TRC
Results you can rely on

708 Heartland Trail
Suite 3000
Madison, WI 53717

608.826.3600 PHONE
608.826.3941 FAX

www.TRCsolutions.com

July 11, 2017

Mr. Michael Schmoller
Hydrogeologist
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Subject: Remedial Action Documentation Report – Storm Sewer Investigation and Rain Garden Restoration

Dear Mr. Schmoller:

The Remedial Action Documentation Report for the Storm Sewer Investigation and Rain Garden Restoration is attached. The report includes all the investigative and remedial action work, pertaining to polychlorinated biphenyl-PCB impacted material in the rain garden and Madison Kipp Corporation's (MKC's) storm sewer network, completed between December 2016 and June 30, 2017. The report also discusses the investigative work completed to determine potential source(s) of PCB-impacted material discharged to the rain garden.

Overall four potential sources were identified which include: (1) historical buildup of sediment in the storm sewer system from former site activities; (2) impacted material migrating from a breach/breaches in the storm sewer network; (3) material present on the roof of the facility; and/or (4) material present and migrating through runoff from surface(s) of the facility (e.g., impermeable pavement).

The investigative work completed to date concludes that the source of the PCB-impacted material is not from the facility roof or surface runoff (sheet flow). The conceptual model derived from this investigation indicates that PCB-impacted material (above the Wisconsin Department of Natural Resources industrial direct contact RCLs for PCBs) in the rain garden were the result of impacted shallow soils entering the storm water conveyance system during previous site activities and from impacted soils entering at points of separation in the piping or manhole connections. During the remedial action the storm sewer was repaired, as documented in the report for work through June 30, 2017. One additional section of the sewer will be repaired in July 2017.

The attached report includes detailed discussion of the investigation results and conclusions, along with recommendations for limited future work.

If you have questions or comments please feel free to contact Andrew Stehn (608-826-3665), Katherine Vater (608-826-3663), or Alina Satkoski (608-242-5200).

Sincerely,

TRC Environmental Corporation

Andrew M. Stehn, E.I.T.
Project Engineer Attachments

Katherine A. Vater, P.E.
Project Manager

Attachment

cc: Alina Satkoski – MKC (electronic)

Remedial Action Documentation Report – Storm Sewer Investigation and Rain Garden Restoration

Madison-Kipp Corporation
201 Waubesa Street
Madison, Wisconsin

Facility ID No. 113125320
BRRTS No. 02-13-562649

July 2017

Thomas R. Stolzenburg, Ph.D.
Senior Consultant

Andrew Stehn, E.I.T.
Project Engineer

Katherine A. Vater, P.E.
Project Manager

Table of Contents

List of Tables

List of Figures

List of Appendices

Section 1
Introduction

TRC Environmental Corp. (TRC), on behalf of Madison-Kipp Corp. (MKC), is reporting on the remedial action completed to remove polychlorinated biphenyl-PCB impacted material from the onsite storm sewer network and rain garden at MKC's facility at 201 Waubesa Street, Madison, Wisconsin (Site) (Figure 1).

1.1 Site Background

Between 2014 and 2015, MKC excavated PCB-impacted soil from areas of the rain garden and collected post-excavation confirmation samples. Confirmation samples were analyzed for PCBs using the United States Environmental Protection Agency (U.S. EPA) SW-846 Method 8082. The excavation limits were backfilled when sample results indicated concentrations were below the established Wisconsin Department of Natural Resources (WDNR) industrial direct contact residual contaminant level (RCL) of 0.744 milligrams per kilogram (mg/kg). As of March 2017 the WDNR industrial direct contact RCL for total PCBs has been changed to 0.967 mg/kg. As the original rain garden investigation and remediation occurred in 2014 and 2015, all sampling and remedial activities in the rain garden were completed using the previous industrial direct contact RCL of 0.744 mg/kg.

Following the 2014 and 2015 activities, on July 6, 2016, MKC was granted final case closure for this portion of the site (WDNR Bureau for Remediation and Redevelopment Tracking System (BRRTS) #02-13-562649) with continuing obligations. Locations containing soil with concentrations above 0.744 mg/kg were documented on the WDNR's geographic information system soil registry.

The property containing the rain garden is owned by the City of Madison (City), and is leased by MKC. On October 19, 2016, the City collected three soil samples from within the rain garden (Sample Identification Numbers: S1, S2, and S3). The samples were analyzed for PCBs using Method 8082. Each soil sample was collected from the top foot of soil in the rain garden. Of the three soil samples collected, sample S1 (7.03 mg/kg) exceeded the WDNR industrial direct contact RCL of 0.744 mg/kg for PCBs.

Analytical results were discussed with the WDNR, and MKC requested that TRC review the information and proceed with an excavation near the storm sewer outfall point into the garden, adjacent to the location of sample S1. On December 19, 2016, TRC and its subcontractor SGS Environmental Contracting (SGS) mobilized to the rain garden and conducted a 5-foot by 5-foot

by 2-foot in depth excavation near the outfall of the storm sewer pipe as proposed in the Rain Garden Excavation and Restoration Work Plan (TRC 2016). Confirmation soil samples were collected from the sidewalls and the base of the excavation, and a sediment sample was obtained from the end of the outfall pipe. In total, six samples were collected and analyzed for PCBs using Method 8082. Four of the six samples collected were reported at concentrations above the previously established WDNR industrial direct contact RCL of 0.744 mg/kg.

On December 21, 2016, five step-out soil samples from the limits of the December 19, 2016 excavation were collected from the rain garden and analyzed for PCBs. Four of the five samples also contained PCBs at concentrations exceeding the previously established WDNR industrial direct contact RCL. Based on the results of the step-out sampling, MKC and TRC began investigating if PCB-containing solids/sediment was present in the storm sewer upgradient of the rain garden and acting as a potential source leading to the impacts found in the previously remediated rain garden. Between December 2016 and March 2017, TRC collected six samples from within or at the surface of select storm water catch basins. Four of the six samples contained PCBs at concentrations above the industrial direct contact RCL for the site.

A summary of the analytical results from the December 2016 excavation along with subsequent investigations are included in the Polychlorinated Biphenyls (PCBs) in Rain Garden – Investigative Actions Summary Letter submitted in March 2017 (TRC 2017).

Based on the investigative results and as discussed in the recommendations section of the Polychlorinated Biphenyls (PCBs) in Rain Garden – Investigative Actions Summary Letter (TRC 2017), PCB impacts are present in shallow soils from historical activity at the site. There is no record of the onsite storm sewer network being cleaned. Sediment observed in the storm sewer was likely the result of historical accumulation of fine- and coarse-grained sediment. Four potential sources were identified that could be contributing PCB-impacted material to the rain garden, these sources are:

- historical buildup of sediment in the storm sewer from past Site activities;
- materials present on the facility roof;
- materials present along the surfaces of the Site; and/or
- materials (including PCB-impacted shallow soils) migrating through breaches in the storm sewer infrastructure.

To determine the contribution of each of these potential sources, TRC recommended that the storm sewer be cleaned and catch basins inspected and repaired (if necessary). In addition, TRC recommended installation of filter fabric and filter bags in the storm water structures to capture sediments in the system for laboratory analysis. Fabric installed at the surface of each catch

basin would allow for solids/sediment to be collected from runoff and filter bags would capture solids/sediment discharged from the roof. The catch basins and roof drains would be sampled for PCBs to isolate areas that potentially could be a source contributing to the rain garden impacts. Further excavation within the rain garden was also recommended to remove identified PCB-impacted soil.

1.2 Purpose and Scope

This report documents the cleaning and repairing of the onsite storm sewer network, the excavation and restoration of the rain garden, and the additional solids/sediment monitoring completed to identify potential sources. The confirmation samples for the rain garden excavation were compared to the historical industrial direct contact RCL of 0.744 mg/kg for total PCBs, as previously applied at the site and approved by the WDNR.

Section 2
Storm Sewer Investigation

A detailed discussion of MKC's storm sewer infrastructure and previous sediment monitoring was provided in the Polychlorinated Biphenyls (PCBs) in Rain Garden – Investigative Actions Summary Letter submitted in March 2017 (TRC 2017). A summary is provided in this section for reference.

2.1 Storm Sewer Infrastructure

MKC's storm sewer infrastructure consists of below-grade conveyance structures and sheet flow across onsite impervious surfaces. The majority of storm water accumulated onsite is conveyed to a rain garden located to the north of the facility. The following discussions relate to infrastructure components that convey water to the rain garden.

Overall, as shown on Figure 2, the storm sewer consists of two main below-grade conveyance pipe sections (S1 and S2) from manhole structure MH-5A to MH-3W and from MH-3W to the outfall point. Additional catch basins and below grade laterals tie into the main sections from the facility's roof and parking lot/walkway areas (S3 and S4).

The system contains catch basins/manhole structures that convey and accept surface runoff. Pipe section S1 is located in the southern half of the property along the west edge of the main facility (extends from MH-5A to MH-3W) and contains four infiltration points from the surface (MH-4A, MH-4B, MH-5A, and MH-5B). Surface water drains from the southwestern parking lot and from a portion of the roof.

Pipe section S2 is located in the northern half of the property, and runs from MH-3W to MH-1A, where the outfall connects and ultimately conveys storm water to the rain garden. To the west of pipe section S2, there are three catch basins (MH-2W, MH-2A, and MH-1NW) with laterals that collect and convey water to the MH-1A (identified as pipe section S3). There are five roof drains that discharge into either MH-3W, MH-1NW, or directly into pipe section S2 or S3 and are conveyed to MH-1A. Figure 2 identifies the approximate location of each of these collection points. The two drains plumbed directly into S2 and S3 are identified as RDO and GUTTER 1, respectively. One roof drain is directly installed into manhole MH-3W and one into manhole MH-1NW. A portion of the roof near the loading dock area collects water within a small section of gutter which is conveyed into pipe section S4. In addition, some gutters collect water and the downspouts discharge immediately above onsite catch basins. Downspouts conveying water

from the roof to above catch basins are located above MH-4A, MH-2W, and MH-3W. All structure locations are noted on Figure 2 for reference.

2.2 Initial Investigative Results

The initial storm sewer investigation completed between December 2016 and March 2017 indicated that at some locations PCB-impacted sediment was present above the WDNR industrial direct contact RCL (TRC, 2017). Overall, seven samples were collected including one sample from the outfall pipe into the rain garden. Of the seven samples, five contained PCB concentrations above the WDNR direct contact industrial RCL of 0.744 mg/kg. During the investigation, TRC noted locations in the system where soil could be entering the storm water conveyance piping due to wear and breakdown. At that time, TRC concluded that the storm sewer system network should be cleaned out and each catch basin be inspected and repaired if necessary.

Section 3
Storm Sewer Cleaning and Repair

3.1 Storm Sewer Cleaning

On May 8, 2017, Covanta Environmental Solutions and VS Water Blasting were onsite to flush out and clean the onsite storm sewer network at MKC. This process was completed by using a high pressure water hose and nozzle that jetted water perpendicularly to the hose, to wash the interior walls of the storm sewer pipe section. The water/sediment mix derived from the cleaning process was then vacuumed into a large tank truck from select manholes/catch basins within the network. When the truck became full, the collected contents (water/solids) were transferred to either 270 gallon plastic totes or 5,000 gallon Vac boxes that were staged onsite. The mixed contents within the containers were then sampled for PCBs for waste characterization and disposal purposes. Photo documentation of the cleaning process is included in Appendix A. The analytical results and laboratory reports for the samples are included in Table 1 and Appendix B, respectively.

Based on higher concentrations of PCBs observed during the initial storm sewer investigation (TRC 2017), TRC initially focused the flushing and vacuuming process at the storm sewer network between MH-2W to MH-2A. Subsequently, sections MH-1NW to MH-2A and MH-1NW to MH-1A were cleaned. The water/sediment that was generated during the cleaning of these sections was deposited into one 270 gallon plastic tote box. The contents of the tote were sampled immediately and submitted to PACE Analytical for waste characterization. The pipe section from MH-1A to the rain garden outfall point was jetted until refusal was encountered; the nozzle wasn't able to reach the end of the pipe due to a slight directional change within the pipe and/or because of sediment build-up. Consequently, the jetting hose was inserted upstream from the outfall pipe and the remaining section between the outfall and MH-1A was cleaned. To prevent any wash water or dislodged sediment from reaching the rain garden the vacuum was inserted into the outfall piping during the washing process to remove any water and sediment that flushed back. As flushing and vacuuming occurred near the outfall, the water from the jetting nozzle daylighted approximately ten feet from the end of the outfall pipe. A separation in the concrete pipe was identified at this location and the cleaning process was completed with caution near the separation. The separated section of pipe was observed to be 24 inches in diameter with the pipe invert being approximately three feet below grade. Further discussion follows regarding both repairs to the storm sewer network and this separation in the outfall pipe.

The next section of pipe flushed and vacuumed was between MH-1A and MH-3W, however, the jet nozzle only reached about halfway through the section before refusal was encountered. The refusal may have occurred at a pipe connection located along the metal corrugated pipe. Rather than attempt additional jetting at this location, the hose was removed and inserted through MH-3W towards MH-1A in order to clean out the rest of the section thoroughly. An attempt was made to clean the pipe section from MH-3W to MH-4A, but the jetting hose was unable to navigate the turns in the pipes under the building. Due to this issue, the jetting hose was redirected to MH-5A and was used to flush water towards MH-3W. The vacuum truck was then staged at MH-3W to collect water/sediment washed through the pipe network. This rinsing process cleaned MH-5B, MH-4B, MH-4A, and all pipes connecting these manholes. After running clean water into MH-5A for approximately ten minutes, the water observed at MH-3W was clear, so the flushing was stopped. The vacuum truck collected water that accumulated in MH-1A and at the rain garden outfall before emptying the truck's tank into two 5,000 gallon Vac boxes. Like the plastic tote, the water/solid mixture within each Vac box was sampled and analyzed for PCBs for waste disposal purposes. The analytical results for the waste characterization samples are summarized in Table 1 and complete laboratory reports are included in Appendix B.

Following the cleaning process approximately 5-gallons of sediment was observed just up gradient from the outfall point into the rain garden which was inaccessible for removal. This sediment may migrate out of the pipe and should be re-inspected when resampling is completed.

3.2 Catch Basin Inspections and Repairs

After the storm sewer network had been completely jetted and vacuumed, TRC and SGS began inspecting and repairing separations and/or cracks observed within the storm sewer network's catch basins. These potential breaches were sealed in order to make sure that soil near the catch basins and manholes was not eroding into the system and migrating downstream into the rain garden. Quikrete, concrete, and/or expanding foam were used depending on the size of the separations and the contractor's suggested repair. Overall, between May 8 and 9, 2017, repairs were made to MH-1A, MH-1NW, MH-2W, MH-4A, and MH-5A. A summary of the repairs completed is provided below and a photo log of onsite activity is included in Appendix A.

- MH-1A contains two inlet pipes and one outlet pipe. The bottom seal between one of the inlet pipes and the manhole structure had been washed out and a separation was observed. The same observation was made for the outlet pipe. The contractor repaired the wall penetrations with concrete to seal the pipe section to the manhole wall and prevent soil from entering the manhole.

- MH-1NW contained noticeable gaps between the top of the manhole and the adjacent building foundation. These separations were filled with expanding foam and sealed with Quikrete. Separations between the manhole walls and the concrete sewer pipes were also observed and sealed with Quikrete.
- The lower portion of the basin within MH-2W, where the side walls and base connect, had separated. The surrounding soils behind the separations were exposed. Based on this observation and the minor use of MH-2W, the three-inch pipe between MH-2W and MH-2A was plugged with expansion plugs, and the small basin at MH-2W was abandoned and filled in with concrete. The downspout from the adjacent roof that previously discharged to above MH-2W was redirected to above MH-2A.
- MH-3W did not require repairs, but a former abandoned section of pipe remained from previous repair work. No issues or potential sediment migration from this area were observed but MKC noted they would plug this small section of pipe. During the inspection of this basin, sediment that was unable to be flushed and vacuumed was removed by hand and containerized for disposal.
- MH-4A contained an inlet and outlet pipe penetrating the manhole walls. During inspection, separations between the pipes and the manhole wall were observed. The contractor sealed the separations with concrete following inspection.
- Sediment found in MH-5B was also removed by hand and containerized for disposal. The PVC pipe at the top of the manhole was modified slightly to provide better flow into the storm sewer system.
- MH-5A contains one outlet pipe that exhibited a gap between the manhole wall and the pipe penetrating the side wall. In addition, a section of black corrugated pipe was found to be entering the manhole from this gap. The gap was filled in with concrete and an extension was added to the black corrugated pipe to allow for the pipe discharge to be monitored. Based on the current design of the storm sewer network, MKC is proposing to abandon MH-5A as the adjacent MH-5B conveys the surface water away from the southwest portion of the property. Based on the surface elevation of MH-5A compared to MH-5B, the manhole receives little to no flow. The black corrugated pipe will be videoed to verify its drainage purpose and to determine if abandonment can be completed.
- Currently there is a section of metal corrugated pipe between MH-3W and MH-1A. This section of pipe, based on its age and material composition, could contain breaches and be comprised and provide a pathway for the surrounding soils to enter the storm sewer. To eliminate this from occurring MKC has scheduled to have this section of pipe relined. The work is scheduled for July 2017.

3.3 Roof Drain and Catch Basin Sampling

Following the cleaning and repairs, filter bags were installed on seven roof discharge points and one small discharge pipe located in MH-5A. Filter fabric was also installed at the surface below the grate of six manholes/catch basins. These filters were used to monitor material being discharged into the storm sewer from the roof and from surface runoff. For the roof drains, the collection point varied based on accessibility (e.g., some were installed at the discharge point and others on the roof at the inflow point). Figure 2 includes the location of each collection point and Attachment A includes photo documentation of the filtering materials used. A summary of the monitored locations and a description of the type of collection point is included below.

Table A
Sediment Monitoring Points

COLLECTION POINT	CATCH BASIN (filter fabric)	ROOF DRAIN (filter bag)	DESCRIPTION
MH-1A	X		Manhole/catch basin.
MH-1NW	X		Manhole/catch basin.
MH-1NWR		X	Drain point located on the rubber roof above the facility offices.
MH-2A			No filter installed based on catch basin design.
MH-2AR		X	Drain point is a gutter downspout off of a portion of the gravel roof. The downspout previously discharged above MH-2W but was relocated to MH-2A.
MH-2W			Catch basin abandoned.
MH-3W	X		Manhole/catch basin.
MH-3WR		X	Drain point located on gravel roof above supply storage area.
MH-4A	X		Manhole/catch basin.
MH-4AR		X	Two drain points located on the gravel roof above supply storage area merge and drain to one location.
MH-4B			No filter installed based on manhole design.
MH-5A	X		Manhole/catch basin.
MH-5AH			Filter bag installed on small inlet pipe in manhole.
MH-5B	X		Manhole/catch basin.
Gutter 1		X	Gutter and downspout that receives water from a portion of the rubber and vinyl roof.

