/18 1200  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Released By: Speedee Date: 10/17/18 1155  
 Received By: Susan K. White Date: 10/17/18 1155  
Pace

40177836



 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

**Client Name:** Pace, Madison, WI Project # **WO# : 40177836**  
 Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco  
 Client  Pace Other: \_\_\_\_\_



**Tracking #:** SP007423032891857889  
**Custody Seal on Cooler/Box Present:**  Yes  No **Seals intact:**  Yes  No  
**Custody Seal on Samples Present:**  Yes  No **Seals intact:**  Yes  No  
**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other  
**Thermometer Used:** SR - N/A **Type of Ice:**  Wet  Blue  Dry  None  Samples on ice, cooling process has begun  
**Cooler Temperature:** Uncorr: ROT /Corr: \_\_\_\_\_

**Temp Blank Present:**  Yes  No **Biological Tissue is Frozen:**  Yes  No  
 Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

**Person examining contents:**  
 Date: 10-17-18  
 Initials: SA

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 checked="" type="checkbox"/> N/A	4. <u>IRWO/Subwork</u>
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

**Project Manager Review:** AL for DM **Date:** 10/17/18

October 26, 2018

Jessica Esser  
Pace Analytical Madison  
2525 Advance Road  
Madison, WI 53718

RE: Project: A184212 MADISON KIPP CORP.  
Pace Project No.: 40177989

Dear Jessica Esser:

Enclosed are the analytical results for sample(s) received by the laboratory on October 19, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40177989001	A184212-02	Water	10/16/18 13:47	10/19/18 12:45
40177989002	A184212-03	Water	10/16/18 12:08	10/19/18 12:45
40177989003	A184212-04	Water	10/16/18 11:38	10/19/18 12:45
40177989004	A184212-05	Water	10/17/18 11:00	10/19/18 12:45
40177989005	A184212-06	Water	10/16/18 15:58	10/19/18 12:45
40177989006	A184212-07	Water	10/16/18 14:27	10/19/18 12:45
40177989007	A184212-08	Water	10/16/18 00:00	10/19/18 12:45
40177989008	A184212-09	Water	10/17/18 12:05	10/19/18 12:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40177989001	A184212-02	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989002	A184212-03	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989003	A184212-04	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989004	A184212-05	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989005	A184212-06	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989006	A184212-07	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989007	A184212-08	SM 2540C	TMK	1
		SM 2540D	DEY	1
40177989008	A184212-09	SM 2540C	TMK	1
		SM 2540D	DEY	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

---

**Sample: A184212-02**      **Lab ID: 40177989001**      Collected: 10/16/18 13:47      Received: 10/19/18 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>376</b>	mg/L	20.0	8.7	1		10/22/18 13:57		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

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**Sample: A184212-03**      **Lab ID: 40177989002**      Collected: 10/16/18 12:08      Received: 10/19/18 12:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1220</b>	mg/L	20.0	8.7	1		10/22/18 13:58		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

**Sample: A184212-04**      **Lab ID: 40177989003**      Collected: 10/16/18 11:38      Received: 10/19/18 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1810</b>	mg/L	20.0	8.7	1		10/22/18 13:58		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

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### ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

**Sample: A184212-05**      **Lab ID: 40177989004**      Collected: 10/17/18 11:00      Received: 10/19/18 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1570</b>	mg/L	20.0	8.7	1		10/24/18 16:12		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

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### ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

**Sample: A184212-06**      **Lab ID: 40177989005**      Collected: 10/16/18 15:58      Received: 10/19/18 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>740</b>	mg/L	20.0	8.7	1		10/22/18 13:58		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

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### ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

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**Sample: A184212-07**      **Lab ID: 40177989006**      Collected: 10/16/18 14:27      Received: 10/19/18 12:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>746</b>	mg/L	20.0	8.7	1		10/22/18 13:58		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

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## ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

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**Sample: A184212-08**      **Lab ID: 40177989007**      Collected: 10/16/18 00:00      Received: 10/19/18 12:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>1220</b>	mg/L	20.0	8.7	1		10/22/18 13:58		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

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### ANALYTICAL RESULTS

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

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**Sample: A184212-09**      **Lab ID: 40177989008**      Collected: 10/17/18 12:05      Received: 10/19/18 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C								
Total Dissolved Solids	<b>&lt;8.7</b>	mg/L	20.0	8.7	1		10/24/18 16:12		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D								
Total Suspended Solids	<b>&lt;0.68</b>	mg/L	1.4	0.68	1		10/22/18 13:09		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: A184212 MADISON KIPP CORP.  
Pace Project No.: 40177989

QC Batch: 303902 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 40177989001, 40177989002, 40177989003, 40177989005, 40177989006, 40177989007

METHOD BLANK: 1775821 Matrix: Water  
Associated Lab Samples: 40177989001, 40177989002, 40177989003, 40177989005, 40177989006, 40177989007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/22/18 13:55	

LABORATORY CONTROL SAMPLE: 1775822

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	615	576	94	80-120	

SAMPLE DUPLICATE: 1775823

Parameter	Units	40177802002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	420	444	6	5	R1

SAMPLE DUPLICATE: 1775824

Parameter	Units	40177892001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	424	538	24	5	R1

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: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

QC Batch: 304200

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 40177989004, 40177989008

METHOD BLANK: 1777205

Matrix: Water

Associated Lab Samples: 40177989004, 40177989008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/24/18 16:12	

LABORATORY CONTROL SAMPLE: 1777206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	615	574	93	80-120	

SAMPLE DUPLICATE: 1777207

Parameter	Units	40178032001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	374	394	5	5	

SAMPLE DUPLICATE: 1777208

Parameter	Units	40178081002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1090	1060	2	5	

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: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

QC Batch: 303901

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 40177989001, 40177989002, 40177989003, 40177989004, 40177989005, 40177989006, 40177989007, 40177989008

METHOD BLANK: 1775805

Matrix: Water

Associated Lab Samples: 40177989001, 40177989002, 40177989003, 40177989004, 40177989005, 40177989006, 40177989007, 40177989008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	10/22/18 13:08	

LABORATORY CONTROL SAMPLE: 1775806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	88.0	88	80-120	

SAMPLE DUPLICATE: 1775807

Parameter	Units	40177978001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	165	212	25	5	R1

SAMPLE DUPLICATE: 1775808

Parameter	Units	40178007001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	456	480	5	5	

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: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

---

### DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: A184212 MADISON KIPP CORP.

Pace Project No.: 40177989

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40177989001	A184212-02	SM 2540C	303902		
40177989002	A184212-03	SM 2540C	303902		
40177989003	A184212-04	SM 2540C	303902		
40177989004	A184212-05	SM 2540C	304200		
40177989005	A184212-06	SM 2540C	303902		
40177989006	A184212-07	SM 2540C	303902		
40177989007	A184212-08	SM 2540C	303902		
40177989008	A184212-09	SM 2540C	304200		
40177989001	A184212-02	SM 2540D	303901		
40177989002	A184212-03	SM 2540D	303901		
40177989003	A184212-04	SM 2540D	303901		
40177989004	A184212-05	SM 2540D	303901		
40177989005	A184212-06	SM 2540D	303901		
40177989006	A184212-07	SM 2540D	303901		
40177989007	A184212-08	SM 2540D	303901		
40177989008	A184212-09	SM 2540D	303901		

### REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER

Pace Analytical - Madison

A184212

TL

4077989

SENDING LABORATORY:

Pace Analytical - Madison
2525 Advance Road
Madison, WI 53718
Phone: 608.221.8700
Fax: 608,221,4889
Project Manager: Jessica Esser

RECEIVING LABORATORY:

Pace Analytical
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Phone : (920) 469-2436
Fax: (920) 469-8827

Turn around Time: [X] Normal 10/31/18
[ ] Rush

Project Name: Madison Kipp Corp. Semi-Annual Sampling

Table with 4 columns: Lab ID, Sample Type, Sampled Time, Laboratory ID, and Comments. Contains 6 rows of lab data for suspended solids analysis.

Signature lines for Released By and Received By with dates and initials.

4077989 (vertical handwritten note)



SUBCONTRACT ORDER  
Pace Analytical - Madison  
A184212

40177989

			Laboratory ID	Comments
Lab ID: A184212-07	Water	Sampled: 10/16/2018 14:27	006	
2540D - Suspended Solids				Dissolved Solids, Total
Subcontracted Analysis - Pace				
Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to				
Lab ID: A184212-08	Water	Sampled: 10/16/2018 00:00	007	
2540D - Suspended Solids				Dissolved Solids, Total
Subcontracted Analysis - Pace				
Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to				
Lab ID: A184212-09	Water	Sampled: 10/17/2018 12:05	008	
2540D - Suspended Solids				Dissolved Solids, Total
Subcontracted Analysis - Pace				
Containers Supplied: 14_1000mL Plastic Cool t 14_250mL Plastic Cool to				

	10/18/18			
Released By	Date	Received By	Date	
	10/19/18 1245		10/19/18 1245	
Released By	Date	Received By	Date	

40177989



**Sample Condition Upon Receipt Form (SCUR)**

Project #:

Client Name: Pace Madison

**WO# : 40177989**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: SP 007423 03 29118 41379

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - 71 Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1 /ICorr: 1

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 10/19/18  
Initials: \_\_\_\_\_

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°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. <u>no time</u>
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4. <u>IRWO</u>
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>all samples have a letter after the ID number</u>
-Includes date/time/ID/Analysis Matrix: <u>W</u>		<u>10/19/18</u>
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

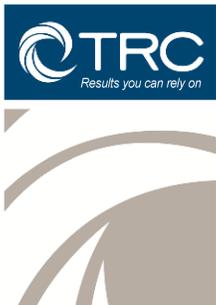
**Client Notification/ Resolution:** If checked, see attached form for additional comments   
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_

Project Manager Review: AL for DM Date: 10/19/18

# Appendix G

## Soil Vapor Extraction System Shut Down and Soil Gas Analytical Results

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February 8, 2019

Mr. Michael Schmoller  
Wisconsin Department of Natural Resources  
South Central Region  
3911 Fish Hatchery Road  
Fitchburg, WI 53711

Subject: Update on Soil Vapor Extraction System Shut Down and Soil Gas Analytical Results  
Madison Kipp Corporation, Madison, Wisconsin  
BRRTS #02-13-578015

Dear Mr. Schmoller:

TRC Environmental (TRC) on behalf of Madison-Kipp Corporation (MKC) is providing this letter to update the Wisconsin Department of Natural Resources (WDNR) on the performance monitoring results and evaluation for the current shutdown of the soil vapor extraction (SVE) system at MKC's facility located at 201 Waubesa Street in Madison (Site) (Figure 1). This work is being completed per TRC's *Soil Vapor Extraction Shut Down & Monitoring Well Network Modification Work Plan* (August 22, 2018) that was approved by WDNR on September 19, 2018.

