RAMBOLL

ENVIRONMENT
& HEALTH

Mr. Trevor Nobile
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King, Jr. Drive
Milwaukee, WI 53212

SUMMARY OF PRE-CONSTRUCTION SITE INVESTIGATION ACTIVITIES
MARQUETTE UNIVERSITY AHPRC SITE
1201-1221 W. WELLS STREET, MILWAUKEE, WISCONSIN
BRRTS NO. 02-41-580746, FID NO. 341293920

Dear Mr. Nobile:

February 20, 2018

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Ref. 1690005255-001

Ramboll US Corporation (Ramboll), on behalf of Marquette University, conducted a pre-construction site investigation at the AHPRC site located at 1201-1221 West Wells Street in Milwaukee, Wisconsin (the "Site") in January 2018, in accordance with Wisconsin Administrative Code (WAC) Chapter NR 716. The pre-construction site investigation activities were conducted in order to further assess soils located beneath the proposed building footprint and to assess the potential for vapor intrusion prior to site redevelopment. As discussed in the Site Investigation Work Plan submitted to the Wisconsin Department of Natural Resources (WDNR), the groundwater portion of the NR 716 site investigation will be completed after the building has been constructed. A NR 716 Site Investigation report will be prepared following completion of the post-construction site investigation activities.

The following sections provide a summary of the project background, pre-construction subsurface assessment activities, investigation results, and conclusions and recommendations.

SITE BACKGROUND

The AHPRC site includes multiple historic addresses between 1201 through 1221 West Wells Street in the City of Milwaukee, Milwaukee County, Wisconsin. The property is now identified as 733 North 12th Street, and the site location is shown on Figure 1. It is anticipated that a new address may be issued following site redevelopment. The approximately 1.3-acre property is located on the Marquette University campus in downtown Milwaukee. The site is predominantly a paved, surface parking lot with no buildings. It is bordered to the north by West Wells Street, to the east by North 12th Street, to the south by Zilber Hall, and to the west by green space and Abbotsford Hall.

Following a Phase I Environmental Site Assessment (ESA) completed by GRAEF in September 2017, Ramboll Environ US Corporation[1] (Ramboll Environ) completed a Phase II ESA in October 2017. The results of the Phase II activities are documented in the Phase II ESA report (Ramboll Environ, November 10, 2017). Soil samples collected during the Phase II ESA revealed tetrachloroethene (PCE)

[1] Effective January 1, 2018, the legal name of Ramboll Environ US Corporation became Ramboll US Corporation.

impacts predominantly in the northern and eastern portions of the site in areas generally consistent with the historic dry cleaning operations reported to have taken place at the site as early as 1920. The highest concentration of PCE in soil was detected in the shallow soil sample collected from the fill material at boring B-4 (371 micrograms per kilogram [µg/kg]) at 2 to 3 feet below ground surface (bgs); boring B-4 appears to be located south of the former dry cleaner building footprint. The Phase II sampling locations (B-1 through B-6) are shown on Figure 2.

Several other contaminants were detected in soil during the Phase II activities. Arsenic was the only metal detected in soil above its WAC NR 720 non-industrial direct contact residual contaminant level (RCL) but below the background threshold value (BTV) for arsenic. Additional metals (cadmium, lead, mercury, and selenium) were detected in select shallow soil samples at concentrations above their groundwater pathway RCLs, but below their non-industrial direct contact RCLs. Low concentrations of polynuclear aromatic hydrocarbons (PAHs) were also detected in soil samples collected at the site; however, none of the PAH concentrations exceeded the WAC NR 720 RCLs. The Phase II ESA soil sampling results are presented in Table 1 and Figure 3.

Groundwater impacts were also encountered during the Phase II activities. PCE and trichloroethene (TCE) were detected above the WAC NR 140 Enforcement Standard (ES) in the groundwater sample collected from temporary well TW-3, located adjacent to and hydraulically downgradient of the former dry cleaning operational area. Vinyl chloride, a breakdown product of PCE, was also reported at a concentration above the ES in the groundwater sample collected from TW-5, located within the former dry cleaning operations area. TW-5 also detected PCE and 1,2-dichloroethane (1,2-DCA) above their respective WAC NR 140 Preventive Action Limits (PALs).

Petroleum-related volatile organic compounds (VOCs) (benzene, ethylbenzene, and/or 1,2,4 – trimethylbenzene) were also detected in groundwater samples collected from temporary wells TW-5 and TW-6, located on the northeast corner of the site, in the area of former filling/automobile service station operations. Arsenic was also detected in groundwater in two temporary wells (TW-1 and TW-6) at or just above its WAC NR 140 ES. Several individual PAHs were detected in groundwater from the temporary wells above their respective WAC NR 140 PALs, but below the ES. The arsenic and PAH detections above the ES and/or PALs may be related to suspended sediment in the temporary wells. The groundwater analytical data from the Phase II ESA is included in Table 2 and Figure 4.

As a result of the soil and groundwater impacts revealed by the Phase II ESA investigation activities, the WDNR was notified of a historic release using Form 4400-225 (Notification for Hazardous Substance Discharge) on December 14, 2017. The WDNR issued a Responsible Party letter to Marquette University on December 21, 2017, and assigned Bureau for Remediation and Redevelopment Tracking System (BRRTS) Activity Number 02-41-580746 and FID No. 341293920. Marquette University subsequently retained Ramboll to complete the site investigation and provide support during site redevelopment activities. Ramboll provided the WDNR with a Site Investigation Work Plan detailing the phased pre-construction and post-construction investigation approach.

GEOLOGIC AND HYDROGEOLOGIC SETTING

The subsurface condition at the Site has been assessed based on geotechnical soil borings completed by Professional Service Industries, Inc. (PSI) and the Phase II ESA borings completed by Ramboll. PSI's November 2017 Geotechnical Engineering Services Report (the "2017 PSI report") indicated that surface materials encountered at the Site included approximately 4 to 6 inches of topsoil fill or asphalt pavement with underlaying aggregate base. The surface pavement or topsoil fill is underlain by varying thicknesses of granular fill soil that generally ranged from 4.5 to 10.5 feet. In the northeast corner of the site (at geotechnical soil boring location 6, as shown on Figure 2), granular fill soils were observed to a depth of 18

feet bgs, and this deeper extent of fill was confirmed by PSI to be confined to an area extending not more than 40 feet west or 40 feet south of geotechnical boring location 6 (Figure 2). The 2017 PSI report indicated that the existing fill materials were comprised of sand, sandy silt/silt, lean clay/silty clay, or brick and concrete fragments. The predominant unit immediately below the fill is generally silty clay with traces of sand and gravel (Ramboll, 2017), with deeper soils encountered by PSI recorded as brown or gray sandy silt, silt, lean clay, silty clay, fine to medium sand, or silty fine sand, with varying gravel content (PSI, 2017).

Odors and/or elevated readings from a photoionization detector (PID) were also observed during the geotechnical and Phase II ESA activities. Petroleum odors were noted by PSI in a sample collected from 13.5 to 15 feet bgs during the completion of geotechnical soil boring 6 (PSI, 2017). Elevated PID readings, as well as visual and olfactory evidence of contamination were encountered by Ramboll during the soil sampling activities at the B-5/TW-5 and B-6/TW-6 locations. The locations of geotechnical soil boring 6 and Phase II ESA borings B-5/TW-5 and B-6/TW-6 are shown on Figure 2. All three of these boring locations are within or approximately within the area of deeper fill observed by PSI in the northeast corner of the Site, which corresponds with the location of a former filling/automobile service station at the Site.

Water level elevations at the Site have been collected from temporary monitoring wells, as permanent monitoring wells will be installed after the proposed building has been constructed in order to conduct the groundwater portion of the NR 716 site investigation. Groundwater was encountered at approximately 9 to 13 feet bgs. Based on groundwater information available from nearby properties, shallow groundwater in the vicinity of the site likely flows to the southeast towards the confluence of the Milwaukee and Menomonee Rivers.

SUBSURFACE INVESTIGATION ACTIVITIES

The objective of the pre-construction site investigation was to further assess soils located beneath the proposed building footprint, and to delineate the extent of soil impacts previously identified at the Site prior to construction of the building on-site. Ramboll completed the pre-construction investigation activities on January 10 and 11, 2018, and these activities included advancing ten soil borings and collecting soil and groundwater samples for laboratory analysis, along with installation and sampling of three soil gas probes. The following sections provide additional details regarding the investigative activities performed at the site.

Soil Boring, Temporary Groundwater Monitoring Well, and Soil Gas Probe Installation

Ramboll advanced a total of ten soil borings (B-7 through B-16). Soil borings B-7 through B-14 were advanced within the proposed building footprint. Soil boring B-7 was advanced in the center of the proposed building footprint and was converted to a temporary groundwater monitoring well (TW-7). Two soil borings (B-15 and B-16) were advanced along the western edge of the parking lot. The soil boring locations are shown on Figure 2.

The soil borings were advanced using direct push technology (DPT) with a Geoprobe® drill rig with a 2-inch diameter drive rod. Soil samples were continuously collected from each soil boring and divided for field screening, laboratory analysis, and in-field classification (noting soil types, moisture, and staining and odors, if any). The soil samples were field screened for organic vapors using a calibrated PID equipped with an 11.7 electron volt (eV) lamp. The PID was calibrated in the field according to manufacturer's instructions, using 100 parts per million (ppm) isobutylene span gas and air (zero gas) and checked between each screening event for proper response. Soil descriptions and PID readings are presented on the soil boring logs, which are included in Attachment A.

B-7/TW-7 was initially advanced to a total depth of 20 feet bgs, and groundwater was encountered at a depth of 9 feet bgs. As the purpose of the site investigation soil borings was to assess and delineate the

extent of soil impacts, soil borings B-8 through B-16 were completed to a total depth of 9 feet bgs in order to stay at or above the water table. Following soil sample collection, soil borings B-8 through B-16 were abandoned appropriately by backfilling with hydrated bentonite and completed with a surface patch, in accordance with WAC NR 141. Borehole abandonment forms are included in Attachment A. Following soil sample collection at soil boring B-7, this soil boring was converted to a temporary groundwater monitoring well. The temporary well was installed to a depth of 17 feet bgs, due to collapse of the boring from 17 to 20 feet bgs. The temporary monitoring well was constructed using a 1-inch diameter 10-foot-long section of polyvinyl chloride (PVC) 0.010-inch slot size well screen, an appropriate length of PVC casing, a sand filter pack, and a bentonite seal. Following soil and groundwater sampling activities, the temporary well TW-7 was removed and appropriately abandoned in accordance with WAC NR 141. Borehole/temporary well abandonment forms are included in Attachment A.

In addition to the soil and groundwater sampling activities, three soil gas probes (SG-1, SG-2, and SG-3) were installed along the eastern portion of the existing asphalt parking lot, on what is considered to be the eastern portion of proposed building footprint. The locations of the soil gas probes are shown on Figure 2. The soil gas probes were installed to assess the possibility of vapor intrusion issues for the future site development. The soil gas probes were installed near the borings which exhibited concentrations of VOCs and/or chlorinated VOCs (CVOCs) during the previously completed Phase II ESA. Per WDNR guidance for soil gas sampling, each probe was set at 7 feet bgs, which is 2 feet above the water table at the site. The soil gas probes were attached to polyethylene tubing, which was brought to ground surface. The annular space surrounding the probes and tubing was filled with a sand filter pack to 1 foot bgs. A bentonite seal was set from 0.5 to 1 foot bgs. The excess tubing at the surface was capped and placed in a flush mounted well vault, which was installed slightly below ground surface to avoid possible damage by snow plowing activities. The soil probe locations were abandoned following receipt of laboratory analytical results. Soil descriptions and PID readings for the three soil gas probe locations are included in Attachment A.

Sampling and Analysis Procedures

Two soil samples were collected from each soil boring location. One sample was collected at a depth below 1 foot, which was predominantly fill material, but above 4 feet; this sample was collected to assess the direct contact pathway and characterize soils that will be disturbed during site redevelopment. One additional sample was collected at a depth below the direct contact pathway, but above the water table, in order to potentially vertically delineate impacted soil. During field activities, no elevated PID readings were recorded at intervals above the water table. Soil sampling equipment was thoroughly decontaminated between each sample using an Alconox© solution and rinsed in deionized water.

All soil samples collected during the investigation were placed on ice and submitted following standard chain of custody procedures to Pace Analytical Services, Inc. (Pace), a Wisconsin certified laboratory in Green Bay, Wisconsin, for laboratory analysis of VOCs in accordance with the United States Environmental Protection Agency (USEPA) Method 8260 and 8 Resource Conservation and Recovery Act (RCRA) Metals using USEPA Method 6010/7470.

In addition to depth-specific soil samples, composite soil samples were collected for waste characterization. One composite soil sample (COMP-1) was collected by taking aliquots from borings B-7 through B-14 and was submitted for landfill Protocol B analysis, which includes toxicity characteristic leaching procedure (TCLP) VOCs, TCLP RCRA 8 metals, free liquids, flashpoint, polychlorinated biphenyls (PCBs), reactive sulfide, and reactive cyanide. Additional composite soil samples were collected from each boring location (B-7 through B-14) for potential laboratory compositing, if needed. These additional composite soil samples were collected for each soil boring location by taking aliquots from each depth-specific sample collected to form the composite sample (i.e., Composite sample B-10-COMP was comprised of remaining sample volume

for soil samples B-10 [3'] and B-10 [8']). Based on the results received, the B-10-COMP sample was submitted for TCLP VPC and TCLP lead analysis. In addition, the B-7-COMP and B-11-COMP sample were lab composited, named COMP-2, and analyzed for TCLP lead.

One groundwater sample was collected from TW-7 for laboratory analysis of VOCs using USEPA Method 8260 and 8 RCRA metals using USEPA Method 6010/7470. Prior to the groundwater sampling activities, a depth to groundwater measurement was made using a Heron electronic water level sensor. The water level sensor indicated that there was less than 1 foot of water in the temporary well. The slow rate of recharge was assumed to be due to the primarily silt and clay lithology. The temporary well was sampled using disposable polyethylene tubing and a peristaltic pump. Due to lack of available water, the first water to reach the surface was collected for analysis. The groundwater samples for VOC analysis were collected initially, and due to insufficient water remaining in the well after the VOC sample collection, the well was allowed to recharge prior to the collection of groundwater samples for 8 RCRA Metals analysis. Because of the limited recharge observed during sampling, the 8 RCRA metals groundwater sample was not field filtered. Instead, the sample was filtered in the laboratory prior to analysis. The groundwater sample was placed on ice and submitted following standard chain of custody procedures to Pace.

Soil gas samples were collected from soil gas probes SG-1, SG-2, and SG-3 on January 11, 2018. The polyethylene tubing at the surface of each probe was connected to a low-flow sampling pump (Gilian Low-Flow Sampler) to purge the soil gas probe and the associated tubing. The pump was pre-calibrated to purge at 100 milliliters per minute (mL/min). Each probe location was purged for a minimum of 2 minutes in order to achieve a three-volume purge. Following the completion of purging the soil gas probe and tubing, the tubing at the ground surface was fitted with an air filter and connected to a 6-liter (L) Summa canister fitted with a 30-minute flow controller (200 mL/min). After all tubing connections were made, but prior to sample collection, a vacuum test was completed in the field to check all connections and seals. Soil gas samples were submitted following standard chain of custody procedures to Pace for laboratory analysis of VOCs using USEPA Method TO-15.

INVESTIGATION RESULTS

Soil Results

The soil sample laboratory analytical results were compared to the WAC NR 720 RCLs. Based on the laboratory analytical results, VOCs and metals were detected in the soil samples analyzed; however, none of the detected concentrations were above the direct contact WAC NR 720 RCLs except for arsenic and lead. Although arsenic concentrations across the site exceed non-industrial direct contact, industrial direct contact, and groundwater pathway RCLs, these concentrations are below the BTV for arsenic in soil and are therefore not considered a regulatory exceedance. However, arsenic concentrations in two samples, B-8 (8') and B-10 (3') were reported with concentrations slightly exceeding the BTV.

PCE was detected in B-7 (7.5'), B-9 (3' and 8'), B-10 (3' and 8'), B-11 (3'), and B-12 (8') at concentrations ranging from an estimated value of 29.5 to 19,600 µg/kg, which exceeded the groundwater pathway RCL of 4.54 µg/kg. TCE was detected in B-10 (3') at a concentration of 350 µg/kg, which is above the groundwater pathway RCL of 3.3 µg/kg.

Select metals, in addition to the previously mentioned arsenic, were also detected in samples above their respective groundwater pathway RCLs: Mercury in B-7 (3'), B-10 (3'), and B-11 (3'); lead in B-7 (3'), B-10 (3'), and B-11 (3'); barium in B-7 (3'); and selenium in B-12 (3'). The lead concentrations in B-7 (3'), B-10 (3'), and B-11 (3') also exceeded the BTV. Laboratory reports are provided in Attachment B, and the soil analytical results are summarized in Table 1. The RCL exceedances for soil samples collected during this pre-construction site investigation, as well as the Phase II ESA, are illustrated on Figure 3.

Groundwater Results

The groundwater sample analytical results were compared to the WAC NR 140 groundwater standards. Based on the laboratory analytical results, PCE was detected at temporary well TW-7 at a concentration of 61.8 µg/kg, which is above the WAC NR 140 ES and PAL. Trace and estimated (i.e., "J" flagged by the laboratory) concentrations of various other VOCs and metals were detected in TW-7; however, none were detected above their respective WAC NR 140 ES. The laboratory report is included in Attachment B, and the groundwater analytical results are summarized in Table 2. The extent of WAC NR 140 ES exceedances for the site is depicted on Figure 4.

Soil Gas Results

Soil gas analytical results were compared to the November 2017 USEPA Regional Screening Levels (RSLs) using the Vapor Risk Screening Levels (VRSLs) for residential, small commercial (shallow soil gas), and small commercial (deep soil gas). At SG-1, benzene was reported at 138 micrograms per cubic meter (µg/m^3), which exceeds the residential VRSL. PCE was detected at SG-2 at a concentration of 15,500 µg/m^3 which exceeds both the residential and small commercial (shallow soil gas) VRSL. Trace and estimated concentrations of various other VOCs were detected in SG-1, SG-2, and SG-3; however, none were detected above their respective VRSLs.

CONCLUSIONS AND RECOMMENDATIONS

Ramboll conducted a pre-construction site investigation focused on the further assessment of soils located beneath the proposed building footprint and the delineation of soil impacts previously identified at the site. The field and laboratory information obtained as a result of this investigation provides a useful understanding of the subsurface conditions at the site in advance of the proposed construction activities. Based on the investigation results to date (including the Phase II ESA results which were previously submitted to Marquette), Ramboll concludes the following:

- PCE, a common dry cleaning solvent, was detected in soil and/or groundwater samples in the northern and eastern portions of the site. The highest concentration of PCE in soil was detected in B-10 (3'), and the highest concentration of PCE in groundwater was detected at TW-3. Based on the investigation activities to date, it appears that the PCE soil and groundwater impacts are primarily located in areas generally consistent with or downgradient of the historic dry cleaning operations reported to have taken place at the site.
- No metals were detected in soil above non-industrial direct contact RCLs except for arsenic and lead. The arsenic concentrations in soil ranged from an estimated value of 3.0 to 10.4 milligrams per kilogram (mg/kg), with most concentrations near or below the BTV except for soil samples B-8 (8') and B-10 (3'). The average arsenic concentration in soil samples collected at the Site is 5.1 mg/kg, which is below the BTV. Based on the wide spread distribution of arsenic in soil, the detections appear related to a background soil condition and arsenic is not considered a site parameter of concern in shallow soil. Additional metals (mercury, selenium, and barium) were detected in select soil samples at concentrations above the groundwater pathway RCL; however, none of these compounds were detected in the groundwater samples above their respective ES or PAL.
- PCE was detected above the WAC NR 140 ES in the groundwater samples collected from temporary wells TW-3 and TW-7. TCE was also detected above the ES at temporary well TW-3, which is located adjacent to and hydraulically downgradient of the former dry cleaning operations. Petroleum-related VOCs including benzene, ethylbenzene, and 1,2,4-trimethylbenzene were detected in groundwater samples collected at TW-5 and TW-6, and benzene was detected above the WAC NR 140 ES at TW-6. These PVOC impacts to groundwater appear to be limited to the northeast corner of the site where a former

filling/automobile service station operated. Several PAHs were detected above their respective WAC NR 140 PALs.