Table A
Sediment Monitoring Points

COLLECTION POINT	CATCH BASIN (filter fabric)	ROOF DRAIN (filter bag)	DESCRIPTION
Gutter 2		X	Gutter and downspout that receives water from a portion of the gravel roof above loading dock.
Roof Drain Office (RDO)		X	Drain point located on gravel roof above facility offices.

3.4 Outfall Pipe Separation Investigation

During the cleaning process a noticeable separation between two sections of storm sewer pipe near the outfall area was observed. The WDNR was notified of the pipe separation and requested that a soil sample be collected below-grade near the pipe separation before excavation of the rain garden proceeded. On May 8, 2017, TRC collected a sample (Sample ID: Pipe B) near the break in the pipe which was analyzed for PCBs. Results indicated that the soil near the pipe break contained PCBs at a concentration of 2.3 mg/kg, which is above the WDNR industrial direct contact RCL.

Based on the results of sample Pipe B, two hand auger samples (Sample ID: HS-1 and HS-2) were collected on May 9, 2017 to determine the southern extent of the PCB-impacted soil. HS-1 was installed to the southwest of the pipe separation and HS-2 was installed southeast of the pipe separation. Results indicated that PCBs were present above the WDNR industrial direct contact RCL to the southeast (HS-2 – Total PCBs 0.86 mg/kg) but soil to the southwest (HS-1 – Total PCBs 0.35 mg/kg) was below the RCL.

Based on these results, it was decided that the separated section of concrete pipe along with the soil surrounding it would be removed and disposed of offsite. MKC requested and was granted approval from the WDNR and the City of Madison to perform the removal, extending the garden footprint to the south by approximately 10 feet. Photos of this area are included in Appendix A.

Section 4
Additional Rain Garden Excavation and Restoration

Following the storm sewer cleaning and repair, solids/sediment monitoring filter installation, and pipe outfall investigation, the excavation and restoration of the rain garden proceeded. The excavation activity was completed between May 11 and May 16, 2017. An initial excavation was completed based on the proposed limits outlined in the Polychlorinated Biphenyls (PCBs) in Rain Garden – Investigative Actions Summary Letter submitted in March 2017 (TRC 2017). Confirmation sampling was completed following excavation and further portions of the rain garden were excavated based on sample results. The following subsections describe the three excavation events completed in May 2017 along with the restoration process.

4.1 Rain Garden Excavation

On May 11, 2017, TRC and SGS proceeded with the excavation of PCB-impacted soil in the rain garden. The excavation was started at the northeasternmost limits of the proposed excavation area and proceeded to the west southwest toward the outfall pipe entering the rain garden. The excavation was completed to approximately one foot below ground surface (bgs) removing primarily top soil and organic material. A light to medium brown fine-grained sand with trace gravel was generally observed below one foot. The topsoil removed was the originally placed during the previous backfilling in the 2014-2015 remedial excavations. The limits of the excavation are shown on Figure 3. The excavation activity included the removal of the separated section of storm sewer pipe, along with the removal of surrounding soils. The soils and pipe section were containerized in roll-off containers provided by Covanta Environmental Solutions for disposal. As the excavation work was completed and the one foot of soil was removed, TRC collected confirmation samples from the side walls and base of the excavation.

Overall, 12 confirmation soil samples were collected (Sample ID: CS-1 through CS-12) from the base and sidewalls of the initial excavation limits. The sidewall samples consisted of soil collected from ground surface to approximately one foot bgs. The samples were submitted to PACE Analytical for analysis for PCBs. PACE reported results for the 12 samples on May 12, 2017 which are summarized in Table 2. The analytical laboratory reports for the samples are included in Appendix B.

The results of the initial 12 samples (CS-1 through CS-12) indicated that impacted soil remained above the industrial direct contact RCL of 0.744 mg/kg in select portions of the rain garden. The four areas where soil exceeded the RCL were:

- Near the outfall point and directly below the former section of storm sewer pipe removed during the excavation (Sample ID: CS-8 – 2.7 mg/kg and CS-12 – 0.76 mg/kg);
- Along the north-northwestern limit of the excavation (Sample ID: CS-6 – 3.6 mg/kg);
- Along the northeast sidewall of the excavation (Sample ID: CS-4 – 1.0 mg/kg)

4.2 Subsequent Excavations

Based on the results of the initial confirmation sampling, SGS and TRC remobilized to the site on May 15, 2017 to complete additional soil removal near sample locations CS-4, CS-6, CS-8 and CS-12. Subsequent confirmation sampling was completed following each excavation as described below. The excavation area and sample locations are include on Figure 3 for reference. The additional confirmation sampling analytical results are included in Table 2 and the laboratory analytical reports are included in Appendix B.

4.2.1 Sample CS-4

Based on the results of sample CS-4, the limits of the excavation were extended to the northeast. An additional area approximately 10 feet by 12 feet was removed to a depth of approximately one foot bgs. An additional confirmation sample (Sample ID: CS-4B) was collected from the northeast sidewall and analyzed for PCBs. The sample consisted of material from ground surface to one foot bgs. Results for CS-4B were obtained on May 16, 2017, and indicated that the remaining soil contained PCBs at a concentrations of 0.20 mg/kg, less than the WDNR industrial direct contact RCL for total PCBs.

4.2.2 Sample CS-6

Based on the results of sample CS-6, the limits of the excavation were extended to the north northwest. An additional area approximately 10 feet by 3 feet was removed to a depth of approximately one foot bgs. An additional confirmation sample (Sample ID: CS-6B) was collected from the north northwest sidewall and analyzed for PCBs. The sample consisted of material from ground surface to one foot bgs. Results for CS-6B were obtained on May 16, 2017, and indicated that the remaining soil contained PCBs at a concentration of 3.7 mg/kg, above the WDNR industrial direct contact RCL for total PCBs.

Based on this subsequent confirmation sampling result, the WDNR was contacted to discuss further excavation to the north and the presence of a communication utility

corridor. The WDNR requested that soil be removed up to a safe buffer from the utility corridor and a sample be collected from the sidewall for documentation. An approximate area 10 feet by 2 feet to a depth of one foot bgs was removed on May 16, 2017. An additional confirmation sample was collected along the north-northwest sidewall and analyzed for PCBs. Results for CS-6C were obtained on May 18, 2017, and indicated that the remaining soil contained PCBs at a concentration of 15 mg/kg, above the WDNR industrial direct contact RCL for total PCBs.

4.2.3 Sample CS-8 and CS-12

Based on the results of samples CS-8 and CS-12, an additional one foot in depth of material was removed from the limits of the excavation area near the base of the outfall. Additional confirmation samples (Sample ID: CS-8B and CS-12B) were collected from the base of the excavation and analyzed for PCBs. Results were obtained on May 16, 2017 and indicated that the remaining soil contained PCBs at concentration between <0.0092 mg/kg and 0.030 mg/kg, below the WDNR industrial direct contact RCL for total PCBs.

4.3 Rain Garden Restoration

On May 16, 2017, following the rain garden excavation activity, the garden was backfilled with topsoil (Purple Cow Organics®) to match the surrounding grade and covered with coconut shell erosion control blanket. River rock was placed near the outfall into the garden to assist with sediment filtration. An erosion control sock was also installed near the outfall area to reduce the amount of future sediment from migrating past the outfall area. Erosion control socks were installed along the perimeter of the garden until replanting and plant establishment could be completed. Following the main restoration work, the garden was then replanted on May 17, 2017.

4.4 Soil Cover Installation

As discussed in Section 4.2.2, PCB-impacted soil above the WDNR industrial direct contact RCL for total PCBs remains in the utility corridor near sample location CS-6C along the northern side of the rain garden. As this soil is near an existing fiber optic utility corridor further excavation is not possible at this time.

MKC discussed the remaining PCB concentrations in the soil in the fiber optic utility corridor with the WDNR on June 1, 2017, and requested permission to place a soil cover over the area where PCB-impacted soils greater than the industrial direct contact RCL remain. MKC then discussed the planned soil cover with the City as well and received approval from them on June 5, 2017. The WDNR reviewed the final cover criteria and provided final approval on June 6, 2017. TRC

mobilized to the Site on June 7, 2017, and installed a one foot thick soil cover over the known impacted soil. Appendix A includes photographic documentation. The soil cover was installed as outlined below and the extents are shown on Figure 3. The soil cover:

- contains a weed guard at the base to separate the existing soil from the clean cover soil. This will ensure existing and new soils do not mix and to assist with identification of the cover limits if any future work is required;
- extends to the northeast from sample CS-6C to the nearby utility pole and tapers down to meet existing grade;
- extends to the northwest to near the bike path with a gentle slope from sample CS-6C to the bike path;
- extends at least 10 feet to the southwest of sample CS-6C and tapers down to meet existing grade;
- extends to the southeast and tapers down to meet the slope of the rain garden sidewall;
- consists of shredded topsoil provided by Madison Top Soil which is appropriate for new grass areas; and
- is seeded with grass seed and covered with an erosion control blanket to enhance grass seeding and growth.

4.5 Storm Sewer Sediment Monitoring

As discussed in Section 3.4 of this report, TRC installed filter bags and catch basin filter fabric to monitor the solids/sediment being discharged from the roof and surface of the site. The filter bags were attached to the drains from the roof. The locations varied based on accessibility (e.g., some were installed at the discharge point and others on the roof at the inflow point). The catch basin filter fabric was installed at the top of each of the catch basins (with removable metal grates). A total of seven roof-water collection points were fitted with filter bags and six catch basin sample points were fitted with filter fabric as outlined in Table A above. A filter bag was also installed on the small inlet pipe in manhole MH-5A. In addition, solids/sediment along the surface of the parking lot adjacent to the rain garden was monitored for accumulation to determine if direct surface runoff into the garden was an issue.

To further assess sediment migrating within the storm sewer while restricting surface and roof runoff, the base of select catch basins and the outfall point into the rain garden were monitored for substantial sediment accumulation. This was completed following the storm sewer cleaning, catch basin repair process, and garden restoration to monitor sediment migrating through the storm sewer network.

Each sample location is shown on Figure 2 and 4 and Appendix A includes photos of the collection points.

4.6 Solids/Sediment Monitoring

Following the installation of the filter bags and fabric, solids were allowed to accumulate at the sample points from subsequent rain events. Between May 10 and June 30, 2017, the National Weather Service reported 36 rain events in the Madison area for a total of 8.76 inches. Sixteen of the rain events were a trace to 0.05 inches, seven were between 0.05 and 0.15 inches, three were between 0.15 and 0.25 inches, four were between 0.25 and 0.5, four were between 0.50 and 1.0 inches, one was 1.31 inches, and one was 1.57 inches.

Through June 30, 2017, TRC was able to sample material collected from six roof drains and from the surface of five catch basins. In addition, solids/sediment were observed and sampled from the base of basins MH-1NW and MH-1A, from the outfall area within the rain garden, and from the parking lot surface adjacent to the rain garden. The remaining sample locations had not accumulated sufficient mass for sampling. Each sample was submitted to PACE analytical for analysis for PCBs. A summary of the analytical data and the sample locations are included in Table 3 and Figure 4, respectively. Table B below provides further details with respect to which sample points contained sufficient sample mass for sampling.

Table B
Solids/Sediment Monitoring Points

COLLECTION POINT[Sample Type]	SUFFICIENT MASS FOR SAMPLE COLLECTION AS OF 6/30/2017
MH-1A[Surface]	X
MH-1A-BASIN[Bottom Basin]	X[1]
MH-1NW[Surface]	
MH-1NWR[Roof Drain]	
MH-1NW-BASIN[Bottom Basin]	X[2]
MH-2A[Surface]	
MH-2AR[Roof Drain]	X
MH-2W[Surface]	*Catch Basin Abandoned
MH-3W[Surface]	X
MH-3WR[Roof Drain]	X
MH-4A[Surface]	X
MH-4AR[Roof Drain]	X

Table B
Solids/Sediment Monitoring Points

COLLECTION POINT[Sample Type]	SUFFICIENT MASS FOR SAMPLE COLLECTION AS OF 6/30/2017
MH-4B[Surface]	
MH-5A[Surface]	X
MH-5AH[Discharge Pipe]	
MH-5B [Surface]	X
Gutter 1 [Roof Drain]	X
Gutter 2 [Roof Drain]	X
Roof Drain Office (RDO) [Roof Drain]	X
PS-1 [Surface]	X[3]
Outfall [Surface]	X[4]

Footnotes:
1. Sample was collected from the base of catch basin MH-1A.
2. Sample was collected from the base of catch basin MH-1NW and the material was likely conveyed from MH-2A and Gutter 1 through pipe section S3 during a heavy rain event.
3. Sample was collected from accumulated solids/sediment along the parking lot located to the west of the rain garden outfall area.
4. Sample was collected from solids/sediment accumulated along a silt sock near the outfall pipe entering the rain garden.

4.7 Solids/Sediment Sampling Discussion

The material collected and sampled from the six roof drains consisted primarily of organic and mossy-like material with high water content (moisture content ranged from 75.5 to 92.65%). Five of the samples collected were materials yielded from the gravel roof portion of MKC's roof (Sample ID: RDO, Gutter 2, MH-2AR, MH-3WR, and MH-4AR) and one sample was collected from a section of their rubber and vinyl roof (Sample ID: Gutter 1). Based on the composition of the material sampled from these locations, namely water and organic content, the material was not considered soil for the purposes of laboratory analysis. The laboratory characterized this material as "other," and it was analyzed on a wet-weight basis. Generally, soil samples are analyzed on a dry-weight basis, however as stated above, the roof drain samples are not soils (high water content and organic composition), and as such the samples were reported on a wet-weight basis.

The samples collected at the filter fabric on the surface of the catch basins (Sample ID: MH-1A (2), MH-3W, MH-4A, MH-5A, and MH-5B) consisted of solids and some organic material. The samples collected from the parking lot surface, within the catch basins, and near the outfall area (Sample ID MH-1A(3) BASIN, MH-1NW-BASIN, and PS-1 consisted of primarily solids with little to no organic material. Based on the solids (soil-like) content compared to water/organic

material content (moisture content ranged from 4.7 to 58.3%), these eight samples were classified as soil for the purposes of laboratory reporting. The results of these eight samples were reported on a dry-weight basis.

4.8 Solids/Sediment Monitoring Results

Overall, detections of total PCBs were reported in twelve of the fifteen samples collected as of June 30, 2017. However, of the twelve samples containing detections, ten samples were below the WDNR-established industrial direct contact RCL and five are estimated because the reported concentration was found to be between the reporting limit and the method detection limit. The samples containing exceedences of the RCL at MKC were collected from the bottom of catch basin MH-1A (Total PCBs 2.2 mg/kg) and from the outfall area (Total PCBs 5.0 mg/kg). The material sampled at these two locations consisted of coarse-grained sand with some fines and larger trace gravel (no organic material present). The monitoring results are summarized in Table 3 and the laboratory analytical results are included in Appendix C.

Section 5
Conclusions and Recommendations

5.1 Conclusions

As of May 16, 2017, soil with PCB concentrations exceeding the previous WDNR industrial direct contact RCL of 0.744 mg/kg within the rain garden has been mostly removed. Approximately 52.26 tons of soil (including the concrete storm sewer section) were hauled offsite and disposed of by Covanta Environmental Solutions. The rain garden has been restored to the previous grade and replanted based on the City of Madison's requirements. A soil cover was installed along the northern portion of the rain garden where PCB-impacted soil remains in place where removal could not be completed due to the presence of a fiber optic utility corridor.

Between December 2016 and June 2017, potential source areas of PCB impacts to the rain garden from MKC's property were evaluated. The four potential sources identified were (1) historical buildup of sediment in the storm sewer system from former site activities; (2) impacted material migrating from a breach/breaches in the storm sewer network; (3) material present on the roof of the facility; and/or (4) material present and migrating through runoff from a surface/surfaces of the facility. The following work and sampling was completed as of June 30, 2017:

- The onsite storm sewer network was cleaned to remove historical buildup of solids and sediment that could have contained PCBs. The flush water and solids mixture were containerized, sampled, removed, and treated offsite by Covanta Environmental Solutions.
- Repairs to the manhole/catch basins within the storm sewer network were made to ensure PCB-impacted materials were not being washed into the sewer system through a breach and subsequently migrating to the rain garden.
- Filter bags were installed at either the inlet or at the discharge point of the roof drains to determine if impacted material was being washed from the roof.
- Filter fabric was installed below the grate of the manholes/catch basins where solids/sediment could accumulate from surface runoff in order to determine if a potential source of PCBs could be identified.
- Solids/sediment was monitored along the parking lot surface adjacent to the rain garden to determine if a potential source could be identified that was not conveyed through the storm sewer network but through sheet flow.
- Solids/sediment was monitored at the outfall and within basins for substantial accumulation following select rain events.

Following the storm sewer cleaning process, sample results indicate that material entering the storm sewer network from the facility roof and the surrounding surfaces may contain PCBs at concentrations that are less than industrial direct contact RCLs, and with the exception of one sample (0.42 mg/kg at MH-3W), concentrations are also less than the non-industrial direct contact RCL for PCBs of 0.234 mg/kg.

In review of the PCB concentrations observed in the samples collected from the rain garden during the initial October 2016 sampling event and observed during the storm sewer investigation, the roof drain and catch basin sampling results do not indicate a source of PCBs in solids/sediment from the roof or surface runoff that would result in an exceedance in the rain garden. In addition, based on the monitoring of solids/sediment from the surface at the site (including the catch basin surfaces and parking lot sample), results indicate that it is reasonable to conclude that a surface discharge source into the storm sewer or through sheet flow into the garden is not present.

However, follow-up sampling within MH-1A and at the outfall area (post storm sewer cleaning and rain garden excavation) indicate PCB-impacted material above the industrial direct contact RCL is currently present at these locations. Based on the composition of the material (coarse-grained sand) in comparison to the roof samples (organics/mossy material), it is reasonable to conclude that the impacted material is migrating from a breach in the metal corrugated section of buried storm sewer pipe, rather than from the roof. Migration of PCB-impacted soil from the storm sewer (coarse-grained sand with some fines and larger trace gravel (no organic material present)) is consistent with historical observations of PCB-impacted soil in the outfall pipe and rain garden.