### **Background**

The SVE system consists of nine extraction wells located along the east-northeast boundary of the Site. The system began operating in 2013 to extract and treat soil vapors emanating from soil and groundwater impacted with volatile organic compounds (VOCs). The primary objectives of the SVE system were to reduce the mass of VOCs onsite and to lower the potential of soil vapor migration offsite.

After review of historical soil gas analytical results and the SVE system's current mass removal rates, MKC decided to pursue a temporary shutdown of the system to evaluate if its continued operation is necessary. Performance monitoring is part of the shutdown process and includes soil gas sampling completed before and after shutdown.

### **Soil Gas Sampling Events and SVE Shut Down**

A total of seven soil gas vapor probes (VP) were selected to be sampled before and after the shutdown of the SVE system. These vapor probes (shown in Figure 2) include VP-237 along

Mr. Michael Schmoller  
Wisconsin Department of Natural Resources  
February 8, 2019  
Page 2

the west side of MKC property, VP-3 VP-6, and VP-102 along the north/northeast side, and VP-126, VP-1S, and VP-210 along the east side. A duplicate sample was collected during each event as a quality control measure. Each sample was analyzed for cis-1,2 dichloroethene, trans-1,2 dichloroethene, tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride.

Prior to the SVE system shutdown TRC collected soil gas samples to establish baseline concentrations while the system was operating. On October 8, 2018, samples were collected from vapor probes VP-237, VP-126, VP-1S, and VP-210. Due to heavy precipitation and a high groundwater table, water was pulled into the vapor sampling equipment while purging vapor probes VP-3, VP-6, and VP-102; and no samples could be collected. TRC returned to the site on October 18 and was able to sample VP-6 and VP-102 successfully. Water was still present within VP-3; and therefore, a soil gas sample could not be collected from this point. Vapor probe VP-3 was again checked on October 25, but water remained in the probe and no sample could be collected.

On October 25, 2018, the SVE system was shut down and winterized. Additionally, the groundwater extraction and treatment system (GETS) was adjusted to run at 40 gpm during the SVE shutdown to ensure proper operation of the treatment system. The GETS system will remain running at 40 gpm during the evaluation of the SVE shutdown.

Two post-SVE shutdown soil gas sampling events occurred between November 27-28 and on December 17, 2018. During both events, VP-3 was purged, but no sample could be collected because water continued to be drawn into the vapor sampling equipment at this location. All six of the other vapor probes were sampled during each post-shutdown event.

### **Analytical Results and Discussion**

Table 1 shows the historical soil gas analytical results for all vapor probe locations, and the latest results from the past three months of soil gas sampling. Laboratory analytical reports from the October, November, and December 2018 sampling events are included in Attachment A.

The VOCs detected in the soil gas samples are mainly TCE and PCE. The results from the recent performance monitoring for the SVE shutdown indicate the following:

- Northern Soil Gas Probes (VP-6 and VP-102):
  - TCE and PCE were detected during all three sampling events.



- VP-102 is the sample point with the highest vapor concentrations, and concentrations of TCE and PCE were slightly over the residential soil gas vapor risk screening levels in samples collected in October and November. The concentrations decreased and were at or below residential soil vapor screening levels in the most recent December sampling event.
- The concentrations of TCE and PCE in VP-6 were below the WDNR's residential soil gas vapor risk screening levels during all three sampling events.
- The concentrations detected after SVE shutdown were similar to, or less than, the concentrations detected while the SVE system was operating.
- Western and Eastern Soil Gas Probes (VP-126, VP-1S, VP-210, and VP-237):
  - PCE was the only constituent detected during all three sampling events.
  - The PCE concentrations detected were all below the WDNR's residential soil gas vapor risk screening levels.
  - The concentrations detected after SVE shutdown were similar to, or less than, the concentrations detected while the SVE system was operating.
  - The results of the SVE shutdown performance monitoring indicate that shutdown of the SVE system has not caused an appreciable change in the soil gas VOC concentrations at the Site.

### **Recommendations**

No increases in the soil gas VOC concentrations occurred after the October 25, 2018 shutdown. TRC proposes to keep the SVE system off and to collect another set of soil gas samples in July 2019 during the annual sampling event. The same seven soil gas vapor probes are proposed for the annual sampling event. If the results from July are consistent with the current trends, the data will support that the SVE system is no longer needed and can be permanently shut down.

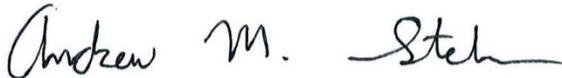


Mr. Michael Schmoller  
Wisconsin Department of Natural Resources  
February 8, 2019  
Page 4

If you have any questions or comments related to this request, please contact Katherine Vater at 608.826.3663 or at [kvater@trcsolutions.com](mailto:kvater@trcsolutions.com) or Andrew Stehn at 608.826.3665 or at [astehn@trcsolutions.com](mailto:astehn@trcsolutions.com). We appreciate your assistance and look forward to discussing these results as needed.

Sincerely,

TRC Environmental Corporation



Andrew Stehn, P.E.  
Senior Project Engineer



Katherine Vater, P.E.  
Project Manger

Attachments:

Table 1: Soil Gas Analytical Results Summary

Figure 1: Site Location Map

Figure 2: Soil Vapor Extraction Well and Vapor Monitoring Point Location Map

Attachment A - Soil Gas Laboratory Reports

cc: Tony Koblinski – MKC (electronic)  
Matt Sill – MKC (electronic)



**Table 1**  
**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-1N	VP-1N	VP-1N	VP-1N	VP-1N	VP-1N	VP-1N	VP-1N
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	9/17/2009	10/26/2012	7/15/2013	1/29/2014	7/22/2014	7/22/2015	7/20/2016	7/25/2017
<b>VOC</b>												
cis-1,2-Dichloroethene	NE	NE	NE	NE	--	0.52	2.6	< 0.14	< 0.17	< 0.16	11	< 0.093
trans-1,2-Dichloroethene	NE	NE	NE	NE	--	< 0.36	< 0.26	< 0.14	< 0.17	< 0.16	< 0.13	< 0.18
1,2-Dichloroethene	NE	NE	NE	NE	< 20	0.52	2.60	< 0.14	< 0.17	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	160	65	76	< 0.14	1.8	0.29	31	< 0.064
Trichloroethene	1,600	39	160	13	< 10	0.52	1.1	< 0.14	< 0.17	< 0.16	<b>13</b>	< 0.12
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	--	< 0.36	< 0.26	< 0.14	< 0.17	< 0.16	< 0.19	< 0.072

**Footnotes:**

1 = VALs in accordance with *Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin*, <http://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>

2 = Non-Res. Deep Soil Gas VAL used 0.001 AF; Res. Deep Soil Gas VAL used 0.01 AF

3 = Vinyl chloride was analyzed using the modified EPA Method TO-15 GC/MS SIM for the July 22, 2015 and July 24, 2015 monitoring event. For monitoring points where no detection was present, the concentration is noted less than the reporting limit.

4 = VRSL values from *WI Vapor Quick Look-Up Table*, <https://dnr.wi.gov/topic/Brownfields/documents/vapor/vapor-quick.pdf>

5 = Non-Res. corresponds to Large Commercial/Industrial category of *WI Vapor Quick Look-Up Table*

Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

**Notes:**

**All concentrations presented in this table are reported in parts per billion by volume (ppbv) unless otherwise noted.**  
Res./Non-Res. VAL provided for comparison purposes.