- Soil gas samples collected at the site revealed of VOCs in exceedance of the VRSLs. Benzene was detected at a concentration greater than the residential VRSL at SG-1, and PCE was detected at a concentration greater than the residential and small commercial (shallow soil gas) VRSLs at SG-2. The location of SG-1 and its associated benzene impacts are consistent with the location of the former filling/automobile service station at the Site. In addition, based on the detected PCE impacts to soil gas at SG-2, there exists a potential for vapor intrusion to the proposed building, and vapor mitigation may be required.

Based on the investigation conclusions, Ramboll recommends the following:

- Because of the PCE impacts encountered at B-10, Ramboll recommends the removal of impacted soil surrounding B-10, utilizing an approximately 20-foot by 20-foot excavation to a depth of approximately 8 feet. This removal will provide for the reduction of contaminant mass present below the proposed building footprint; however, vapor intrusion risks will remain due to residual soil and groundwater impacts. Therefore, Ramboll recommends the collection of post-excavation soil samples to aid in understanding the residual impacts beneath the proposed building.
- Given the documented presence of soil, groundwater, and soil gas impacts beneath a portion of the proposed building footprint, the potential for vapor intrusion exists and a prospective mitigation system should be planned for as part of the construction to minimize post construction modifications. The results of the vapor investigation indicate that vapor mitigation is needed for the proposed basement level to be constructed in the southern portion of the site and for the proposed slab-on-grade portion of the building to be constructed in the northern portion of the site. In addition, vapor mitigation measures for sumps and elevator shafts must be considered. Potential approaches to address vapor intrusion risks include the installation of a vapor barrier, sealing elevator shafts/sumps, and the installation of vapor collection piping, with the option to operate only if needed.
- Soil samples should be collected during excavation of the basement on the southern portion of the site to document whether residual soil impacts remain. The results of this post-excavation soil sampling will be evaluated to determine if additional soil sampling is needed to further define the nature and extent of soil impacts.
- Following construction of the proposed building, Ramboll recommends further evaluation of groundwater impacts at the site. The temporary wells have all been abandoned, and once the building has been constructed, the installation of permanent monitoring wells is recommended. A NR 716 Work Plan will be prepared and submitted to the WDNR in advance of the post-construction investigation activities.

If you have any questions or need further information, please contact us.

Yours sincerely,

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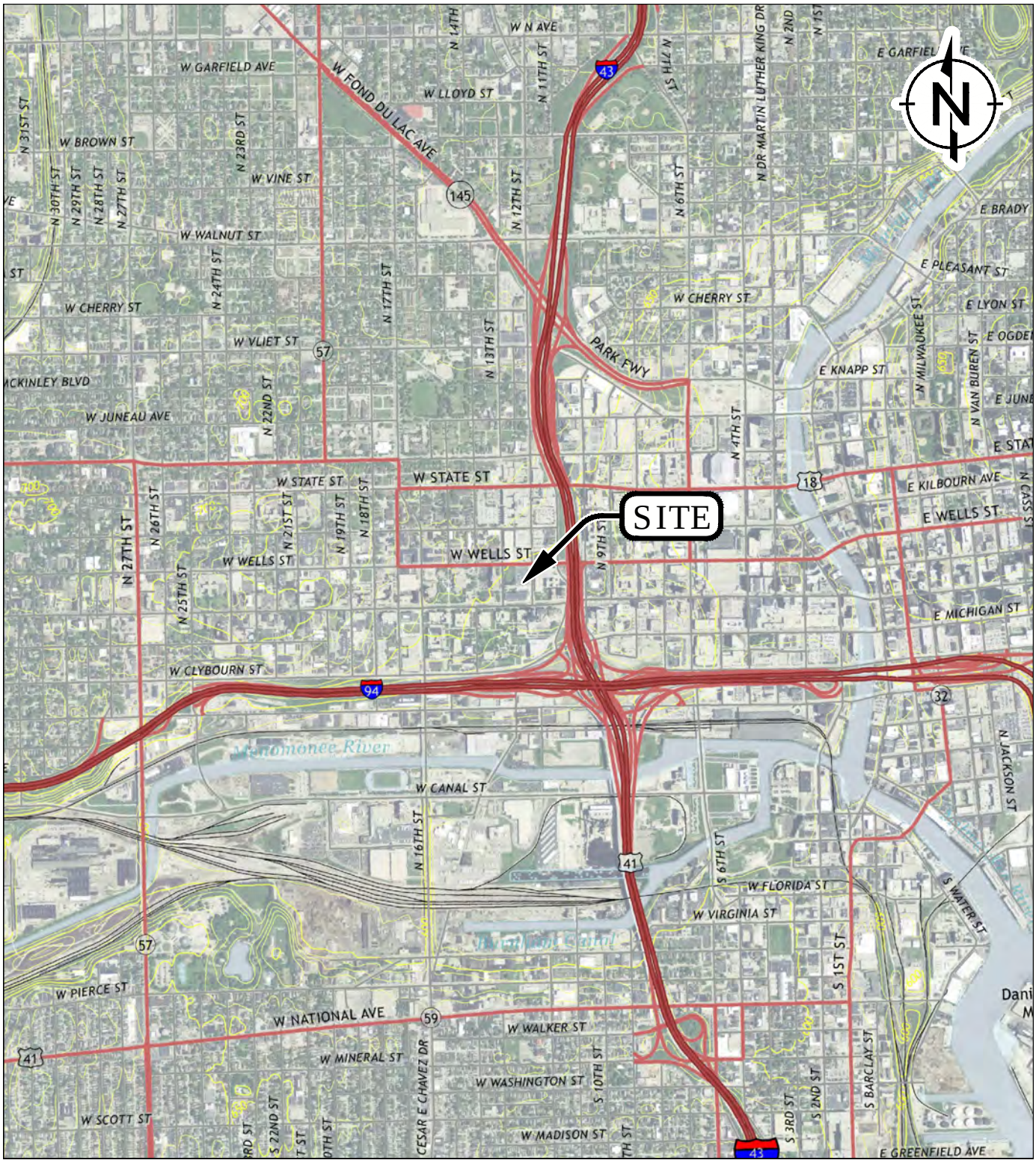
FIGURES



CONTOUR INTERVAL 10 FEET

0 1/2 1 MILE

0 2000 4000 FEET

LEGEND:

PROPERTY BOUNDARY (APPROXIMATE)

SOURCE:
2016 USGS 7.5 Minute Series Milwaukee, Wisconsin Topographic Quadrangle.
Site Location; N: 43.039581° W: -87.927909° WGS84

QUADRANGLE LOCATION

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DRAFTED BY: APR

DATE: 2/2/2018

SITE LOCATION MAP
AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN

FIGURE
1

PROJECT: 1690005255-001

E:\00_CAD FILES\21\2143145_MU Wells Street_PH2_Record Files\01_Site Location Map.dwg

M:\Proposals\YR-2017\P21-17186 - Marquette ARRC\2\GIS\MXD\Fig2-Surveyed Boring Locations_with buildings_20180202.mxd

SAMPLING LOCATIONS

AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN

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FIGURE
2

DRAFTED BY: MJL	DATE: 2/20/2018	PROJECT: 1690005255-001

WELLS STREET

B-8 (3') (1/10/18)
NE

B-8 (8') (1/10/18)
Arsenic 10.4 mg/kg A,B,C,D

B-5 (12.5-13.5') (10/09/17)
Chloroform 151 J ug/kg C

B-5 (14-15') (10/09/17)
Chloroform 133 J ug/kg C

B-6 (3-4') (10/09/17)
PCE 109 ug/kg C

B-6 (11-12') (10/09/17)
PCE 39.1 J ug/kg C

B-10 (3') (1/10/18)
PCE 19,600 ug/kg C
TCE 350 ug/kg C
Arsenic 9.3 mg/kg A,B,C,D
Lead 166 mg/kg C,D
Mercury 0.32 mg/kg C

B-10 (8') (1/10/18)
PCE 340 ug/kg C

B-1 (3-4') (10/09/17)
PCE 44.8 J ug/kg C

B-1 (11.5-12.5') (10/09/17)
NE

B-9 (3') (1/10/18)
PCE 80.7 J ug/kg C

B-9 (8') (1/10/18)
PCE 3,650 ug/kg C

B-15 (3') (1/10/18)
NE

B-15 (8') (1/10/18)
NE

B-11 (3') (1/10/18)
PCE 50.6 J ug/kg C
Lead 96.3 mg/kg C,D
Mercury 0.38 mg/kg C

B-11 (8') (1/10/18)
NE

B-2 (3-4') (10/09/17)
Lead 214 mg/kg C,D
Mercury 0.59 mg/kg C

B-2 (12-13') (10/09/17)
NE

B-7 (3') (1/10/18)
Barium 335 mg/kg C
Lead 491 mg/kg A,C,D
Mercury 0.96 mg/kg C

B-7 (7.5') (1/10/18)
PCE 29.5 J ug/kg C

B-3 (3-4') (10/09/17)
PCE 44.6 J ug/kg C

B-3 (11-12') (10/09/17)
NE

B-16 (3') (1/10/18)
NE

B-16 (8') (1/10/18)
NE

B-4 (2-3') (10/09/17)
PCE 371 ug/kg C
Cadmium 7.7 mg/kg C,D
Lead 135 mg/kg C,D
Selenium 1.5 J mg/kg C

B-4 (10-11') (10/09/17)
NE

B-12 (3') (1/10/18)
Selenium 1.4 J mg/kg C

B-12 (8') (1/10/18)
PCE 38.6 J ug/kg C

B-13 (3') (1/10/18)
NE

B-13 (8') (1/10/18)
NE

B-14 (3') (1/10/18)
NE

B-14 (8') (1/10/18)
NE

4 3 5 6 SG-1 SG-2 SG-3 B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11 B-12 B-13 B-14 B-15 B-16 12TH STREET

Legend

- Soil Boring
- Soil Boring/Temporary Well
- Previous Geotechnical Soil Boring
- Soil Gas Probe
- Milwaukee County Parcel Boundary

Notes
µg/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
PCE - Tetrachloroethene
NE - No exceedances

A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway
D Parameter exceeds Surficial Background Threshold Value (BTV) for metals
J Estimated concentration at or above the LOD and below the LOQ

Refer to Table 1 for NR 720 RCL and BTV criteria.

Arsenic detections in surficial soil that are below the BTV are not shown as they are not considered exceedances of the NR 720 RCLs for the purposes of this evaluation.

0 15 30 60 90 120 Feet

bing

NR 720 RCL EXCEEDANCES IN SOIL

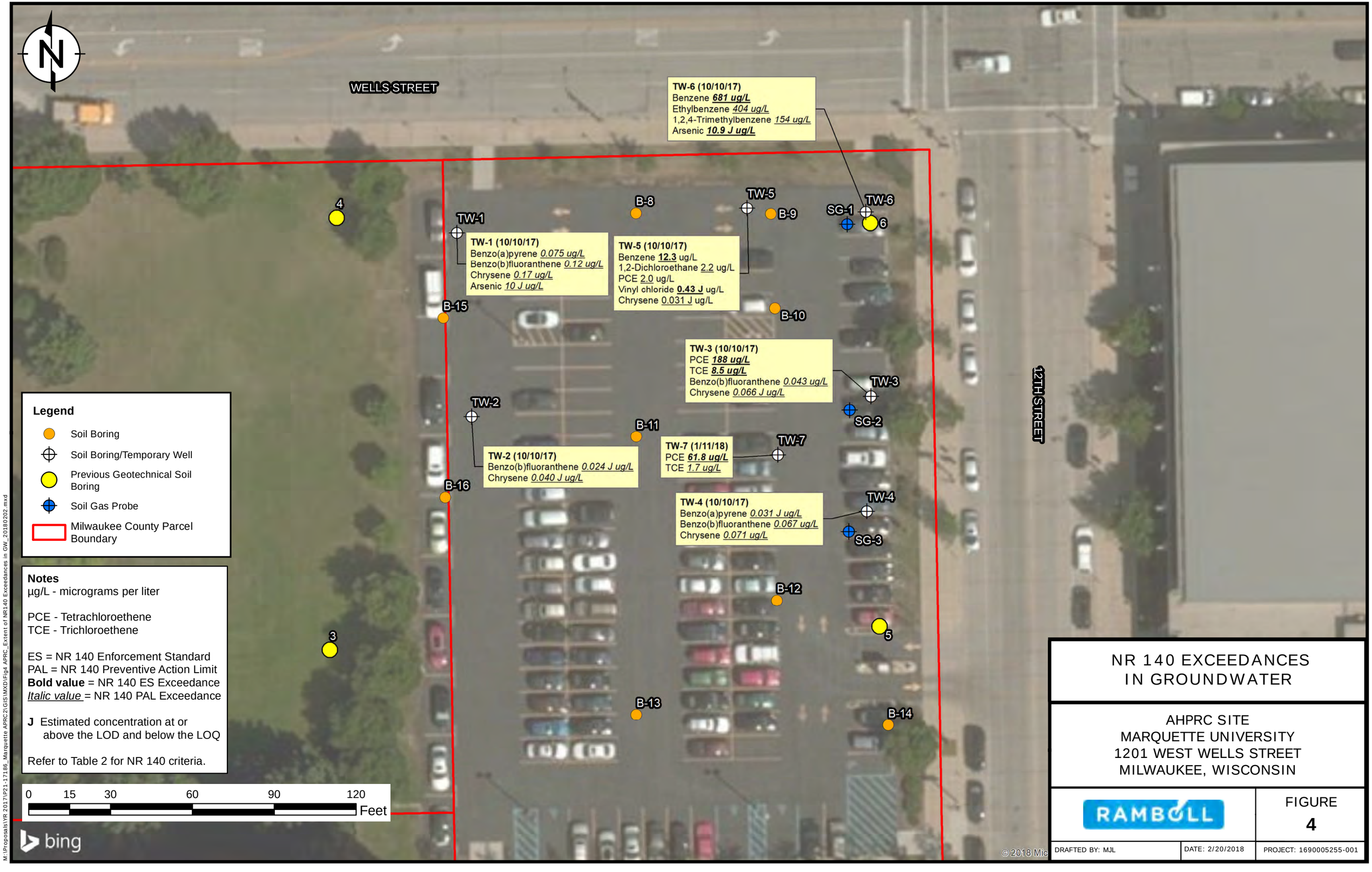
AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN

RAMBOLL

FIGURE 3

DRAFTED BY: MJL | DATE: 2/20/2018 | PROJECT: 1690005255-001

M:\Proposals\YR 2017\P21-17186_Marquette APRC2\GIS\MXD\Fig3 APRC_Extent of NR720 Exceedances in Soil_20180205.mxd



M:\Proposals\YR 2017\P21-17186_Marquette APRC\GIS\MXD\Fig4 APRC_Extent of NR140 Exceedances in GW_20180202.mxd

NR 140 EXCEEDANCES IN GROUNDWATER

AHPRC SITE
MARQUETTE UNIVERSITY
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN

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FIGURE
4

DRAFTED BY: MJL	DATE: 2/20/2018	PROJECT: 1690005255-001

TABLES

TABLE 1. SOIL ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001

Parameters	Soil RCLs			BTV	B-1 (3-4')	B-1 (11.5-12.5')	B-2 (3-4')	B-2 (12-13')	B-3 (3-4')	B-3 (11-12')	B-4 (2-3')	B-4 (10-11')	B-5 (12.5-13.5')	B-5 (14-15')	B-6 (3-4')	B-6 (11-12')	B-7 (3')	B-7 (7.5')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	10/09/17	01/10/18	01/10/18
VOCs (µg/kg)																		
sec-Butylbenzene	145,000	145,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	159	46.5 J	<25.0	<25.0	<28.1	<25.0
n-Butylbenzene	108,000	108,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	324	152	<25.0	<25.0	<28.1	<25.0
Chloroform	454	1,980	3.3	--	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	**151 J C**	**133 J C**	<46.4	<46.4	<52.2	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	74.1	1,060	<25.0	61.8 J	<28.1	<25.0
Isopropylbenzene	268,000	268,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	112	211	<25.0	<25.0	<28.1	<25.0
n-Propylbenzene	264,000	264,000	--	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	545	778	<25.0	32.5 J	<28.1	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	**44.8 J C**	<25.0	<25.0	<25.0	**44.6 J C**	<25.0	**371 C**	<25.0	<25.0	<25.0	**109 C**	**39.1 J C**	<28.1	**29.5 J C**
Trichloroethene	1,300	8,410	3.6	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<28.1	<25.0
1,2,4-Trimethylbenzene[1]	219,000	219,000	1,378.7	--	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	36.6 J	<25.0	<25.0	<28.1	<25.0
PAHs (µg/kg)																		
Acenaphthene	3,590,000	45,200,000	--	--	<4.3	7.1 J	13.3 J	<4.6	9.3 J	<4.6	<4.6	<4.4	<4.4	<4.8	<4.5	<4.3	#N/A	#N/A
Acenaphthylene	--	--	--	--	<3.7	<3.9	6.3 J	<3.9	<3.8	<3.9	<3.9	<3.8	<3.7	<4.1	<3.8	<3.7	#N/A	#N/A
Anthracene	17,900,000	100,000,000	196,949.2	--	<6.3	<6.8	25.3	<6.7	16.7 J	<6.8	10.6 J	<6.5	<6.4	<7.0	<6.6	<6.4	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	11.7 J	17.3	64.3	<3.7	26.0	5.5 J	27.6	<3.6	<3.6	<3.9	5.9 J	<3.6	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	12.1	15.3	65.7	<2.9	20.2	4.9 J	26.3	3.7 J	<2.8	<3.1	4.2 J	<2.8	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	20.6	21.8	79.0	<3.3	25.7	7.1 J	39.9	4.7 J	3.5 J	<3.5	6.5 J	<3.2	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	11.1	10.7	38.8	<2.4	11.6	4.3 J	20.9	5.1 J	<2.3	<2.5	3.2 J	<2.3	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	7.1 J	9.4 J	33.5	<2.9	10.9	<3.0	14.4	<2.9	<2.8	<3.1	<2.9	<2.8	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	15.2	21.5	67.2	<4.0	24.4	6.6 J	33.7	<3.8	<3.8	<4.1	6.5 J	<3.8	#N/A	#N/A
Dibenzo(a,h,)anthracene	115	2110	--	--	<2.5	<2.7	9.0 J	<2.6	3.2 J	<2.6	4.4 J	<2.6	<2.5	<2.8	<2.6	<2.5	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	33.9	52.2	143	<6.1	66.1	15.2 J	77.5	6.5 J	<5.9	<6.4	10.7 J	<5.8	#N/A	#N/A
Fluorene	2,390,000	30,100,000	14,829.9	--	<4.6	6.2 J	15.0 J	<4.9	9.7 J	<4.9	<4.9	<4.7	<4.7	<5.1	<4.8	<4.6	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	8.3	9.2	34.6	<2.6	9.9	3.0 J	17.4	2.6 J	<2.5	<2.7	<2.5	<2.5	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	<4.5	<4.8	7.5 J	<4.7	<4.7	<4.8	<4.8	<4.6	12.1 J	47.0	<4.6	5.0 J	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	<5.6	<5.9	7.7 J	<5.9	<5.8	<5.9	<5.9	<5.7	<5.6	8.4 J	<5.8	<5.6	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	<9.4	<10.0 C4	20.4 J	<9.9	<9.8	<10	<9.9	<9.6 C4	52.5	35.3	<9.7	10.0 J	#N/A	#N/A
Phenanthrene	--	--	--	--	15.6 J	53.0	128	<13.7	79.8	<13.8	57.0	<13.3	<13.1	<14.3	<13.5	<13.1	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	27.9	43.9	126	<5.3	56.2	12.5 J	61.1	5.4 J	<5.1	<5.5	12.1 J	<5.1	#N/A	#N/A
Metals (mg/kg)																		
Arsenic[3]	0.677	3.00	0.58	8.3	**3.7 J A,B,C**	**4.6 J C**	**8.2 A,B,C**	**3.9 J C**	**6.9 A,B,C**	**3.3 J A,B,C**	**6.1 A,B,C**	**4.1 J A,B,C**	**3.3 J A,B,C**	**3.5 J A,B,C**	**3.9 J A,B,C**	**3.7 J A,B,C**	**4.4 J A,B,C**	**3.0 J A,C**
Barium[3]	15,300	100,000	164.8	364	48.0	72.1	105	49.9	86.2	65.6	128	47.8	20.0	94.4	43.7	43.1	**335 C**	10.8
Cadmium[3]	71	985	0.75	1.07	0.15 J	0.23 J	0.43 J	0.19 J	0.19 J	0.28 J	**7.7 C,D**	0.15 J	0.16 J	0.18 J	0.21 J	0.14 J	0.31 J	<0.13
Chromium	--	--	360,000	43.5	19.5	19.0	39.0	18.3	20.4	27.1	14.0	17.7	9.3	27.9	16.1	14.2	12.4	6.2
Lead[3]	400	800	27	51.6	7.0	9.8	**214 C,D**	8.2	13.8	9.0	**135 C,D**	7.8	7.1	8.7	6.9	6.6	**491 A,C,D**	5.2
Mercury	3.13	3.13	0.21	--	0.015 J	<0.013	**0.59 C**	<0.012	<0.012	0.016 J	0.013 J	<0.012	<0.012	0.020 M0	<0.012	0.012 J	**0.96 C**	<0.012
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.3	<1.3	<1.2	<1.2	**1.5 J C**	<1.3	<1.2	<1.2	<1.2	<1.2	<1.3	<1.1