In evaluating the sampling data, it is important to understand the concept that concentrations are <u>not</u> additive. If solids with PCBs are mixed with solids without PCBs, the PCB concentrations will decrease. If solids from two individual points both containing PCBs are mixed, the mixed PCB concentration will be of equal or less value to the highest concentration observed between the two individual points. For example (hypothetically), if solids collected at MH-2A are found to contain 1 mg/kg PCBs, and solids collected at MH-3W are found to contain 1 mg/kg PCBs, when these solids are added together at MH-1A the resultant solids contain 1 mg/kg PCBs (not 2 mg/kg). Thus the final PCB concentration in sediments reaching the rain garden should be less than the highest concentrations observed at individual sampling points upstream.

The conceptual model derived from this investigation indicates that PCB impacts above the WDNR industrial direct contact RCLs in the rain garden were the result of impacted surface soils entering the storm water conveyance system during previous site activities and from

impacted soils entering at points of separation in the piping or manhole connections. The most recent impacts are believed to have come from shallow subsurface soil entering the storm sewer through the potentially corroded corrugated steel pipe between MH-3W and MH-1A. The historical buildup of material has been removed from the majority of the storm sewer network and the known points of separation in the network were subsequently identified and have been or will be repaired. MKC has scheduled to have the corrugated steel pipe between MH-3W and MH-1A lined to eliminate potential and/or future breaches within the pipe.

5.2 Recommendations

First, in July 2017, the corrugated steel pipe will be lined. Then, following the lining, MKC will monitor MH-1A and the outfall area for solids/sediment. When/if a sufficient mass of solids/sediment accumulates, one confirmation sample will be collected from each MH-1A and the outfall area and analyzed for PCBs. This monitoring will be used to confirm that the cleaning and repairs that have been conducted on the storm sewer network through July 2017 have eliminated the source of PCB-impacted materials to the rain garden.

Upon receipt of the confirmation samples, the impacted area of the rain garden (adjacent outfall sample 6/30/17) will be excavated, confirmation samples will be collected, and the area restored. A separate work plan will be provided to WDNR for review prior to the removal of the area adjacent outfall sample 6/30/17.

MKC will conduct an annual visual inspection of the storm water conveyance system to ensure physical integrity. The results of the inspection will be kept up-to-date and on site. MKC will submit the inspection logs to the WDNR only on request from the WDNR.

Section 6
References

TRC. 2016. Rain Garden Excavation and Restoration Work Plan. December 9, 2016.

TRC. 2017. Polychlorinated Biphenyls (PCBs) in Rain Garden – Investigative Actions Summary. March 27, 2017.

Table 1
Storm Sewer Cleaning Water Analytical Results Summary – May 2017
Madison-Kipp Corporation
201 Waubesa Street, Madison, Wisconsin

PARAMETER	UNIT	SAMPLE LOCATION AND DATE		
		SW-1 (Tote) 5/8/2017	SW-2 (VB12) 5/8/2017	SW-3 (VB07) 5/11/2017
PCB-1016	ug/L	<0.035	<0.035	<0.035
PCB-1221	ug/L	<0.020	<0.020	<0.020
PCB-1232	ug/L	<0.037	<0.037	<0.037
PCB-1242	ug/L	<0.038	<0.038	<0.038
PCB-1248	ug/L	<0.020	0.29	0.91
PCB-1254	ug/L	<0.0090	<0.0090	<0.0090
PCB-1260	ug/L	<0.025	<0.025	<0.025
Total PCBs	ug/L	<0.038	0.29	0.91

Notes:
< = Less than
µg/L = Micrograms per liter
PCBs = Poly-Chlorinated Biphenyls

Created by: B. Wachholz 5/19/2017
Checked by: B. Perk 5/23/2017

Footnotes:
(1) The samples collected are representative of the water/solids mixture generated from the storm sewer cleaning process completed on May 8, 2017 and used for waste characterization purposes.

Table 2
Confirmation Sampling – Soil Analytical Results Summary Table – May 2017
Madison-Kipp Corporation
201 Waubesa Street, Madison, Wisconsin

PARAMETER	UNIT	NR 720 RCL		SAMPLE LOCATION AND DATE																		
		INDUSTRIAL DIRECT CONTACT[1]	HISTORICAL INDUSTRIAL DIRECT CONTACT[2]	PIPE B 5/8/2017	HS1 5/9/2017	HS2 5/9/2017	CS-1 5/11/2017	CS-2 5/11/2017	CS-3 5/11/2017	CS-4 5/11/2017	CS-5 5/11/2017	CS-6 5/11/2017	CS-7 5/11/2017	CS-8 5/11/2017	CS-9 5/11/2017	CS-10 5/11/2017	CS-11 5/11/2017	CS-12 5/11/2017	CS-4B 5/15/2017	CS-6B 5/15/2017	CS-8B 5/15/2017	CS-12B 5/15/2017	CS-6C 5/16/2017	TOP SOIL 5/16/2017
PCB-1016	mg/kg	28	21.2	<0.0098	<0.0099	<0.0099	<0.012	<0.0091	<0.0087	<0.011	<0.0092	<0.0097	<0.0085	<0.010	<0.0099	<0.0089	<0.0091	<0.010	<0.0085	<0.0087	<0.0089	<0.0092	<0.0091	<0.010
PCB-1221	mg/kg	0.883	0.589	<0.0054	<0.0055	<0.0055	<0.0065	<0.0050	<0.0048	<0.0059	<0.0051	<0.0054	<0.0047	<0.0055	<0.0055	<0.0049	<0.0050	<0.0057	<0.0047	<0.0048	<0.0049	<0.0051	<0.0051	<0.0055
PCB-1232	mg/kg	0.792	0.589	<0.0037	<0.0038	<0.0038	<0.0044	<0.0034	<0.0033	<0.0040	<0.0035	<0.0037	<0.0032	<0.0038	<0.0037	<0.0034	<0.0034	<0.0039	<0.0032	<0.0033	<0.0034	<0.0035	<0.0035	<0.0038
PCB-1242	mg/kg	0.972	0.744	<0.0058	<0.0059	<0.0059	<0.0070	<0.0054	<0.0052	<0.0063	<0.0054	<0.0058	<0.0051	<0.0060	<0.0059	<0.0053	<0.0054	<0.0062	<0.0051	<0.0052	<0.0053	<0.0055	<0.0054	<0.0059
PCB-1248	mg/kg	0.975	0.744	***2.3***	<0.0071	<0.0071	<0.0084	0.27	0.015 J	***1.0***	0.060 J	***3.6***	0.033 J	***1.7***	0.14	0.091 J	<0.0065	***0.76***	0.11 J	<0.0062	0.030 J	<0.0066	***8.5***	<0.0072
PCB-1254	mg/kg	0.988	0.744	<0.0058	0.35	***0.86***	0.18	0.19	<0.0052	<0.0063	<0.0054	<0.0058	<0.0051	***1.0***	<0.0059	<0.0053	0.24	<0.0062	0.085 J	***3.7***	<0.0053	<0.0055	***6.2***	<0.0059
PCB-1260	mg/kg	1	0.744	<0.0032	<0.0032	<0.0032	<0.0038	<0.0029	<0.0028	<0.0035	<0.0030	<0.0031	<0.0028	<0.0032	<0.0032	<0.0029	<0.0030	<0.0034	<0.0028	<0.0028	<0.0029	<0.0030	<0.0030	<0.0032
Total PCBs	mg/kg	0.967	0.744	***2.3***	0.35	***0.86***	0.18	0.46	0.015 J	***1.0***	0.060 J	***3.6***	0.033 J	***2.7***	0.14	0.091 J	0.24	***0.76***	0.20	***3.7***	0.030 J	<0.0092	***15***	<0.010

Notes:
Created by: B. Wachholz 5/19/2017
Checked by: B. Perk 5/23/2017

< = 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
PCBs = Polychlorinated Biphenyls
RCL = Residual Contaminant Level
WDNR = Wisconsin Department of Natural Resources
Bold and Italics = Historical WDNR Industrial Direct Contact Limit Exceedance

Footnotes:
(1) As of March 2017, the WDNR updated the industrial direct contact RCL for total PCBs and specific Aroclors.
(2) The confirmation samples for the rain garden excavation were compared to the historical industrial direct contact RCLs, as previously applied at the site and approved by the WDNR.

Table 3
Catch Basin and Roof Drain Sediment Sampling Analytical Results Summary
Madison-Kipp Corporation
201 Waubesa Street, Madison, Wisconsin

		NR 720 RCL		SAMPLE LOCATION AND DATE														
				ROOF DRAIN SAMPLE						SURFACE SAMPLE						BASIN BOTTOM SAMPLE		OUTFALL SAMPLE
PARAMETER	UNIT	INDUSTRIAL DIRECT CONTACT[2]	HISTORICAL INDUSTRIAL DIRECT CONTACT[3]	MH-3WR 5/22/2017	MH-4AR 5/22/2017	GUTTER 1 5/31/2017	GUTTER 2 5/31/2017	MH-2AR 6/14/2017	RDO 6/14/2017	MH-1A (2) 5/31/2017	MH-4A 5/31/2017	MH-5B 5/31/2017	MH-3W 6/14/2017	MH-5A 6/29/2017	PS-1 6/30/2017	MH-1NW-BASIN 6/14/2017	MH-1A(3)-BASIN 6/30/2017	OUTFALL (6/30) 6/30/2017
Matrix [1]	--	--	--	Other	Other	Other	Other	Other	Other	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
PCB-1016	mg/kg	28	21.2	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0081	<0.0088	<0.010	<0.018	<0.0078	<0.0077	<0.010	<0.0092	<0.0086
PCB-1221	mg/kg	0.883	0.589	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0045	<0.0049	<0.0058	<0.0098	<0.0043	<0.0043	<0.0057	<0.0051	<0.0048
PCB-1232	mg/kg	0.792	0.589	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0031	<0.0033	<0.0039	<0.0067	<0.0029	<0.0029	<0.0039	<0.0035	<0.0032
PCB-1242	mg/kg	0.972	0.744	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0048	<0.0052	<0.0062	<0.011	<0.0046	<0.0046	<0.0061	<0.0055	<0.0051
PCB-1248	mg/kg	0.975	0.744	0.20	<0.0053	<0.0053	0.049 J	<0.0053	0.050 J	0.023 J	0.096 J	0.12 J	0.32	<0.0056	<0.0055	0.10 J	***2.2***	***5.0***
PCB-1254	mg/kg	0.988	0.744	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	0.013 J	<0.0048	<0.0052	<0.0062	0.099 J	0.071 J	0.034 J	0.086 J	<0.0055	<0.0051
PCB-1260	mg/kg	1	0.744	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0026	<0.0028	<0.0034	<0.0058	<0.0025	<0.0025	<0.0033	<0.003	<0.0028
Total PCBs	mg/kg	0.967	0.744	0.20	<0.0074	<0.0074	0.049 J	<0.0074	0.063 J	0.023 J	0.096 J	0.12 J	0.42	0.071 J	0.034 J	0.19	***2.2***	***5.0***

Notes:

< = Less than

mg/kg = Milligrams per kilogram

J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.

RCL = residual contaminant level

PCBs = Polychlorinated Biphenyls

Bold and Italics = WDNR Industrial Direct Contact Limit Exceedance

Sample ID ending in "R" indicates the sample is from roof drain adjacent the manhole location (e.g., MH-4AR is the roof drain adjacent MH-4A).

Updated by: A. Stehn 7/10/2017

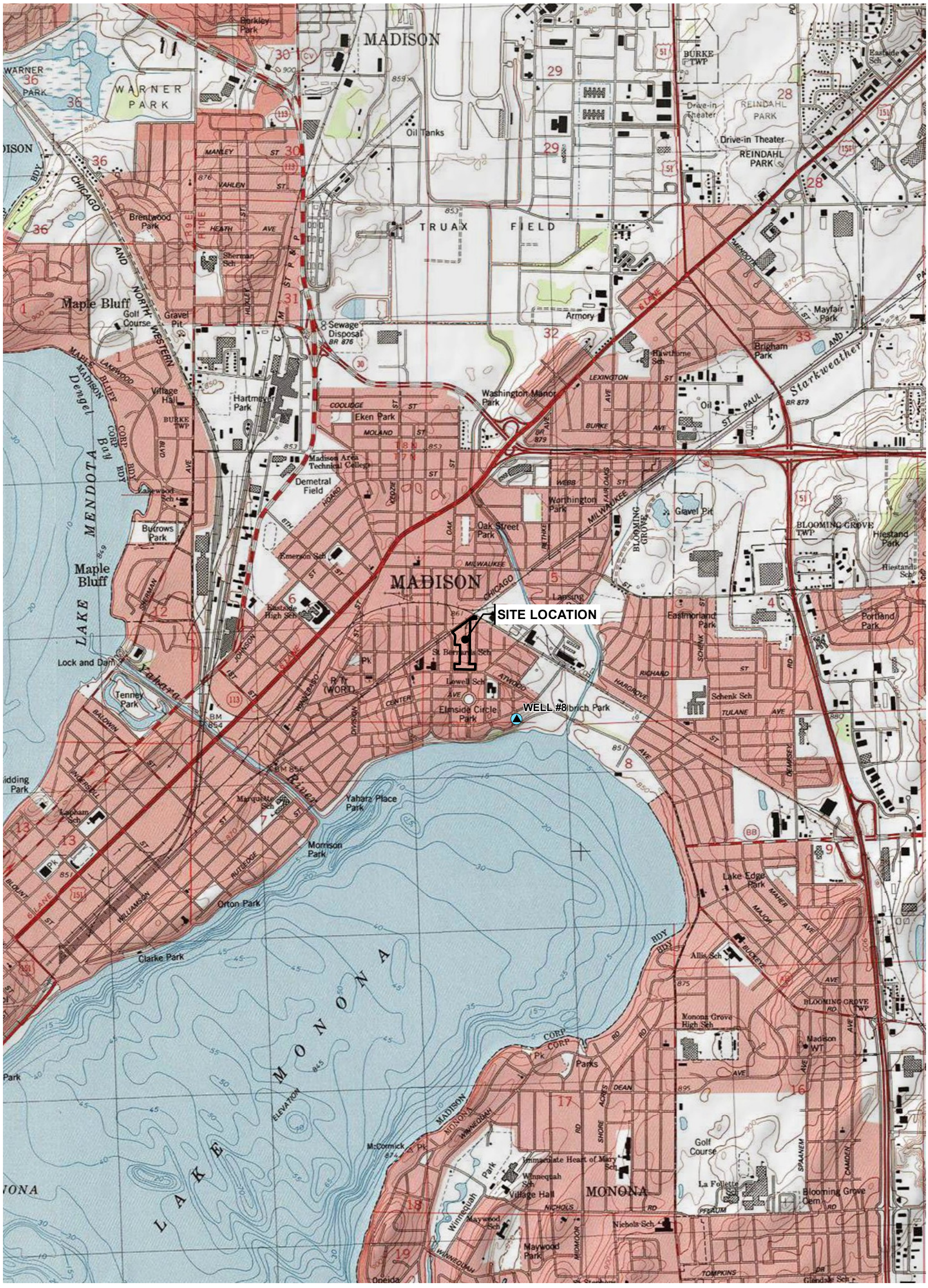
Checked by: B. Perk 7/10/2017

Footnotes:

(1) PCB results for samples with a matrix of "Other" are reported on an as is (wet weight) basis.

(2) As of March 2017, the WDNR updated the industrial direct contact residual contaminant levels for total PCBs and specific Aroclors.

(3) Historical WDNR industrial direct contact RCLs applied at the MKC site.



LEGEND

SITE PROPERTY BOUNDARY

MUNICIPAL SUPPLY WELL

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

0 2,000 4,000 FEET

1 " = 2,000 '
1:24,000

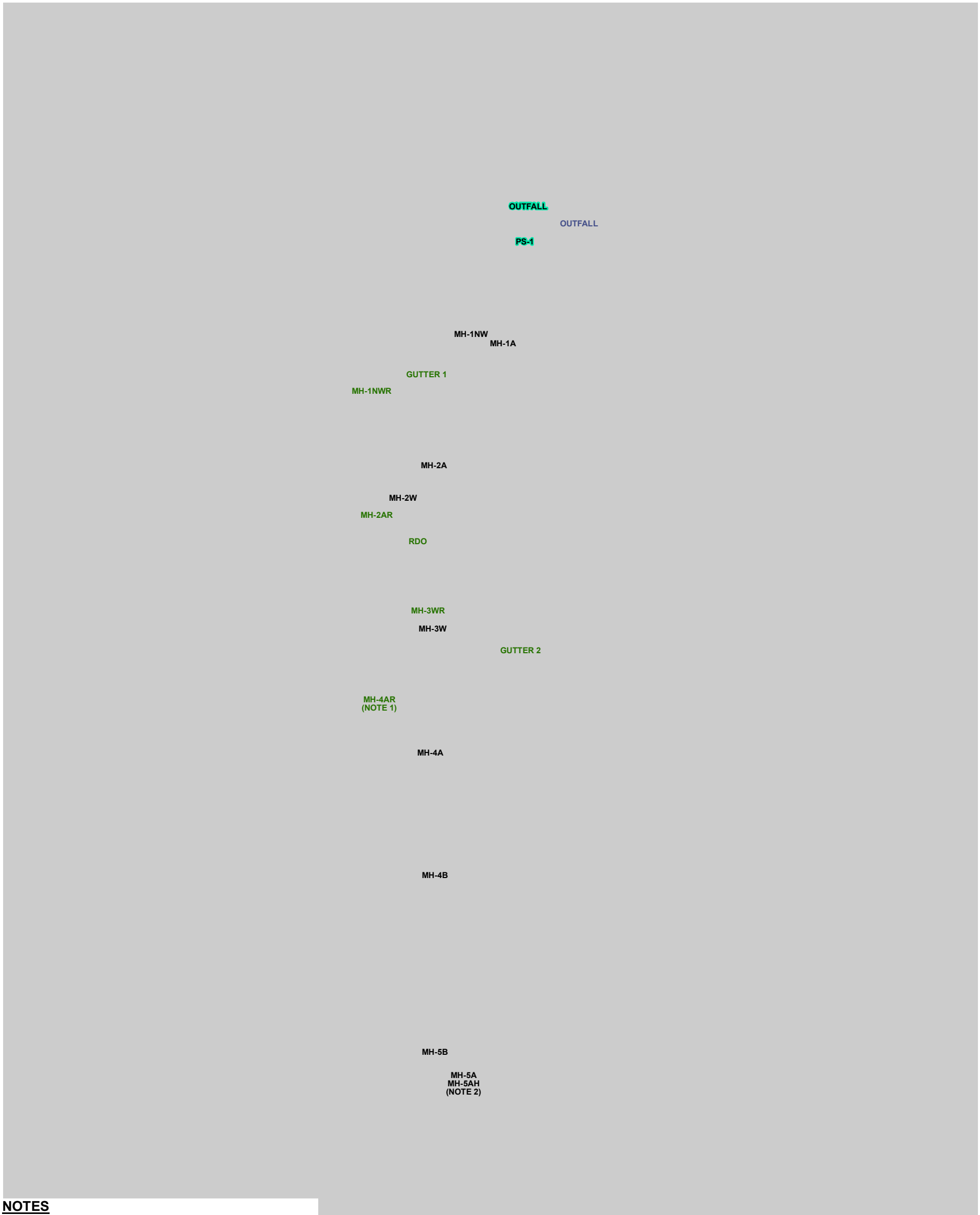
TRC
708 Heartland Trail
Suite 3000
Madison, WI 53717
Phone: 608.826.3600

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

TITLE:
SITE LOCATION MAP

DRAWN BY:	B DEEGAN
CHECKED BY:	A STEHN
APPROVED BY:	S SELLWOOD
DATE:	JULY 2017
PROJ. NO.:	268304
FILE:	268304-001slm.mxd

FIGURE 1



NOTES

1. MH-4AR REPRESENTS TWO COLLECTION POINTS THAT MERGE INTO ONE DISCHARGE POINT.
2. MH-5AH REPRESENTS A DISCHARGE PIPE LOCATED IN MANHOLE MH-5A.
3. MH-2W AND THE SECTION OF PIPE BETWEEN MH -2W AND MH-2A WERE ABANDONED ON 5/8/2017.
4. BASEMAP FROM GOOGLE EARTH PRO & PARTNERS, 2014.