All values compared to residential sub-slab vapor risk screening levels (VRSLs)

**BOLD** = result is equal to or exceeds residential sub-slab VRSL

< = constituent not detected above noted laboratory method detection limit

> = greater than

-- = not designated

\*D = limit of detection not achievable due to dilution

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AF = Attenuation Factor

NE = Criteria Not Established

NA = Not Analyzed

DUP = Duplicate sample collected

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**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-1S	VP-1S	VP-1S	VP-1S	VP-1S	VP-1S	VP-1S	VP-1S	VP-1S	
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	9/17/2009	10/26/2012	7/15/2013	1/29/2014	7/22/2014	7/22/2015	7/20/2016	07/25/2017	10/08/2018	11/27/2018
<b>VOC</b>														
cis-1,2-Dichloroethene	NE	NE	NE	NE	--	< 0.15	0.26	< 0.14	0.19	< 0.14	7.6	< 0.098	< 0.84	<0.75
trans-1,2-Dichloroethene	NE	NE	NE	NE	--	< 0.15	< 0.16	< 0.14	< 0.16	< 0.14	< 0.14	< 0.19	< 0.84	<0.75
1,2-Dichloroethene	NE	NE	NE	NE	341	< 0.15	0.26	< 0.14	0.19	NA	NA	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	<b>1,400</b>	4.8	33	0.9	4.7	< 0.14	31	6.2	12	14
Trichloroethene	1,600	39	160	13	<b>260</b>	0.15	0.44	< 0.14	0.21	< 0.14	8.2	< 0.12	< 0.84	<0.75
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	--	< 0.15	< 0.16	< 0.14	< 0.16	< 0.014	< 0.21	< 0.076	< 0.84	<0.75

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Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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**Table 1**  
**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-2N	VP-2N	VP-2N	VP-2N	VP-2N	VP-2N	VP-2N	VP-2N
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	9/17/2009	10/26/2012	7/15/2013	1/29/2014	7/22/2014	7/22/2015	7/20/2016	07/25/2017
<b>VOC</b>												
cis-1,2-Dichloroethene	NE	NE	NE	NE	NA	< 0.93	2.5	< 0.14	< 0.18	< 0.16	7.8	< 0.094
trans-1,2-Dichloroethene	NE	NE	NE	NE	NA	< 0.93	< 0.39	< 0.14	< 0.18	< 0.16	< 0.14	< 0.19
1,2-Dichloroethene	NE	NE	NE	NE	500	< 0.93	2.5	< 0.14	< 0.18	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	<b>1,300</b>	160	110	< 0.14	1.5	< 0.16	20	< 0.065
Trichloroethene	1,600	39	160	13	<b>370</b>	< 0.93	1.4	< 0.14	< 0.18	< 0.16	8.2	< 0.12
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	NA	< 0.93	< 0.39	< 0.14	< 0.18	< 0.016	< 0.21	< 0.073

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Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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VOCs = Volatile Organic Compounds

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**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	9/17/2009	10/26/2012	7/15/2013	1/29/2014	7/22/2014	7/22/2015
<b>VOC</b>										
cis-1,2-Dichloroethene	NE	NE	NE	NE	--	< 0.14	0.54	0.36	0.19	2.6
trans-1,2-Dichloroethene	NE	NE	NE	NE	--	< 0.14	< 0.31	< 0.14	< 0.15	0.32
1,2-Dichloroethene	NE	NE	NE	NE	332	< 0.14	0.54	NA	0.19	NA
Tetrachloroethene	27,000	620	2,700	210	<b>1,100</b>	12	86	44	2.0	44
Trichloroethene	1,600	39	160	13	<b>240</b>	< 0.14	0.38	0.22	< 0.15	1.4
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	--	< 0.14	< 0.31	< 0.14	< 0.15	< 0.017

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Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-3	VP-3	VP-3 (DUP)	VP-3	VP-4	VP-4	VP-4	VP-4
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	3/30/2012	10/26/2012	10/26/2012	7/22/2014	3/30/2012	10/26/2012	7/23/2014	7/24/2015
<b>VOC</b>												
cis-1,2-Dichloroethene	NE	NE	NE	NE	0.60	< 0.16	< 0.15	0.58	< 0.15	< 0.15	0.27	0.18 J
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 0.17	< 0.16	< 0.15	< 0.17	< 0.15	< 0.15	< 0.16	< 0.18
1,2-Dichloroethene	NE	NE	NE	NE	0.6	< 0.16	< 0.15	0.58	< 0.15	< 0.15	0.27	NA
Tetrachloroethene	27,000	620	2,700	210	18	3.2	3.8	25	0.68	0.20	< 0.16	0.19
Trichloroethene	1,600	39	160	13	2.0	0.36	0.44	3.6	< 0.15	< 0.15	< 0.16	0.29
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 0.17	< 0.16	< 0.15	< 0.17	< 0.15	< 0.15	< 0.16	< 0.018

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Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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VAL = Vapor Action Level

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Table 1  
Soil Gas Analytical Results Summary  
Madison-Kipp Corporation  
Madison, Wisconsin

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-5	VP-5	VP-5	VP-6	VP-6	VP-6	VP-6	VP-6	VP-6	VP-6	VP-6	VP-6	
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	3/30/2012	10/26/2012	7/22/2014	3/30/2012	10/26/2012	4/29/2013	1/29/2014	7/22/2014	7/22/2015	7/20/2016	07/25/2017	10/18/2018	11/28/2018
<b>VOC</b>																	
cis-1,2-Dichloroethene	NE	NE	NE	NE	1.1	26	2.6	28	190	2100	310	1.0	780	< 0.23	< 0.20	< 0.84	<0.74
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 0.15	0.38	< 0.17	1.7	5.8	82	16	< 0.16	58	< 0.14	< 0.40	< 0.84	<0.74
1,2-Dichloroethene	NE	NE	NE	NE	1.1	26.38	2.6	29.7	195.8	2182	326	1	NA	NA	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	2.1	27	0.59	63	190	<b>2,900</b>	<b>550</b>	< 0.16	<b>470</b>	<b>280</b>	<b>380</b>	88	55
Trichloroethene	1,600	39	160	13	1.1	<b>22</b>	2.4	<b>20</b>	<b>72</b>	<b>1,100</b>	<b>240</b>	0.34	<b>700</b>	<b>19</b>	10	2.5	1.3
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 0.15	1.2	0.38	<b>53</b>	<b>23</b>	<b>130</b>	<b>28</b>	< 0.16	<b>30</b>	< 0.20	< 0.16	< 0.84	<0.74

**Footnotes:**

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Updated By: B. Wachholz 1/31/2019  
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VAL = Vapor Action Level

VRSL = Sub-Slab Vapor Risk Screening Levels

VOCs = Volatile Organic Compounds

**Table 1**  
**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-102	VP-102	VP-102	VP-102	VP-102	VP-102	VP-102	VP-102 DUP	VP-102	VP-102	VP-102 DUP
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/24/2012	1/29/2014	7/23/2014	7/22/2015	7/20/2016	07/25/2017	07/25/2017	10/18/2018	11/27/2018	11/27/2018
<b>VOC</b>															
cis-1,2-Dichloroethene	NE	NE	NE	NE	1,940 *IS	45	0.56	< 0.16	0.24	< 0.46	< 0.39	< 0.39	< 1.6	<1.2	<1.2
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 400 *IS*D	< 3.4	< 0.14	< 0.16	< 0.17	< 0.28	< 0.77	< 0.76	< 1.6	<1.2	<1.2
1,2-Dichloroethene	NE	NE	NE	NE	1,940	45	0.56	< 0.16	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	<b>4,620 *IS</b>	<b>1,200</b>	2	0.17	< 0.17	<b>400</b>	<b>820</b>	<b>810</b>	<b>380</b>	<b>260</b>	<b>260</b>
Trichloroethene	1,600	39	160	13	<b>1,770 *IS</b>	<b>240</b>	1.2	< 0.16	0.17	<b>56</b>	<b>75</b>	<b>74</b>	<b>38</b>	<b>15</b>	<b>18</b>
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 400 *IS*D	< 3.4	< 0.14	< 0.16	< 0.017	< 0.42	< 0.30	< 0.30	< 1.6	<1.2	<1.2

**Footnotes:**

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2 = Non-Res. Deep Soil Gas VAL used 0.001 AF; Res. Deep Soil Gas VAL used 0.01 AF  
3 = Vinyl chloride was analyzed using the modified EPA Method TO-15 GC/MS SIM for the July 22, 2015 and July 24, 2015 monitoring event. For monitoring points where no detection was present, the concentration is noted less than the reporting limit.  
4 = VRSL values from *WI Vapor Quick Look-Up Table*, <https://dnr.wi.gov/topic/Brownfields/documents/vapor/vapor-quick.pdf>  
5 = Non-Res. corresponds to Large Commercial/Industrial category of *WI Vapor Quick Look-Up Table*

Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

**Notes:**

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Res./Non-Res. VAL provided for comparison purposes.