Notes:

Analytical results displayed are for detected parameters only.
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
RCL = Residual Contaminant Level
BTV = Background Threshold Value
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram

[1] Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
[2] Direct Contact RCL listed is for the more stringent m-Xylene.
[3] Parameter BTV is larger than one or more of the RCLs or is the only standard available.

A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
#N/A = Not analyzed
Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

TABLE 1. SOIL ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001

Parameters	Soil RCLs			BTV	B-8 (3')	B-8 (8')	B-9 (3')	B-9 (8')	B-10 (3')	B-10 (8')	B-11 (3')	B-11 (8')	B-12 (3')	B-12 (8')	B-13 (3')	B-13 (8')	B-14 (3')	B-14 (8')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18	01/10/18
VOCs (µg/kg)																		
sec-Butylbenzene	145,000	145,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
n-Butylbenzene	108,000	108,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
Chloroform	454	1,980	3.3	--	<51.0	<46.4	<70.4	<61.9	<145	<46.4	<74.9	<52.8	<65.4	<46.4	<50.5	<46.4	<60.3	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
Isopropylbenzene	268,000	268,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
n-Propylbenzene	264,000	264,000	--	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	<27.5	<25.0	**80.7 J C**	**3,650 C**	**19,600 C**	**340 C**	**50.6 J C**	<28.4	<35.2	**38.6 J C**	<27.2	<25.0	<32.5	<25.0
Trichloroethene	1,300	8,410	3.6	--	<27.5	<25.0	<37.9	<33.3	**350 C**	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
1,2,4-Trimethylbenzene[1]	219,000	219,000	1,378.7	--	<27.5	<25.0	<37.9	<33.3	<78.1	<25.0	<40.3	<28.4	<35.2	<25.0	<27.2	<25.0	<32.5	<25.0
PAHs (µg/kg)																		
Acenaphthene	3,590,000	45,200,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Acenaphthylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Anthracene	17,900,000	100,000,000	196,949.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Dibenzo(a,h,)anthracene	115	2110	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fluorene	2,390,000	30,100,000	14,829.9	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Phenanthrene	--	--	--	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Metals (mg/kg)																		
Arsenic[3]	0.677	3.00	0.58	8.3	**5.1 J A,B,C**	**10.4 A,B,C,D**	**4.2 J A,B,C**	**4.6 J A,B,C**	**9.3 A,B,C,D**	**5.3 J A,B,C**	**5.1 J A,B,C**	**6.9 A,B,C**	**4.5 J A,B,C**	**3.8 J A,B,C**	**4.0 J A,B,C**	**5.0 J A,B,C**	**5.5 J A,B,C**	**4.8 J A,B,C**
Barium[3]	15,300	100,000	164.8	364	80.4	73.4	17.2	48.5	83.1	17.7	91.9	71.9	46.5	61.8	21.8	49.5	58.4	74.2
Cadmium[3]	71	985	0.75	1.07	0.18 J	0.21 J	<0.14	0.19 J	0.43 J	0.20 J	0.17 J	0.24 J	0.16 J	0.20 J	0.28 J	0.23 J	0.22 J	0.24 J
Chromium	--	--	360,000	43.5	29.0	20.7	8.2	23.5	17.2	10.2	19.1	26.4	16.2	17.6	10.1	20.6	25.8	19.7
Lead[3]	400	800	27	51.6	12.5	8.3	5.2	8.2	**166 C,D**	6.4	**96.3 C,D**	8.1	8.5	5.8	7.6	7.6	11.5	8.7
Mercury	3.13	3.13	0.21	--	0.042	0.016 J	<0.012	<0.013	**0.32 C**	0.019 J	**0.38 C**	0.019 J	0.018 J	<0.012	0.029 J	0.013 J	0.020 J	0.014 J
Selenium	391	5,840	0.52	--	<1.2	<1.2	<1.2	<1.3	<1.3	<1.3	<1.2	<1.3	**1.4 J C**	<1.3	<1.3	<1.2	<1.3	<1.2

Notes:

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VOCs = Volatile Organic Compounds
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[2] Direct Contact RCL listed is for the more stringent m-Xylene.
[3] Parameter BTV is larger than one or more of the RCLs or is the only standard available.

A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
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D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

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1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001

Parameters	Soil RCLs			BTV	B-15 (3') 01/10/18	B-15 (8') 01/10/18	B-16 (3') 01/10/18	B-16 (8') 01/10/18
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway					
VOCs (µg/kg)								
sec-Butylbenzene	145,000	145,000	--	--	<27.8	<30.1	<25.0	<25.0
n-Butylbenzene	108,000	108,000	--	--	<27.8	<30.1	<25.0	<25.0
Chloroform	454	1,980	3.3	--	<51.6	<56.0	<46.4	<46.4
Ethylbenzene	8,020	35,400	1,570	--	<27.8	<30.1	<25.0	<25.0
Isopropylbenzene	268,000	268,000	--	--	<27.8	<30.1	<25.0	<25.0
n-Propylbenzene	264,000	264,000	--	--	<27.8	<30.1	<25.0	<25.0
Tetrachloroethene	33,000	145,000	4.54	--	<27.8	<30.1	<25.0	<25.0
Trichloroethene	1,300	8,410	3.6	--	<27.8	<30.1	<25.0	<25.0
1,2,4-Trimethylbenzene[1]	219,000	219,000	1,378.7	--	<27.8	<30.1	<25.0	<25.0
PAHs (µg/kg)								
Anthracene	17,900,000	100,000,000	196,949.2	--	#N/A	#N/A	#N/A	#N/A
Benzo(a)anthracene	1140	20,800	--	--	#N/A	#N/A	#N/A	#N/A
Benzo(a)pyrene	115	2110	470	--	#N/A	#N/A	#N/A	#N/A
Benzo(b)fluoranthene	1150	21,100	478.1	--	#N/A	#N/A	#N/A	#N/A
Benzo(ghi)perylene	--	--	--	--	#N/A	#N/A	#N/A	#N/A
Benzo(k)fluoranthene	11,500	211,000	--	--	#N/A	#N/A	#N/A	#N/A
Chrysene	115,000	2,110,000	144.2	--	#N/A	#N/A	#N/A	#N/A
Dibenzo(a,h,)anthracene	115	2110	--	--	#N/A	#N/A	#N/A	#N/A
Fluoranthene	2,390,000	30,100,000	88,877.8	--	#N/A	#N/A	#N/A	#N/A
Indeno(1,2,3-cd)pyrene	1150	21,100	--	--	#N/A	#N/A	#N/A	#N/A
1-Methylnaphthalene	17,600	72,700	--	--	#N/A	#N/A	#N/A	#N/A
2-Methylnaphthalene	239,000	3,010,000	--	--	#N/A	#N/A	#N/A	#N/A
Naphthalene	5,520	24,100	658.2	--	#N/A	#N/A	#N/A	#N/A
Phenanthrene	--	--	--	--	#N/A	#N/A	#N/A	#N/A
Pyrene	1,790,000	22,600,000	54,545.5	--	#N/A	#N/A	#N/A	#N/A
Metals (mg/kg)								
Arsenic[3]	0.677	3.00	0.58	8.3	**4.8 J A,B,C**	**6.5 C**	**4.6 J A,B,C**	**5.6 C**
Barium[3]	15,300	100,000	164.8	364	71.1	67.3	59.8	61.2
Cadmium[3]	71	985	0.75	1.07	<0.16	0.29 J	0.18 J	0.15 J
Chromium	--	--	360,000	43.5	22.2	27.3	26.1	18.0
Lead[3]	400	800	27	51.6	11.2	9.8	10.3	7.1
Mercury	3.13	3.13	0.21	--	0.016 J	0.045	0.055	<0.012
Selenium	391	5,840	0.52	--	<1.3	<1.3	<1.3	<1.2

Notes:

Analytical results displayed are for detected parameters only.
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
RCL = Residual Contaminant Level
BTV = Background Threshold Value
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram

[1] Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
[2] Direct Contact RCL listed is for the more stringent m-Xylene.
[3] Parameter BTV is larger than one or more of the RCLs or is the only standard available.

A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
C Parameter exceeds NR 720 RCL for Groundwater Pathway.
D Parameter exceeds Surficial BTV for metals.
J Estimated concentration at or above the LOD and below the LOQ.

M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
#N/A = Not analyzed
Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet, December 2017).

TABLE 2. GROUNDWATER ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001

Parameters	NR 140 Standards		TW-1	TW-2	TW-3	TW-4	TW-5	TW-6	TW-7
	ES	*PAL*	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	1/11/18
VOCs (µg/L)									
Benzene	**5**	*0.5*	<0.50	<0.50	<0.50	<0.50	***12.3***	***681***	<0.50
Bromobenzene	**--**	--	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23
Bromochloromethane	**--**	--	<0.34	<0.34	<0.34	<0.34	<0.34	<3.4	<0.34
Bromodichloromethane	**0.6**	*0.06*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Bromoform	**4.4**	*0.44*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Bromomethane	**10**	*1*	<2.4	<2.4	<2.4	<2.4	<2.4	<24.3	<2.4
n-Butylbenzene	**--**	--	<0.50	<0.50	<0.50	<0.50	13.5	5.8 J	<0.50
sec-Butylbenzene	**--**	--	<2.2	<2.2	<2.2	<2.2	7.3	<21.9	<2.2
tert-Butylbenzene	**--**	--	<0.18	<0.18	<0.18	<0.18	0.67 J	<1.8	<0.18
Carbon tetrachloride	**5**	*0.5*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Chlorobenzene	**--**	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Chloroethane	**400**	*80*	<0.37	<0.37	<0.37	<0.37	<0.37	<3.7	<0.37
Chloroform	**6**	*0.6*	<2.5	<2.5	<2.5	<2.5	<2.5	<25.0	<2.5
Chloromethane	**30**	*3*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	1.7
2-Chlorotoluene	**--**	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
4-Chlorotoluene	**--**	--	<0.21	<0.21	<0.21	<0.21	<0.21	<2.1	<0.21
Dibromochloromethane	**60**	*6*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,2-Dibromo-3-chloropropane	**0.2**	*0.02*	<2.2	<2.2	<2.2	<2.2	<2.2	<21.6	<2.2
1,2-Dibromoethane	**0.05**	*0.005*	<0.18	<0.18	<0.18	<0.18	<0.18	<1.8	<0.18
Dibromomethane	**--**	--	<0.43	<0.43	<0.43	<0.43	<0.43	<4.3	<0.43
1,2-Dichlorobenzene	**600**	*60*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,3-Dichlorobenzene	**600**	*120*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,4-Dichlorobenzene	**75**	*15*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Dichlorodifluoromethane	**1000**	*200*	<0.22	<0.22	<0.22	<0.22	<0.22	<2.2	<0.22
1,1-Dichloroethane	**850**	*85*	<0.24	<0.24	<0.24	<0.24	<0.24	<2.4	<0.24
1,2-Dichloroethane	**5**	*0.5*	<0.17	<0.17	<0.17	<0.17	*2.2*	<1.7	<0.17
1,1-Dichloroethene	**7**	*0.7*	<0.41	<0.41	<0.41	<0.41	<0.41	<4.1	<0.41
cis-1,2-Dichloroethene	**70**	*7*	<0.26	<0.26	3.3	<0.26	3.4	4.9 J	0.49 J
trans-1,2-Dichloroethene	**100**	*20*	<0.26	<0.26	0.65 J	<0.26	2.0	<2.6	<0.26
1,2-Dichloropropane	**5**	*0.5*	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23
1,3-Dichloropropane	**--**	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
2,2-Dichloropropane	**--**	--	<0.48	<0.48	<0.48	<0.48	<0.48	<4.8	<0.48
1,1-Dichloropropene	**--**	--	<0.44	<0.44	<0.44	<0.44	<0.44	<4.4	<0.44
cis-1,3-Dichloropropene	**0.4**	*0.04*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
trans-1,3-Dichloropropene	**0.4**	*0.04*	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23
Diisopropyl ether	**--**	--	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Ethylbenzene	**700**	*140*	<0.50	<0.50	<0.50	<0.50	23.6	*404*	<0.50
Hexachlorobutadiene	**--**	--	<2.1	<2.1	<2.1	<2.1	<2.1	<21.1	<2.1
Isopropylbenzene	**--**	--	<0.14	<0.14	<0.14	<0.14	12.7	9.3 J	<0.14
p-Isopropyltoluene	**--**	--	<0.50	<0.50	<0.50	<0.50	3.2	<5.0	<0.50
Methylene chloride	**5**	*0.5*	0.42 JB	0.46 JB	0.31 JB	0.46 JB	<0.23	<2.3	<0.23
Methyl-tert-butyl-ether	**60**	*12*	<0.17	<0.17	<0.17	<0.17	<0.17	<1.7	<0.17
Naphthalene	**100**	*10*	<2.5	<2.5	<2.5	<2.5	<2.5	<25.0	<2.5
n-Propylbenzene	**--**	--	<0.50	<0.50	<0.50	<0.50	47.7	21.8	<0.50
Styrene	**100**	*10*	<0.50 L1	<0.50 L1	<0.50 L1	<0.50 L1	<0.50 L1	<5.0 L1	<0.50
1,1,1,2-Tetrachloroethane	**70**	*7*	<0.18	<0.18	<0.18	<0.18	<0.18	<1.8	<0.18
1,1,2,2-Tetrachloroethane	**0.2**	*0.02*	<0.25	<0.25	<0.25	<0.25	<0.25	<2.5	<0.25
Tetrachloroethene	**5**	*0.5*	<0.50	<0.50	***188***	<0.50	*2.0*	<5.0	***61.8***
Toluene	**800**	*160*	<0.50	<0.50	<0.50	<0.50	0.68 J	65.1	<0.50
1,2,3-Trichlorobenzene	**--**	--	<2.1	<2.1	<2.1	<2.1	<2.1	<21.3	<2.1
1,2,4-Trichlorobenzene	**70**	*14*	<2.2	<2.2	<2.2	<2.2	<2.2	<22.1	<2.2
1,1,1-Trichloroethane	**200**	*40*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,1,2-Trichloroethane	**5**	*0.5*	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<0.20
Trichloroethene	**5**	*0.5*	<0.33	<0.33	***8.5***	<0.33	<0.33	<3.3	*1.7*
Trichlorofluoromethane	**3490**	*698*	<0.18	<0.18	<0.18	<0.18	<0.18	<1.8	<0.18
1,2,3-Trichloropropane	**60**	*12*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
1,2,4-Trimethylbenzene[1]	**480**	*96*	<0.50	<0.50	<0.50	<0.50	17.9	*154*	<0.50
1,3,5-Trimethylbenzene[1]	**480**	*96*	<0.50	<0.50	<0.50	<0.50	<0.50	7.5 J	<0.50
Vinyl chloride	**0.2**	*0.02*	<0.18	<0.18	<0.18	<0.18	***0.43*** ***J***	<1.8	<0.18
m&p-Xylene[2]	**2,000**	*400*	<1.0 L1	<1.0 L1	<1.0 L1	<1.0 L1	1.2 JL1	246 L1	<1.0
o-Xylene[2]	**2,000**	*400*	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Xylenes, total	**2,000**	*400*	<1.5 LS	<1.5 LS	<1.5 LS	<1.5 LS	<1.5 LS	250 LS	<1.5
PAHs (µg/L)									
Acenaphthene	**--**	--	0.051	0.022 J	0.0084 J	0.014 J	0.028 J	0.015 J	#N/A
Acenaphthylene	**--**	--	0.0082 J	<0.010	<0.0065	<0.0053	0.0062 J	0.0062 J	#N/A
Anthracene	**3000**	*600*	0.060	<0.021	<0.014	0.014 J	<0.011	<0.012	#N/A
Benzo(a)anthracene	**--**	--	0.088	<0.015	0.023 J	0.030 J	0.0085 J	0.0087 J	#N/A
Benzo(a)pyrene	**0.2**	*0.02*	*0.075*	<0.021	0.020 J	*0.031* *J*	<0.011	<0.012	#N/A
Benzo(b)fluoranthene	**0.2**	*0.02*	*0.12*	*0.024* *J*	*0.043*	*0.067*	<0.0062	<0.0064	#N/A
Benzo(ghi)perylene	**--**	--	0.077	0.019 J	0.033 J	0.046	<0.0073	<0.0075	#N/A
Benzo(k)fluoranthene	**--**	--	0.074	0.020 J	0.026 J	0.036 J	<0.0081	<0.0084	#N/A
Chrysene	**0.2**	*0.02*	*0.17*	*0.040* *J*	*0.066* *J*	*0.071*	*0.031* *J*	<0.014	#N/A
Dibenzo(a,h,)anthracene	**--**	--	0.013 J	<0.020	<0.013	<0.011	<0.011	<0.011	#N/A
Fluroanthene	**400**	*80*	0.35	0.13	0.15	0.21	0.033 J	0.066	#N/A
Fluorene	**400**	*80*	0.040 J	<0.016	<0.010	0.014 J	0.017 J	0.011 J	#N/A
Indeno(1,2,3-cd)pyrene	**--**	--	0.059 J	<0.036	<0.023	0.034 J	<0.019	<0.020	#N/A
1-Methylnaphthalene	**--**	--	0.033	<0.012	0.012 J	0.0082 J	1.4	3.2	#N/A
2-Methylnaphthalene	**--**	--	0.036	<0.010	0.014 J	0.012 J	0.041	0.15	#N/A
Naphthalene	**100**	*10*	0.17	<0.037	<0.024	<0.020	2.5	5.6	#N/A
Phenanthrene	**--**	--	0.33	0.089 J	0.13	0.17	0.073 J	0.10	#N/A
Pyrene	**250**	*50*	0.32	0.11	0.14	0.17	0.030 J	0.055	#N/A
Metals (µg/L)									
Arsenic	**10**	*1*	*10* J	<8.3	<8.3	<8.3	<8.3	***10.9*** ***J***	<5.4
Barium	**2000**	*400*	239	170	114	141	370	204	170
Cadmium	**5**	*0.5*	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Chromium	**100**	*10*	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Lead	**15**	*1.5*	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3
Selenium	**50**	*10*	<16.6	<16.6	<16.6	<16.6	<16.6	<16.6	<5.6
Silver	**50**	*10*	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	3.4 J
Mercury	**2**	*0.2*	<0.25 D3	<0.13	<0.13	<0.50 D3	<0.50 D3	<0.25 D3	<0.50