LEGEND

- SITE PROPERTY BOUNDARY
- SURFACE SAMPLE LOCATION
- ROOF DRAIN INLET
- MANHOLE/CATCH BASIN
- OUTFALL
- S-1 PIPE SECTION
- S-2 PIPE SECTION
- S-3 PIPE SECTION
- S-3-ABANDONED (NOTE 3)
- S-4 PIPE SECTION

0 100 200 FEET

1 " = 100 '
1:1,200

N

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

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

TITLE:
STORM SEWER INFRASTRUCTURE

DRAWN BY:	B DEEGAN
CHECKED BY:	A STEHN
APPROVED BY:	S SELLWOOD
DATE:	JULY 2017
PROJ. NO.:	268304
FILE:	268304-010.mxd

FIGURE 2

LEGEND

- EXCAVATION AREA-DECEMBER 2016
- EXCAVATION AREA - MAY 2017
- SOIL COVER - JUNE 2017
- PREVIOUSLY PROPOSED EXCAVATION AREA
- CONFIRMATION SAMPLE LOCATION (<0.744 mg/kg - MAY 2017)
- CONFIRMATION SAMPLE LOCATION (>0.744 mg/kg - MAY 2017)
- STORM SEWER S-2
- COMMUNICATION (FIBER OPTIC)
- GAS LINE
- RIGHT-OF-WAY LINE

LABEL FORMAT

SAMPLE ID
[TOTAL PCBs RESULT - mg/kg] - MAY 2017
J= ESTIMATED VALUE. ANALYTE DETECTED AT A LEVEL LESS THAN REPORTING LIMIT AND GREATER THAN OR EQUAL TO THE DETECTION LIMIT.

NOTES

1. BASE MAP IMAGERY FROM NEARMAP, 4/24/2017.
2. CONFIRMATION SAMPLES WERE ANALYZED FOR POLYCHLORINATED BIPHENYLS (PCBs) USING EPA METHOD 8082. THE CONCENTRATIONS SHOWN REPRESENT TOTAL CONCENTRATION OF PCBs.
3. EXCAVATIONS WERE COMPLETED BETWEEN MAY 11 AND MAY 16, 2017. AFTER EACH EXCAVATION CONFIRMATION SOIL SAMPLES WERE COLLECTED AND IF RESULTS INDICATED EXCEEDANCES ABOVE THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES ESTABLISHED INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINANT LEVEL (RCL) FOR PCBS, FURTHER EXCAVATION AND CONFIRMATION SAMPLING WAS COMPLETED. THIS PROCESS WAS REPEATED UNTIL CONFIRMATION SAMPLES WERE BELOW THE RCL WITH THE EXCEPTION OF THE NORTHERN SIDEWALL WHERE A UTILITY CORRIDOR IS PRESENT.

0 10 20 Feet

1 " = 10 '

1:120

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

TITLE:
RAIN GARDEN EXCAVATION AND RESTORATION MAP

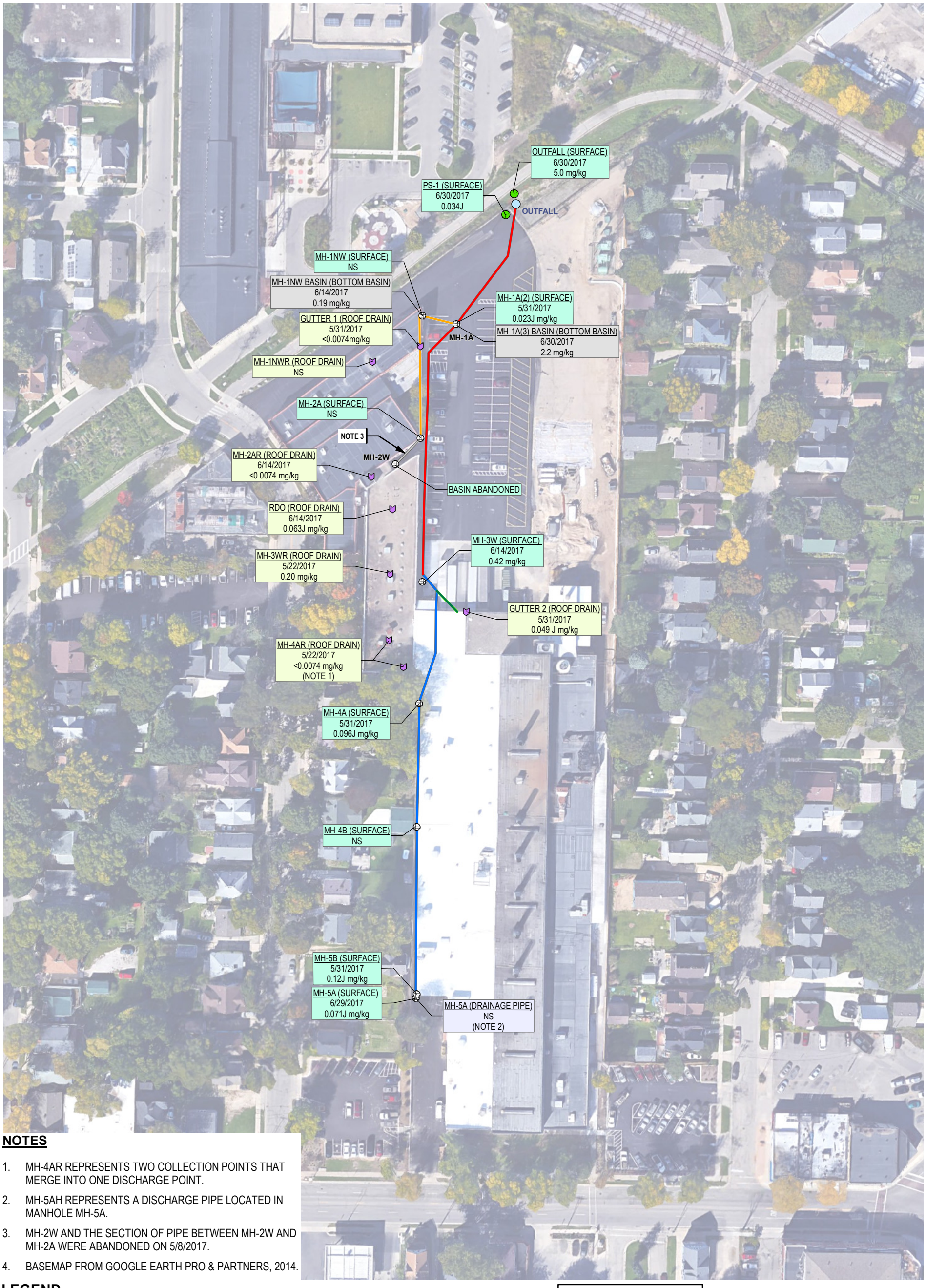
DRAWN BY:	J. PAPEZ	PROJ NO.:	268304
CHECKED BY:	A. STEHN		
APPROVED BY:	S SELLWOOD		**FIGURE 3**
DATE:	JULY 2017		

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

FILE NO.: 268304-009.mxd

Plot Date: 7/11/2017, 13:20:16 PM by BDEEGAN -- LAYOUT: ANSI B (11"x17")
Path: E:\Madison\KIPPCorp\2016_268304\268304-009.mxd
Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet (Foot US)
Map Rotation: 0

TRC - GIS



NOTES

1. MH-4AR REPRESENTS TWO COLLECTION POINTS THAT MERGE INTO ONE DISCHARGE POINT.
2. MH-5AH REPRESENTS A DISCHARGE PIPE LOCATED IN MANHOLE MH-5A.
3. MH-2W AND THE SECTION OF PIPE BETWEEN MH-2W AND MH-2A WERE ABANDONED ON 5/8/2017.
4. BASEMAP FROM GOOGLE EARTH PRO & PARTNERS, 2014.

LEGEND

- SITE PROPERTY BOUNDARY
- SURFACE SAMPLE LOCATION
- ROOF DRAIN INLET
- MANHOLE/CATCH BASIN
- OUTFALL
- S-1 PIPE SECTION
- S-2 PIPE SECTION
- S-3 PIPE SECTION
- S-3-ABANDONED (NOTE 3)
- S-4 PIPE SECTION

SAMPLE ID (COLLECTION POINT)
SAMPLE DATE
TOTAL PCB CONCENTRATION
*NS=NOT SAMPLED
*PCB=POLYCHLORINATED BIPHENYLS

0 100 200 FEET

1 " = 100 '
1:1,200

N

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

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

TITLE:
SOLIDS/SEDIMENT MONITORING SUMMARY

DRAWN BY:	B DEEGAN
CHECKED BY:	A STEHN
APPROVED BY:	S SELLWOOD
DATE:	JULY 2017
PROJ. NO.:	268304
FILE:	268304-011.mxd

FIGURE 4

Appendix A
Photographic Documentation

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
1	5/8/2017

Description
Stormwater pipes and manhole being flushed and vacuumed at MH-1NW (facing SW)

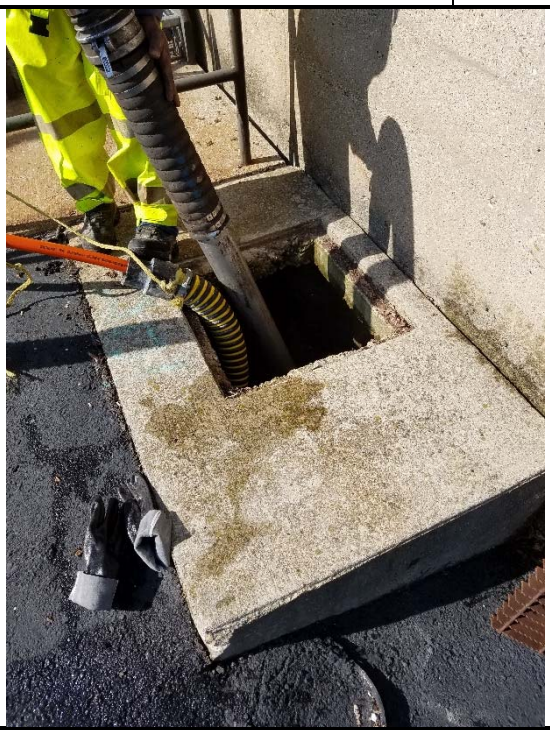


Photo No.	Date
2	5/8/2017

Description
MH-2W being flushed out before capping (facing N)

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
3 & 4	5/2/2017 & 5/9/2017

Description

Left: Gap and corrugated plastic pipe seen in MH-5A before storm sewer system cleaning and sealing (facing NE)

Right: Concrete was used to seal the gap above the storm sewer outlet pipe. A corrugated plastic pipe extension was attached to the small drain pipe entering the manhole and fitted with a filter bag (facing NE).

Photo No.	Date
5	5/9/2017

Description

Concrete used to seal gaps in manhole MH-4A (facing SE).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
6	5/8/2017

Description
Filter fabric placed under manhole cover of MH-3W (facing SW).

Photo No.	Date
7	5/8/2017

Description
Filter bag fitted to the end of roof drain pipe above MH-2A (facing SW).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
8	5/8/2017

Description
Capped pipe that used to drain MH-2W into MH-2A (facing N).

Photo No.	Date
9 & 10	5/8/2017

Description
Left: MH-2W before drainage pipe was capped and sealed (facing N).

Right: MH-2W capped and filled with concrete (facing W).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
11	5/22/2017

Description
Hydraulic cement and expanding foam used to fill in gaps near and around MH-1NW (facing SW).

Photo No.	Date
12	5/9/2017

Description
Concrete repairs made to seal the gap between the outlet pipe penetration and manhole base at MH-1A (facing NE).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
13	5/9/2017

Description
Concrete repairs made to seal the gap between the inlet pipe penetration and manhole base at MH-1A (facing SW)

Photo No.	Date
14	5/8/2017

Description
Water and sediment being flushed and vacuumed out of the rain garden pipe outfall. (facing S)

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
15	5/8/2017

Description
Sediment filter bag placed in roof drain. Sample location RDO.

Photo No.	Date
16	5/8/2017

Description
Sediment filter bag secured on end of roof drain above MH-4A (facing N).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
17	5/9/2017

Description
Sediment filter fabric placed under the metal grates for MH-5A and MH-5B (facing N).

Photo No.	Date
18	5/8/2017

Description
Rain garden before excavation (facing NE).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
19	5/11/2017

Description
Rain garden during excavation (facing NE).

Photo No.	Date
20	5/11/2017

Description
Section of outfall pipe removed due to separation from the rest of storm sewer system (facing SW)

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
21	5/11/2017

Description
Western side of raingarden excavation near outfall pipe into the garden (facing SW).

Photo No.	Date
22	5/16/2017

Description
Additional excavation performed on the northwest and northeast sides of the rain garden (facing NE).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
23	5/16/2017

Description
Topsoil placed during the restoration of the rain garden (facing NE).

Photo No.	Date
24	5/16/2017

Description
Coconut shell erosion control blanket and silt socks laid over topsoil (facing W).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
25	5/16/2017

Description
Coconut shell erosion control blanket, silt sock, and stones placed near rain garden outfall (facing S).

Photo No.	Date
26	6/7/2017

Description
Filter fabric was placed on the ground surface before installing a soil cap over PCB impacted soil (facing NE).

Photographic Log

Client Name:	Site Location:	Project No.:
Madison-Kipp Corporation	201 Waubesa Street Madison, WI 53704	268304.0000

Photo No.	Date
25	6/7/2017

Description
Soil cap placed on top of filter fabric and impacted soil (facing W).

Photo No.	Date
26	6/7/2017

Description
Soil cap seeded and erosion control blanket placed over soil cap (facing NE).

Appendix B
Laboratory Analytical Reports – Rain Garden Confirmation Samples

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

May 09, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Storm Sewer - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/08/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
PADEP	Pennsylvania Secondary NELAP Accreditation	68-02962	05/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pipe B	A171902-03	Soil	05/08/2017	05/08/2017

CASE NARRATIVE

Sample Receipt Information:
3 samples were received on 05/08/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Additional Comments:
This report contains the results for sample A171902-03 only.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Pipe B

A171902-03 (Soil)

Date Sampled
05/08/2017 16:00

Pace Analytical - Madison

Polychlorinated Biphenyls by EPA Method 8082 — **Preparation Batch: A705019**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
PCB-1016	ND	0.0098	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
PCB-1221	ND	0.0054	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
PCB-1232	ND	0.0037	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
PCB-1242	ND	0.0058	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
PCB-1248	**2.3**	0.0070	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	X
PCB-1254	ND	0.0058	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
PCB-1260	ND	0.0032	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
Total PCBs	ND	0.0098	0.13	mg/kg dry	1	05/08/2017	05/08/2017 22:13	EPA 8082A	
Surrogate: Decachlorobiphenyl			*92.3 %*	*69.9-115*		*05/08/2017*	*05/08/2017 22:13*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*94.1 %*	*64.1-115*		*05/08/2017*	*05/08/2017 22:13*	*EPA 8082A*	

Classical Chemistry Parameters — **Preparation Batch: A705020**

% Solids	**75.8**		0.00	% by Weight	1	05/08/2017	05/09/2017 09:58	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705019 - EPA 3570										
Blank (A705019-BLK1)			Prepared: 05/08/2017 Analyzed: 05/08/2017 21:48							
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.241*		*mg/kg wet*	*0.2400*		*101*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.230*		*mg/kg wet*	*0.2400*		*95.8*	*64.1-115*			
LCS (A705019-BS1)			Prepared: 05/08/2017 Analyzed: 05/08/2017 21:23							
PCB-1248	2.02	0.10	mg/kg wet	2.000		101	78.4-125			
Surrogate: Decachlorobiphenyl	*0.227*		*mg/kg wet*	*0.2400*		*94.7*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.228*		*mg/kg wet*	*0.2400*		*95.0*	*64.1-115*			
Matrix Spike (A705019-MS1)	**Source: A171902-03**		Prepared: 05/08/2017 Analyzed: 05/08/2017 22:38							
PCB-1248	4.65	0.13	mg/kg dry	2.640	2.33	88.0	64.2-143			
Surrogate: Decachlorobiphenyl	*0.271*		*mg/kg dry*	*0.3168*		*85.5*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.286*		*mg/kg dry*	*0.3168*		*90.2*	*64.1-115*			
Matrix Spike Dup (A705019-MSD1)	**Source: A171902-03**		Prepared: 05/08/2017 Analyzed: 05/08/2017 23:02							
PCB-1248	4.09	0.13	mg/kg dry	2.640	2.33	66.5	64.2-143	27.8	20	X
Surrogate: Decachlorobiphenyl	*0.259*		*mg/kg dry*	*0.3168*		*81.8*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.272*		*mg/kg dry*	*0.3168*		*85.8*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A705020 - % Solids										
Duplicate (A705020-DUP1)	**Source: A171902-03**		Prepared: 05/08/2017 Analyzed: 05/09/2017 09:58							
% Solids	77.3	0.00	% by Weight		75.8			1.98	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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.
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 Mobile Lab Services

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 5764 Page: 1 of: 1

Lab Work Order #: A171902

Report To: Andy Stehn
Company: TRC
Address 1: 708 Heartland Trl. Suite 3000, Madison, WI 53717
Address 2:
E-mail Address: astehn@trcsolutions.com

Project Number: 268304 PO Number:
Project Name: MKC Storm Sewer
Project Location (City, State): Madison, WI

Preservation Codes
Analyses Requested

Turn Around (check one): ☐ Normal ☒ Rush water = 1 week soil = 24 hours
If Rush, Report Due Date:
Sampled By (Print): Andy Stehn

Invoice To:
Company: Same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	PCBs (A)	Comments	Lab ID	Lab Receipt Time
SW-1	5/8/17	09:55	W	1	X		01	
SW-2	5/8/17	14:20	W	3	↓	MS/MSD samples collected	02	
Pipe B	5/8/17	16:00	S	1	↓		03	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	5/8/17	16:37	[signature]	05-08-17	1653
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: on ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

White Copy - Original / Yellow Copy - Copy 2 / Pink Copy - Copy 3

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

May 10, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Storm Sewer - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/09/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
PADEP	Pennsylvania Secondary NELAP Accreditation	68-02962	05/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HS1	A171904-01	Soil	05/09/2017	05/09/2017
HS2	A171904-02	Soil	05/09/2017	05/09/2017

CASE NARRATIVE

Sample Receipt Information:
3 samples were received on 05/09/2017. Samples were received on ice. Samples were received in acceptable condition.