All values compared to residential sub-slab vapor risk screening levels (VRSLs)

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**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-114	VP-114	VP-114	VP-114	VP-114
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/24/2012	7/15/2013	1/29/2014	7/23/2014
<b>VOC</b>									
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 400 *IS*D	< 0.16	< 0.15	< 0.14	< 0.16
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 400 *IS*D	< 0.16	< 0.15	< 0.14	< 0.16
1,2-Dichloroethene	NE	NE	NE	NE	< 400	< 0.16	< 0.15	< 0.14	< 0.16
Tetrachloroethene	27,000	620	2,700	210	<b>2,540 *IS</b>	10	24	< 0.14	2.9
Trichloroethene	1,600	39	160	13	< 400 *IS*D	< 0.16	< 0.15	< 0.14	< 0.16
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 400 *IS*D	< 0.16	< 0.15	< 0.14	< 0.16

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Updated By: B. Wachholz 1/31/2019

Checked By: L. Auner 1/31/2019

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**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-126	VP-126	VP-126	VP-126	VP-126	VP-126	VP-126 (DUP)	VP-126	VP-126 DUP	VP-126	
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/24/2012	7/15/2013	1/29/2014	7/23/2014	7/24/2015	7/20/2016	7/20/2016	10/08/2018	10/08/2018	11/27/2018
<b>VOC</b>															
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 200 *D	< 0.16	< 0.16	< 0.14	< 0.17	< 0.17	< 0.22	< 0.24	< 0.88	1.4	<0.73
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 200 *D	< 0.16	< 0.16	< 0.14	< 0.17	< 0.17	< 0.13	< 0.14	< 0.88	< 0.82	<0.73
1,2-Dichloroethene	NE	NE	NE	NE	< 200	< 0.16	< 0.16	< 0.14	< 0.17	NA	NA	NA	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	<b>452</b>	1.4	4.4	< 0.14	0.48	0.75	< 0.16	< 0.17	< 0.88	< 0.82	0.98
Trichloroethene	1,600	39	160	13	< 200 *D	< 0.16	< 0.16	< 0.14	< 0.17	< 0.17	< 0.25	< 0.27	< 0.88	< 0.82	<0.73
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 200 *D	< 0.16	< 0.16	< 0.14	< 0.17	< 0.017	< 0.20	< 0.21	< 0.88	< 0.82	<0.73

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Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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**Table 1**  
**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-202	VP-202	VP-202	VP-202
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/24/2012	7/16/2013	1/30/2014
<b>VOC</b>								
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 0.085 *IS	< 0.16	< 0.16	< 0.14
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 0.085 *IS	< 0.16	< 0.16	< 0.14
1,2-Dichloroethene	NE	NE	NE	NE	< 0.085	< 0.16	< 0.16	< 0.14
Tetrachloroethene	27,000	620	2,700	210	5.7 *IS	9.1	8	1.5
Trichloroethene	1,600	39	160	13	< 0.085 *IS	0.58	< 0.16	< 0.14
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 0.085 *IS	< 0.16	< 0.16	< 0.14

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Checked By: L. Auner 1/31/2019

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**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-210	VP-210	VP-210	VP-210	VP-210	VP-210	VP-210	VP-210	VP-210	VP-210
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/25/2012	7/16/2013	1/30/2014	7/23/2014	7/24/2015	7/22/2016	07/25/2017	10/08/2018	11/27/2018
<b>VOC</b>														
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 0.085 *IS	< 0.17	< 0.15	< 0.14	< 0.17	< 0.17	< 0.23	< 0.095	< 0.92	<0.75
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 0.085 *IS	< 0.17	< 0.15	< 0.14	< 0.17	< 0.17	< 0.14	< 0.19	< 0.92	<0.75
1,2-Dichloroethene	NE	NE	NE	NE	< 0.085	< 0.17	< 0.15	< 0.14	< 0.17	NA	NA	NA	NA	NA
Tetrachloroethene	27,000	620	2,700	210	3.22	3.9	3.6	< 0.14	5.4	5.2	5.1	7.8	3.0	1.2
Trichloroethene	1,600	39	160	13	< 0.085 *IS	< 0.17	0.26	< 0.14	< 0.17	< 0.17	< 0.26	< 0.12	< 0.92	<0.75
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 0.085 *IS	< 0.17	< 0.15	< 0.14	< 0.17	< 0.017	< 0.21	< 0.074	< 0.92	<0.75

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Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-222	VP-222	VP-222	VP-222	VP-222
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/25/2012	7/16/2013	1/30/2014	7/23/2014
<b>VOC</b>									
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 20 *D	< 0.49	< 0.92	< 0.14	< 0.89
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 20 *D	< 0.49	< 0.92	< 0.14	< 0.89
1,2-Dichloroethene	NE	NE	NE	NE	< 20	< 0.49	< 0.92	< 0.14	< 0.89
Tetrachloroethene	27,000	620	2,700	210	77	120	<b>280</b>	22	150
Trichloroethene	1,600	39	160	13	< 20 *D	< 0.49	< 0.92	< 0.14	< 0.89
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 20 *D	< 0.49	< 0.92	< 0.14	< 0.89

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Updated By: B. Wachholz 1/31/2019

Checked By: L. Auner 1/31/2019

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**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-237	VP-237	VP-237	VP-237	VP-237	VP-237	VP-237	VP-249	VP-249	VP-249	
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/25/2011	10/25/2012	7/17/2013	1/30/2014	7/23/2014	7/24/2015	10/08/2018	11/28/2018	11/25/2011	10/25/2012	7/17/2013
<b>VOC</b>															
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 20	< 0.16	< 0.16	< 0.14	< 0.33	< 0.17	< 0.86	<0.74	< 0.085	< 0.16	< 0.14
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 20	< 0.16	< 0.16	< 0.14	< 0.33	< 0.17	< 0.86	<0.74	< 0.085	< 0.16	< 0.14
1,2-Dichloroethene	NE	NE	NE	NE	< 20	< 0.16	< 0.16	< 0.14	< 0.33	NA	NA	NA	< 0.085	< 0.16	< 0.14
Tetrachloroethene	27,000	620	2,700	210	53	63	30	3.6	59	43	19	9.5	8.44	23	3.3
Trichloroethene	1,600	39	160	13	< 20	< 0.16	< 0.16	< 0.14	< 0.33	< 0.17	< 0.86	<0.74	< 0.085	< 0.16	< 0.14
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 20	< 0.16	< 0.16	< 0.14	< 0.33	< 0.017	< 0.86	<0.74	< 0.085	< 0.16	< 0.14

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**Soil Gas Analytical Results Summary**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

SAMPLE LOCATION SAMPLE DATE	DEEP SOIL GAS		SUB-SLAB VAPOR		VP-261	VP-261	VP-261	VP-261	VP-261	VP-261
	NON-RES. <sup>1,2</sup>	RES. <sup>1,2</sup>	NON-RES. <sup>4,5</sup>	RES. <sup>4</sup>	11/28/2011	7/17/2013	1/30/2014	7/23/2014	7/23/2014	7/24/2015
<b>VOC</b>										
cis-1,2-Dichloroethene	NE	NE	NE	NE	< 0.085 *IS	< 0.15	< 0.13	< 0.16	< 0.16	< 0.17
trans-1,2-Dichloroethene	NE	NE	NE	NE	< 0.085 *IS	< 0.15	< 0.13	< 0.16	< 0.16	< 0.17
1,2-Dichloroethene	NE	NE	NE	NE	< 0.085	< 0.15	< 0.13	< 0.16	< 0.16	NA
Tetrachloroethene	27,000	620	2,700	210	< 0.085 *IS	1.2	1.2	5.0	4.3	15
Trichloroethene	1,600	39	160	13	< 0.085 *IS	< 0.15	< 0.13	< 0.16	< 0.16	< 0.17
Vinyl chloride <sup>3</sup>	11,000	65	1,100	22	< 0.085 *IS	< 0.15	< 0.13	< 0.16	< 0.16	< 0.017