Notes:

VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
µg/L = micrograms per Liter
[1] Standards are for 1,2,4- and 1,3,5-Trimethylbenzene
[2] Standards are for Total Xylenes (-m, -p and -o).
ES = Enforcement Standard
PAL = Preventive Action Limit
Bold value = NR 140 ES Exceedance
Italic value = NR 140 PAL Exceedance
-- No NR 140 ES or PAL established.
#N/A = Not analyzed
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
B = Analyte was detected in the associated method blank.
L1 = Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
LS = Analyte recovery in the laboratory control sample (LCS) was outside QC limits for one or more of the constituent analyties used in the calculated result.
D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

TABLE 3. SOIL GAS VAPOR ANALYTICAL RESULTS
AHPRC PRE-CONSTRUCTION SITE INVESTIGATION
1201 WEST WELLS STREET
MILWAUKEE, WISCONSIN
RAMBOLL PROJECT NO. 1690005255-001

Parameters		**Residential (Shallow Soil Gas)[4]**				**Small Commercial (Shallow Soil Gas)[4]**				**Small Commercial (Deep Soil Gas)[5]**				**USEPA RSL Basis[2]**	**SG-1**	**SG-2**	**SG-3**
Analyte (µg/m³)[1]	**CAS No.**	Indoor Air VAL (1 E -5)	**Sub-Slab Vapor VRSL (33.3 x)**	Indoor Air VAL (HI = 1)	**Sub-Slab Vapor VRSL (33.3 x)**	Indoor Air VAL (1 E -5)	**Sub-Slab Vapor VRSL (33.3 x)**	Indoor Air VAL (HI = 1)	**Sub-Slab Vapor VRSL (33.3 x)**	Indoor Air VAL (1 E -5)	**Soil Gas Vapor VRSL (100 x)**	Indoor Air VAL (HI = 1)	**Soil Gas Vapor VRSL (100 x)**	--	1/11/2018	1/11/2018	1/11/2018
Acetone	67-64-1	--	--	32000	**1100000**	--	**--**	140000	**4700000**	--	**--**	140000	**14000000**	nc	<2.3	26.9	20.1
Benzene	71-43-2	3.6	**120**	31	1000	16	**530**	130	4300	16	**1600**	130	**13000**	c	**138 A**	4.8	3.6
Carbon Disulfide	75-15-0	--	**--**	730	**24000**	--	**--**	3100	**100000**	--	**--**	3100	**310000**	nc	13.7	3.6	3.3
Chloromethane	74-87-3	--	**--**	94	**3100**	--	**--**	390	**13000**	--	**--**	390	**39000**	nc	1.4	<0.22	<0.22
Cyclohexane	110-82-7	--	**--**	6300	**210000**	--	**--**	26000	**870000**	--	**--**	26000	**2600000**	nc	6270	9.7	7.0
Dichlorodifluoromethane	75-71-8	--	**--**	100	**3300**	--	**--**	440	**15000**	--	**--**	440	**44000**	nc	1.7	1.0 J	1.3 J
Dichloroethylene, 1,2-cis-	156-59-2	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	28.6	<0.56	<0.55
Ethanol	64-17-5	--	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	10.2	8.7	7.2
Ethylbenzene	100-41-4	11	**370**	1000	33000	49	**1600**	4400	150000	49	**4900**	4400	440000	c	54.2	12.9	7.5
Ethyltoluene,4-	622-96-8	--	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	16.6	6.3	4.8
Hexane, N-	110-54-3	--	**--**	730	**24000**	--	**--**	3100	**100000**	--	**--**	3100	**310000**	nc	1890	15.5	9.3
Methyl Ethyl Ketone (2-Butanone)	78-93-3	--	**--**	5200	**170000**	--	**--**	22000	**730000**	--	**--**	22000	**2200000**	nc	<0.31	8.6	5.9
Methylene Chloride	75-09-2	1000	33000	630	**21000**	12000	400000	2600	**87000**	12000	1200000	2600	**260000**	nc	<2.4	5.3 J	<2.4
Naphthalene	91-20-3	0.83	28	3.1	100	3.6	120	13	430	3.6	360	13	1300	c	4.9	4.6	10
Propylene	115-07-1	--	**--**	3100	**100000**	--	**--**	13000	**430000**	--	**--**	13000	**1300000**	nc	142	35.7	18.4
Styrene	100-42-5	--	**--**	1000	**33000**	--	**--**	4400	**150000**	--	**--**	4400	**440000**	nc	0.85 J	0.86 J	0.77 J
Tetrachloroethylene	127-18-4	110	3700	42	**1400**	470	16000	180	**6000**	470	47000	180	**18000**	nc	259	**15500 A,B**	151
Toluene	108-88-3	--	**--**	5200	**170000**	--	**--**	22000	**730000**	--	**--**	22000	**2200000**	nc	482	51.0	25.0
Trichloroethylene	79-01-6	4.8	160	2.1	**70**	30	1000	8.8	**290**	30	3000	8.8	**880**	nc	<0.42	23.3	<0.43
Trimethylbenzene, 1,2,4-	95-63-6	--	**--**	63	**2100**	--	**--**	260	**8700**	--	**--**	260	**26000**	nc	40.6	14.6	13.0
Trimethylbenzene, 1,3,5-	108-67-8	--	**--**	63	**2100**	--	**--**	260	**8700**	--	**--**	260	**26000**	nc	22.3	4.2	3.4
Xylene, m & p	179601-23-1	--	**--**	100	**3300**	--	**--**	440	**15000**	--	**--**	440	**44000**	nc	234	54.0	33.7
Xylene, o-	95-47-6	--	**--**	100	**3300**	--	**--**	440	**15000**	--	**--**	440	**44000**	nc	78.2	18.6	11.9

Notes:

Standards based on November 2017 USEPA Regional Screening Level (RSL) Tables.

Samples analyzed using EPA Air Method TO-15. Only detected compounds are included on table.

µg/m^3 = Microgram per cubic meter

AF = Attenuation Factor

VAL= Indoor Air Vapor Action Level

VRSL = Vapor Risk Screening Level

A = Exceeds Residential VRSL
B = Exceeds Small Commercial VRSL for Sub-slab/Shallow Soil Gas
C = Exceeds Small Commercial VRSL for Deep Soil Gas
J = Estimated concentration at or above the level of detection (LOD) and below the level of quantification (LOQ).

-- No RSL established.
NA = Not analyzed

[1] For parameters with both carcinogenic and non-carcinogenic indoor air VALs, results are compared to the most conservative sub-slab vapor VRSL displayed in **bold** font.

[2] The USEPA RSL Basis indicates whether the carcinogenic (c) or non-carcinogenic (nc) indoor air VAL is most stringent.

[3] Wisconsin Residential Screening Levels do not apply to the site, based on planned development as a recreational facility.

[4] Shallow soil gas is defined as less than 5 feet below building slab.

[5] Deep soil gas is defined as 5 feet or more below buliding slab.

ATTACHMENT A

BORING LOGS AND ABANDONMENT FORMS

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name: APRC	License/Permit/Monitoring Number:	Boring Number: **B-7/TW-7**
Boring Drilled By: Name of crew chief (first, last) and Firm — First Name: Marc Last Name: Watali — Firm: CS Drilling	Date Drilling Started: 01/10/2018 (mm dd yyyy)	Date Drilling Completed: 01/10/2018 (mm dd yyyy) — Drilling Method: Direct Push
WI Unique Well No.:	DNR Well ID No.:	Well Name: B-7/TW-7 — Final Static Water Level: ____ Feet MSL — Surface Elevation: 647 Feet MSL — Borehole Diameter: 2 inches
Local Grid Origin ☐ (estimated: □) or Boring Location ☐ — State Plane ____ N, ____ E — ____ 1/4 of ____ 1/4 of Section ____, T ____ N, R ____	Lat 43 ° 02 ' 23 " — Long 87 ° 55 ' 39 "	Local Grid Location: 385861.74 ■ N 2554023.642 ■ E — ____ Feet ☐ S ____ Feet ☐ W
Facility ID:	County: Milwaukee — County Code: 41	Civil Town/City/ or Village: Milwaukee, WI

Sample Number and Type	Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill				0.0						
B-7-3	5		2–5	Well Graded Sand. Yellow (10YR, 7/6). CMF sand, loose, rounded to angular. Moist. Trace gravel. Non plastic, non elastic. Possibly fill.	SW			0.0 / 0.0						
	5		6–7	Clay. Brown (7.5YR, 5/3). Medium stiff. Moist. ~25% silt. ~15% fine grained sand. Low plasticity, non elastic.	CL			0.0						
B-7-7.5	5	x	8–9	Silty Clay. Brown (7.5YR, 5/3). Medium stiff. Moist. Low plasticity, non elastic.	CL			0.0						
	5		10–12	Silty Clay. Brown (7.5YR, 5/3). Medium stiff. Moist. Trace gravel, max diameter 30mm. Low plasticity, non elastic.	CL			0.0						
	5		13–20	Silty Clay. Light brown gray (10YR, 6/2). Medium stiff. Wet. Gravel content increases with depth. Low plasticity, non elastic. Slight hydrocarbon odor at 17 feet. TD at 20 feet	CL			0.0 / 0.0 / 0.2 / 0.0 / 0.0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Bradley J Marcotte — Firm: Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-8**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	649 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
1/4 of 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385950.294 ■ N 2553971.606 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
B-8-3	5		2 3	Silty Sand. Black. Loose. Moist. Rounded to angular. Non plastic, non elastic	SM		0.0						
	4		4 5 6 7	Silt. Strong brown (7.5YR, 5/6). Soft. Moist. Low plasticity, non elastic.	ML		0.0						
B-8-8		x	8 9	Clay. Light brown (7.5YR, 6/4). Soft. Moist. Medium plasticity, non elastic.	CL		0.0						

End of Boring at 9 feet

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-9**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	648 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385950.062 ■ N 2554020.046 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Att. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
B-9-3	5		2 3	Well Graded Sand. Reddish yellow (7.5YR, 6/6). Loose. Moist. Primarily fine to medium grained, rounded to angular. Non plastic, non elastic.	SW		0.0 0.0						
			4 5	Sandy Clay. Strong brown (7.5YR, 5/6). Soft. Moist. ~40% sand. Low plasticity, non elastic.	CL		0.0						
	4		6 7				0.0						
B-9-8		x	8	Well Graded Sand. Yellow. Gravel inclusions. Possibly fill.	SW		0.0						
			9	Sandy Clay. Strong brown (7.5YR, 5/6). Soft. Moist. ~40% sand. Low plasticity, non elastic.	CL		0.0						

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-10**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	648 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
1/4 of 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385915.648 ■ N 2554021.655 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
			2	Sand and Gravel Fill. Black/yellow/white. Loose.			0.0						
B-10-3	5		3 4 5	Silt with Sand. Black (5Y, 2.5/1). Soft. Wet. ~25% fine grained sand. Low plasticity, non elastic.	ML		0.0						
			6	Well Graded Sand. Yellow (2.5Y, 7/6). Loose. Moist. ~25% silt. Trace gravel. Non plastic, non elastic. Possibly fill.	SW		0.0						
B-10-8	4	x	7 8 9	Well Graded Sand. Strong brown (7.5YR, 5/6). Loose. Moist. Mostly fine to medium grained. Non plastic, non elastic. Clay content increases with depth.	SW		0.0						

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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SOIL BORING LOG INFORMATION
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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-11**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 mm dd yyyy	01 / 10 / 2018 mm dd yyyy	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	647 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐		Local Grid Location
State Plane _____ N, _____ E _____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____	Lat 43 ° 02 ' 22 " Long 87 ° 55 ' 38 "	385868.405 ■ N 2553970.702 ■ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
	5		2	Sandy Silt. Strong brown (7.5YR, 5/6). Stiff. Moist. ~40% CMF sand. Non plastic, non elastic.	ML		0.0						
B-11-3			3	Well Graded Sand. Yellow. Loose. Moist. Trace gravel, max diameter 30mm. Non plastic, non elastic.	SW		0.0						
			4										
			5										
	4		6				0.0						
			7										
B-11-8			8	Clay. Light brown (7.5YR, 6/4). Stiff. Moist. Medium plasticity, non elastic.	CL		0.0						
		x	9										

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-12**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	646 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
1/4 of 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385808.353 ■ N 2554022.185 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
				Silt fill. Yellow. Soft. Dry. Non plastic.	ML		0.0						
			2										
B-12-3	5		3				0.0						
			4										
			5	Silty Clay. Strong brown (7.5yr, 5/6). Medium stiff. Moist. Medium plasticity, non elastic.	CL		0.0						
	4		6										
			7										
B-12-8			8				0.0						
		x	9										

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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SOIL BORING LOG INFORMATION
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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-13**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	646 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385766.469 ■ N 2553970.747 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Att. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
	5		2	Sandy Silt. Strong brown (7.5YR, 5/6). Soft. Moist. Non plastic, non elastic.	ML		0.0						
B-13-3			3	Well Graded Sand. Yellow. Loose. Moist. Rounded to angular, CMF.	SW		0.0						
			4	Clay. Black. Stiff. Moist. Medium plasticity, non elastic.	CL		0.2						Slight hydrocarbon odor at black clay leanse.
	4		5	Clay. Light brown (7.5YR, 6/4). Medium stiff. Moist. Medium plasticity, non elastic.	CL								
			6				0.0						
			7										
B-13-8			8										
		x	9				0.0						

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-14**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	646 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
1/4 of 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385762.735 ■ N 2554062.998 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
B-14-3	5		2 3	Sandy Clay. Dark brown (7.5YR, 3/4). Stiff. Moist. 25-30% fine grained sand. Medium plasticity, non elastic.	CL		0.0						
			4 5	Silty Clay. Dark gray (7.5YR, 4/1). Medium stiff. Moist. ~25% silt. Medium plasticity, non elastic.	CL		0.0						
	4		6	Well Graded Sand. Light yellowish brown (10YR, 6/5). Loose. Moist. Rounded to angular. Non plastic, non elastic.	SW		0.0						
B-14-8		x	7 8 9	Silty Clay. Yellowish brown (10YR, 5/6). Soft. Moist. Medium plasticity, non elastic.	CL		0.0 0.0						

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name: APRC	License/Permit/Monitoring Number:	Boring Number: **B-15**

Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Watali Firm: CS Drilling	Date Drilling Started: 01/10/2018 (m m d d y y y y)	Date Drilling Completed: 01/10/2018 (m m d d y y y y)	Drilling Method: Direct Push
WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level: _____ Feet MSL
			Surface Elevation: 648 Feet MSL
			Borehole Diameter: 2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385911.897 ■ N 2553900.02 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Att. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
	5		2	Well Graded Sand. Strong brown (7.5YR, 5/6). Loose. Moist. Non plastic, non elastic.	SW		0.0						
B-15-3			3	Silt. Black. Soft. Moist. ~20% fine grained sand. Low plasticity, non elastic.	ML		0.0						
			4										
			5										
	4		6				0.0						
			7										
B-15-8		x	8	Clay. Light brown (7.5YR, 6/4). Medium stiff. Moist. Medium plasticity, non elastic.	CL		0.0						
			9										

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
APRC		**B-16**

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Marc Last Name: Watali Firm: CS Drilling	01 / 10 / 2018 m m d d y y y y	01 / 10 / 2018 m m d d y y y y	Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	648 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
1/4 of 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 22 "
Long 87 ° 55 ' 38 "

Local Grid Location
385846.184 ■ N 2553900.639 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Alt. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill									
	5		2	Clayey Silt. Black. Soft. Moist. Low plasticity, non elastic. Clay content increases with depth.	ML		0.0						
B-16-3			3				0.0						
			4	Clay. Strong brown (7.5YR, 5/6). Soft. Moist. Medium plasticity, non elastic. Interbedded with sand and silt. Silt content increases with depth.	CL		0.0						
	4		5										
			6										
			7										
B-16-8		x	8										
			9										

End of boring at 9 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name: APRC	License/Permit/Monitoring Number:	Boring Number: **SG-1**

Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Watali Firm: CS Drilling	Date Drilling Started: 01/10/2018 (m m d d y y y y)	Date Drilling Completed: 01/10/2018 (m m d d y y y y)	Drilling Method: Direct Push
WI Unique Well No.	DNR Well ID No.	Well Name: SG-1	Final Static Water Level: _____ Feet MSL
Surface Elevation: 648 Feet MSL	Borehole Diameter: 2 inches		

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 24 "
Long 87 ° 55 ' 38 "

Local Grid Location
385946.28 ■ N 2554048.013 ■ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Att. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill										
	5		2 3 4 5	Silty Clay. Brown (7.5YR, 5/3). Stiff. Moist. ~10% fine grained sand. Trace gravel. Low plasticity, non elastic.	CL			0.0 0.0						
	5	x	6 7 8 9 10					0.0 0.0						Soil-gas probe installed at 7 feet.

End of boring at 10 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name: APRC	License/Permit/Monitoring Number:	Boring Number: **SG-2**

Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Watali Firm: CS Drilling	Date Drilling Started 01 / 10 / 2018 m m d d y y y y	Date Drilling Completed 01 / 10 / 2018 m m d d y y y y	Drilling Method Direct Push

WI Unique Well No.	DNR Well ID No.	Well Name: SG-2	Final Static Water Level: _____ Feet MSL	Surface Elevation: 647 Feet MSL	Borehole Diameter: 2 inches

Local Grid Origin ☐ (estimated: □) or Boring Location ☐ State Plane _____ N, _____ E _____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____	Lat 43 ° 02 ' 23 " Long 87 ° 55 ' 39 "	Local Grid Location 385878.17 ■ N 2554048.919 ■ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County: Milwaukee	County Code: 4 1	Civil Town/City/ or Village: Milwaukee, WI

Sample Number and Type	Sample Length Att. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill										
			2	Silty Clay. Brown (7.5YR, 5/6). Stiff. Moist. High plasticity, non elastic.	CL			0.0						
	5		3 4 5 6	Clay. Brown (7.5YR, 5/6). Medium stiff. Moist. Medium plasticity, non elastic.	CL			0.0						
	3		7 8	Well Graded Sand. Yellowish brown (10YR, 5/6). Loose. Moist. Rounded to angular. Trace gravel. Non plastic, non elastic.				0.0						Soil-gas probe installed at 7 feet.