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-1260 for samples A171904-01 and A171904-02. Samples were less than the reporting limit for this analyte so no further action is required.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

HS1

A171904-01 (Soil)

Date Sampled
05/09/2017 14:40

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A705023**		
PCB-1016	ND	0.0099	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
PCB-1221	ND	0.0055	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
PCB-1232	ND	0.0038	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
PCB-1242	ND	0.0059	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
PCB-1248	ND	0.0071	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
PCB-1254	**0.35**	0.0059	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
PCB-1260	ND	0.0032	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
Total PCBs	**0.35**	0.0099	0.13	mg/kg dry	1	05/09/2017	05/09/2017 20:12	EPA 8082A	
Surrogate: Decachlorobiphenyl			*100 %*	*69.9-115*		*05/09/2017*	*05/09/2017 20:12*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*99.7 %*	*64.1-115*		*05/09/2017*	*05/09/2017 20:12*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A705024**		
% Solids	**74.6**		0.00	% by Weight	1	05/09/2017	05/10/2017 09:37	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

HS2

A171904-02 (Soil)

Date Sampled
05/09/2017 14:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705023**			
PCB-1016	ND	0.0099	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
PCB-1221	ND	0.0055	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
PCB-1232	ND	0.0038	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
PCB-1242	ND	0.0059	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
PCB-1248	ND	0.0071	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
PCB-1254	**0.86**	0.0059	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
PCB-1260	ND	0.0032	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
Total PCBs	**0.86**	0.0099	0.13	mg/kg dry	1	05/09/2017	05/10/2017 09:10	EPA 8082A	
Surrogate: Decachlorobiphenyl			*99.0 %*	*69.9-115*		*05/09/2017*	*05/10/2017 09:10*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*96.7 %*	*64.1-115*		*05/09/2017*	*05/10/2017 09:10*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705024**			
% Solids	**74.4**		0.00	% by Weight	1	05/09/2017	05/10/2017 09:37	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705023 - EPA 3570										
Blank (A705023-BLK1)				Prepared: 05/09/2017 Analyzed: 05/09/2017 19:47						
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.257*		*mg/kg wet*	*0.2400*		*107*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.245*		*mg/kg wet*	*0.2400*		*102*	*64.1-115*			
LCS (A705023-BS1)				Prepared: 05/09/2017 Analyzed: 05/09/2017 19:22						
PCB-1248	2.15	0.10	mg/kg wet	2.000		107	78.4-125			
Surrogate: Decachlorobiphenyl	*0.254*		*mg/kg wet*	*0.2400*		*106*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.242*		*mg/kg wet*	*0.2400*		*101*	*64.1-115*			
Matrix Spike (A705023-MS1)	**Source: A171904-01**			Prepared: 05/09/2017 Analyzed: 05/09/2017 21:02						
PCB-1248	2.93	0.13	mg/kg dry	2.680	ND	109	64.2-143			
Surrogate: Decachlorobiphenyl	*0.317*		*mg/kg dry*	*0.3216*		*98.5*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.323*		*mg/kg dry*	*0.3216*		*100*	*64.1-115*			
Matrix Spike Dup (A705023-MSD1)	**Source: A171904-01**			Prepared: 05/09/2017 Analyzed: 05/09/2017 21:27						
PCB-1248	2.68	0.13	mg/kg dry	2.680	ND	100	64.2-143	8.71	20	
Surrogate: Decachlorobiphenyl	*0.304*		*mg/kg dry*	*0.3216*		*94.5*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.293*		*mg/kg dry*	*0.3216*		*91.0*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A705024 - % Solids										
Duplicate (A705024-DUP1)	**Source: A171904-01**		Prepared: 05/09/2017 Analyzed: 05/10/2017 09:37							
% Solids	74.9	0.00	% by Weight		74.6			0.393	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

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 Mobile Lab Services

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 7443 Page: 1 of: 1

Lab Work Order #: A171904

Project Number: 268304 PO Number:
Project Name: MHC Rain Garden
Project Location (City, State): Madison WI
Turn Around (check one): ☐ Normal ☒ Rush 24 hr
If Rush, Report Due Date: 5/10/17
Sampled By (Print): Andrew Stehn

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trl Suite 3000
Address 2: Madison, WI 53717
E-mail Address: astehn@trcsolutions.com

Invoice To:
Company: Same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes / Analyses Requested: PCBs	PCBs (Hold)					Comments	Lab ID	Lab Receipt Time
HS1	05/09/17	1440	S	1	X							01	
HS2	↓	1400	S	1	X							02	
HS3	↓	1500	S	1		X					HOLD SAMPLE	03	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Andrew Stehn (TRC)	05/09/17	1530	Jessica Gaar	050917	1645
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: on ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

May 12, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Storm Sewer - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/ 11/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
PADEP	Pennsylvania Secondary NELAP Accreditation	68-02962	05/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS-4	A171910-01	Soil	05/11/2017	05/11/2017
CS-10	A171910-02	Soil	05/11/2017	05/11/2017
CS-3	A171910-03	Soil	05/11/2017	05/11/2017
CS-5	A171910-04	Soil	05/11/2017	05/11/2017
CS-6	A171910-05	Soil	05/11/2017	05/11/2017
CS-9	A171910-06	Soil	05/11/2017	05/11/2017
CS-2	A171910-07	Soil	05/11/2017	05/11/2017
CS-7	A171910-08	Soil	05/11/2017	05/11/2017
CS-8	A171910-09	Soil	05/11/2017	05/11/2017
CS-11	A171910-10	Soil	05/11/2017	05/11/2017
CS-1	A171910-11	Soil	05/11/2017	05/11/2017
CS-12	A171910-12	Soil	05/11/2017	05/11/2017

CASE NARRATIVE

Sample Receipt Information:
13 samples were received on 05/11/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Additional Comments:
Results for sample A171910-13 will be provided in a separate report, per client instruction.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-4

A171910-01 (Soil)

Date Sampled
05/11/2017 09:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A705028**		
PCB-1016	ND	0.011	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
PCB-1221	ND	0.0059	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
PCB-1232	ND	0.0040	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
PCB-1242	ND	0.0063	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
PCB-1248	**1.0**	0.0076	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
PCB-1254	ND	0.0063	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
PCB-1260	ND	0.0035	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
Total PCBs	**1.0**	0.011	0.14	mg/kg dry	1	05/11/2017	05/11/2017 19:00	EPA 8082A	
Surrogate: Decachlorobiphenyl			*96.9 %*	*69.9-115*		*05/11/2017*	*05/11/2017 19:00*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*103 %*	*64.1-115*		*05/11/2017*	*05/11/2017 19:00*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A705029**		
% Solids	**69.3**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-10

A171910-02 (Soil)

Date Sampled
05/11/2017 09:05

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0089	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	
PCB-1221	ND	0.0049	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	
PCB-1232	ND	0.0034	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	
PCB-1242	ND	0.0053	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	
PCB-1248	**0.091**	0.0064	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	J
PCB-1254	ND	0.0053	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	
PCB-1260	ND	0.0029	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	
Total PCBs	**0.091**	0.0089	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:14	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*85.3 %*	*69.9-115*		*05/11/2017*	*05/11/2017 20:14*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*89.4 %*	*64.1-115*		*05/11/2017*	*05/11/2017 20:14*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**83.1**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-3

A171910-03 (Soil)

Date Sampled
05/11/2017 09:10

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0087	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	
PCB-1221	ND	0.0048	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	
PCB-1232	ND	0.0033	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	
PCB-1242	ND	0.0052	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	
PCB-1248	**0.015**	0.0062	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	J
PCB-1254	ND	0.0052	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	
PCB-1260	ND	0.0028	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	
Total PCBs	**0.015**	0.0087	0.12	mg/kg dry	1	05/11/2017	05/11/2017 20:39	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*85.7 %*	*69.9-115*		*05/11/2017*	*05/11/2017 20:39*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*88.1 %*	*64.1-115*		*05/11/2017*	*05/11/2017 20:39*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**85.0**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

CS-5

A171910-04 (Soil)

Date Sampled
05/11/2017 09:15

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0092	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	
PCB-1221	ND	0.0051	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	
PCB-1232	ND	0.0035	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	
PCB-1242	ND	0.0054	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	
PCB-1248	**0.060**	0.0066	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	J
PCB-1254	ND	0.0054	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	
PCB-1260	ND	0.0030	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	
Total PCBs	**0.060**	0.0092	0.12	mg/kg dry	1	05/11/2017	05/11/2017 21:04	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*94.5 %*	*69.9-115*		*05/11/2017*	*05/11/2017 21:04*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*105 %*	*64.1-115*		*05/11/2017*	*05/11/2017 21:04*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**80.9**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-6

A171910-05 (Soil)

Date Sampled
05/11/2017 10:05

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0097	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
PCB-1221	ND	0.0054	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
PCB-1232	ND	0.0037	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
PCB-1242	ND	0.0058	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
PCB-1248	**3.6**	0.0070	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
PCB-1254	ND	0.0058	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
PCB-1260	ND	0.0031	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
Total PCBs	**3.6**	0.0097	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:29	EPA 8082A	
Surrogate: Decachlorobiphenyl			*96.2 %*	*69.9-115*		*05/11/2017*	*05/11/2017 21:29*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*105 %*	*64.1-115*		*05/11/2017*	*05/11/2017 21:29*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**76.2**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-9

A171910-06 (Soil)

Date Sampled
05/11/2017 10:10

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0099	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
PCB-1221	ND	0.0055	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
PCB-1232	ND	0.0037	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
PCB-1242	ND	0.0059	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
PCB-1248	**0.14**	0.0071	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
PCB-1254	ND	0.0059	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
PCB-1260	ND	0.0032	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
Total PCBs	**0.14**	0.0099	0.13	mg/kg dry	1	05/11/2017	05/11/2017 21:54	EPA 8082A	
Surrogate: Decachlorobiphenyl			*92.4 %*	*69.9-115*		*05/11/2017*	*05/11/2017 21:54*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*104 %*	*64.1-115*		*05/11/2017*	*05/11/2017 21:54*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**74.8**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-2

A171910-07 (Soil)

Date Sampled
05/11/2017 10:15

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0091	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
PCB-1221	ND	0.0050	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
PCB-1232	ND	0.0034	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
PCB-1242	ND	0.0054	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
PCB-1248	**0.27**	0.0065	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
PCB-1254	**0.19**	0.0054	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
PCB-1260	ND	0.0029	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
Total PCBs	**0.46**	0.0091	0.12	mg/kg dry	1	05/11/2017	05/11/2017 23:59	EPA 8082A	
Surrogate: Decachlorobiphenyl			*85.0 %*	*69.9-115*		*05/11/2017*	*05/11/2017 23:59*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*92.9 %*	*64.1-115*		*05/11/2017*	*05/11/2017 23:59*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**81.4**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

CS-7

A171910-08 (Soil)

Date Sampled
05/11/2017 12:05

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0085	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	
PCB-1221	ND	0.0047	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	
PCB-1232	ND	0.0032	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	
PCB-1242	ND	0.0051	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	
PCB-1248	**0.033**	0.0061	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	J
PCB-1254	ND	0.0051	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	
PCB-1260	ND	0.0028	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	
Total PCBs	**0.033**	0.0085	0.11	mg/kg dry	1	05/11/2017	05/12/2017 00:24	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*91.3 %*	*69.9-115*		*05/11/2017*	*05/12/2017 00:24*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*100 %*	*64.1-115*		*05/11/2017*	*05/12/2017 00:24*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**87.1**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-8

A171910-09 (Soil)

Date Sampled
05/11/2017 12:10

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.010	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
PCB-1221	ND	0.0055	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
PCB-1232	ND	0.0038	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
PCB-1242	ND	0.0060	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
PCB-1248	**1.7**	0.0072	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
PCB-1254	**1.0**	0.0060	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
PCB-1260	ND	0.0032	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
Total PCBs	**2.7**	0.010	0.14	mg/kg dry	1	05/11/2017	05/12/2017 00:49	EPA 8082A	
Surrogate: Decachlorobiphenyl			*83.3 %*	*69.9-115*		*05/11/2017*	*05/12/2017 00:49*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*90.5 %*	*64.1-115*		*05/11/2017*	*05/12/2017 00:49*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**73.9**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-11

A171910-10 (Soil)

Date Sampled
05/11/2017 14:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705028**			
PCB-1016	ND	0.0091	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
PCB-1221	ND	0.0050	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
PCB-1232	ND	0.0034	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
PCB-1242	ND	0.0054	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
PCB-1248	ND	0.0065	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
PCB-1254	**0.24**	0.0054	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
PCB-1260	ND	0.0030	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
Total PCBs	**0.24**	0.0091	0.12	mg/kg dry	1	05/11/2017	05/12/2017 01:14	EPA 8082A	
Surrogate: Decachlorobiphenyl			*92.6 %*	*69.9-115*		*05/11/2017*	*05/12/2017 01:14*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*103 %*	*64.1-115*		*05/11/2017*	*05/12/2017 01:14*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705029**			
% Solids	**81.3**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

CS-1

A171910-11 (Soil)

Date Sampled
05/11/2017 14:05

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A705028**		
PCB-1016	ND	0.012	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
PCB-1221	ND	0.0065	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
PCB-1232	ND	0.0044	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
PCB-1242	ND	0.0070	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
PCB-1248	ND	0.0084	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
PCB-1254	**0.18**	0.0070	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
PCB-1260	ND	0.0038	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
Total PCBs	**0.18**	0.012	0.16	mg/kg dry	1	05/11/2017	05/12/2017 01:39	EPA 8082A	
Surrogate: Decachlorobiphenyl			*86.5 %*	*69.9-115*		*05/11/2017*	*05/12/2017 01:39*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*91.0 %*	*64.1-115*		*05/11/2017*	*05/12/2017 01:39*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A705029**		
% Solids	**63.2**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

CS-12

A171910-12 (Soil)

Date Sampled
05/11/2017 14:10

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A705028**		
PCB-1016	ND	0.010	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
PCB-1221	ND	0.0057	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
PCB-1232	ND	0.0039	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
PCB-1242	ND	0.0062	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
PCB-1248	**0.76**	0.0074	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
PCB-1254	ND	0.0062	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
PCB-1260	ND	0.0034	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
Total PCBs	**0.76**	0.010	0.14	mg/kg dry	1	05/11/2017	05/12/2017 02:04	EPA 8082A	
Surrogate: Decachlorobiphenyl			*90.7 %*	*69.9-115*		*05/11/2017*	*05/12/2017 02:04*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*100 %*	*64.1-115*		*05/11/2017*	*05/12/2017 02:04*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A705029**		
% Solids	**71.5**		0.00	% by Weight	1	05/11/2017	05/12/2017 11:11	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705028 - EPA 3570										
Blank (A705028-BLK1)				Prepared: 05/11/2017 Analyzed: 05/11/2017 18:35						
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.230*		*mg/kg wet*	*0.2400*		*96.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.243*		*mg/kg wet*	*0.2400*		*101*	*64.1-115*			
LCS (A705028-BS1)				Prepared: 05/11/2017 Analyzed: 05/11/2017 18:10						
PCB-1248	2.13	0.10	mg/kg wet	2.000		106	78.4-125			
Surrogate: Decachlorobiphenyl	*0.238*		*mg/kg wet*	*0.2400*		*99.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.244*		*mg/kg wet*	*0.2400*		*102*	*64.1-115*			
Matrix Spike (A705028-MS1)	**Source: A171910-01**			Prepared: 05/11/2017 Analyzed: 05/11/2017 19:25						
PCB-1248	3.84	0.14	mg/kg dry	2.885	1.04	97.1	64.2-143			
Surrogate: Decachlorobiphenyl	*0.345*		*mg/kg dry*	*0.3462*		*99.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.361*		*mg/kg dry*	*0.3462*		*104*	*64.1-115*			
Matrix Spike Dup (A705028-MSD1)	**Source: A171910-01**			Prepared: 05/11/2017 Analyzed: 05/11/2017 19:50						
PCB-1248	3.36	0.14	mg/kg dry	2.885	1.04	80.4	64.2-143	18.8	20	
Surrogate: Decachlorobiphenyl	*0.295*		*mg/kg dry*	*0.3462*		*85.3*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.320*		*mg/kg dry*	*0.3462*		*92.5*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A705029 - % Solids										
Duplicate (A705029-DUP1)	**Source: A171910-01**		Prepared: 05/11/2017 Analyzed: 05/12/2017 11:11							
% Solids	66.8	0.00	% by Weight		69.3			3.76	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