Updated By: B. Wachholz 1/31/2019  
Checked By: L. Auner 1/31/2019

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> = greater than

-- = not designated

\*D = limit of detection not achievable due to dilution

\*IS = the internal standard quality control limit is exceeded

AF = Attenuation Factor

NE = Criteria Not Established

NA= Not Analyzed

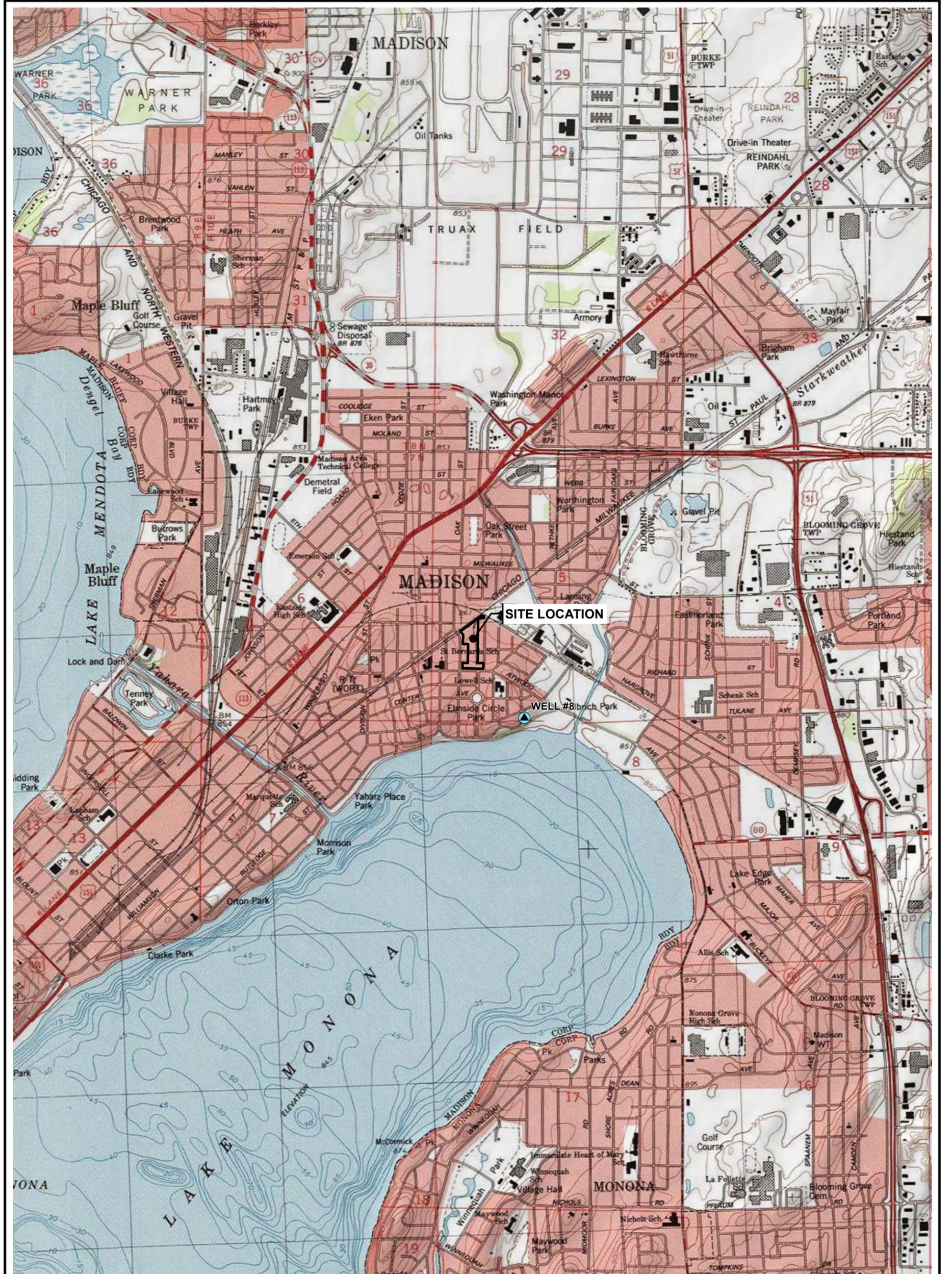
DUP = Duplicate sample collected

Res. = Residential

VAL = Vapor Action Level

VRSL = Sub-Slab Vapor Risk Screening Levels

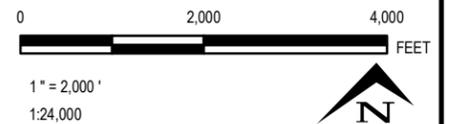
VOCs = Volatile Organic Compounds



**LEGEND**

-  SITE PROPERTY BOUNDARY
-  MUNICIPAL SUPPLY WELL

BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES, "USA TOPO MAPS" WEB BASEMAP SERVICE LAYER.



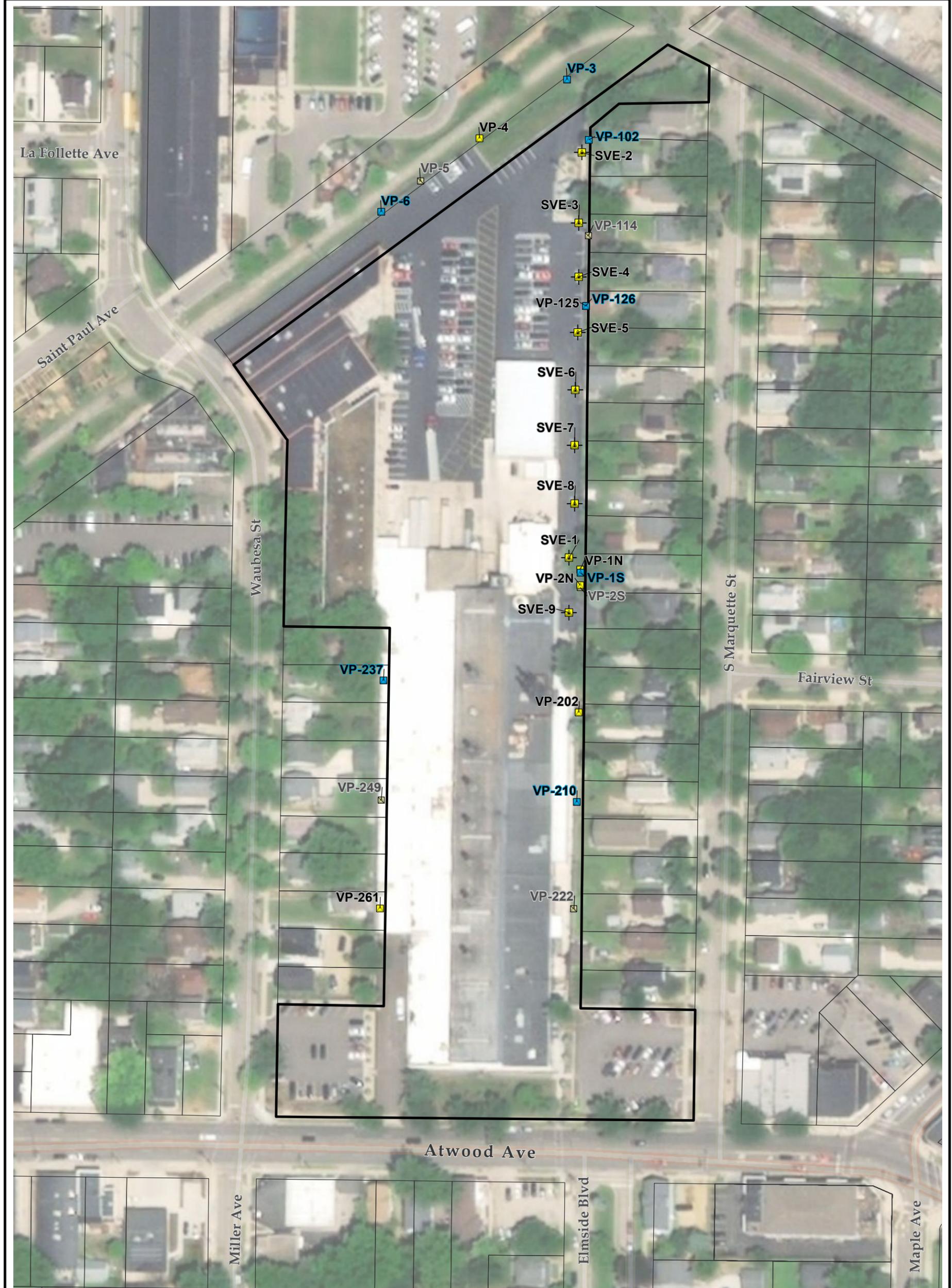

708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT: **MADISON-KIPP CORPORATION**  
 201 WAUBESA STREET  
 MADISON, WISCONSIN

TITLE: **SITE LOCATION MAP**

DRAWN BY: A.ADAIR  
 CHECKED BY: A.STEHN  
 APPROVED BY: K.VATER  
 DATE: FEBRUARY 2019  
 PROJ. NO.: 323372  
 FILE: 266431-2018S2-014.mxd

**FIGURE 1**



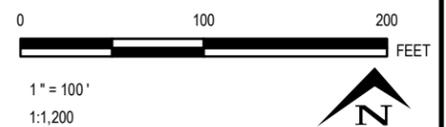
**LEGEND**

- SITE PROPERTY BOUNDARY
- SOIL EXTRACTION WELL
- VAPOR MONITORING POINT

- VAPOR MONITORING POINT (PERFORMANCE MONITORING POINT FOR SVE SHUTDOWN)
- VAPOR MONITORING POINT (LOST)

**NOTES**

1. BASE MAP IMAGERY FROM ESRI/DIGITAL GLOBE, 2016.
2. PARCEL INFORMATION FROM WISCONSIN STATE CARTOGRAPHER'S OFFICE, 2018




708 Heartland Trail  
 Suite 3000  
 Madison, WI 53717  
 Phone: 608.826.3600

PROJECT:	<b>MADISON-KIPP CORPORATION 201 WAUBESA STREET MADISON, WISCONSIN</b>
TITLE:	<b>SOIL VAPOR EXTRACTION WELL AND VAPOR MONITORING POINT LOCATION MAP</b>

DRAWN BY:	A.ADAIR
CHECKED BY:	A.STEHN
APPROVED BY:	K.VATER
DATE:	FEBRUARY 2019
PROJ. NO.:	323372
FILE:	266431-2018S2-013.mxd
<b>FIGURE 2</b>	

**Attachment A**  
**Soil Gas Laboratory Reports**

10/24/2018

Mr. Andrew Stehn

TRC Corporation (RMT)

708 Heartland Trail

Suite 3000

Madison WI 53717

Project Name: MKC

Project #: 292257 Ph. 3

Workorder #: 1810235

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 10/11/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott

Project Manager

**WORK ORDER #: 1810235**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373/223544
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257 Ph. 3 MKC
<b>DATE RECEIVED:</b>	10/11/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	10/24/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1S	TO-15	6.0 "Hg	5 psi
02A	VP-210	TO-15	8.0 "Hg	5 psi
03A	VP-126	TO-15	7.0 "Hg	5 psi
04A	VP-237	TO-15	6.5 "Hg	5 psi
05A	DUP-01	TO-15	5.5 "Hg	5 psi
06A	Lab Blank	TO-15	NA	NA
07A	CCV	TO-15	NA	NA
08A	LCS	TO-15	NA	NA
08AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 10/24/18

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1810235**

Five 6 Liter Summa Canister samples were received on October 11, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS**

**Client Sample ID: VP-1S**

**Lab ID#: 1810235-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.84	12	5.7	82

**Client Sample ID: VP-210**

**Lab ID#: 1810235-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.92	3.0	6.2	20

**Client Sample ID: VP-126**

**Lab ID#: 1810235-03A**

No Detections Were Found.