End of boring at 8 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ■ Other ☐ _____

Page 1 of 1

Facility/Project Name: APRC	License/Permit/Monitoring Number:	Boring Number: **SG-3**

Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Watali Firm: CS Drilling	Date Drilling Started: 01 / 10 / 2018 (m m d d y y y y)	Date Drilling Completed: 01 / 10 / 2018 (m m d d y y y y)	Drilling Method: Direct Push
WI Unique Well No.:	DNR Well ID No.:	Well Name: SG-3	Final Static Water Level: _____ Feet MSL
Surface Elevation: 647 Feet MSL	Borehole Diameter: 2 inches		

Local Grid Origin ☐ (estimated: □) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat 43 ° 02 ' 23 "
Long 87 ° 55 ' 39 "

Local Grid Location
385833.601 ■ N Feet ☐ S
2554048.566 ■ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	4 1	Milwaukee, WI

Sample Number and Type	Sample Length Att. & Recovered (ft)	Groundwater	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			1	Asphalt/Fill										
	5		2	Sand and gravel Fill										
			3											
			4	Silty Clay. Brown (7.5YR, 5/6). Stiff. Moist. Medium plasticity, non elastic	CL			0.0						
			5											
	3		6											
			7	Silt. Yellow (10YR, 7/6). Soft. Moist. Non plastic, non elastic. Clay content increases with depth.	ML			0.0						Soil-gas probe installed at 7 feet.
			8											

End of boring at 8 feet.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	Ramboll

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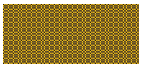
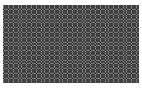
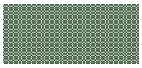
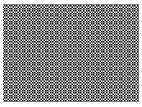
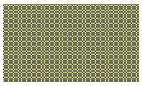
SOIL BORING LOG KEY


CRUSHED STONE


SAND AND GRAVEL FILL

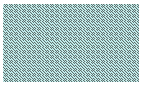

SILTY CLAY FILL


GRAVEL

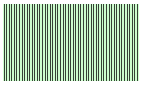

SAND AND GRAVEL

SAND

CLAYEY SAND


SILTY SAND


SANDY SILT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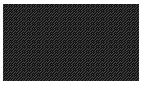
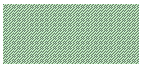
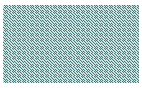
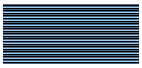
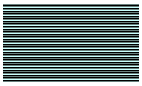

BEDROCK


CLAYEY SILT

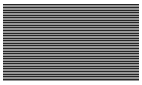

SILTY CLAY

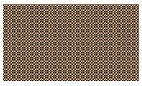

SANDY CLAY


CLAY


SILTY SAND/GRAVEL

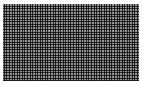

GRAVELY CLAY


SILTY SAND/GRAVEL FILL


FILTER PACK


ASPHALT


CONCRETE


BENTONITE CHIPS

Route To: Watershed/Wastewater ☐ Waste Management **MONITORING WELL CONSTRUCTION**
Remediation/Redevelopment ■ Other _____ **Form 4400-113A Rev. 7-98**

Facility/Project Name APRC	Local Grid Location of Well □N. □E. ft. □S. ft. □W.	Well Name **TW-7**
License/Permit/Monitoring Number	Local Grid Origin □ (estimated □) or Well Location ■ 385861.74 N 2554023.642 E	Wis. Unique Well No. __ / DNR Well ID No _____
Facility ID	St. Plane S/C/N	Date Well Installed 0 1 / 1 0 / 2 0 1 8 m m d d y y y y
Type of Well Well Code ___/_TW_	Section Location of Waste/Source □E ____1/4 of____1/4 of Sec.____, T. ____N, R. _____□W	
Distance from Waste/Source _____ ft. / Enf. Stds. Apply □	Location of Well Relative to Waste/Source u □ Upgradient s □ Sidegradient d □ Downgradient n □ Not Known	Gov. Lot Number _____
		Well Installed By: Name (first, last) and Firm Marc Watali CS Drilling.

A. Protective Pipe, top elevation ft. MSL

B. Well Casing, top elevation 649 ft. MSL

C. Land surface elevation 647 ft. MSL

D. Surface seal, bottom 646 ft. MSL

12. USCS classification of soil near screen:
GP □ GM □ GC □ GW □ SW □ SP □
SM □ SC □ ML □ MH □ CL ■ CH □
Bedrock □

13. Sieve analysis performed? □ Yes ■ No

14. Drilling method used: Rotary □ 50
Hollow Stem Auger □ 41
_____ Other ■ _DPT__

15. Drilling fluid used: Water □ 0 2 Air □ 0 1
Drilling Mud □ 0 3 None ■ 9 9

16. Drilling additives used? □ Yes ■ No
Describe _____

17. Source of water (attach analysis, if required)
_____

E. Bentonite seal, top 647 ft. MSL

F. Fine sand, top __ __ __ __ __ __ ft. MSL

G. Filter pack, top 646 ft. MSL

H. Screen joint, top 640 ft. MSL

I. Well bottom 628 ft. MSL

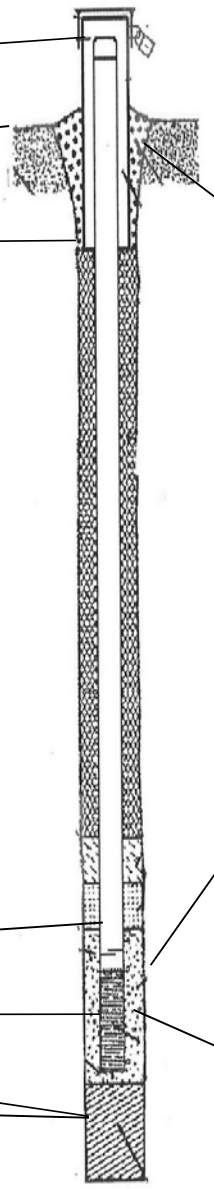
J. Filter pack, bottom 627 ft. MSL

K. Borehole, bottom 627 ft. MSL

L. Borehole, diameter 2 in.

M. O.D. well casing 1 in.

N. I.D. well casing 0.99 in.



1. Cap and lock? □ Yes ■ No

2. Protective cover pipe:
a. Inside Diameter: __ __ __ in.
b. Length: __ __ ____ ft.
c. Material: Steel □ 04
_____ Other □ _ _
d. Additional protection? □ Yes □ No
If yes, describe: _____

3. Surface seal: Bentonite ■
Concrete □
_____ Other □

4. Material between well casing and protective pipe:
Bentonite □
Other □

5. Annular space seal: a. Granular/Chipped Bentonite □
b. Lbs/gal mud weight…. Bentonite-sand slurry □
c. Lbs/gal mud weight….. Bentonite slurry □
d. ____% Bentonite… Bentonite-cement grout □
e. 4 bags volume added for any of the above
f. How installed: Tremie □
Tremie pumped □
Gravity □

6. Bentonite seal: a. Bentonite granules □
b. □ 1/4 in. □ 3/8 in. □ 1/2 in. Bentonite chips □
c. _____ Other □

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint Sand and Gravel, #15, 0.015 in
b. Volume added - 1 bag

8. Filter pack material: Manufacturer, product name & mesh size
a. RW Sidley #5 Sand
b. Volume added -

9. Well casing: Flush threaded PVC schedule 40 □
Flush threaded PVC schedule 80 ■
_____ Other □

10. Screen material: _PVC_____
a. Screen type: Factory cut ■
Continuous slot □
_____ Other □
b. Manufacturer _____
c. Slot size: 0.0 1 0 in
d. Slotted length: 10 ft.

11. Backfill material (below filter pack None ■
_____ Other □

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Bradley J Marcotte Firm Ramboll

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299. Wis. Stats., and ch. NR 141, Wis. Adm. Code. in accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and the conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells.
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name:
Lot #:

Reason for Removal from Service:
WI Unique Well # of Replacement Well:

2. Facility / Owner Information

Facility Name: MV Lot F APRC
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code:

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geo Probe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
10	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	1		
Bentonite				

6. Comments

SG-1

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Rambol		02/12/2018

Street or Route	Telephone Number
175 N. Corporate Dr.	(262) 901-0129

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		02/14/2018

DNR Use Only

Date Received	Noted By
Comments	

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) — N / W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 201 W. Wells
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name:
Lot #:
Reason for Removal from Service:
WI Unique Well # of Replacement Well:

2. Facility / Owner Information

Facility Name: MU Lot F APRC
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code:

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geo Probe

Formation Type:
☐ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
3	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	1		
Bentonite				

6. Comments

SG-2

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Rumbol		02/12/2018

Street or Route: 175 N. Corporate Dr
Telephone Number: (262) 901-0129
City: Brookfield | State: WI | ZIP Code: 53045
Signature of Person Doing Work:
Date Signed: 02/14/2018

DNR Use Only
Date Received | Noted By
Comments

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name
Lot #
Reason for Removal from Service
WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: MU lot F APRC
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner
Present Well Owner
Mailing Address of Present Owner
City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geo Probe

Formation Type:
☐ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
8	/
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	1		
Bentonite				

6. Comments

S6-3

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		02/12/2018

Street or Route	Telephone Number
~~1401~~ 175 N. Corporate Dr.	(262) 901-0129

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		02/14/2018

DNR Use Only

Date Received	Noted By

Comments

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1261 W. Wells St.

Well City, Village or Town	Well ZIP Code
Milwaukee	53233

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Marquette University Lot F
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
20	1

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
2	17'

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☒ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☒ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	20		

6. Comments

B-7 / TW-7

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262) 901-0029

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee	_ _ _ _ _ _ _	

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name:
Lot #:
Reason for Removal from Service:
WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name: Marquette University Lot F
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole
Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): 9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

R-8

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262)901-0129

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) ____ N ____ W | Format Code ☐ DD ☐ DDM | Method Code ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.

Well City, Village or Town: Milwaukee | Well ZIP Code: 53233

Subdivision Name | Lot #

Reason for Removal from Service | WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Marquette University Lot F

Facility ID (FID or PWS)

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner

City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-9

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262) 901-0029

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments

State of Wis., Dept of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) _____ N _____ W | Format Code: ☐ DD ☐ DDM | Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.

Well City, Village or Town	Well ZIP Code
Milwaukee	53233

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Marquette University Lot F

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018

If a Well Construction Report is available, please attach

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-10

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262) 901-0129

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee	_ _ _ _ _ _ _	

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name:
Lot #:
Reason for Removal from Service:
WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name: Marquette University Lot F
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code:

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-11

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262) 901-0029

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) N / W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.

Well City, Village or Town: Milwaukee — Well ZIP Code: 53233

Subdivision Name — Lot #

Reason for Removal from Service — WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Marquette University Lot F

Facility ID (FID or PWS)

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner

City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-12

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route: 175 N. Corporate Dr. Suite 160 — Telephone Number: (262) 901-0029

City: Brookfield — State: WI — ZIP Code: 53045

Signature of Person Doing Work — Date Signed: 01/12/2018

DNR Use Only

Date Received	Noted By

Comments

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) — N / W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name:
Lot #:
Reason for Removal from Service:
WI Unique Well # of Replacement Well:

2. Facility / Owner Information

Facility Name: Marquette University Lot F
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code:

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole
Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): 9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-13

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route: 175 N. Corporate Dr. Suite 160
Telephone Number: (262) 901-0029
City: Brookfield | State: WI | ZIP Code: 53045
Signature of Person Doing Work:
Date Signed: 01/12/2018

DNR Use Only
Date Received | Noted By
Comments

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.

Well City, Village or Town	Well ZIP Code
Milwaukee	53233

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Marquette University Lot F
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

R-14

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262) 901-0029

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		

Latitude / Longitude (see instructions) ____ N ____ W | Format Code ☐ DD ☐ DDM | Method Code ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1261 W. Wells St.

Well City, Village or Town: Milwaukee | Well ZIP Code: 53233

Subdivision Name | Lot #

Reason for Removal from Service | WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Marquette University Lot F

Facility ID (FID or PWS)

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner

City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain)

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-15

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262)901-0029

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee	_ _ _ _ _ _ _	

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 1201 W. Wells St.
Well City, Village or Town: Milwaukee
Well ZIP Code: 53233
Subdivision Name:
Lot #:
Reason for Removal from Service:
WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name: Marquette University Lot F
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code:

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/10/2018
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): 9

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☒ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Asphalt	Surface	0.5		
Bentonite	0.5	9		

6. Comments

B-16

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Ramboll		01/10/2018

Street or Route	Telephone Number
175 N. Corporate Dr. Suite 160	(262) 901-0029

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Brookfield	WI	53045		01/12/2018

DNR Use Only

Date Received	Noted By

Comments:

ATTACHMENT B

LABORATORY ANALYTICAL RESULTS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 26, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Dear Jeanne Tarvin:
Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Steven Mleczko
steve.mleczko@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163468001	**B-7-3**	Solid	01/10/18 09:45	01/13/18 08:45
40163468002	**B-7-7.5**	Solid	01/10/18 09:55	01/13/18 08:45
40163468003	**B-14-3**	Solid	01/10/18 11:38	01/13/18 08:45
40163468004	**B-14-8**	Solid	01/10/18 11:42	01/13/18 08:45
40163468005	**B-12-3**	Solid	01/10/18 12:43	01/13/18 08:45
40163468006	**B-12-8**	Solid	01/10/18 12:45	01/13/18 08:45
40163468007	**B-10-3**	Solid	01/10/18 13:00	01/13/18 08:45
40163468008	**B-10-8**	Solid	01/10/18 13:05	01/13/18 08:45
40163468009	**B-9-3**	Solid	01/10/18 13:30	01/13/18 08:45
40163468010	**B-9-8**	Solid	01/10/18 13:35	01/13/18 08:45
40163468011	**B-8-3**	Solid	01/10/18 13:50	01/13/18 08:45
40163468012	**B-8-8**	Solid	01/10/18 13:55	01/13/18 08:45
40163468013	**B-11-3**	Solid	01/10/18 14:20	01/13/18 08:45
40163468014	**B-11-8**	Solid	01/10/18 14:25	01/13/18 08:45
40163468015	**B-13-3**	Solid	01/10/18 14:40	01/13/18 08:45
40163468016	**B-13-8**	Solid	01/10/18 14:45	01/13/18 08:45
40163468017	**B-16-3**	Solid	01/10/18 15:00	01/13/18 08:45
40163468018	**B-16-8**	Solid	01/10/18 15:05	01/13/18 08:45
40163468019	**B-15-3**	Solid	01/10/18 15:15	01/13/18 08:45
40163468020	**B-15-8**	Solid	01/10/18 15:20	01/13/18 08:45
40163468021	**TW-7**	Water	01/11/18 11:05	01/13/18 08:45
40163468022	**TRIP BLANK**	Water	01/11/18 00:00	01/13/18 08:45

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE
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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163468001	**B-7-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468002	**B-7-7.5**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468003	**B-14-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468004	**B-14-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468005	**B-12-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468006	**B-12-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468007	**B-10-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468008	**B-10-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468009	**B-9-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468010	**B-9-8**	EPA 6010	JLD	7	PASI-G

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468011	**B-8-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468012	**B-8-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468013	**B-11-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468014	**B-11-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468015	**B-13-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468016	**B-13-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468017	**B-16-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468018	**B-16-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468019	**B-15-3**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE
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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468020	**B-15-8**	EPA 6010	JLD	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8260	MDS	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40163468021	**TW-7**	EPA 6010	JLD	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	HNW	65	PASI-G
40163468022	**TRIP BLANK**	EPA 8260	HNW	65	PASI-G

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468001	**B-7-3**					
EPA 6010	Arsenic	4.4J	mg/kg	5.9	01/19/18 00:06	
EPA 6010	Barium	335	mg/kg	0.59	01/19/18 00:06	
EPA 6010	Cadmium	0.31J	mg/kg	0.59	01/19/18 00:06	
EPA 6010	Chromium	12.4	mg/kg	1.2	01/19/18 00:06	
EPA 6010	Lead	491	mg/kg	1.5	01/19/18 00:06	
EPA 7471	Mercury	0.96	mg/kg	0.040	01/24/18 11:20	
ASTM D2974-87	Percent Moisture	16.9	%	0.10	01/15/18 11:00	
40163468002	**B-7-7.5**					
EPA 6010	Arsenic	3.0J	mg/kg	5.0	01/19/18 00:09	
EPA 6010	Barium	10.8	mg/kg	0.50	01/19/18 00:09	
EPA 6010	Chromium	6.2	mg/kg	1.0	01/19/18 00:09	
EPA 6010	Lead	5.2	mg/kg	1.3	01/19/18 00:09	
EPA 8260	Tetrachloroethene	29.5J	ug/kg	64.1	01/16/18 12:43	
ASTM D2974-87	Percent Moisture	6.5	%	0.10	01/15/18 11:00	
40163468003	**B-14-3**					
EPA 6010	Arsenic	5.5J	mg/kg	5.9	01/19/18 00:11	
EPA 6010	Barium	58.4	mg/kg	0.59	01/19/18 00:11	
EPA 6010	Cadmium	0.22J	mg/kg	0.59	01/19/18 00:11	
EPA 6010	Chromium	25.8	mg/kg	1.2	01/19/18 00:11	
EPA 6010	Lead	11.5	mg/kg	1.5	01/19/18 00:11	
EPA 7471	Mercury	0.020J	mg/kg	0.044	01/24/18 11:29	
ASTM D2974-87	Percent Moisture	17.1	%	0.10	01/15/18 11:00	
40163468004	**B-14-8**					
EPA 6010	Arsenic	4.8J	mg/kg	5.4	01/19/18 00:18	
EPA 6010	Barium	74.2	mg/kg	0.54	01/19/18 00:18	
EPA 6010	Cadmium	0.24J	mg/kg	0.54	01/19/18 00:18	
EPA 6010	Chromium	19.7	mg/kg	1.1	01/19/18 00:18	
EPA 6010	Lead	8.7	mg/kg	1.4	01/19/18 00:18	
EPA 7471	Mercury	0.014J	mg/kg	0.040	01/24/18 11:32	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	01/15/18 11:34	
40163468005	**B-12-3**					
EPA 6010	Arsenic	4.5J	mg/kg	5.7	01/19/18 00:21	
EPA 6010	Barium	46.5	mg/kg	0.57	01/19/18 00:21	
EPA 6010	Cadmium	0.16J	mg/kg	0.57	01/19/18 00:21	
EPA 6010	Chromium	16.2	mg/kg	1.1	01/19/18 00:21	
EPA 6010	Lead	8.5	mg/kg	1.5	01/19/18 00:21	
EPA 6010	Selenium	1.4J	mg/kg	5.7	01/19/18 00:21	
EPA 7471	Mercury	0.018J	mg/kg	0.040	01/24/18 11:34	
ASTM D2974-87	Percent Moisture	15.0	%	0.10	01/15/18 11:34	
40163468006	**B-12-8**					
EPA 6010	Arsenic	3.8J	mg/kg	5.9	01/17/18 16:19	
EPA 6010	Barium	61.8	mg/kg	0.59	01/17/18 16:19	
EPA 6010	Cadmium	0.20J	mg/kg	0.59	01/17/18 16:19	
EPA 6010	Chromium	17.6	mg/kg	1.2	01/17/18 16:19	