J	Analyte was detected but is below the reporting limit. The concentration is estimated.
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. 5765 Page: 1 of: 1

Lab Work Order #: A171910

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trail, Madison, WI
Address 2:
E-mail Address: astehn@trcsolutions.com

Project Number: 268304 PO Number:
Project Name: MKC Rain Garden
Project Location (City, State): Madison, WI

Turn Around (check one): ☐ Normal ☒ Rush 24 hour
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Invoice To:
Company: same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes / Analyses Requested: PCBs	Comments	Lab ID	Lab Receipt Time
CS-4	5/11/17	9:00	S	1	X		01	
CS-10	5/11/17	9:05					02	
CS-3	5/11/17	9:10					03	
CS-5	5/11/17	9:15					04	
CS-6	5/11/17	10:05					05	
CS-9	5/11/17	10:10					06	
CS-2	5/11/17	10:15					07	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Andrew Stehn TRC	Date: 05/11/17	Time: 10 29	Received By: [signature]
Relinquished By:	Date:	Time:	Received By: [signature]

Date: 05/11/17 Time: 1045

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: on ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

White C Copy 3

Pace Analytical
ECCS Mobile Lab Services

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 7445 Page: of:

Lab Work Order #: A171910

Project Number: 268304 PO Number:
Project Name: MKC Raingarden
Project Location (City, State): Madison, WI
Turn Around (check one): ☐ Normal ☒ Rush 24 hour
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Preservation Codes
Analyses Requested

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trail, Madison, WI
Address 2:
E-mail Address: astehn@trcsolutions.com

Invoice To:
Company: same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	PCBs						Comments	Lab ID	Lab Receipt Time
CS-7	5/11/17	12:05	S	1	X							08	
CS-8	5/11/17	12:10	"	"	"							09	
CS-11	5/11/17	14:00	"	"	"							10	
CS-1	5/11/17	14:05	"	"	"							11	
CS-12	5/11/17	14:10	"	"	"							12	
SW-3	5/11/17	16:10	W	1	X							13	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)
Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Ben Warkop	Date: 5/11/17	Time: 16:20 ~~15:00~~	Received By:	Date: 05-11-17	Time: 1645
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: 0°C
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

May 17, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Storm Sewer - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/15/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
PADEP	Pennsylvania Secondary NELAP Accreditation	68-02962	05/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS-12B	A172001-01	Soil	05/15/2017	05/15/2017
CS-8B	A172001-02	Soil	05/15/2017	05/15/2017
CS-6B	A172001-03	Soil	05/15/2017	05/15/2017
CS-4B	A172001-04	Soil	05/15/2017	05/15/2017

CASE NARRATIVE

Sample Receipt Information:
4 samples were received on 05/15/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-12B

A172001-01 (Soil)

Date Sampled
05/15/2017 15:45

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705039**			
PCB-1016	ND	0.0092	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
PCB-1221	ND	0.0051	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
PCB-1232	ND	0.0035	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
PCB-1242	ND	0.0055	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
PCB-1248	ND	0.0066	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
PCB-1254	ND	0.0055	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
PCB-1260	ND	0.0030	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
Total PCBs	ND	0.0092	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:26	EPA 8082A	
Surrogate: Decachlorobiphenyl			*92.9 %*	*69.9-115*		*05/15/2017*	*05/16/2017 19:26*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*82.3 %*	*64.1-115*		*05/15/2017*	*05/16/2017 19:26*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705049**			
% Solids	**80.4**		0.00	% by Weight	1	05/15/2017	05/16/2017 09:30	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

CS-8B

A172001-02 (Soil)

Date Sampled
05/15/2017 15:50

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705039**			
PCB-1016	ND	0.0089	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	
PCB-1221	ND	0.0049	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	
PCB-1232	ND	0.0034	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	
PCB-1242	ND	0.0053	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	
PCB-1248	**0.030**	0.0063	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	J
PCB-1254	ND	0.0053	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	
PCB-1260	ND	0.0029	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	
Total PCBs	**0.030**	0.0089	0.12	mg/kg dry	1	05/15/2017	05/16/2017 19:52	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*87.5 %*	*69.9-115*		*05/15/2017*	*05/16/2017 19:52*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*76.9 %*	*64.1-115*		*05/15/2017*	*05/16/2017 19:52*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705049**			
% Solids	**83.6**		0.00	% by Weight	1	05/15/2017	05/16/2017 09:30	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-6B

A172001-03 (Soil)

Date Sampled
05/15/2017 15:55

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705039**			
PCB-1016	ND	0.0087	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
PCB-1221	ND	0.0048	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
PCB-1232	ND	0.0033	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
PCB-1242	ND	0.0052	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
PCB-1248	ND	0.0062	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
PCB-1254	**3.7**	0.0052	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
PCB-1260	ND	0.0028	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
Total PCBs	**3.7**	0.0087	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:17	EPA 8082A	
Surrogate: Decachlorobiphenyl			*81.3 %*	*69.9-115*		*05/15/2017*	*05/16/2017 20:17*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*77.0 %*	*64.1-115*		*05/15/2017*	*05/16/2017 20:17*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705049**			
% Solids	**85.0**		0.00	% by Weight	1	05/15/2017	05/16/2017 09:30	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-4B

A172001-04 (Soil)

Date Sampled
05/15/2017 16:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705039**			
PCB-1016	ND	0.0085	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	
PCB-1221	ND	0.0047	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	
PCB-1232	ND	0.0032	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	
PCB-1242	ND	0.0051	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	
PCB-1248	**0.11**	0.0061	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	J
PCB-1254	**0.085**	0.0051	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	J
PCB-1260	ND	0.0028	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	
Total PCBs	**0.20**	0.0085	0.12	mg/kg dry	1	05/15/2017	05/16/2017 20:42	EPA 8082A	
Surrogate: Decachlorobiphenyl			*81.8 %*	*69.9-115*		*05/15/2017*	*05/16/2017 20:42*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*76.4 %*	*64.1-115*		*05/15/2017*	*05/16/2017 20:42*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705049**			
% Solids	**86.8**		0.00	% by Weight	1	05/15/2017	05/16/2017 09:30	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705039 - EPA 3570										
Blank (A705039-BLK1)				Prepared: 05/15/2017 Analyzed: 05/16/2017 19:01						
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.223*		*mg/kg wet*	*0.2400*		*92.8*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.204*		*mg/kg wet*	*0.2400*		*85.0*	*64.1-115*			
LCS (A705039-BS1)				Prepared: 05/15/2017 Analyzed: 05/16/2017 18:36						
PCB-1248	2.01	0.10	mg/kg wet	2.000		101	78.4-125			
Surrogate: Decachlorobiphenyl	*0.233*		*mg/kg wet*	*0.2400*		*96.9*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.207*		*mg/kg wet*	*0.2400*		*86.4*	*64.1-115*			
Matrix Spike (A705039-MS1)	**Source: A172001-04**			Prepared: 05/15/2017 Analyzed: 05/16/2017 21:07						
PCB-1248	2.14	0.12	mg/kg dry	2.304	0.113	87.8	64.2-143			
Surrogate: Decachlorobiphenyl	*0.229*		*mg/kg dry*	*0.2765*		*82.9*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.209*		*mg/kg dry*	*0.2765*		*75.6*	*64.1-115*			
Matrix Spike Dup (A705039-MSD1)	**Source: A172001-04**			Prepared: 05/15/2017 Analyzed: 05/16/2017 21:31						
PCB-1248	2.17	0.12	mg/kg dry	2.304	0.113	89.5	64.2-143	1.87	20	
Surrogate: Decachlorobiphenyl	*0.232*		*mg/kg dry*	*0.2765*		*83.9*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.211*		*mg/kg dry*	*0.2765*		*76.5*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A705049 - % Solids										
Duplicate (A705049-DUP1)	**Source: A172001-04**		Prepared: 05/15/2017 Analyzed: 05/16/2017 09:30							
% Solids	85.5	0.00	% by Weight		86.8			1.56	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

J	Analyte was detected but is below the reporting limit. The concentration is estimated.
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. 7446 Page: 1 of: 1

Lab Work Order #: A172001

Project Number: 268304 PO Number:
Project Name: MKC Rain Garden
Project Location (City, State): Madison, WI
Turn Around (check one): ☐ Normal ☒ Rush 24-hr
If Rush, Report Due Date: 5/16/17
Sampled By (Print): Andrew Stehn (TRC)

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trl. Suite 3000
Address 2:
E-mail Address: astehn@trcsolutions.com
Invoice To:
Company: Same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes / Analyses Requested: A	PCBs	Comments	Lab ID	Lab Receipt Time
CS-12B	5/15/17	1545	S	1		X		01	
CS-8B		1550	S	1		X		02	
CS-6B		1555	S	1		X		03	
CS-4B		1600	S	1		X		04	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Andrew Stehn (TRC) Date: 5/15/17 Time:
Received By: [signature] Date: 05-15-17 Time: 1648
Relinquished By: Date: Time:
Received By: Date: Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk In
Receipt Temp: Onice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

May 18, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Storm Sewer - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/17/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
PADEP	Pennsylvania Secondary NELAP Accreditation	68-02962	05/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS-6C	A172010-01	Soil	05/16/2017	05/17/2017
Top Soil	A172010-02	Soil	05/16/2017	05/17/2017

CASE NARRATIVE

Sample Receipt Information:
2 samples were received on 05/17/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

CS-6C

A172010-01 (Soil)

Date Sampled
05/16/2017 13:15

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A705060**		
PCB-1016	ND	0.0091	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
PCB-1221	ND	0.0051	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
PCB-1232	ND	0.0035	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
PCB-1242	ND	0.0054	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
PCB-1248	**8.5**	0.0065	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	M, X
PCB-1254	**6.2**	0.0054	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
PCB-1260	ND	0.0030	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
Total PCBs	**15**	0.0091	0.12	mg/kg dry	1	05/17/2017	05/17/2017 17:22	EPA 8082A	
Surrogate: Decachlorobiphenyl			*91.2 %*	*69.9-115*		*05/17/2017*	*05/17/2017 17:22*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*81.6 %*	*64.1-115*		*05/17/2017*	*05/17/2017 17:22*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A705061**		
% Solids	**80.9**		0.00	% by Weight	1	05/17/2017	05/18/2017 12:47	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

Top Soil

A172010-02 (Soil)

Date Sampled
05/16/2017 13:38

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Pace Analytical - Madison									
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705060**			
PCB-1016	ND	0.010	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
PCB-1221	ND	0.0055	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
PCB-1232	ND	0.0038	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
PCB-1242	ND	0.0059	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
PCB-1248	ND	0.0072	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
PCB-1254	ND	0.0059	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
PCB-1260	ND	0.0032	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
Total PCBs	ND	0.010	0.14	mg/kg dry	1	05/17/2017	05/17/2017 18:37	EPA 8082A	
Surrogate: Decachlorobiphenyl			*74.6 %*	*69.9-115*		*05/17/2017*	*05/17/2017 18:37*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*71.9 %*	*64.1-115*		*05/17/2017*	*05/17/2017 18:37*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A705061**			
% Solids	**74.0**		0.00	% by Weight	1	05/17/2017	05/18/2017 12:47	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705060 - EPA 3570										
Blank (A705060-BLK1)			Prepared: 05/17/2017 Analyzed: 05/17/2017 16:57							
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.203*		*mg/kg wet*	*0.2400*		*84.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.173*		*mg/kg wet*	*0.2400*		*72.2*	*64.1-115*			
LCS (A705060-BS1)			Prepared: 05/17/2017 Analyzed: 05/17/2017 16:32							
PCB-1248	1.79	0.10	mg/kg wet	2.000		89.4	78.4-125			
Surrogate: Decachlorobiphenyl	*0.202*		*mg/kg wet*	*0.2400*		*84.4*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.176*		*mg/kg wet*	*0.2400*		*73.1*	*64.1-115*			
Matrix Spike (A705060-MS1)	**Source: A172010-01**		Prepared: 05/17/2017 Analyzed: 05/18/2017 11:39							
PCB-1248	11.5	0.49	mg/kg dry	2.471	8.45	124	64.2-143			D
Surrogate: Decachlorobiphenyl	*0.250*		*mg/kg dry*	*0.2966*		*84.2*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.233*		*mg/kg dry*	*0.2966*		*78.7*	*64.1-115*			
Matrix Spike Dup (A705060-MSD1)	**Source: A172010-01**		Prepared: 05/17/2017 Analyzed: 05/18/2017 12:04							
PCB-1248	15.3	0.49	mg/kg dry	2.471	8.45	278	64.2-143	76.5	20	M, X, D
Surrogate: Decachlorobiphenyl	*0.249*		*mg/kg dry*	*0.2966*		*84.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.239*		*mg/kg dry*	*0.2966*		*80.6*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A705061 - % Solids										
Duplicate (A705061-DUP1)	**Source: A172010-02**		Prepared: 05/17/2017 Analyzed: 05/18/2017 12:47							
% Solids	75.8	0.00	% by Weight		74.0			2.28	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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.
D	Data reported from a dilution
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. 5763 Page: 1 of: 1

Lab Work Order #: A172010

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trl. Suite 3000
Address 2: Madison WI 53717
E-mail Address: astehn@trcsolutions.com

Project Number: 268304 PO Number:
Project Name: MMC Rain Garden
Project Location (City, State): Madison, WI
Turn Around (check one): ☐ Normal ☒ Rush 5-day
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Preservation Codes
Analyses Requested

Invoice To:
Company: Same as
Address 1: above
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Pr/35						Comments	Lab ID	Lab Receipt Time
CS-6C	05/16/17	1315	S	1	X							01	
Top Soil	05/16/17	1338	S	1	X							02	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	05/17/17	0800	[signature]	05/17/17	1007
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Hand delivered
Receipt Temp: on ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

White C ... Copy 3

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

May 15, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

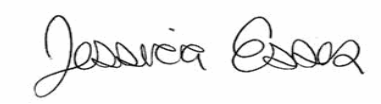
RE: MKC Storm Sewer - Madison, WI

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
PADEP	Pennsylvania Secondary NELAP Accreditation	68-02962	05/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-1 (Tote)	A171902-01	Water	05/08/2017	05/08/2017
SW-2 (VB12)	A171902-02	Water	05/08/2017	05/08/2017
SW-3 (VB07)	A171910-13	Water	05/11/2017	05/11/2017

CASE NARRATIVE

Per client instruction, this report contains results for samples A171902-01, A171902-02 and A171910-13 only and also adds additional information to the sample descriptions. .

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

SW-1 (Tote)

A171902-01 (Water)

Date Sampled
05/08/2017 09:55

Pace Analytical - Madison

Polychlorinated Biphenyls by EPA Method 8082 — **Preparation Batch: A705030**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
PCB-1016	ND	0.035	0.13	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
PCB-1221	ND	0.020	0.25	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
PCB-1232	ND	0.037	0.13	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
PCB-1242	ND	0.038	0.13	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
PCB-1248	ND	0.020	0.13	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
PCB-1254	ND	0.0090	0.13	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
PCB-1260	ND	0.025	0.13	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
Total PCBs	ND	0.038	0.25	ug/L	1	05/11/2017	05/11/2017 22:51	EPA 8082A	
Surrogate: Decachlorobiphenyl			*98.0 %*	*52.8-147*		*05/11/2017*	*05/11/2017 22:51*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*83.4 %*	*55.9-133*		*05/11/2017*	*05/11/2017 22:51*	*EPA 8082A*	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

SW-2 (VB12)

A171902-02 (Water)

Date Sampled
05/08/2017 14:20

Pace Analytical - Madison

Polychlorinated Biphenyls by EPA Method 8082 — **Preparation Batch: A705030**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
PCB-1016	ND	0.035	0.13	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
PCB-1221	ND	0.020	0.25	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
PCB-1232	ND	0.037	0.13	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
PCB-1242	ND	0.038	0.13	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
PCB-1248	**0.29**	0.020	0.13	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
PCB-1254	ND	0.0090	0.13	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
PCB-1260	ND	0.025	0.13	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
Total PCBs	**0.29**	0.038	0.25	ug/L	1	05/11/2017	05/11/2017 21:12	EPA 8082A	
Surrogate: Decachlorobiphenyl			*94.9 %*	*52.8-147*		*05/11/2017*	*05/11/2017 21:12*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*98.1 %*	*55.9-133*		*05/11/2017*	*05/11/2017 21:12*	*EPA 8082A*	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

SW-3 (VB07)

A171910-13 (Water)

Date Sampled
05/11/2017 16:10

Pace Analytical - Madison

Polychlorinated Biphenyls by EPA Method 8082 — **Preparation Batch: A705030**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
PCB-1016	ND	0.035	0.13	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
PCB-1221	ND	0.020	0.25	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
PCB-1232	ND	0.037	0.13	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
PCB-1242	ND	0.038	0.13	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
PCB-1248	**0.91**	0.020	0.13	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
PCB-1254	ND	0.0090	0.13	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
PCB-1260	ND	0.025	0.13	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
Total PCBs	**0.91**	0.038	0.25	ug/L	1	05/11/2017	05/11/2017 22:26	EPA 8082A	
Surrogate: Decachlorobiphenyl			*102 %*	*52.8-147*		*05/11/2017*	*05/11/2017 22:26*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*98.6 %*	*55.9-133*		*05/11/2017*	*05/11/2017 22:26*	*EPA 8082A*	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705030 - EPA 3511										
Blank (A705030-BLK1)				Prepared: 05/11/2017 Analyzed: 05/11/2017 20:47						
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: Decachlorobiphenyl	*0.715*		*ug/L*	*0.7500*		*95.3*	*52.8-147*			
Surrogate: Tetrachloro-meta-xylene	*0.666*		*ug/L*	*0.7500*		*88.8*	*55.9-133*			
LCS (A705030-BS1)				Prepared: 05/11/2017 Analyzed: 05/11/2017 20:22						
PCB-1248	12.3	0.13	ug/L	12.50		98.5	65.5-133			
Surrogate: Decachlorobiphenyl	*0.697*		*ug/L*	*0.7500*		*93.0*	*52.8-147*			
Surrogate: Tetrachloro-meta-xylene	*0.657*		*ug/L*	*0.7500*		*87.6*	*55.9-133*			
Matrix Spike (A705030-MS1)	**Source: A171902-02**			Prepared: 05/11/2017 Analyzed: 05/11/2017 21:37						
PCB-1248	12.3	0.13	ug/L	12.50	0.289	96.3	60-140			
Surrogate: Decachlorobiphenyl	*0.716*		*ug/L*	*0.7500*		*95.5*	*52.8-147*			
Surrogate: Tetrachloro-meta-xylene	*0.707*		*ug/L*	*0.7500*		*94.3*	*55.9-133*			
Matrix Spike Dup (A705030-MSD1)	**Source: A171902-02**			Prepared: 05/11/2017 Analyzed: 05/11/2017 22:01						
PCB-1248	12.2	0.13	ug/L	12.50	0.289	95.6	60-140	0.691	20	
Surrogate: Decachlorobiphenyl	*0.706*		*ug/L*	*0.7500*		*94.1*	*52.8-147*			
Surrogate: Tetrachloro-meta-xylene	*0.717*		*ug/L*	*0.7500*		*95.5*	*55.9-133*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