**Client Sample ID: VP-237**

**Lab ID#: 1810235-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.86	19	5.8	130

**Client Sample ID: DUP-01**

**Lab ID#: 1810235-05A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
cis-1,2-Dichloroethene	0.82	1.4	3.2	5.6



Air Toxics

Client Sample ID: VP-1S

Lab ID#: 1810235-01A

EPA METHOD TO-15 GC/MS

File Name:	p101506	Date of Collection:	10/8/18 10:17:00 AM
Dil. Factor:	1.68	Date of Analysis:	10/15/18 02:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Trichloroethene	0.84	Not Detected	4.5	Not Detected
Tetrachloroethene	0.84	12	5.7	82
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: VP-210

Lab ID#: 1810235-02A

EPA METHOD TO-15 GC/MS

File Name:	p101507	Date of Collection:	10/8/18 11:27:00 AM
Dil. Factor:	1.83	Date of Analysis:	10/15/18 03:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.92	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Trichloroethene	0.92	Not Detected	4.9	Not Detected
Tetrachloroethene	0.92	3.0	6.2	20
trans-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: VP-126

Lab ID#: 1810235-03A

EPA METHOD TO-15 GC/MS

File Name:	p101508	Date of Collection:	10/8/18 1:41:00 PM
Dil. Factor:	1.75	Date of Analysis:	10/15/18 03:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: VP-237

Lab ID#: 1810235-04A

EPA METHOD TO-15 GC/MS

File Name:	p101509	Date of Collection:	10/8/18 4:22:00 PM
Dil. Factor:	1.71	Date of Analysis:	10/15/18 04:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Trichloroethene	0.86	Not Detected	4.6	Not Detected
Tetrachloroethene	0.86	19	5.8	130
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: DUP-01

Lab ID#: 1810235-05A

EPA METHOD TO-15 GC/MS

File Name:	p101514	Date of Collection:	10/8/18
Dil. Factor:	1.64	Date of Analysis:	10/15/18 06:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.82	1.4	3.2	5.6
Trichloroethene	0.82	Not Detected	4.4	Not Detected
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: Lab Blank

Lab ID#: 1810235-06A

EPA METHOD TO-15 GC/MS

File Name:	p101505	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/15/18 10:17 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: CCV

Lab ID#: 1810235-07A

EPA METHOD TO-15 GC/MS

File Name:	p101502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/15/18 08:58 AM

Compound	%Recovery
Vinyl Chloride	118
cis-1,2-Dichloroethene	103
Trichloroethene	94
Tetrachloroethene	95
trans-1,2-Dichloroethene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: LCS

Lab ID#: 1810235-08A

EPA METHOD TO-15 GC/MS

File Name:	p101503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/15/18 09:25 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	122	70-130
cis-1,2-Dichloroethene	95	70-130
Trichloroethene	95	70-130
Tetrachloroethene	97	70-130
trans-1,2-Dichloroethene	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: LCSD

Lab ID#: 1810235-08AA

EPA METHOD TO-15 GC/MS

File Name:	p101504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/15/18 09:51 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	115	70-130
cis-1,2-Dichloroethene	92	70-130
Trichloroethene	91	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	110	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager AEE Andrew Stehn Ausha Scott  
 Collected by: (Print and Sign) Alia Fright  
 Company TRC Email astehn@trcsolutions.com  
 Address 708 Heartland Trail Suite 300 City Madison State WI Zip 53717  
 Phone (608) 826-3665 Fax -

<b>Project Info:</b> P.O. # <u>117373</u> Project # <u>292257 Ph. 3</u> Project Name <u>MKC</u>	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
--	---	---

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	VP-1S	34744	10/8/18	09:47-10:17	TO-15 (see notes)	-30 inHg	-7 inHg		
02A	VP-210	00967	↓	10:57-11:27	↓	-27 inHg	-5.5 inHg		
03A	VP-126	6L0026	↓	13:02-13:41	↓	-30	-7		
04A	VP-237	34382	↓	15:41-16:22	↓	-29	-6.5		
05A	DUP-01	96100	10/8/18		TO-15 (see notes)	-29.5	-5.5		

Relinquished by: (signature) Date/Time <u>Alia Fright</u> 10/9/18 10:00	Received by: (signature) Date/Time <u>Jan EARL</u> 10/11/18 0930
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

**Notes:** Analyze using method TO-15 for PCE, TCE, VC, cis-1,2 DCE, and trans-1,2-DCE.

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>FedEx</u>		<u>NA</u>	<u>6000</u>	Yes No <u>None</u>	<u>1810235</u>

11/8/2018

Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: MKC  
Project #: 292257 Ph. 3  
Workorder #: 1810600

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 10/26/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1810600**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373/223544
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	292257 Ph. 3 MKC
<b>DATE RECEIVED:</b>	10/26/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	11/08/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-102	TO-15	4.5 "Hg	5 psi
02A	VP-6	TO-15	5.9 "Hg	5 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 11/08/18

Certification numbers: AZ Licensure AZ0775, FL NELAP - E8 , LA NELAP - 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP CA009332018-10, VA NELAP - 9505, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-011, Effective date: 10/18/2018, Expiration date: 10/17/2019.

Eurofins Air Toxics LLC. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1810600**

Two 6 Liter Summa Canister samples were received on October 26, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on sample VP-102 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS**

**Client Sample ID: VP-102**

**Lab ID#: 1810600-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Trichloroethene	1.6	38	8.5	200
Tetrachloroethene	1.6	380	11	2600

**Client Sample ID: VP-6**

**Lab ID#: 1810600-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Trichloroethene	0.84	2.5	4.5	13
Tetrachloroethene	0.84	88	5.7	600

Client Sample ID: VP-102

Lab ID#: 1810600-01A

EPA METHOD TO-15 GC/MS

File Name:	3103110	Date of Collection:	10/18/18 12:04:00 P
Dil. Factor:	3.15	Date of Analysis:	10/31/18 04:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.6	Not Detected	4.0	Not Detected
cis-1,2-Dichloroethene	1.6	Not Detected	6.2	Not Detected
Trichloroethene	1.6	38	8.5	200
Tetrachloroethene	1.6	380	11	2600
trans-1,2-Dichloroethene	1.6	Not Detected	6.2	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: VP-6

Lab ID#: 1810600-02A

EPA METHOD TO-15 GC/MS

File Name:	3103109	Date of Collection:	10/18/18 1:24:00 PM
Dil. Factor:	1.67	Date of Analysis:	10/31/18 04:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Trichloroethene	0.84	2.5	4.5	13
Tetrachloroethene	0.84	88	5.7	600
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130



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Client Sample ID: Lab Blank

Lab ID#: 1810600-03A

EPA METHOD TO-15 GC/MS

File Name:	3103106	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/31/18 10:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: CCV

Lab ID#: 1810600-04A

EPA METHOD TO-15 GC/MS

File Name:	3103102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/31/18 08:16 AM

Compound	%Recovery
Vinyl Chloride	99
cis-1,2-Dichloroethene	103
Trichloroethene	106
Tetrachloroethene	106
trans-1,2-Dichloroethene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: LCS

Lab ID#: 1810600-05A

EPA METHOD TO-15 GC/MS

File Name:	3103103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/31/18 08:41 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	103	70-130
cis-1,2-Dichloroethene	92	70-130
Trichloroethene	113	70-130
Tetrachloroethene	104	70-130
trans-1,2-Dichloroethene	112	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 1810600-05AA

EPA METHOD TO-15 GC/MS

File Name:	3103104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/31/18 09:06 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	105	70-130
cis-1,2-Dichloroethene	94	70-130
Trichloroethene	108	70-130
Tetrachloroethene	105	70-130
trans-1,2-Dichloroethene	112	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Ausha Scott
Collected by: (Print and Sign) Alia Enright
Company TRC
Address 708 Heartland Trail Suite 3000 City Madison State WI Zip 53717
Phone (608) 826-3665 Fax -

Project Info: P.O. # 117373, Project # 292257 Ph. 3, Project Name MKC
Turn Around Time: [X] Normal, [ ] Rush
Lab Use Only: Pressurized by, Date, Pressurization Gas: N2 He

Table with columns: Lab I.D., Field Sample I.D. (Location), Can #, Date of Collection, Time of Collection, Analyses Requested, Canister Pressure/Vacuum (Initial, Final, Receipt, Final (psi)).

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time
Notes: Analyze using method TO-15 for PCE, TCE, VC, cis-1,2 DCE, and trans-1,2-DCE. Can 6L1234 and FC00685 fittings would not provide a closed seal - kept failing shut-in test.

Lab Use Only: Shipper Name FEDEX, Air Bill #, Temp (°C) NA, Condition 6680, Custody Seals Intact? Yes No None, Work Order # 1810600

12/11/2018  
Mr. Andrew Stehn  
TRC Corporation (RMT)  
708 Heartland Trail  
Suite 3000  
Madison WI 53717

Project Name: Madison Kipp Corp.  
Project #: 117373  
Workorder #: 1811624

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 11/30/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott  
Project Manager

**WORK ORDER #: 1811624**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373/223544
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	117373 Madison Kipp Corp.
<b>DATE RECEIVED:</b>	11/30/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	12/11/2018		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-126	TO-15	2.4 "Hg	5 psi
02A	VP-210	TO-15	3.1 "Hg	5.1 psi
03A	VP-1S	TO-15	3.1 "Hg	5.1 psi
04A	VP-102	TO-15	2.8 "Hg	5.1 psi
05A	VP-6	TO-15	2.8 "Hg	5.1 psi
06A	VP-237	TO-15	2.2 "Hg	5.3 psi
07A	DUP-1	TO-15	0.6 "Hg	5.2 psi
08A	Lab Blank	TO-15	NA	NA
09A	CCV	TO-15	NA	NA
10A	LCS	TO-15	NA	NA
10AA	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 12/11/18

Certification numbers: AZ Licensure AZ0775, FL NELAP - E8 , LA NELAP - 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP CA009332018-10, VA NELAP - 9505, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005-011, Effective date: 10/18/2018, Expiration date: 10/17/2019.