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468006	**B-12-8**					
EPA 6010	Lead	5.8	mg/kg	1.5	01/17/18 16:19	1q
EPA 8260	Tetrachloroethene	38.6J	ug/kg	71.5	01/16/18 14:36	
ASTM D2974-87	Percent Moisture	16.1	%	0.10	01/15/18 11:34	
40163468007	**B-10-3**					
EPA 6010	Arsenic	9.3	mg/kg	5.8	01/17/18 16:22	
EPA 6010	Barium	83.1	mg/kg	0.58	01/17/18 16:22	
EPA 6010	Cadmium	0.43J	mg/kg	0.58	01/17/18 16:22	
EPA 6010	Chromium	17.2	mg/kg	1.2	01/17/18 16:22	
EPA 6010	Lead	166	mg/kg	1.5	01/17/18 16:22	
EPA 7471	Mercury	0.32	mg/kg	0.042	01/24/18 11:39	
EPA 8260	Tetrachloroethene	19600	ug/kg	221	01/16/18 19:52	
EPA 8260	Trichloroethene	350	ug/kg	221	01/16/18 19:52	
ASTM D2974-87	Percent Moisture	15.1	%	0.10	01/15/18 11:34	
40163468008	**B-10-8**					
EPA 6010	Arsenic	5.3J	mg/kg	5.6	01/17/18 16:12	
EPA 6010	Barium	17.7	mg/kg	0.56	01/17/18 16:12	
EPA 6010	Cadmium	0.20J	mg/kg	0.56	01/17/18 16:12	
EPA 6010	Chromium	10.2	mg/kg	1.1	01/17/18 16:12	
EPA 6010	Lead	6.4	mg/kg	1.5	01/17/18 16:12	1q
EPA 7471	Mercury	0.019J	mg/kg	0.042	01/24/18 11:41	
EPA 8260	Tetrachloroethene	340	ug/kg	68.1	01/16/18 14:58	
ASTM D2974-87	Percent Moisture	11.9	%	0.10	01/15/18 11:34	
40163468009	**B-9-3**					
EPA 6010	Arsenic	4.2J	mg/kg	5.3	01/17/18 16:24	
EPA 6010	Barium	17.2	mg/kg	0.53	01/17/18 16:24	
EPA 6010	Chromium	8.2	mg/kg	1.1	01/17/18 16:24	
EPA 6010	Lead	5.2	mg/kg	1.4	01/17/18 16:24	1q
EPA 8260	Tetrachloroethene	80.7J	ug/kg	108	01/16/18 15:21	
ASTM D2974-87	Percent Moisture	15.5	%	0.10	01/15/18 11:34	
40163468010	**B-9-8**					
EPA 6010	Arsenic	4.6J	mg/kg	5.6	01/19/18 11:06	
EPA 6010	Barium	48.5	mg/kg	0.56	01/19/18 11:06	
EPA 6010	Cadmium	0.19J	mg/kg	0.56	01/19/18 11:06	
EPA 6010	Chromium	23.5	mg/kg	1.1	01/19/18 11:06	
EPA 6010	Lead	8.2	mg/kg	1.5	01/19/18 11:06	
EPA 8260	Tetrachloroethene	3650	ug/kg	95.2	01/16/18 15:44	
ASTM D2974-87	Percent Moisture	16.0	%	0.10	01/15/18 11:34	
40163468011	**B-8-3**					
EPA 6010	Arsenic	5.1J	mg/kg	5.4	01/17/18 16:29	
EPA 6010	Barium	80.4	mg/kg	0.54	01/17/18 16:29	
EPA 6010	Cadmium	0.18J	mg/kg	0.54	01/17/18 16:29	
EPA 6010	Chromium	29.0	mg/kg	1.1	01/17/18 16:29	
EPA 6010	Lead	12.5	mg/kg	1.4	01/17/18 16:29	
EPA 7471	Mercury	0.042	mg/kg	0.040	01/24/18 11:48	

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468011	**B-8-3**					
ASTM D2974-87	Percent Moisture	17.2	%	0.10	01/15/18 11:34	
40163468012	**B-8-8**					
EPA 6010	Arsenic	10.4	mg/kg	5.6	01/17/18 16:36	
EPA 6010	Barium	73.4	mg/kg	0.56	01/17/18 16:36	
EPA 6010	Cadmium	0.21J	mg/kg	0.56	01/17/18 16:36	
EPA 6010	Chromium	20.7	mg/kg	1.1	01/17/18 16:36	
EPA 6010	Lead	8.3	mg/kg	1.5	01/17/18 16:36	
EPA 7471	Mercury	0.016J	mg/kg	0.041	01/24/18 11:50	
ASTM D2974-87	Percent Moisture	18.1	%	0.10	01/15/18 11:35	
40163468013	**B-11-3**					
EPA 6010	Arsenic	5.1J	mg/kg	5.4	01/17/18 16:39	
EPA 6010	Barium	91.9	mg/kg	0.54	01/17/18 16:39	
EPA 6010	Cadmium	0.17J	mg/kg	0.54	01/17/18 16:39	
EPA 6010	Chromium	19.1	mg/kg	1.1	01/17/18 16:39	
EPA 6010	Lead	96.3	mg/kg	1.4	01/17/18 16:39	
EPA 7471	Mercury	0.38	mg/kg	0.039	01/24/18 11:57	
EPA 8260	Tetrachloroethene	50.6J	ug/kg	115	01/16/18 16:52	
ASTM D2974-87	Percent Moisture	15.7	%	0.10	01/15/18 11:35	
40163468014	**B-11-8**					
EPA 6010	Arsenic	6.9	mg/kg	5.8	01/17/18 16:41	
EPA 6010	Barium	71.9	mg/kg	0.58	01/17/18 16:41	
EPA 6010	Cadmium	0.24J	mg/kg	0.58	01/17/18 16:41	
EPA 6010	Chromium	26.4	mg/kg	1.2	01/17/18 16:41	
EPA 6010	Lead	8.1	mg/kg	1.5	01/17/18 16:41	
EPA 7471	Mercury	0.019J	mg/kg	0.044	01/24/18 11:59	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	01/15/18 11:35	
40163468015	**B-13-3**					
EPA 6010	Arsenic	4.0J	mg/kg	5.6	01/17/18 16:44	
EPA 6010	Barium	21.8	mg/kg	0.56	01/17/18 16:44	
EPA 6010	Cadmium	0.28J	mg/kg	0.56	01/17/18 16:44	
EPA 6010	Chromium	10.1	mg/kg	1.1	01/17/18 16:44	
EPA 6010	Lead	7.6	mg/kg	1.5	01/17/18 16:44	
EPA 7471	Mercury	0.029J	mg/kg	0.041	01/24/18 12:02	
ASTM D2974-87	Percent Moisture	12.7	%	0.10	01/15/18 11:35	
40163468016	**B-13-8**					
EPA 6010	Arsenic	5.0J	mg/kg	5.6	01/17/18 16:46	
EPA 6010	Barium	49.5	mg/kg	0.56	01/17/18 16:46	
EPA 6010	Cadmium	0.23J	mg/kg	0.56	01/17/18 16:46	
EPA 6010	Chromium	20.6	mg/kg	1.1	01/17/18 16:46	
EPA 6010	Lead	7.6	mg/kg	1.5	01/17/18 16:46	
EPA 7471	Mercury	0.013J	mg/kg	0.042	01/24/18 12:04	
ASTM D2974-87	Percent Moisture	13.9	%	0.10	01/15/18 11:35	
40163468017	**B-16-3**					
EPA 6010	Arsenic	4.6J	mg/kg	6.0	01/17/18 16:49	

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163468017	**B-16-3**					
EPA 6010	Barium	59.8	mg/kg	0.60	01/17/18 16:49	
EPA 6010	Cadmium	0.18J	mg/kg	0.60	01/17/18 16:49	
EPA 6010	Chromium	26.1	mg/kg	1.2	01/17/18 16:49	
EPA 6010	Lead	10.3	mg/kg	1.6	01/17/18 16:49	
EPA 7471	Mercury	0.055	mg/kg	0.041	01/24/18 12:18	
ASTM D2974-87	Percent Moisture	18.2	%	0.10	01/15/18 11:35	
40163468018	**B-16-8**					
EPA 6010	Arsenic	5.6	mg/kg	5.2	01/17/18 16:51	
EPA 6010	Barium	61.2	mg/kg	0.52	01/17/18 16:51	
EPA 6010	Cadmium	0.15J	mg/kg	0.52	01/17/18 16:51	
EPA 6010	Chromium	18.0	mg/kg	1.0	01/17/18 16:51	
EPA 6010	Lead	7.1	mg/kg	1.4	01/17/18 16:51	
ASTM D2974-87	Percent Moisture	12.8	%	0.10	01/15/18 11:35	
40163468019	**B-15-3**					
EPA 6010	Arsenic	4.8J	mg/kg	5.9	01/17/18 16:54	
EPA 6010	Barium	71.1	mg/kg	0.59	01/17/18 16:54	
EPA 6010	Chromium	22.2	mg/kg	1.2	01/17/18 16:54	
EPA 6010	Lead	11.2	mg/kg	1.5	01/17/18 16:54	
EPA 7471	Mercury	0.016J	mg/kg	0.044	01/24/18 12:27	
ASTM D2974-87	Percent Moisture	17.2	%	0.10	01/15/18 11:35	
40163468020	**B-15-8**					
EPA 6010	Arsenic	6.5	mg/kg	6.0	01/19/18 11:08	
EPA 6010	Barium	67.3	mg/kg	0.60	01/19/18 11:08	
EPA 6010	Cadmium	0.29J	mg/kg	0.60	01/19/18 11:08	
EPA 6010	Chromium	27.3	mg/kg	1.2	01/19/18 11:08	
EPA 6010	Lead	9.8	mg/kg	1.6	01/19/18 11:08	
EPA 7471	Mercury	0.045	mg/kg	0.042	01/24/18 12:29	
ASTM D2974-87	Percent Moisture	18.6	%	0.10	01/15/18 11:35	
40163468021	**TW-7**					
EPA 6010	Barium, Dissolved	170	ug/L	5.0	01/16/18 15:46	
EPA 6010	Silver, Dissolved	3.4J	ug/L	10.0	01/16/18 15:46	
EPA 8260	Chloromethane	1.7	ug/L	1.0	01/15/18 19:02	
EPA 8260	cis-1,2-Dichloroethene	0.49J	ug/L	1.0	01/15/18 19:02	
EPA 8260	Tetrachloroethene	61.8	ug/L	1.0	01/15/18 19:02	
EPA 8260	Trichloroethene	1.7	ug/L	1.0	01/15/18 19:02	