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 Mobile Lab Services

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 5764 Page: 1 of: 1

Lab Work Order #: A171902

Report To: Andy Stehn
Company: TRC
Address 1: 708 Heartland Trl. Suite 3000, Madison, WI 53717
Address 2:
E-mail Address: astehn@trcsolutions.com

Project Number: 268304 PO Number:
Project Name: MKC Storm Sewer
Project Location (City, State): Madison, WI

Preservation Codes
Analyses Requested

Turn Around (check one): ☐ Normal ☒ Rush water=1 week soil=24 hours
If Rush, Report Due Date:
Sampled By (Print): Andy Stehn

Invoice To:
Company: Same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	PCBs						Comments	Lab ID	Lab Receipt Time
SW-1	5/8/17	09:55	W	1	X							01	
SW-2	5/8/17	14:20	W	3	↓						MS/MSD samples collected	02	
Pipe B	5/8/17	16:00	S	1	↓							03	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	5/8/17	16:37	[signature]	05-08-17	1653
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: on ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

White Copy - Original / Yellow Copy - Copy 2 / Pink Copy - Copy 3

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 5765 Page: 1 of: 1

Lab Work Order #: A171910

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trail, Madison, WI
Address 2:
E-mail Address: astehn@trcsolutions.com

Project Number: 268304 PO Number:
Project Name: MKC Rain Garden
Project Location (City, State): Madison, WI

Turn Around (check one): ☐ Normal ☒ Rush 24 hour
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Invoice To:
Company: same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes / Analyses Requested: PCB5	Comments	Lab ID	Lab Receipt Time
CS-4	5/11/17	9:00	S	1	X		01	
CS-10	5/11/17	9:05					02	
CS-3	5/11/17	9:10					03	
CS-5	5/11/17	9:15					04	
CS-6	5/11/17	10:05					05	
CS-9	5/11/17	10:10					06	
CS-2	5/11/17	10:15					07	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Andrew Stehn TRC Date: 05/11/17 Time: 10 29
Received By: [signature] Date: 05/11/17 Time: 1045
Relinquished By: Date: Time:
Received By: Date: Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: on ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Wh... y 3

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 7445 Page: of:

Lab Work Order #: A171910

Project Number: 268304 PO Number:
Project Name: MKC Raingarden
Project Location (City, State): Madison, WI
Turn Around (check one): ☐ Normal ☒ Rush 24 hour
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Preservation Codes
Analyses Requested: A

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trail, Madison, WI
Address 2:
E-mail Address: astehn@trcsolutions.com

Invoice To:
Company: same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	PCBs						Comments	Lab ID	Lab Receipt Time
CS-7	5/11/17	12:05	S	1	X							08	
CS-8	5/11/17	12:10	"	"	"							09	
CS-11	5/11/17	14:00	"	"	"							10	
CS-1	5/11/17	14:05	"	"	"							11	
CS-12	5/11/17	14:10	"	"	"							12	
SW-3	5/11/17	16:10	W	1	X							13	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)
Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Ben Warkop Date: 5/11/17 Time: 16:20 ~~15:00~~ Received By: Date: 05-11-17 Time: 1645
Relinquished By: Date: Time: Received By: Date: Time:

Custody Seal: X NA ☐ Intact ☐ Not Intact
Shipped Via: Walk-In
Receipt Temp: 0°C
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Appendix C
Laboratory Analytical Reports – Solids/Sediment Monitoring

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

June 09, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Rain Garden - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/24/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MH-3WR	A172121-01	Other	05/22/2017	05/24/2017
MH-4AR	A172121-02	Other	05/22/2017	05/24/2017

CASE NARRATIVE

Sample Receipt Information:
2 samples were received on 05/24/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Additional Comments:
PCB results are reported on an as is (wet weight) basis. Total solids are provided for reference.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

MH-3WR

A172121-01 (Other)

Date Sampled
05/22/2017 13:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705105**			
PCB-1016	ND	0.0074	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
PCB-1221	ND	0.0041	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
PCB-1232	ND	0.0028	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
PCB-1242	ND	0.0044	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
PCB-1248	**0.20**	0.0053	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
PCB-1254	ND	0.0044	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
PCB-1260	ND	0.0024	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
Total PCBs	**0.20**	0.0074	0.10	mg/kg	1	05/26/2017	05/30/2017 20:12	EPA 8082A	
Surrogate: Decachlorobiphenyl			*102 %*	*69.9-115*		*05/26/2017*	*05/30/2017 20:12*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*99.0 %*	*64.1-115*		*05/26/2017*	*05/30/2017 20:12*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706004**			
% Solids	**13.1**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

MH-4AR

A172121-02 (Other)

Date Sampled
05/22/2017 13:30

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A705105**			
PCB-1016	ND	0.0074	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
PCB-1221	ND	0.0041	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
PCB-1232	ND	0.0028	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
PCB-1242	ND	0.0044	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
PCB-1248	ND	0.0053	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
PCB-1254	ND	0.0044	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
PCB-1260	ND	0.0024	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
Total PCBs	ND	0.0074	0.10	mg/kg	1	05/26/2017	05/30/2017 21:27	EPA 8082A	
Surrogate: Decachlorobiphenyl			*99.2 %*	*69.9-115*		*05/26/2017*	*05/30/2017 21:27*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*101 %*	*64.1-115*		*05/26/2017*	*05/30/2017 21:27*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706004**			
% Solids	**8.83**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A705105 - EPA 3570										
Blank (A705105-BLK1)				Prepared: 05/26/2017 Analyzed: 05/30/2017 19:47						
PCB-1016	ND	0.10	mg/kg							
PCB-1221	ND	0.10	mg/kg							
PCB-1232	ND	0.10	mg/kg							
PCB-1242	ND	0.10	mg/kg							
PCB-1248	ND	0.10	mg/kg							
PCB-1254	ND	0.10	mg/kg							
PCB-1260	ND	0.10	mg/kg							
Total PCBs	ND	0.10	mg/kg							
Surrogate: Decachlorobiphenyl	*0.227*		*mg/kg*	*0.2400*		*94.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.217*		*mg/kg*	*0.2400*		*90.6*	*64.1-115*			
LCS (A705105-BS1)				Prepared: 05/26/2017 Analyzed: 05/30/2017 19:22						
PCB-1248	2.17	0.10	mg/kg	2.000		108	78.4-125			
Surrogate: Decachlorobiphenyl	*0.235*		*mg/kg*	*0.2400*		*98.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.243*		*mg/kg*	*0.2400*		*101*	*64.1-115*			
Matrix Spike (A705105-MS1)	**Source: A172121-01**			Prepared: 05/26/2017 Analyzed: 05/30/2017 20:37						
PCB-1248	2.21	0.10	mg/kg	2.000	0.202	100	64.2-143			
Surrogate: Decachlorobiphenyl	*0.221*		*mg/kg*	*0.2400*		*92.2*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.237*		*mg/kg*	*0.2400*		*98.6*	*64.1-115*			
Matrix Spike Dup (A705105-MSD1)	**Source: A172121-01**			Prepared: 05/26/2017 Analyzed: 05/30/2017 21:02						
PCB-1248	2.13	0.10	mg/kg	2.000	0.202	96.3	64.2-143	4.12	20	
Surrogate: Decachlorobiphenyl	*0.225*		*mg/kg*	*0.2400*		*93.7*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.222*		*mg/kg*	*0.2400*		*92.6*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A706004 - % Solids										
Duplicate (A706004-DUP1)	**Source: A172121-02**		Prepared: 06/01/2017 Analyzed: 06/02/2017 11:21							
% Solids	9.85	0.00	% by Weight		8.83			10.9	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

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 Mobile Lab Services

Pace Analytical - ECCS Division
2525 Advance Road
Madison, WI 53718
608-221-8700 (phone)
608-221-4889 (fax)

CHAIN OF CUSTODY

No. 7280 Page: 1 of: 1

Lab Work Order #: A172121

Project Number: 268304 PO Number:
Project Name: MUC Rain Garden
Project Location (City, State): Madison, WI
Turn Around (check one): ☒ Normal ☐ Rush
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Report To: Andrew Stehn
Company: TRC
Address 1: 708 Heartland Trl
Address 2: Suite 300 Madison WI
E-mail Address: astehn@trcsolutions.com

Invoice To:
Company: Same as
Address 1: above
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes / Analyses Requested: A	PCBs					Comments	Lab ID	Lab Receipt Time
MH-3WR	5/22/17	1300	S	1	X							01	
MH-4AR	5/22/17	1330	S	1	X							02	
~~MH-4A~~ AMS 4A													

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Andrew St Date: 5/24/17 Time: 0900
Received By: Date: 05-24-17 Time: 0953
Relinquished By: Date: Time:
Received By: Date: Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk In
Receipt Temp: 0°C
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

June 09, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

RE: MKC Rain Garden - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 05/31/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2017
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2017
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MH-1A (2)	A172203-01	Soil	05/31/2017	05/31/2017
GUTTER 1	A172203-02	Other	05/31/2017	05/31/2017
GUTTER 2	A172203-03	Other	05/31/2017	05/31/2017
MH-4A	A172203-04	Soil	05/31/2017	05/31/2017
MH-5B	A172203-05	Soil	05/31/2017	05/31/2017

CASE NARRATIVE

Sample Receipt Information:
5 samples were received on 05/31/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Additional Comments:
PCB results for samples A172203-02 and A172203-03 are reported on an as is (wet weight) basis. Total solids provided for reference.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

MH-1A (2)

A172203-01 (Soil)

Date Sampled
05/31/2017 07:55

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706003**			
PCB-1016	ND	0.0081	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	
PCB-1221	ND	0.0045	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	
PCB-1232	ND	0.0031	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	
PCB-1242	ND	0.0048	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	
PCB-1248	**0.023**	0.0058	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	J
PCB-1254	ND	0.0048	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	
PCB-1260	ND	0.0026	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	
Total PCBs	**0.023**	0.0081	0.11	mg/kg dry	1	06/01/2017	06/01/2017 23:07	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*87.7 %*	*69.9-115*		*06/01/2017*	*06/01/2017 23:07*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*92.3 %*	*64.1-115*		*06/01/2017*	*06/01/2017 23:07*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706004**			
% Solids	**91.2**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

GUTTER 1

A172203-02 (Other)

Date Sampled
05/31/2017 08:15

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A706003**		
PCB-1016	ND	0.0074	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
PCB-1221	ND	0.0041	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
PCB-1232	ND	0.0028	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
PCB-1242	ND	0.0044	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
PCB-1248	ND	0.0053	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
PCB-1254	ND	0.0044	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
PCB-1260	ND	0.0024	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
Total PCBs	ND	0.0074	0.10	mg/kg	1	06/01/2017	06/01/2017 23:31	EPA 8082A	
Surrogate: Decachlorobiphenyl			*86.1 %*	*69.9-115*		*06/01/2017*	*06/01/2017 23:31*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*96.4 %*	*64.1-115*		*06/01/2017*	*06/01/2017 23:31*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A706004**		
% Solids	**7.35**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

GUTTER 2

A172203-03 (Other)

Date Sampled
05/31/2017 08:25

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706003**			
PCB-1016	ND	0.0074	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	
PCB-1221	ND	0.0041	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	
PCB-1232	ND	0.0028	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	
PCB-1242	ND	0.0044	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	
PCB-1248	**0.049**	0.0053	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	J
PCB-1254	ND	0.0044	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	
PCB-1260	ND	0.0024	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	
Total PCBs	**0.049**	0.0074	0.10	mg/kg	1	06/01/2017	06/01/2017 23:56	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*86.1 %*	*69.9-115*		*06/01/2017*	*06/01/2017 23:56*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*94.1 %*	*64.1-115*		*06/01/2017*	*06/01/2017 23:56*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706004**			
% Solids	**23.6**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

MH-4A

A172203-04 (Soil)

Date Sampled
05/31/2017 09:35

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706003**			
PCB-1016	ND	0.0088	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	
PCB-1221	ND	0.0049	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	
PCB-1232	ND	0.0033	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	
PCB-1242	ND	0.0052	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	
PCB-1248	**0.096**	0.0063	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	J
PCB-1254	ND	0.0052	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	
PCB-1260	ND	0.0028	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	
Total PCBs	**0.096**	0.0088	0.12	mg/kg dry	1	06/01/2017	06/02/2017 00:21	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*80.1 %*	*69.9-115*		*06/01/2017*	*06/02/2017 00:21*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*88.1 %*	*64.1-115*		*06/01/2017*	*06/02/2017 00:21*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706004**			
% Solids	**84.5**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

MH-5B

A172203-05 (Soil)

Date Sampled
05/31/2017 09:50

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706003**			
PCB-1016	ND	0.010	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	
PCB-1221	ND	0.0058	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	
PCB-1232	ND	0.0039	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	
PCB-1242	ND	0.0062	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	
PCB-1248	**0.12**	0.0075	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	J
PCB-1254	ND	0.0062	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	
PCB-1260	ND	0.0034	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	
Total PCBs	**0.12**	0.010	0.14	mg/kg dry	1	06/01/2017	06/02/2017 01:36	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*76.8 %*	*69.9-115*		*06/01/2017*	*06/02/2017 01:36*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*94.5 %*	*64.1-115*		*06/01/2017*	*06/02/2017 01:36*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706004**			
% Solids	**71.0**		0.00	% by Weight	1	06/01/2017	06/02/2017 11:21	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A706003 - EPA 3570										
Blank (A706003-BLK1)			Prepared: 06/01/2017 Analyzed: 06/01/2017 22:42							
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.215*		*mg/kg wet*	*0.2400*		*89.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.201*		*mg/kg wet*	*0.2400*		*83.6*	*64.1-115*			
LCS (A706003-BS1)			Prepared: 06/01/2017 Analyzed: 06/01/2017 22:17							
PCB-1248	1.90	0.10	mg/kg wet	2.000		94.8	78.4-125			
Surrogate: Decachlorobiphenyl	*0.220*		*mg/kg wet*	*0.2400*		*91.7*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.207*		*mg/kg wet*	*0.2400*		*86.1*	*64.1-115*			
Matrix Spike (A706003-MS1)	**Source: A172203-04**		Prepared: 06/01/2017 Analyzed: 06/02/2017 00:46							
PCB-1248	2.28	0.12	mg/kg dry	2.367	0.0960	92.2	64.2-143			
Surrogate: Decachlorobiphenyl	*0.234*		*mg/kg dry*	*0.2840*		*82.4*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.256*		*mg/kg dry*	*0.2840*		*90.2*	*64.1-115*			
Matrix Spike Dup (A706003-MSD1)	**Source: A172203-04**		Prepared: 06/01/2017 Analyzed: 06/02/2017 01:11							
PCB-1248	2.20	0.12	mg/kg dry	2.367	0.0960	89.0	64.2-143	3.54	20	
Surrogate: Decachlorobiphenyl	*0.215*		*mg/kg dry*	*0.2840*		*75.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.246*		*mg/kg dry*	*0.2840*		*86.7*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A706004 - % Solids										
Duplicate (A706004-DUP1)	**Source: A172121-02**		Prepared: 06/01/2017 Analyzed: 06/02/2017 11:21							
% Solids	9.85	0.00	% by Weight		8.83			10.9	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Rain Garden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

J	Analyte was detected but is below the reporting limit. The concentration is estimated.
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. 7447 Page: 1 of: 1

Lab Work Order #: A172203

Project Number: 268304 PO Number: ~~268304~~
Project Name: MKC RAIN GARDEN
Project Location (City, State): MADISON, WI
Turn Around (check one): ☒ Normal ☐ Rush
If Rush, Report Due Date: N/A
Sampled By (Print): ANDY STEHN

Report To: ANDREW STEHN
Company: TRC
Address 1: 708 HEARTLAND TRAIL, SUITE 3000
Address 2: MADISON, WI 53717
E-mail Address: ASTEHN@TRCSOLUTIONS.COM
Invoice To: SAME AS ABOVE
Company: "
Address 1: "
Address 2: "

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes / Analyses Requested: A						Comments	Lab ID	Lab Receipt Time
					PCBs								
MH-1A (2)	5/31/17	07:55	S	1	X							01	
GUTTER 1		08:15		1								02	
GUTTER 2		08:25		1								03	
MH-4A		09:35		1								04	
MH-5B		09:50		1								05	

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Alex Schneider	5/31/17	10:30	JESSICA EDDY	05-31-17	1230
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Walk In
Receipt Temp: 0 ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

June 27, 2017

Ben Wachholz
TRC Environmental Corporation, Inc.
230 W Monroe St, Suite 510
Chicago, IL 60606

RE: MKC Roof Drains/Sewer - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 06/14/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2018
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2018
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MH-2AR	A172406-01	Other	06/14/2017	06/14/2017
MH-3W	A172406-02	Soil	06/14/2017	06/14/2017
RDO	A172406-03	Other	06/14/2017	06/14/2017
MH-1NW-BASIN	A172406-04	Soil	06/14/2017	06/14/2017

CASE NARRATIVE

Sample Receipt Information:
8 samples were received on 06/14/2017 14:36. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Additional Comments:
PCB results for samples A172406-01 and A172406-03 are reported on an as is (wet weight) basis. Total solids provided for reference.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
230 W Monroe St, Suite 510
Chicago IL, 60606

Project: MKC Roof Drains/Sewer - Madison, WI
Project Number: 268304
Project Manager: Ben Wachholz

MH-2AR

A172406-01 (Other)