Eurofins Air Toxics LLC. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics LLC.

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 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1811624**

Seven 6 Liter Summa Canister samples were received on November 30, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

The Chain of Custody (COC) information for sample VP-6 did not match the information on the canister with regard to canister barcode. The sample labeled 6L036 on the COC is labeled as 6L1036 on the canister. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

**Analytical Notes**

Dilution was performed on samples VP-102 and DUP-1 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: VP-126

Lab ID#: 1811624-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.73	0.98	5.0	6.6

Client Sample ID: VP-210

Lab ID#: 1811624-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.75	1.2	5.1	8.2

Client Sample ID: VP-1S

Lab ID#: 1811624-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.75	14	5.1	94

Client Sample ID: VP-102

Lab ID#: 1811624-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.2	15	6.7	82
Tetrachloroethene	1.2	260	8.4	1800

Client Sample ID: VP-6

Lab ID#: 1811624-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.74	1.3	4.0	6.8
Tetrachloroethene	0.74	55	5.0	370

Client Sample ID: VP-237

Lab ID#: 1811624-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS**

**Client Sample ID: VP-237**

**Lab ID#: 1811624-06A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.74	9.5	5.0	64

**Client Sample ID: DUP-1**

**Lab ID#: 1811624-07A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Trichloroethene	1.2	18	6.2	99
Tetrachloroethene	1.2	260	7.8	1800

Client Sample ID: VP-126

Lab ID#: 1811624-01A

EPA METHOD TO-15 GC/MS

File Name:	3120621	Date of Collection:	11/27/18 9:13:00 AM
Dil. Factor:	1.46	Date of Analysis:	12/7/18 12:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.73	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected
Trichloroethene	0.73	Not Detected	3.9	Not Detected
Tetrachloroethene	0.73	0.98	5.0	6.6
trans-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: VP-210

Lab ID#: 1811624-02A

EPA METHOD TO-15 GC/MS

File Name:	3120622	Date of Collection:	11/27/18 11:24:00 A
Dil. Factor:	1.50	Date of Analysis:	12/7/18 01:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.75	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected	3.0	Not Detected
Trichloroethene	0.75	Not Detected	4.0	Not Detected
Tetrachloroethene	0.75	1.2	5.1	8.2
trans-1,2-Dichloroethene	0.75	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: VP-1S

Lab ID#: 1811624-03A

EPA METHOD TO-15 GC/MS

File Name:	3120624	Date of Collection:	11/27/18 11:45:00 A
Dil. Factor:	1.50	Date of Analysis:	12/7/18 01:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.75	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected	3.0	Not Detected
Trichloroethene	0.75	Not Detected	4.0	Not Detected
Tetrachloroethene	0.75	14	5.1	94
trans-1,2-Dichloroethene	0.75	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: VP-102

Lab ID#: 1811624-04A

EPA METHOD TO-15 GC/MS

File Name:	3120623	Date of Collection:	11/27/18 3:28:00 PM
Dil. Factor:	2.48	Date of Analysis:	12/7/18 01:26 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	15	6.7	82
Tetrachloroethene	1.2	260	8.4	1800
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: VP-6

Lab ID#: 1811624-05A

EPA METHOD TO-15 GC/MS

File Name:	3120625	Date of Collection:	11/28/18 9:30:00 AM
Dil. Factor:	1.48	Date of Analysis:	12/7/18 02:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.74	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.74	Not Detected	2.9	Not Detected
Trichloroethene	0.74	1.3	4.0	6.8
Tetrachloroethene	0.74	55	5.0	370
trans-1,2-Dichloroethene	0.74	Not Detected	2.9	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: VP-237

Lab ID#: 1811624-06A

EPA METHOD TO-15 GC/MS

File Name:	3120626	Date of Collection:	11/28/18 11:40:00 A
Dil. Factor:	1.47	Date of Analysis:	12/7/18 02:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.74	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.74	Not Detected	2.9	Not Detected
Trichloroethene	0.74	Not Detected	4.0	Not Detected
Tetrachloroethene	0.74	9.5	5.0	64
trans-1,2-Dichloroethene	0.74	Not Detected	2.9	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: DUP-1

Lab ID#: 1811624-07A

EPA METHOD TO-15 GC/MS

File Name:	3120627	Date of Collection:	11/27/18
Dil. Factor:	2.30	Date of Analysis:	12/7/18 03:09 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Trichloroethene	1.2	18	6.2	99
Tetrachloroethene	1.2	260	7.8	1800
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1811624-08A

EPA METHOD TO-15 GC/MS

File Name:	3120606c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/6/18 02:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: CCV

Lab ID#: 1811624-09A

EPA METHOD TO-15 GC/MS

File Name:	3120602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/6/18 10:51 AM

Compound	%Recovery
Vinyl Chloride	108
cis-1,2-Dichloroethene	100
Trichloroethene	96
Tetrachloroethene	101
trans-1,2-Dichloroethene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCS

Lab ID#: 1811624-10A

EPA METHOD TO-15 GC/MS

File Name:	3120603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/6/18 11:39 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	107	70-130
cis-1,2-Dichloroethene	89	70-130
Trichloroethene	96	70-130
Tetrachloroethene	99	70-130
trans-1,2-Dichloroethene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCSD

Lab ID#: 1811624-10AA

EPA METHOD TO-15 GC/MS

File Name:	3120604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/6/18 12:04 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	110	70-130
cis-1,2-Dichloroethene	90	70-130
Trichloroethene	96	70-130
Tetrachloroethene	99	70-130
trans-1,2-Dichloroethene	101	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

# Analysis Request / Canister Chain of Custody

For Laboratory Use Only

180 Blue Ravine Rd. Suite B, Folsom, CA 95630  
Phone (800) 985-5955; Fax (916) 351-8279

PID: \_\_\_\_\_ Workorder #: **1811624**

page 1 of 1

Client: <u>TRC/MKC</u>	Special Instructions/Notes: <u>Analyze for PCE, TCE, VC, cis-1,2-DCE trans-1,2-DCE.</u>	Turnaround Time (Rush surcharges may apply)							
Project Name: <u>Andrew Stehns</u>		Standard <input checked="" type="checkbox"/> Rush _____ (specify)							
Project Manager: <u>Madison Kipp Corp.</u> Project # <u>X</u>		Canister Vacuum/Pressure	Requested Analyses						
Sampler: <u>Alia Enright</u> 117373		Lab Use Only							
Site Name: <u>Madison Kipp Corp.</u>		Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N <sub>2</sub> /He	TO-15 (SEE NOTES)			

Lab ID	Field Sample Identification(Location)	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N <sub>2</sub> /He	TO-15 (SEE NOTES)			
				Date	Time	Date	Time								
01A	VP-126	6L1590	FC00418	11/27/18	8:43	11/27/18	9:13	-26	-6			X			
02A	VP-210	6L0304	6844		10:21		11:24	-29	-6						
	<del>VP-15 AEG</del>														
03A	VP-15	6L0452	40834		11:10		11:45	-30	-6						
04A	VP-102	6L0334	FC00123		14:52		15:28	-30	-6						
05A	VP-6	6L036	FC00660	11/28/18	8:47	11/28/18	9:30	-28.5	-5.5						
06A	VP-237	6L0601	FC00146		10:55		11:40	-30	-6						
07A	DVP-1	6L1551	FC00490	11/27/18	-	11/27/18	-	-27.5	-4						

Relinquished by: (Signature/Affiliation) <u>Alia Enright / TRC</u>	Date <u>11/28/18</u>	Time <u>15:00</u>	Received by: (Signature/Affiliation) <u>EATL</u>	Date <u>11/30/18</u>	Time <u>1048</u>
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: TRC Custody Seals Intact? Yes No None

**Sample Transportation Notice:** Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

1/10/2019

Mr. Andrew Stehn

TRC Corporation (RMT)

708 Heartland Trail

Suite 3000

Madison WI 53717

Project Name: MKC

Project #: 117373

Workorder #: 1812465R1

Dear Mr. Andrew Stehn

The following report includes the data for the above referenced project for sample(s) received on 12/20/2018 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott

Project Manager

**WORK ORDER #: 1812465R1**

Work Order Summary

<b>CLIENT:</b>	Mr. Andrew Stehn TRC Corporation (RMT) 708 Heartland Trail Suite 3000 Madison, WI 53717	<b>BILL TO:</b>	Accounts Payable/Windsor TRC Companies, Inc. 21 Griffin Rd North Windsor, CT 06095
<b>PHONE:</b>	608-826-3665	<b>P.O. #</b>	117373
<b>FAX:</b>	608-826-3941	<b>PROJECT #</b>	117373 MKC
<b>DATE RECEIVED:</b>	12/20/2018	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	01/04/2019		
<b>DATE REISSUED:</b>	01/10/2019		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-237	TO-15	3.9 "Hg	4.9 psi
02A	VP-6	TO-15	3.5 "Hg	4.9 psi
03A	VP-102	TO-15	4.1 "Hg	4.9 psi
04A	VP-126	TO-15	3.9 "Hg	5.2 psi
05A	VP-210	TO-15	3.1 "Hg	5.1 psi
06A	VP-1S	TO-15	3.5 "Hg	5 psi
07A	DUP-1	TO-15	3.9 "Hg	5 psi
08A	Lab Blank	TO-15	NA	NA
08B	Lab Blank	TO-15	NA	NA
09A	CCV	TO-15	NA	NA
09B	CCV	TO-15	NA	NA
10A	LCS	TO-15	NA	NA
10AA	LCSD	TO-15	NA	NA
10B	LCS	TO-15	NA	NA
10BB	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 01/10/19

Certification numbers: AZ Licensure AZ0775, FL NELAP - E8 , LA NELAP - 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP CA009332018-10, VA NELAP - 9505, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005-011, Effective date: 10/18/2018, Expiration date: 10/17/2019.