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-3 **Lab ID: 40163468001** Collected: 01/10/18 09:45 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.4J**	mg/kg	5.9	1.2	1	01/17/18 13:10	01/19/18 00:06	7440-38-2	
Barium	**335**	mg/kg	0.59	0.18	1	01/17/18 13:10	01/19/18 00:06	7440-39-3	
Cadmium	**0.31J**	mg/kg	0.59	0.16	1	01/17/18 13:10	01/19/18 00:06	7440-43-9	
Chromium	**12.4**	mg/kg	1.2	0.33	1	01/17/18 13:10	01/19/18 00:06	7440-47-3	
Lead	**491**	mg/kg	1.5	0.51	1	01/17/18 13:10	01/19/18 00:06	7439-92-1	
Selenium	**<1.3**	mg/kg	5.9	1.3	1	01/17/18 13:10	01/19/18 00:06	7782-49-2	
Silver	**<0.41**	mg/kg	1.2	0.41	1	01/17/18 13:10	01/19/18 00:06	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.96**	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:20	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	630-20-6	W
1,1,1-Trichloroethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	71-55-6	W
1,1,2,2-Tetrachloroethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-34-5	W
1,1,2-Trichloroethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-00-5	W
1,1-Dichloroethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-34-3	W
1,1-Dichloroethene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-35-4	W
1,1-Dichloropropene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	563-58-6	W
1,2,3-Trichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	87-61-6	W
1,2,3-Trichloropropane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	96-18-4	W
1,2,4-Trichlorobenzene	**<53.4**	ug/kg	281	53.4	1	01/16/18 08:45	01/16/18 13:05	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-63-6	W
1,2-Dibromo-3-chloropropane	**<103**	ug/kg	281	103	1	01/16/18 08:45	01/16/18 13:05	96-12-8	W
1,2-Dibromoethane (EDB)	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-93-4	W
1,2-Dichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-50-1	W
1,2-Dichloroethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	107-06-2	W
1,2-Dichloropropane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	78-87-5	W
1,3,5-Trimethylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-67-8	W
1,3-Dichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	541-73-1	W
1,3-Dichloropropane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	142-28-9	W
1,4-Dichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-46-7	W
2,2-Dichloropropane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	594-20-7	W
2-Chlorotoluene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-49-8	W
4-Chlorotoluene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	106-43-4	W
Benzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	71-43-2	W
Bromobenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-86-1	W
Bromochloromethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-97-5	W
Bromodichloromethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-27-4	W
Bromoform	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-25-2	W
Bromomethane	**<78.5**	ug/kg	281	78.5	1	01/16/18 08:45	01/16/18 13:05	74-83-9	W
Carbon tetrachloride	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	56-23-5	W
Chlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-90-7	W
Chloroethane	**<75.3**	ug/kg	281	75.3	1	01/16/18 08:45	01/16/18 13:05	75-00-3	W
Chloroform	**<52.2**	ug/kg	281	52.2	1	01/16/18 08:45	01/16/18 13:05	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-3 **Lab ID: 40163468001** Collected: 01/10/18 09:45 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-87-3	W
Dibromochloromethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	124-48-1	W
Dibromomethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	74-95-3	W
Dichlorodifluoromethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-71-8	W
Diisopropyl ether	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-20-3	W
Ethylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	100-41-4	W
Hexachloro-1,3-butadiene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	87-68-3	W
Isopropylbenzene (Cumene)	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	98-82-8	W
Methyl-tert-butyl ether	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	1634-04-4	W
Methylene Chloride	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-09-2	W
Naphthalene	**<45.0**	ug/kg	281	45.0	1	01/16/18 08:45	01/16/18 13:05	91-20-3	W
Styrene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	100-42-5	W
Tetrachloroethene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	127-18-4	W
Toluene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	108-88-3	W
Trichloroethene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	79-01-6	W
Trichlorofluoromethane	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-69-4	W
Vinyl chloride	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	75-01-4	W
Xylene (Total)	**<84.3**	ug/kg	202	84.3	1	01/16/18 08:45	01/16/18 13:05	1330-20-7	W
cis-1,2-Dichloroethene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	156-59-2	W
cis-1,3-Dichloropropene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	10061-01-5	W
m&p-Xylene	**<56.2**	ug/kg	135	56.2	1	01/16/18 08:45	01/16/18 13:05	179601-23-1	W
n-Butylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	104-51-8	W
n-Propylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	103-65-1	W
o-Xylene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	95-47-6	W
p-Isopropyltoluene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	99-87-6	W
sec-Butylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	135-98-8	W
tert-Butylbenzene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	98-06-6	W
trans-1,2-Dichloroethene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	156-60-5	W
trans-1,3-Dichloropropene	**<28.1**	ug/kg	67.4	28.1	1	01/16/18 08:45	01/16/18 13:05	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	121	%	68-130		1	01/16/18 08:45	01/16/18 13:05	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 13:05	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 13:05	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.9**	%	0.10	0.10	1		01/15/18 11:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-7.5 **Lab ID: 40163468002** Collected: 01/10/18 09:55 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.0J**	mg/kg	5.0	1.0	1	01/17/18 13:10	01/19/18 00:09	7440-38-2	
Barium	**10.8**	mg/kg	0.50	0.15	1	01/17/18 13:10	01/19/18 00:09	7440-39-3	
Cadmium	**<0.13**	mg/kg	0.50	0.13	1	01/17/18 13:10	01/19/18 00:09	7440-43-9	
Chromium	**6.2**	mg/kg	1.0	0.28	1	01/17/18 13:10	01/19/18 00:09	7440-47-3	
Lead	**5.2**	mg/kg	1.3	0.43	1	01/17/18 13:10	01/19/18 00:09	7439-92-1	
Selenium	**<1.1**	mg/kg	5.0	1.1	1	01/17/18 13:10	01/19/18 00:09	7782-49-2	
Silver	**<0.34**	mg/kg	1.0	0.34	1	01/17/18 13:10	01/19/18 00:09	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.012**	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:22	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 12:43	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 12:43	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 12:43	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 12:43	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 12:43	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-7-7.5 **Lab ID: 40163468002** Collected: 01/10/18 09:55 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 12:43	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	100-42-5	W
Tetrachloroethene	**29.5J**	ug/kg	64.1	26.7	1	01/16/18 08:45	01/16/18 12:43	127-18-4	
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 12:43	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 12:43	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 12:43	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 12:43	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 12:43	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 12:43	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.5**	%	0.10	0.10	1		01/15/18 11:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-14-3 **Lab ID: 40163468003** Collected: 01/10/18 11:38 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.5J**	mg/kg	5.9	1.2	1	01/17/18 13:10	01/19/18 00:11	7440-38-2	
Barium	**58.4**	mg/kg	0.59	0.18	1	01/17/18 13:10	01/19/18 00:11	7440-39-3	
Cadmium	**0.22J**	mg/kg	0.59	0.16	1	01/17/18 13:10	01/19/18 00:11	7440-43-9	
Chromium	**25.8**	mg/kg	1.2	0.33	1	01/17/18 13:10	01/19/18 00:11	7440-47-3	
Lead	**11.5**	mg/kg	1.5	0.51	1	01/17/18 13:10	01/19/18 00:11	7439-92-1	
Selenium	**<1.3**	mg/kg	5.9	1.3	1	01/17/18 13:10	01/19/18 00:11	7782-49-2	
Silver	**<0.41**	mg/kg	1.2	0.41	1	01/17/18 13:10	01/19/18 00:11	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.020J**	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:29	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	630-20-6	W
1,1,1-Trichloroethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	71-55-6	W
1,1,2,2-Tetrachloroethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-34-5	W
1,1,2-Trichloroethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-00-5	W
1,1-Dichloroethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-34-3	W
1,1-Dichloroethene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-35-4	W
1,1-Dichloropropene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	563-58-6	W
1,2,3-Trichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	87-61-6	W
1,2,3-Trichloropropane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	96-18-4	W
1,2,4-Trichlorobenzene	**<61.8**	ug/kg	325	61.8	1	01/16/18 08:45	01/16/18 13:28	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-63-6	W
1,2-Dibromo-3-chloropropane	**<118**	ug/kg	325	118	1	01/16/18 08:45	01/16/18 13:28	96-12-8	W
1,2-Dibromoethane (EDB)	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-93-4	W
1,2-Dichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-50-1	W
1,2-Dichloroethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	107-06-2	W
1,2-Dichloropropane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	78-87-5	W
1,3,5-Trimethylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-67-8	W
1,3-Dichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	541-73-1	W
1,3-Dichloropropane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	142-28-9	W
1,4-Dichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-46-7	W
2,2-Dichloropropane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	594-20-7	W
2-Chlorotoluene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-49-8	W
4-Chlorotoluene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	106-43-4	W
Benzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	71-43-2	W
Bromobenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-86-1	W
Bromochloromethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-97-5	W
Bromodichloromethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-27-4	W
Bromoform	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-25-2	W
Bromomethane	**<90.8**	ug/kg	325	90.8	1	01/16/18 08:45	01/16/18 13:28	74-83-9	W
Carbon tetrachloride	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	56-23-5	W
Chlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-90-7	W
Chloroethane	**<87.0**	ug/kg	325	87.0	1	01/16/18 08:45	01/16/18 13:28	75-00-3	W
Chloroform	**<60.3**	ug/kg	325	60.3	1	01/16/18 08:45	01/16/18 13:28	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-14-3 **Lab ID: 40163468003** Collected: 01/10/18 11:38 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-87-3	W
Dibromochloromethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	124-48-1	W
Dibromomethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	74-95-3	W
Dichlorodifluoromethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-71-8	W
Diisopropyl ether	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-20-3	W
Ethylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	100-41-4	W
Hexachloro-1,3-butadiene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	87-68-3	W
Isopropylbenzene (Cumene)	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	98-82-8	W
Methyl-tert-butyl ether	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	1634-04-4	W
Methylene Chloride	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-09-2	W
Naphthalene	**<52.0**	ug/kg	325	52.0	1	01/16/18 08:45	01/16/18 13:28	91-20-3	W
Styrene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	100-42-5	W
Tetrachloroethene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	127-18-4	W
Toluene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	108-88-3	W
Trichloroethene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	79-01-6	W
Trichlorofluoromethane	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-69-4	W
Vinyl chloride	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	75-01-4	W
Xylene (Total)	**<97.4**	ug/kg	234	97.4	1	01/16/18 08:45	01/16/18 13:28	1330-20-7	W
cis-1,2-Dichloroethene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	156-59-2	W
cis-1,3-Dichloropropene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	10061-01-5	W
m&p-Xylene	**<64.9**	ug/kg	156	64.9	1	01/16/18 08:45	01/16/18 13:28	179601-23-1	W
n-Butylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	104-51-8	W
n-Propylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	103-65-1	W
o-Xylene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	95-47-6	W
p-Isopropyltoluene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	99-87-6	W
sec-Butylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	135-98-8	W
tert-Butylbenzene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	98-06-6	W
trans-1,2-Dichloroethene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	156-60-5	W
trans-1,3-Dichloropropene	**<32.5**	ug/kg	77.9	32.5	1	01/16/18 08:45	01/16/18 13:28	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	124	%	68-130		1	01/16/18 08:45	01/16/18 13:28	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	01/16/18 08:45	01/16/18 13:28	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 13:28	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.1**	%	0.10	0.10	1		01/15/18 11:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-14-8 **Lab ID: 40163468004** Collected: 01/10/18 11:42 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.8J**	mg/kg	5.4	1.1	1	01/17/18 13:10	01/19/18 00:18	7440-38-2	
Barium	**74.2**	mg/kg	0.54	0.16	1	01/17/18 13:10	01/19/18 00:18	7440-39-3	
Cadmium	**0.24J**	mg/kg	0.54	0.14	1	01/17/18 13:10	01/19/18 00:18	7440-43-9	
Chromium	**19.7**	mg/kg	1.1	0.30	1	01/17/18 13:10	01/19/18 00:18	7440-47-3	
Lead	**8.7**	mg/kg	1.4	0.47	1	01/17/18 13:10	01/19/18 00:18	7439-92-1	
Selenium	**<1.2**	mg/kg	5.4	1.2	1	01/17/18 13:10	01/19/18 00:18	7782-49-2	
Silver	**<0.37**	mg/kg	1.1	0.37	1	01/17/18 13:10	01/19/18 00:18	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.014J**	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:32	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 13:51	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 13:51	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 13:51	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 13:51	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 13:51	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-14-8 **Lab ID: 40163468004** Collected: 01/10/18 11:42 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 13:51	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 13:51	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 13:51	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 13:51	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 13:51	1868-53-7	
Toluene-d8 (S)	107	%	68-149		1	01/16/18 08:45	01/16/18 13:51	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 13:51	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.0**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-12-3 **Lab ID: 40163468005** Collected: 01/10/18 12:43 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.5J**	mg/kg	5.7	1.2	1	01/17/18 13:10	01/19/18 00:21	7440-38-2	
Barium	**46.5**	mg/kg	0.57	0.17	1	01/17/18 13:10	01/19/18 00:21	7440-39-3	
Cadmium	**0.16J**	mg/kg	0.57	0.15	1	01/17/18 13:10	01/19/18 00:21	7440-43-9	
Chromium	**16.2**	mg/kg	1.1	0.32	1	01/17/18 13:10	01/19/18 00:21	7440-47-3	
Lead	**8.5**	mg/kg	1.5	0.50	1	01/17/18 13:10	01/19/18 00:21	7439-92-1	
Selenium	**1.4J**	mg/kg	5.7	1.3	1	01/17/18 13:10	01/19/18 00:21	7782-49-2	
Silver	**<0.40**	mg/kg	1.1	0.40	1	01/17/18 13:10	01/19/18 00:21	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.018J**	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:34	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	630-20-6	W
1,1,1-Trichloroethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	71-55-6	W
1,1,2,2-Tetrachloroethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-34-5	W
1,1,2-Trichloroethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-00-5	W
1,1-Dichloroethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-34-3	W
1,1-Dichloroethene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-35-4	W
1,1-Dichloropropene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	563-58-6	W
1,2,3-Trichlorobenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	87-61-6	W
1,2,3-Trichloropropane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	96-18-4	W
1,2,4-Trichlorobenzene	**<67.0**	ug/kg	352	67.0	1	01/16/18 08:45	01/16/18 14:13	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-63-6	W
1,2-Dibromo-3-chloropropane	**<129**	ug/kg	352	129	1	01/16/18 08:45	01/16/18 14:13	96-12-8	W
1,2-Dibromoethane (EDB)	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-93-4	W
1,2-Dichlorobenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-50-1	W
1,2-Dichloroethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	107-06-2	W
1,2-Dichloropropane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	78-87-5	W
1,3,5-Trimethylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-67-8	W
1,3-Dichlorobenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	541-73-1	W
1,3-Dichloropropane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	142-28-9	W
1,4-Dichlorobenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-46-7	W
2,2-Dichloropropane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	594-20-7	W
2-Chlorotoluene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-49-8	W
4-Chlorotoluene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	106-43-4	W
Benzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	71-43-2	W
Bromobenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-86-1	W
Bromochloromethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-97-5	W
Bromodichloromethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-27-4	W
Bromoform	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-25-2	W
Bromomethane	**<98.5**	ug/kg	352	98.5	1	01/16/18 08:45	01/16/18 14:13	74-83-9	W
Carbon tetrachloride	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	56-23-5	W
Chlorobenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-90-7	W
Chloroethane	**<94.4**	ug/kg	352	94.4	1	01/16/18 08:45	01/16/18 14:13	75-00-3	W
Chloroform	**<65.4**	ug/kg	352	65.4	1	01/16/18 08:45	01/16/18 14:13	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-12-3 **Lab ID: 40163468005** Collected: 01/10/18 12:43 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-87-3	W
Dibromochloromethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	124-48-1	W
Dibromomethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	74-95-3	W
Dichlorodifluoromethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-71-8	W
Diisopropyl ether	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-20-3	W
Ethylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	100-41-4	W
Hexachloro-1,3-butadiene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	87-68-3	W
Isopropylbenzene (Cumene)	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	98-82-8	W
Methyl-tert-butyl ether	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	1634-04-4	W
Methylene Chloride	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-09-2	W
Naphthalene	**<56.4**	ug/kg	352	56.4	1	01/16/18 08:45	01/16/18 14:13	91-20-3	W
Styrene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	100-42-5	W
Tetrachloroethene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	127-18-4	W
Toluene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	108-88-3	W
Trichloroethene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	79-01-6	W
Trichlorofluoromethane	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-69-4	W
Vinyl chloride	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	75-01-4	W
Xylene (Total)	**<106**	ug/kg	254	106	1	01/16/18 08:45	01/16/18 14:13	1330-20-7	W
cis-1,2-Dichloroethene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	156-59-2	W
cis-1,3-Dichloropropene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	10061-01-5	W
m&p-Xylene	**<70.4**	ug/kg	169	70.4	1	01/16/18 08:45	01/16/18 14:13	179601-23-1	W
n-Butylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	104-51-8	W
n-Propylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	103-65-1	W
o-Xylene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	95-47-6	W
p-Isopropyltoluene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	99-87-6	W
sec-Butylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	135-98-8	W
tert-Butylbenzene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	98-06-6	W
trans-1,2-Dichloroethene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	156-60-5	W
trans-1,3-Dichloropropene	**<35.2**	ug/kg	84.5	35.2	1	01/16/18 08:45	01/16/18 14:13	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	130	%	68-130		1	01/16/18 08:45	01/16/18 14:13	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 14:13	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 14:13	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.0**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-12-8 **Lab ID: 40163468006** Collected: 01/10/18 12:45 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.8J**	mg/kg	5.9	1.2	1	01/16/18 13:32	01/17/18 16:19	7440-38-2	
Barium	**61.8**	mg/kg	0.59	0.18	1	01/16/18 13:32	01/17/18 16:19	7440-39-3	
Cadmium	**0.20J**	mg/kg	0.59	0.16	1	01/16/18 13:32	01/17/18 16:19	7440-43-9	
Chromium	**17.6**	mg/kg	1.2	0.33	1	01/16/18 13:32	01/17/18 16:19	7440-47-3	
Lead	**5.8**	mg/kg	1.5	0.51	1	01/16/18 13:32	01/17/18 16:19	7439-92-1	1q
Selenium	**<1.3**	mg/kg	5.9	1.3	1	01/16/18 13:32	01/17/18 16:19	7782-49-2	
Silver	**<0.41**	mg/kg	1.2	0.41	1	01/16/18 13:32	01/17/18 16:19	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.012**	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:36	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 14:36	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 14:36	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 14:36	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 14:36	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 14:36	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-12-8 **Lab ID: 40163468006** Collected: 01/10/18 12:45 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 14:36	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	100-42-5	W
Tetrachloroethene	**38.6J**	ug/kg	71.5	29.8	1	01/16/18 08:45	01/16/18 14:36	127-18-4	
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 14:36	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 14:36	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:36	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	138	%	68-130		1	01/16/18 08:45	01/16/18 14:36	1868-53-7	S3
Toluene-d8 (S)	115	%	68-149		1	01/16/18 08:45	01/16/18 14:36	2037-26-5	
4-Bromofluorobenzene (S)	94	%	58-141		1	01/16/18 08:45	01/16/18 14:36	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.1**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-10-3 **Lab ID: 40163468007** Collected: 01/10/18 13:00 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**9.3**	mg/kg	5.8	1.2	1	01/16/18 13:32	01/17/18 16:22	7440-38-2	
Barium	**83.1**	mg/kg	0.58	0.17	1	01/16/18 13:32	01/17/18 16:22	7440-39-3	
Cadmium	**0.43J**	mg/kg	0.58	0.15	1	01/16/18 13:32	01/17/18 16:22	7440-43-9	
Chromium	**17.2**	mg/kg	1.2	0.32	1	01/16/18 13:32	01/17/18 16:22	7440-47-3	
Lead	**166**	mg/kg	1.5	0.50	1	01/16/18 13:32	01/17/18 16:22	7439-92-1	
Selenium	**<1.3**	mg/kg	5.8	1.3	1	01/16/18 13:32	01/17/18 16:22	7782-49-2	
Silver	**<0.40**	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:22	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.32**	mg/kg	0.042	0.013	1	01/24/18 06:29	01/24/18 11:39	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	630-20-6	W
1,1,1-Trichloroethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	71-55-6	W
1,1,2,2-Tetrachloroethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	79-34-5	W
1,1,2-Trichloroethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	79-00-5	W
1,1-Dichloroethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-34-3	W
1,1-Dichloroethene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-35-4	W
1,1-Dichloropropene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	563-58-6	W
1,2,3-Trichlorobenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	87-61-6	W
1,2,3-Trichloropropane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	96-18-4	W
1,2,4-Trichlorobenzene	**<149**	ug/kg	781	149	2	01/16/18 08:45	01/16/18 19:52	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-63-6	W
1,2-Dibromo-3-chloropropane	**<285**	ug/kg	781	285	2	01/16/18 08:45	01/16/18 19:52	96-12-8	W
1,2-Dibromoethane (EDB)	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-93-4	W
1,2-Dichlorobenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-50-1	W
1,2-Dichloroethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	107-06-2	W
1,2-Dichloropropane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	78-87-5	W
1,3,5-Trimethylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-67-8	W
1,3-Dichlorobenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	541-73-1	W
1,3-Dichloropropane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	142-28-9	W
1,4-Dichlorobenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-46-7	W
2,2-Dichloropropane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	594-20-7	W
2-Chlorotoluene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-49-8	W
4-Chlorotoluene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	106-43-4	W
Benzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	71-43-2	W
Bromobenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-86-1	W
Bromochloromethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-97-5	W
Bromodichloromethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-27-4	W
Bromoform	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-25-2	W
Bromomethane	**<218**	ug/kg	781	218	2	01/16/18 08:45	01/16/18 19:52	74-83-9	W
Carbon tetrachloride	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	56-23-5	W
Chlorobenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-90-7	W
Chloroethane	**<209**	ug/kg	781	209	2	01/16/18 08:45	01/16/18 19:52	75-00-3	W
Chloroform	**<145**	ug/kg	781	145	2	01/16/18 08:45	01/16/18 19:52	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-10-3 **Lab ID: 40163468007** Collected: 01/10/18 13:00 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-87-3	W
Dibromochloromethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	124-48-1	W
Dibromomethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	74-95-3	W
Dichlorodifluoromethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-71-8	W
Diisopropyl ether	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-20-3	W
Ethylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	100-41-4	W
Hexachloro-1,3-butadiene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	87-68-3	W
Isopropylbenzene (Cumene)	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	98-82-8	W
Methyl-tert-butyl ether	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	1634-04-4	W
Methylene Chloride	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-09-2	W
Naphthalene	**<125**	ug/kg	781	125	2	01/16/18 08:45	01/16/18 19:52	91-20-3	W
Styrene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	100-42-5	W
Tetrachloroethene	**19600**	ug/kg	221	92.1	2	01/16/18 08:45	01/16/18 19:52	127-18-4	
Toluene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	108-88-3	W
Trichloroethene	**350**	ug/kg	221	92.1	2	01/16/18 08:45	01/16/18 19:52	79-01-6	
Trichlorofluoromethane	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-69-4	W
Vinyl chloride	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	75-01-4	W
Xylene (Total)	**<234**	ug/kg	562	234	2	01/16/18 08:45	01/16/18 19:52	1330-20-7	W
cis-1,2-Dichloroethene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	156-59-2	W
cis-1,3-Dichloropropene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	10061-01-5	W
m&p-Xylene	**<156**	ug/kg	375	156	2	01/16/18 08:45	01/16/18 19:52	179601-23-1	W
n-Butylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	104-51-8	W
n-Propylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	103-65-1	W
o-Xylene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	95-47-6	W
p-Isopropyltoluene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	99-87-6	W