Date Sampled
06/14/2017 10:45

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706093**			
PCB-1016	ND	0.0074	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
PCB-1221	ND	0.0041	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
PCB-1232	ND	0.0028	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
PCB-1242	ND	0.0044	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
PCB-1248	ND	0.0053	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
PCB-1254	ND	0.0044	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
PCB-1260	ND	0.0024	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
Total PCBs	ND	0.0074	0.10	mg/kg	1	06/20/2017	06/21/2017 00:39	EPA 8082A	
Surrogate: Decachlorobiphenyl			*85.2 %*	*69.9-115*		*06/20/2017*	*06/21/2017 00:39*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*86.5 %*	*64.1-115*		*06/20/2017*	*06/21/2017 00:39*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706088**			
% Solids	**24.5**		0.00	% by Weight	1	06/19/2017	06/20/2017 09:15	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

MH-3W

A172406-02 (Soil)

Date Sampled
06/14/2017 11:40

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706093**			
PCB-1016	ND	0.018	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
PCB-1221	ND	0.0098	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
PCB-1232	ND	0.0067	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
PCB-1242	ND	0.011	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
PCB-1248	**0.32**	0.013	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
PCB-1254	**0.099**	0.011	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	J
PCB-1260	ND	0.0058	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
Total PCBs	**0.42**	0.018	0.24	mg/kg dry	1	06/20/2017	06/21/2017 01:04	EPA 8082A	
Surrogate: Decachlorobiphenyl			*85.4 %*	*69.9-115*		*06/20/2017*	*06/21/2017 01:04*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*92.8 %*	*64.1-115*		*06/20/2017*	*06/21/2017 01:04*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706088**			
% Solids	**41.7**		0.00	% by Weight	1	06/19/2017	06/20/2017 09:15	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

RDO

A172406-03 (Other)

Date Sampled
06/14/2017 11:55

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706093**			
PCB-1016	ND	0.0074	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	
PCB-1221	ND	0.0041	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	
PCB-1232	ND	0.0028	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	
PCB-1242	ND	0.0044	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	
PCB-1248	**0.050**	0.0053	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	J
PCB-1254	**0.013**	0.0044	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	J
PCB-1260	ND	0.0024	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	
Total PCBs	**0.063**	0.0074	0.10	mg/kg	1	06/20/2017	06/21/2017 01:29	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*84.8 %*	*69.9-115*		*06/20/2017*	*06/21/2017 01:29*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*91.6 %*	*64.1-115*		*06/20/2017*	*06/21/2017 01:29*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706088**			
% Solids	**18.9**		0.00	% by Weight	1	06/19/2017	06/20/2017 09:15	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

MH-1NW-BASIN

A172406-04 (Soil)

Date Sampled
06/14/2017 11:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A706093**			
PCB-1016	ND	0.010	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	
PCB-1221	ND	0.0057	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	
PCB-1232	ND	0.0039	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	
PCB-1242	ND	0.0061	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	
PCB-1248	**0.10**	0.0074	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	J
PCB-1254	**0.086**	0.0061	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	J
PCB-1260	ND	0.0033	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	
Total PCBs	**0.19**	0.010	0.14	mg/kg dry	1	06/20/2017	06/21/2017 01:54	EPA 8082A	
Surrogate: Decachlorobiphenyl			*80.7 %*	*69.9-115*		*06/20/2017*	*06/21/2017 01:54*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*91.7 %*	*64.1-115*		*06/20/2017*	*06/21/2017 01:54*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A706088**			
% Solids	**72.0**		0.00	% by Weight	1	06/19/2017	06/20/2017 09:15	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

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
Batch A706093 - EPA 3570										
Blank (A706093-BLK1)			Prepared: 06/20/2017 Analyzed: 06/21/2017 00:14							
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.220*		*mg/kg wet*	*0.2400*		*91.8*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.221*		*mg/kg wet*	*0.2400*		*92.2*	*64.1-115*			
LCS (A706093-BS1)			Prepared: 06/20/2017 Analyzed: 06/20/2017 23:49							
PCB-1254	1.92	0.10	mg/kg wet	2.000		96.2	69.5-128			
Surrogate: Decachlorobiphenyl	*0.198*		*mg/kg wet*	*0.2400*		*82.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.199*		*mg/kg wet*	*0.2400*		*82.7*	*64.1-115*			
Matrix Spike (A706093-MS1)	**Source: A172406-04**		Prepared: 06/20/2017 Analyzed: 06/21/2017 02:44							
PCB-1254	2.76	0.14	mg/kg dry	2.777	0.0857	96.4	66.2-139			
Surrogate: Decachlorobiphenyl	*0.267*		*mg/kg dry*	*0.3332*		*80.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.315*		*mg/kg dry*	*0.3332*		*94.6*	*64.1-115*			
Matrix Spike Dup (A706093-MSD1)	**Source: A172406-04**		Prepared: 06/20/2017 Analyzed: 06/21/2017 02:19							
PCB-1254	2.79	0.14	mg/kg dry	2.777	0.0857	97.4	66.2-139	1.01	20	
Surrogate: Decachlorobiphenyl	*0.272*		*mg/kg dry*	*0.3332*		*81.5*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.313*		*mg/kg dry*	*0.3332*		*94.0*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A706088 - % Solids										
Duplicate (A706088-DUP1)	**Source: A172406-01**		Prepared: 06/19/2017 Analyzed: 06/20/2017 09:15							
% Solids	25.1	0.00	% by Weight		24.5			2.64	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Roof Drains/Sewer - Madison, WI
230 W Monroe St, Suite 510	Project Number: 268304
Chicago IL, 60606	Project Manager: Ben Wachholz

Notes and Definitions

J	Analyte was detected but is below the reporting limit. The concentration is estimated.
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

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Pace Analytical®
www.pacelabs.com

A172406

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	TRC Environmental
Branch/Location:	Madison, WI
Project Contact:	Ben Wachholz
Phone:	608-354-3923
Project Number:	268304
Project Name:	MKC Roof Drains/Sewer
Project State:	WI
Sampled By (Print):	Ben Wachholz
Sampled By (Sign):	Ben Wachholz
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ben Wachholz
Mail To Company:	TRC Environmental
Mail To Address:	708 HeartHand Trail Suite 3000 Madison, WI 53711
Invoice To Contact:	
Invoice To Company:	same as above
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water
B = Biota, DW = Drinking Water
C = Charcoal, GW = Ground Water
O = Oil, SW = Surface Water
S = Soil, WW = Waste Water
SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PCBs	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	MH-2AR	6/14/17	10:45	S		A	X		01	
	MH-3W	6/14/17	11:40	S					02	
	MH-3WR	6/14/17	11:45	S				HOLD	05	
	RDO	6/14/17	11:55	S					03	
	MH-5B	6/14/17	12:40	S				HOLD	06	
	MH-INW-BASIN	6/14/17	11:00	S					04	
	MH-4AR	6/14/17	12:55	S			↓	HOLD	07	
	MH-4A	6/14/17	13:00	S			X	HOLD	08	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Ben Wachholz	6/14/17 14:36	[signature]	06-14-17 1436

PACE Project No.

Receipt Temp = 0nice °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

July 10, 2017

Andrew Stehn
TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison, WI 53717

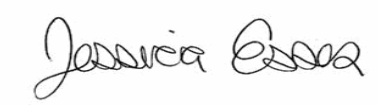
RE: MKC Storm Sewer/Raingarden - Madison, WI

Enclosed are the analytical results for the samples received by the laboratory on 06/30/2017.

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
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2018
ILEPA	Illinois Secondary NELAP Accreditation	003174	04/30/2018
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2018
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2018
NCDEQ	North Carolina Dept. of Environmental Quality Accreditation	688	12/31/2017
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2018
ODEQ	Oklahoma Department of Environmental Quality Accreditation	2016-083	08/31/2017
TCEQ	Texas Secondary NELAP Accreditation	T104704504-16-7	11/30/2017
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2017

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer/Raingarden - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MH-5A	A172620-01	Soil	06/29/2017	06/30/2017
MH-1A(3)-BASIN	A172620-02	Soil	06/30/2017	06/30/2017
Outfall (6/30)	A172620-03	Soil	06/30/2017	06/30/2017
PS-1	A172620-04	Soil	06/30/2017	06/30/2017

CASE NARRATIVE

Sample Receipt Information:
4 samples were received on 06/30/2017. Samples were received on ice. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer/Raingarden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

MH-5A

A172620-01 (Soil)

Date Sampled
06/29/2017 15:45

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082							**Preparation Batch: A707002**		
PCB-1016	ND	0.0078	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	
PCB-1221	ND	0.0043	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	
PCB-1232	ND	0.0029	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	
PCB-1242	ND	0.0046	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	
PCB-1248	ND	0.0056	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	
PCB-1254	**0.071**	0.0046	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	J
PCB-1260	ND	0.0025	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	
Total PCBs	**0.071**	0.0078	0.10	mg/kg dry	1	07/03/2017	07/04/2017 02:56	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*90.8 %*	*69.9-115*		*07/03/2017*	*07/04/2017 02:56*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*100 %*	*64.1-115*		*07/03/2017*	*07/04/2017 02:56*	*EPA 8082A*	
Classical Chemistry Parameters							**Preparation Batch: A707003**		
% Solids	**95.3**		0.00	% by Weight	1	07/03/2017	07/05/2017 11:22	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer/Raingarden - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

MH-1A(3)-BASIN

A172620-02 (Soil)

Date Sampled
06/30/2017 15:30

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A707002**			
PCB-1016	ND	0.0092	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
PCB-1221	ND	0.0051	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
PCB-1232	ND	0.0035	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
PCB-1242	ND	0.0055	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
PCB-1248	**2.2**	0.0066	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
PCB-1254	ND	0.0055	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
PCB-1260	ND	0.0030	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
Total PCBs	**2.2**	0.0092	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:21	EPA 8082A	
Surrogate: Decachlorobiphenyl			*83.4 %*	*69.9-115*		*07/03/2017*	*07/04/2017 03:21*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*93.7 %*	*64.1-115*		*07/03/2017*	*07/04/2017 03:21*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A707003**			
% Solids	**80.5**		0.00	% by Weight	1	07/03/2017	07/05/2017 11:22	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer/Raingarden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Outfall (6/30)

A172620-03 (Soil)

Date Sampled
06/30/2017 16:00

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A707002**			
PCB-1016	ND	0.0086	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
PCB-1221	ND	0.0048	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
PCB-1232	ND	0.0032	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
PCB-1242	ND	0.0051	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
PCB-1248	**5.0**	0.0061	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
PCB-1254	ND	0.0051	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
PCB-1260	ND	0.0028	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
Total PCBs	**5.0**	0.0086	0.12	mg/kg dry	1	07/03/2017	07/04/2017 03:46	EPA 8082A	
Surrogate: Decachlorobiphenyl			*81.6 %*	*69.9-115*		*07/03/2017*	*07/04/2017 03:46*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*88.6 %*	*64.1-115*		*07/03/2017*	*07/04/2017 03:46*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A707003**			
% Solids	**86.3**		0.00	% by Weight	1	07/03/2017	07/05/2017 11:22	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer/Raingarden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

PS-1

A172620-04 (Soil)

Date Sampled
06/30/2017 15:45

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Polychlorinated Biphenyls by EPA Method 8082						**Preparation Batch: A707014**			
PCB-1016	ND	0.0077	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	
PCB-1221	ND	0.0043	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	
PCB-1232	ND	0.0029	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	
PCB-1242	ND	0.0046	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	
PCB-1248	ND	0.0055	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	
PCB-1254	**0.034**	0.0046	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	J
PCB-1260	ND	0.0025	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	
Total PCBs	**0.034**	0.0077	0.10	mg/kg dry	1	07/06/2017	07/06/2017 14:34	EPA 8082A	J
Surrogate: Decachlorobiphenyl			*112 %*	*69.9-115*		*07/06/2017*	*07/06/2017 14:34*	*EPA 8082A*	
Surrogate: Tetrachloro-meta-xylene			*109 %*	*64.1-115*		*07/06/2017*	*07/06/2017 14:34*	*EPA 8082A*	
Classical Chemistry Parameters						**Preparation Batch: A707015**			
% Solids	**96.1**		0.00	% by Weight	1	07/06/2017	07/07/2017 10:50	SM 2540B	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer/Raingarden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A707002 - EPA 3570										
Blank (A707002-BLK1)			Prepared: 07/03/2017 Analyzed: 07/04/2017 02:07							
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.210*		*mg/kg wet*	*0.2400*		*87.6*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.212*		*mg/kg wet*	*0.2400*		*88.4*	*64.1-115*			
LCS (A707002-BS1)			Prepared: 07/03/2017 Analyzed: 07/04/2017 02:32							
PCB-1254	1.95	0.10	mg/kg wet	2.000		97.5	69.5-128			
Surrogate: Decachlorobiphenyl	*0.226*		*mg/kg wet*	*0.2400*		*94.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.234*		*mg/kg wet*	*0.2400*		*97.6*	*64.1-115*			
Matrix Spike (A707002-MS1)	**Source: A172620-03**		Prepared: 07/03/2017 Analyzed: 07/04/2017 04:11							
PCB-1254	2.62	0.12	mg/kg dry	2.318	ND	113	66.2-139			
Surrogate: Decachlorobiphenyl	*0.229*		*mg/kg dry*	*0.2781*		*82.4*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.252*		*mg/kg dry*	*0.2781*		*90.5*	*64.1-115*			
Matrix Spike Dup (A707002-MSD1)	**Source: A172620-03**		Prepared: 07/03/2017 Analyzed: 07/04/2017 04:36							
PCB-1254	2.81	0.12	mg/kg dry	2.318	ND	121	66.2-139	6.72	20	
Surrogate: Decachlorobiphenyl	*0.237*		*mg/kg dry*	*0.2781*		*85.0*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.259*		*mg/kg dry*	*0.2781*		*92.9*	*64.1-115*			
Batch A707014 - EPA 3570										
Blank (A707014-BLK1)			Prepared: 07/06/2017 Analyzed: 07/06/2017 14:08							
PCB-1016	ND	0.10	mg/kg wet							
PCB-1221	ND	0.10	mg/kg wet							
PCB-1232	ND	0.10	mg/kg wet							
PCB-1242	ND	0.10	mg/kg wet							
PCB-1248	ND	0.10	mg/kg wet							
PCB-1254	ND	0.10	mg/kg wet							
PCB-1260	ND	0.10	mg/kg wet							
Total PCBs	ND	0.10	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.250*		*mg/kg wet*	*0.2400*		*104*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.234*		*mg/kg wet*	*0.2400*		*97.5*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer/Raingarden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	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
Batch A707014 - EPA 3570										
LCS (A707014-BS1)				Prepared: 07/06/2017 Analyzed: 07/06/2017 13:43						
PCB-1248	2.05	0.10	mg/kg wet	2.000		102	78.4-125			
Surrogate: Decachlorobiphenyl	*0.259*		*mg/kg wet*	*0.2400*		*108*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.255*		*mg/kg wet*	*0.2400*		*106*	*64.1-115*			
Matrix Spike (A707014-MS1)	**Source: A172620-04**			Prepared: 07/06/2017 Analyzed: 07/06/2017 14:59						
PCB-1248	2.15	0.10	mg/kg dry	2.080	ND	104	64.2-143			
Surrogate: Decachlorobiphenyl	*0.277*		*mg/kg dry*	*0.2496*		*111*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.272*		*mg/kg dry*	*0.2496*		*109*	*64.1-115*			
Matrix Spike Dup (A707014-MSD1)	**Source: A172620-04**			Prepared: 07/06/2017 Analyzed: 07/06/2017 15:24						
PCB-1248	2.15	0.10	mg/kg dry	2.080	ND	103	64.2-143	0.226	20	
Surrogate: Decachlorobiphenyl	*0.273*		*mg/kg dry*	*0.2496*		*109*	*69.9-115*			
Surrogate: Tetrachloro-meta-xylene	*0.268*		*mg/kg dry*	*0.2496*		*107*	*64.1-115*			

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.
708 Heartland Trail, Ste 3000
Madison WI, 53717

Project: MKC Storm Sewer/Raingarden - Madison, WI
Project Number: 268304
Project Manager: Andrew Stehn

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A707003 - % Solids										
Duplicate (A707003-DUP1)	**Source: A172620-01**		Prepared: 07/03/2017 Analyzed: 07/05/2017 11:22							
% Solids	94.8	0.00	% by Weight		95.3			0.490	20	
Batch A707015 - % Solids										
Duplicate (A707015-DUP1)	**Source: A172707-01**		Prepared: 07/06/2017 Analyzed: 07/07/2017 10:50							
% Solids	55.1	0.00	% by Weight		55.0			0.260	20	

Pace Analytical®
ECCS Mobile Lab Services

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

TRC Environmental Corporation, Inc.	Project: MKC Storm Sewer/Raingarden - Madison, WI
708 Heartland Trail, Ste 3000	Project Number: 268304
Madison WI, 53717	Project Manager: Andrew Stehn

Notes and Definitions

J	Analyte was detected but is below the reporting limit. The concentration is estimated.
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. 5762 Page: 1 of: 1

Lab Work Order #: A172620

Project Number: 268304 PO Number:
Project Name: MKC Storm Sewer/Raingarden
Project Location (City, State): Madison, WI
Turn Around (check one): ☐ Normal ☒ Rush 3 day TAT
If Rush, Report Due Date:
Sampled By (Print): Andrew Stehn

Report To: Andy Stehn
Company: TRC
Address 1: 708 Heartland Trail Suite 3000
Address 2: Madison, WI 53717
E-mail Address: astehn@trcsolutions.com

Invoice To:
Company: Same as above
Address 1:
Address 2:

Sample Description	Collection Date	Collection Time	Matrix	Total # of Containers	Preservation Codes	Analyses Requested: A						Comments	Lab ID	Lab Receipt Time
						PCBs					Hold			
MH-5A	6/29 6/30/17	15:45	S	1	X								01	
MH-1A(3)-BASIN	6/30/17	15:30	S	1	↓								02	
PS-1	6/30/17	15:45	S	1							X	Hold ①	04	
Outfall (6/30)	6/30/17	16:00	S	1									03	
												① Analysis added 07-06-17 j.		

Preservation Codes
A=None B=HCL C=H_2SO_4
D=HNO_3 E=EnCore F=Methanol
G=NaOH O=Other (Indicate)

Matrix Codes
A=Air S=Soil W=Water O=Other

Other Comments:

Relinquished By: Andrew Stehn Date: 6/30/17 Time: 1630
Received By: Pat Patterson Date: 6/30/17 Time: 1630
Relinquished By: Date: Time:
Received By: Date: Time:

Custody Seal: ☒ NA ☐ Intact ☐ Not Intact
Shipped Via: Hand Delivered
Receipt Temp: On ice
Thermometer #/ Exp. Date:
Temp Blank: ☐ Y ☐ N

Rev. 12/15