Eurofins Air Toxics LLC. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**TRC Corporation (RMT)**  
**Workorder# 1812465R1**

Seven 6 Liter Summa Canister samples were received on December 20, 2018. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

The work order was reissued on 1/10/2019 to correct identification of sample VP-1S due to laboratory transcription error.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS

**Client Sample ID: VP-237**

**Lab ID#: 1812465R1-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.76	7.1	5.2	48

**Client Sample ID: VP-6**

**Lab ID#: 1812465R1-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.76	0.83	4.0	4.5
Tetrachloroethene	0.76	36	5.1	240

**Client Sample ID: VP-102**

**Lab ID#: 1812465R1-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.77	13	4.1	68
Tetrachloroethene	0.77	190	5.2	1300

**Client Sample ID: VP-126**

**Lab ID#: 1812465R1-04A**

No Detections Were Found.

**Client Sample ID: VP-210**

**Lab ID#: 1812465R1-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.75	1.0	5.1	6.8

**Client Sample ID: VP-1S**

**Lab ID#: 1812465R1-06A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.76	8.9	5.2	61

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS**

**Client Sample ID: DUP-1**

**Lab ID#: 1812465R1-07A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Trichloroethene	0.77	13	4.1	68
Tetrachloroethene	0.77	190	5.2	1300



Air Toxics

Client Sample ID: VP-237

Lab ID#: 1812465R1-01A

EPA METHOD TO-15 GC/MS

File Name:	a122720	Date of Collection:	12/17/18 9:15:00 AM
Dil. Factor:	1.53	Date of Analysis:	12/27/18 11:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.76	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Trichloroethene	0.76	Not Detected	4.1	Not Detected
Tetrachloroethene	0.76	7.1	5.2	48
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: VP-6

Lab ID#: 1812465R1-02A

EPA METHOD TO-15 GC/MS

File Name:	a122721	Date of Collection:	12/17/18 10:31:00 A
Dil. Factor:	1.51	Date of Analysis:	12/28/18 12:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.76	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Trichloroethene	0.76	0.83	4.0	4.5
Tetrachloroethene	0.76	36	5.1	240
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: VP-102

Lab ID#: 1812465R1-03A

EPA METHOD TO-15 GC/MS

File Name:	a122722	Date of Collection:	12/17/18 11:41:00 A
Dil. Factor:	1.54	Date of Analysis:	12/28/18 12:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.77	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Trichloroethene	0.77	13	4.1	68
Tetrachloroethene	0.77	190	5.2	1300
trans-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: VP-126

Lab ID#: 1812465R1-04A

EPA METHOD TO-15 GC/MS

File Name:	a122723	Date of Collection:	12/17/18 12:40:00 P
Dil. Factor:	1.56	Date of Analysis:	12/28/18 01:17 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Trichloroethene	0.78	Not Detected	4.2	Not Detected
Tetrachloroethene	0.78	Not Detected	5.3	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: VP-210

Lab ID#: 1812465R1-05A

EPA METHOD TO-15 GC/MS

File Name:	a122724	Date of Collection:	12/17/18 2:38:00 PM
Dil. Factor:	1.50	Date of Analysis:	12/28/18 01:43 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.75	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.75	Not Detected	3.0	Not Detected
Trichloroethene	0.75	Not Detected	4.0	Not Detected
Tetrachloroethene	0.75	1.0	5.1	6.8
trans-1,2-Dichloroethene	0.75	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: VP-1S

Lab ID#: 1812465R1-06A

EPA METHOD TO-15 GC/MS

File Name:	a122725	Date of Collection:	12/17/18 3:27:00 PM
Dil. Factor:	1.52	Date of Analysis:	12/28/18 02:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.76	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Trichloroethene	0.76	Not Detected	4.1	Not Detected
Tetrachloroethene	0.76	8.9	5.2	61
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: DUP-1

Lab ID#: 1812465R1-07A

EPA METHOD TO-15 GC/MS

File Name:	a122819	Date of Collection:	12/17/18
Dil. Factor:	1.54	Date of Analysis:	12/28/18 10:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.77	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Trichloroethene	0.77	13	4.1	68
Tetrachloroethene	0.77	190	5.2	1300
trans-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1812465R1-08A

EPA METHOD TO-15 GC/MS

File Name:	a122705	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/27/18 02:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: Lab Blank

Lab ID#: 1812465R1-08B

EPA METHOD TO-15 GC/MS

File Name:	a122806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/28/18 12:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: CCV

Lab ID#: 1812465R1-09A

EPA METHOD TO-15 GC/MS

File Name:	a122702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/27/18 11:52 AM

Compound	%Recovery
Vinyl Chloride	90
cis-1,2-Dichloroethene	92
Trichloroethene	98
Tetrachloroethene	101
trans-1,2-Dichloroethene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1812465R1-09B

EPA METHOD TO-15 GC/MS

File Name:	a122802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/28/18 10:16 AM

Compound	%Recovery
Vinyl Chloride	87
cis-1,2-Dichloroethene	96
Trichloroethene	99
Tetrachloroethene	103
trans-1,2-Dichloroethene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1812465R1-10A

EPA METHOD TO-15 GC/MS

File Name:	a122703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/27/18 12:17 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	95	70-130
cis-1,2-Dichloroethene	89	70-130
Trichloroethene	99	70-130
Tetrachloroethene	104	70-130
trans-1,2-Dichloroethene	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCSD  
 Lab ID#: 1812465R1-10AA  
 EPA METHOD TO-15 GC/MS

File Name:	a122704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/27/18 12:42 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	91	70-130
cis-1,2-Dichloroethene	87	70-130
Trichloroethene	100	70-130
Tetrachloroethene	101	70-130
trans-1,2-Dichloroethene	110	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: LCS

Lab ID#: 1812465R1-10B

EPA METHOD TO-15 GC/MS

File Name:	a122803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/28/18 10:41 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	93	70-130
cis-1,2-Dichloroethene	90	70-130
Trichloroethene	99	70-130
Tetrachloroethene	103	70-130
trans-1,2-Dichloroethene	115	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD  
Lab ID#: 1812465R1-10BB  
EPA METHOD TO-15 GC/MS

File Name:	a122804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/28/18 11:06 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	87	70-130
cis-1,2-Dichloroethene	86	70-130
Trichloroethene	98	70-130
Tetrachloroethene	104	70-130
trans-1,2-Dichloroethene	111	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

# Analysis Request / Canister Chain of Custody

For Laboratory Use Only

1812465

180 Blue Ravine Rd. Suite B, Folsom, CA 95630

Phone (800) 985-5955; Fax (916) 351-8279

PID: \_\_\_\_\_

Workorder #: \_\_\_\_\_

page 1 of 1

Client: <u>TRC/MKC</u>		Special Instructions/Notes: <u>Analyze for PCE, TCE, VC, cis-1,2-DCE, and trans-1,2-DCE.</u>						Turnaround Time (Rush surcharges may apply)						
Project Name: <u>MKC</u>								Standard <input checked="" type="checkbox"/>		Rush _____ (specify)				
Project Manager: <u>Andrew Stehn</u>		Project # <u>117373</u>								Canister Vacuum/Pressure		Requested Analyses		
Sampler: <u>Alia Enright / Ben Wachholz</u>								Lab Use Only						
Site Name: <u>Madison Kipp Corporation</u>														
Lab ID	Field Sample Identification (Location)	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N <sub>2</sub> / He	TO-15 (SEP notes)		
				Date	Time	Date	Time							
01A	VP-237	35166	FC00997	12/17/18	8:46 <sup>5</sup> AM	12/17/18	9:15	-27.5	-6			X		
02A	VP-6	34216	FC00208	12/17/18	9:57	12/17/18	10:31	-27.5	-6			X		
03A	VP-102	33771	FC00206	12/17/18	11:05	12/17/18	11:41	-28.5	-5			X		
04A	VP-126	6L0489	FC00639	12/17/18	12:09	12/17/18	12:40	-30	-6			X		
05A	VP-210	6L1530	FC00708	12/17/18	14:01	12/17/18	14:38	-30	-5.5			X		
06A	VP-15	6L0725	FC00998	12/17/18	14:55	12/17/18	15:27	-27	-6			X		
07A	DUP-1	<sup>ACC #14115</sup> 00283 6L0712	FC00284	12/17/18	—	12/17/18	—	-28.5	-5.8			X		
	Not used	34384	40840											
	Not used	6L0925	FC00479											
	Not suitable for sample	35260	FC00249											
Relinquished by: (Signature/Affiliation)		Date		Time		Received by: (Signature/Affiliation)		Date		Time				
<u>Alia Enright (TRC)</u>		12/18/18		10:00		<u>JM FATL</u>		12/20/18		11:30				
Relinquished by: (Signature/Affiliation)		Date		Time		Received by: (Signature/Affiliation)		Date		Time				
Relinquished by: (Signature/Affiliation)		Date		Time		Received by: (Signature/Affiliation)		Date		Time				
Lab Use Only														
Shipper Name: <u>TRC</u>		Custody Seals Intact?		Yes		No		None						
Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T Hotline (800) 467-4922														

\* Vacuum increased during shut in test so no sample could be collected from this can and flow controller