sec-Butylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	135-98-8	W
tert-Butylbenzene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	98-06-6	W
trans-1,2-Dichloroethene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	156-60-5	W
trans-1,3-Dichloropropene	**<78.1**	ug/kg	188	78.1	2	01/16/18 08:45	01/16/18 19:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	68-130		2	01/16/18 08:45	01/16/18 19:52	1868-53-7	
Toluene-d8 (S)	96	%	68-149		2	01/16/18 08:45	01/16/18 19:52	2037-26-5	
4-Bromofluorobenzene (S)	76	%	58-141		2	01/16/18 08:45	01/16/18 19:52	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.1**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-10-8 **Lab ID: 40163468008** Collected: 01/10/18 13:05 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.3J**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:12	7440-38-2	
Barium	**17.7**	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:12	7440-39-3	
Cadmium	**0.20J**	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:12	7440-43-9	
Chromium	**10.2**	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:12	7440-47-3	
Lead	**6.4**	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:12	7439-92-1	1q
Selenium	**<1.3**	mg/kg	5.6	1.3	1	01/16/18 13:32	01/17/18 16:12	7782-49-2	
Silver	**<0.39**	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:12	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.019J**	mg/kg	0.042	0.012	1	01/24/18 06:29	01/24/18 11:41	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 14:58	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 14:58	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 14:58	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 14:58	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 14:58	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-10-8 **Lab ID: 40163468008** Collected: 01/10/18 13:05 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 14:58	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	100-42-5	W
Tetrachloroethene	**340**	ug/kg	68.1	28.4	1	01/16/18 08:45	01/16/18 14:58	127-18-4	
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 14:58	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 14:58	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 14:58	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	126	%	68-130		1	01/16/18 08:45	01/16/18 14:58	1868-53-7	
Toluene-d8 (S)	104	%	68-149		1	01/16/18 08:45	01/16/18 14:58	2037-26-5	
4-Bromofluorobenzene (S)	87	%	58-141		1	01/16/18 08:45	01/16/18 14:58	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.9**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-9-3 **Lab ID: 40163468009** Collected: 01/10/18 13:30 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.2J**	mg/kg	5.3	1.1	1	01/16/18 13:32	01/17/18 16:24	7440-38-2	
Barium	**17.2**	mg/kg	0.53	0.16	1	01/16/18 13:32	01/17/18 16:24	7440-39-3	
Cadmium	**<0.14**	mg/kg	0.53	0.14	1	01/16/18 13:32	01/17/18 16:24	7440-43-9	
Chromium	**8.2**	mg/kg	1.1	0.29	1	01/16/18 13:32	01/17/18 16:24	7440-47-3	
Lead	**5.2**	mg/kg	1.4	0.46	1	01/16/18 13:32	01/17/18 16:24	7439-92-1	1q
Selenium	**<1.2**	mg/kg	5.3	1.2	1	01/16/18 13:32	01/17/18 16:24	7782-49-2	
Silver	**<0.36**	mg/kg	1.1	0.36	1	01/16/18 13:32	01/17/18 16:24	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.012**	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:43	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	630-20-6	W
1,1,1-Trichloroethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	71-55-6	W
1,1,2,2-Tetrachloroethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-34-5	W
1,1,2-Trichloroethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-00-5	W
1,1-Dichloroethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-34-3	W
1,1-Dichloroethene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-35-4	W
1,1-Dichloropropene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	563-58-6	W
1,2,3-Trichlorobenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	87-61-6	W
1,2,3-Trichloropropane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	96-18-4	W
1,2,4-Trichlorobenzene	**<72.0**	ug/kg	379	72.0	1	01/16/18 08:45	01/16/18 15:21	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-63-6	W
1,2-Dibromo-3-chloropropane	**<138**	ug/kg	379	138	1	01/16/18 08:45	01/16/18 15:21	96-12-8	W
1,2-Dibromoethane (EDB)	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-93-4	W
1,2-Dichlorobenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-50-1	W
1,2-Dichloroethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	107-06-2	W
1,2-Dichloropropane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	78-87-5	W
1,3,5-Trimethylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-67-8	W
1,3-Dichlorobenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	541-73-1	W
1,3-Dichloropropane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	142-28-9	W
1,4-Dichlorobenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-46-7	W
2,2-Dichloropropane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	594-20-7	W
2-Chlorotoluene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-49-8	W
4-Chlorotoluene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	106-43-4	W
Benzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	71-43-2	W
Bromobenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-86-1	W
Bromochloromethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-97-5	W
Bromodichloromethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-27-4	W
Bromoform	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-25-2	W
Bromomethane	**<106**	ug/kg	379	106	1	01/16/18 08:45	01/16/18 15:21	74-83-9	W
Carbon tetrachloride	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	56-23-5	W
Chlorobenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-90-7	W
Chloroethane	**<102**	ug/kg	379	102	1	01/16/18 08:45	01/16/18 15:21	75-00-3	W
Chloroform	**<70.4**	ug/kg	379	70.4	1	01/16/18 08:45	01/16/18 15:21	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-9-3 **Lab ID: 40163468009** Collected: 01/10/18 13:30 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-87-3	W
Dibromochloromethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	124-48-1	W
Dibromomethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	74-95-3	W
Dichlorodifluoromethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-71-8	W
Diisopropyl ether	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-20-3	W
Ethylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	100-41-4	W
Hexachloro-1,3-butadiene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	87-68-3	W
Isopropylbenzene (Cumene)	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	98-82-8	W
Methyl-tert-butyl ether	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	1634-04-4	W
Methylene Chloride	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-09-2	W
Naphthalene	**<60.7**	ug/kg	379	60.7	1	01/16/18 08:45	01/16/18 15:21	91-20-3	W
Styrene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	100-42-5	W
Tetrachloroethene	**80.7J**	ug/kg	108	44.8	1	01/16/18 08:45	01/16/18 15:21	127-18-4	
Toluene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	108-88-3	W
Trichloroethene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	79-01-6	W
Trichlorofluoromethane	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-69-4	W
Vinyl chloride	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	75-01-4	W
Xylene (Total)	**<114**	ug/kg	273	114	1	01/16/18 08:45	01/16/18 15:21	1330-20-7	W
cis-1,2-Dichloroethene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	156-59-2	W
cis-1,3-Dichloropropene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	10061-01-5	W
m&p-Xylene	**<75.8**	ug/kg	182	75.8	1	01/16/18 08:45	01/16/18 15:21	179601-23-1	W
n-Butylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	104-51-8	W
n-Propylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	103-65-1	W
o-Xylene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	95-47-6	W
p-Isopropyltoluene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	99-87-6	W
sec-Butylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	135-98-8	W
tert-Butylbenzene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	98-06-6	W
trans-1,2-Dichloroethene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	156-60-5	W
trans-1,3-Dichloropropene	**<37.9**	ug/kg	90.9	37.9	1	01/16/18 08:45	01/16/18 15:21	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	123	%	68-130		1	01/16/18 08:45	01/16/18 15:21	1868-53-7	
Toluene-d8 (S)	102	%	68-149		1	01/16/18 08:45	01/16/18 15:21	2037-26-5	
4-Bromofluorobenzene (S)	84	%	58-141		1	01/16/18 08:45	01/16/18 15:21	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.5**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-9-8 **Lab ID: 40163468010** Collected: 01/10/18 13:35 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.6J**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/19/18 11:06	7440-38-2	
Barium	**48.5**	mg/kg	0.56	0.17	1	01/16/18 13:32	01/19/18 11:06	7440-39-3	
Cadmium	**0.19J**	mg/kg	0.56	0.15	1	01/16/18 13:32	01/19/18 11:06	7440-43-9	
Chromium	**23.5**	mg/kg	1.1	0.31	1	01/16/18 13:32	01/19/18 11:06	7440-47-3	
Lead	**8.2**	mg/kg	1.5	0.49	1	01/16/18 13:32	01/19/18 11:06	7439-92-1	
Selenium	**<1.3**	mg/kg	5.6	1.3	1	01/16/18 13:32	01/19/18 11:06	7782-49-2	
Silver	**<0.39**	mg/kg	1.1	0.39	1	01/16/18 13:32	01/19/18 11:06	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.013**	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:45	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	630-20-6	W
1,1,1-Trichloroethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	71-55-6	W
1,1,2,2-Tetrachloroethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-34-5	W
1,1,2-Trichloroethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-00-5	W
1,1-Dichloroethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-34-3	W
1,1-Dichloroethene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-35-4	W
1,1-Dichloropropene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	563-58-6	W
1,2,3-Trichlorobenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	87-61-6	W
1,2,3-Trichloropropane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	96-18-4	W
1,2,4-Trichlorobenzene	**<63.4**	ug/kg	333	63.4	1	01/16/18 08:45	01/16/18 15:44	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-63-6	W
1,2-Dibromo-3-chloropropane	**<122**	ug/kg	333	122	1	01/16/18 08:45	01/16/18 15:44	96-12-8	W
1,2-Dibromoethane (EDB)	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-93-4	W
1,2-Dichlorobenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-50-1	W
1,2-Dichloroethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	107-06-2	W
1,2-Dichloropropane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	78-87-5	W
1,3,5-Trimethylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-67-8	W
1,3-Dichlorobenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	541-73-1	W
1,3-Dichloropropane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	142-28-9	W
1,4-Dichlorobenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-46-7	W
2,2-Dichloropropane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	594-20-7	W
2-Chlorotoluene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-49-8	W
4-Chlorotoluene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	106-43-4	W
Benzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	71-43-2	W
Bromobenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-86-1	W
Bromochloromethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-97-5	W
Bromodichloromethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-27-4	W
Bromoform	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-25-2	W
Bromomethane	**<93.2**	ug/kg	333	93.2	1	01/16/18 08:45	01/16/18 15:44	74-83-9	W
Carbon tetrachloride	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	56-23-5	W
Chlorobenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-90-7	W
Chloroethane	**<89.4**	ug/kg	333	89.4	1	01/16/18 08:45	01/16/18 15:44	75-00-3	W
Chloroform	**<61.9**	ug/kg	333	61.9	1	01/16/18 08:45	01/16/18 15:44	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-9-8 **Lab ID: 40163468010** Collected: 01/10/18 13:35 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-87-3	W
Dibromochloromethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	124-48-1	W
Dibromomethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	74-95-3	W
Dichlorodifluoromethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-71-8	W
Diisopropyl ether	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-20-3	W
Ethylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	100-41-4	W
Hexachloro-1,3-butadiene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	87-68-3	W
Isopropylbenzene (Cumene)	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	98-82-8	W
Methyl-tert-butyl ether	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	1634-04-4	W
Methylene Chloride	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-09-2	W
Naphthalene	**<53.4**	ug/kg	333	53.4	1	01/16/18 08:45	01/16/18 15:44	91-20-3	W
Styrene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	100-42-5	W
Tetrachloroethene	**3650**	ug/kg	95.2	39.7	1	01/16/18 08:45	01/16/18 15:44	127-18-4	
Toluene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	108-88-3	W
Trichloroethene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	79-01-6	W
Trichlorofluoromethane	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-69-4	W
Vinyl chloride	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	75-01-4	W
Xylene (Total)	**<100**	ug/kg	240	100	1	01/16/18 08:45	01/16/18 15:44	1330-20-7	W
cis-1,2-Dichloroethene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	156-59-2	W
cis-1,3-Dichloropropene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	10061-01-5	W
m&p-Xylene	**<66.7**	ug/kg	160	66.7	1	01/16/18 08:45	01/16/18 15:44	179601-23-1	W
n-Butylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	104-51-8	W
n-Propylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	103-65-1	W
o-Xylene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	95-47-6	W
p-Isopropyltoluene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	99-87-6	W
sec-Butylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	135-98-8	W
tert-Butylbenzene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	98-06-6	W
trans-1,2-Dichloroethene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	156-60-5	W
trans-1,3-Dichloropropene	**<33.3**	ug/kg	80.0	33.3	1	01/16/18 08:45	01/16/18 15:44	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	125	%	68-130		1	01/16/18 08:45	01/16/18 15:44	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 15:44	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	01/16/18 08:45	01/16/18 15:44	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.0**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-8-3 **Lab ID: 40163468011** Collected: 01/10/18 13:50 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.1J**	mg/kg	5.4	1.1	1	01/16/18 13:32	01/17/18 16:29	7440-38-2	
Barium	**80.4**	mg/kg	0.54	0.16	1	01/16/18 13:32	01/17/18 16:29	7440-39-3	
Cadmium	**0.18J**	mg/kg	0.54	0.14	1	01/16/18 13:32	01/17/18 16:29	7440-43-9	
Chromium	**29.0**	mg/kg	1.1	0.30	1	01/16/18 13:32	01/17/18 16:29	7440-47-3	
Lead	**12.5**	mg/kg	1.4	0.46	1	01/16/18 13:32	01/17/18 16:29	7439-92-1	
Selenium	**<1.2**	mg/kg	5.4	1.2	1	01/16/18 13:32	01/17/18 16:29	7782-49-2	
Silver	**<0.37**	mg/kg	1.1	0.37	1	01/16/18 13:32	01/17/18 16:29	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.042**	mg/kg	0.040	0.012	1	01/24/18 06:29	01/24/18 11:48	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	630-20-6	W
1,1,1-Trichloroethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	71-55-6	W
1,1,2,2-Tetrachloroethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-34-5	W
1,1,2-Trichloroethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-00-5	W
1,1-Dichloroethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-34-3	W
1,1-Dichloroethene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-35-4	W
1,1-Dichloropropene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	563-58-6	W
1,2,3-Trichlorobenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	87-61-6	W
1,2,3-Trichloropropane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	96-18-4	W
1,2,4-Trichlorobenzene	**<52.3**	ug/kg	275	52.3	1	01/16/18 08:45	01/16/18 16:06	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-63-6	W
1,2-Dibromo-3-chloropropane	**<100**	ug/kg	275	100	1	01/16/18 08:45	01/16/18 16:06	96-12-8	W
1,2-Dibromoethane (EDB)	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-93-4	W
1,2-Dichlorobenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-50-1	W
1,2-Dichloroethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	107-06-2	W
1,2-Dichloropropane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	78-87-5	W
1,3,5-Trimethylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-67-8	W
1,3-Dichlorobenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	541-73-1	W
1,3-Dichloropropane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	142-28-9	W
1,4-Dichlorobenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-46-7	W
2,2-Dichloropropane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	594-20-7	W
2-Chlorotoluene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-49-8	W
4-Chlorotoluene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	106-43-4	W
Benzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	71-43-2	W
Bromobenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-86-1	W
Bromochloromethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-97-5	W
Bromodichloromethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-27-4	W
Bromoform	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-25-2	W
Bromomethane	**<76.8**	ug/kg	275	76.8	1	01/16/18 08:45	01/16/18 16:06	74-83-9	W
Carbon tetrachloride	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	56-23-5	W
Chlorobenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-90-7	W
Chloroethane	**<73.6**	ug/kg	275	73.6	1	01/16/18 08:45	01/16/18 16:06	75-00-3	W
Chloroform	**<51.0**	ug/kg	275	51.0	1	01/16/18 08:45	01/16/18 16:06	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-8-3 **Lab ID: 40163468011** Collected: 01/10/18 13:50 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-87-3	W
Dibromochloromethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	124-48-1	W
Dibromomethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	74-95-3	W
Dichlorodifluoromethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-71-8	W
Diisopropyl ether	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-20-3	W
Ethylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	100-41-4	W
Hexachloro-1,3-butadiene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	87-68-3	W
Isopropylbenzene (Cumene)	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	98-82-8	W
Methyl-tert-butyl ether	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	1634-04-4	W
Methylene Chloride	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-09-2	W
Naphthalene	**<44.0**	ug/kg	275	44.0	1	01/16/18 08:45	01/16/18 16:06	91-20-3	W
Styrene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	100-42-5	W
Tetrachloroethene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	127-18-4	W
Toluene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	108-88-3	W
Trichloroethene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	79-01-6	W
Trichlorofluoromethane	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-69-4	W
Vinyl chloride	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	75-01-4	W
Xylene (Total)	**<82.4**	ug/kg	198	82.4	1	01/16/18 08:45	01/16/18 16:06	1330-20-7	W
cis-1,2-Dichloroethene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	156-59-2	W
cis-1,3-Dichloropropene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	10061-01-5	W
m&p-Xylene	**<54.9**	ug/kg	132	54.9	1	01/16/18 08:45	01/16/18 16:06	179601-23-1	W
n-Butylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	104-51-8	W
n-Propylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	103-65-1	W
o-Xylene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	95-47-6	W
p-Isopropyltoluene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	99-87-6	W
sec-Butylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	135-98-8	W
tert-Butylbenzene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	98-06-6	W
trans-1,2-Dichloroethene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	156-60-5	W
trans-1,3-Dichloropropene	**<27.5**	ug/kg	65.9	27.5	1	01/16/18 08:45	01/16/18 16:06	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	121	%	68-130		1	01/16/18 08:45	01/16/18 16:06	1868-53-7	
Toluene-d8 (S)	98	%	68-149		1	01/16/18 08:45	01/16/18 16:06	2037-26-5	
4-Bromofluorobenzene (S)	81	%	58-141		1	01/16/18 08:45	01/16/18 16:06	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.2**	%	0.10	0.10	1		01/15/18 11:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-8-8 **Lab ID: 40163468012** Collected: 01/10/18 13:55 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**10.4**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:36	7440-38-2	
Barium	**73.4**	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:36	7440-39-3	
Cadmium	**0.21J**	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:36	7440-43-9	
Chromium	**20.7**	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:36	7440-47-3	
Lead	**8.3**	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:36	7439-92-1	
Selenium	**<1.2**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:36	7782-49-2	
Silver	**<0.39**	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:36	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.016J**	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 11:50	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 16:29	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 16:29	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 16:29	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 16:29	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 16:29	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-8-8 **Lab ID: 40163468012** Collected: 01/10/18 13:55 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 16:29	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 16:29	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 16:29	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 16:29	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	127	%	68-130		1	01/16/18 08:45	01/16/18 16:29	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 16:29	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 16:29	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.1**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-11-3 **Lab ID: 40163468013** Collected: 01/10/18 14:20 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.1J**	mg/kg	5.4	1.1	1	01/16/18 13:32	01/17/18 16:39	7440-38-2	
Barium	**91.9**	mg/kg	0.54	0.16	1	01/16/18 13:32	01/17/18 16:39	7440-39-3	
Cadmium	**0.17J**	mg/kg	0.54	0.14	1	01/16/18 13:32	01/17/18 16:39	7440-43-9	
Chromium	**19.1**	mg/kg	1.1	0.30	1	01/16/18 13:32	01/17/18 16:39	7440-47-3	
Lead	**96.3**	mg/kg	1.4	0.47	1	01/16/18 13:32	01/17/18 16:39	7439-92-1	
Selenium	**<1.2**	mg/kg	5.4	1.2	1	01/16/18 13:32	01/17/18 16:39	7782-49-2	
Silver	**<0.37**	mg/kg	1.1	0.37	1	01/16/18 13:32	01/17/18 16:39	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.38**	mg/kg	0.039	0.012	1	01/24/18 06:29	01/24/18 11:57	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	630-20-6	W
1,1,1-Trichloroethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	71-55-6	W
1,1,2,2-Tetrachloroethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-34-5	W
1,1,2-Trichloroethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-00-5	W
1,1-Dichloroethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-34-3	W
1,1-Dichloroethene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-35-4	W
1,1-Dichloropropene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	563-58-6	W
1,2,3-Trichlorobenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	87-61-6	W
1,2,3-Trichloropropane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	96-18-4	W
1,2,4-Trichlorobenzene	**<76.7**	ug/kg	403	76.7	1	01/16/18 08:45	01/16/18 16:52	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-63-6	W
1,2-Dibromo-3-chloropropane	**<147**	ug/kg	403	147	1	01/16/18 08:45	01/16/18 16:52	96-12-8	W
1,2-Dibromoethane (EDB)	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-93-4	W
1,2-Dichlorobenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-50-1	W
1,2-Dichloroethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	107-06-2	W
1,2-Dichloropropane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	78-87-5	W
1,3,5-Trimethylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-67-8	W
1,3-Dichlorobenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	541-73-1	W
1,3-Dichloropropane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	142-28-9	W
1,4-Dichlorobenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-46-7	W
2,2-Dichloropropane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	594-20-7	W
2-Chlorotoluene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-49-8	W
4-Chlorotoluene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	106-43-4	W
Benzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	71-43-2	W
Bromobenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-86-1	W
Bromochloromethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-97-5	W
Bromodichloromethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-27-4	W
Bromoform	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-25-2	W
Bromomethane	**<113**	ug/kg	403	113	1	01/16/18 08:45	01/16/18 16:52	74-83-9	W
Carbon tetrachloride	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	56-23-5	W
Chlorobenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-90-7	W
Chloroethane	**<108**	ug/kg	403	108	1	01/16/18 08:45	01/16/18 16:52	75-00-3	W
Chloroform	**<74.9**	ug/kg	403	74.9	1	01/16/18 08:45	01/16/18 16:52	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-11-3 **Lab ID: 40163468013** Collected: 01/10/18 14:20 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-87-3	W
Dibromochloromethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	124-48-1	W
Dibromomethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	74-95-3	W
Dichlorodifluoromethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-71-8	W
Diisopropyl ether	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-20-3	W
Ethylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	100-41-4	W
Hexachloro-1,3-butadiene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	87-68-3	W
Isopropylbenzene (Cumene)	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	98-82-8	W
Methyl-tert-butyl ether	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	1634-04-4	W
Methylene Chloride	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-09-2	W
Naphthalene	**<64.6**	ug/kg	403	64.6	1	01/16/18 08:45	01/16/18 16:52	91-20-3	W
Styrene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	100-42-5	W
Tetrachloroethene	**50.6J**	ug/kg	115	47.8	1	01/16/18 08:45	01/16/18 16:52	127-18-4	
Toluene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	108-88-3	W
Trichloroethene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	79-01-6	W
Trichlorofluoromethane	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-69-4	W
Vinyl chloride	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	75-01-4	W
Xylene (Total)	**<121**	ug/kg	290	121	1	01/16/18 08:45	01/16/18 16:52	1330-20-7	W
cis-1,2-Dichloroethene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	156-59-2	W
cis-1,3-Dichloropropene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	10061-01-5	W
m&p-Xylene	**<80.6**	ug/kg	194	80.6	1	01/16/18 08:45	01/16/18 16:52	179601-23-1	W
n-Butylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	104-51-8	W
n-Propylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	103-65-1	W
o-Xylene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	95-47-6	W
p-Isopropyltoluene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	99-87-6	W
sec-Butylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	135-98-8	W
tert-Butylbenzene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	98-06-6	W
trans-1,2-Dichloroethene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	156-60-5	W
trans-1,3-Dichloropropene	**<40.3**	ug/kg	96.8	40.3	1	01/16/18 08:45	01/16/18 16:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	130	%	68-130		1	01/16/18 08:45	01/16/18 16:52	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	01/16/18 08:45	01/16/18 16:52	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	01/16/18 08:45	01/16/18 16:52	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.7**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-11-8 **Lab ID: 40163468014** Collected: 01/10/18 14:25 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**6.9**	mg/kg	5.8	1.2	1	01/16/18 13:32	01/17/18 16:41	7440-38-2	
Barium	**71.9**	mg/kg	0.58	0.17	1	01/16/18 13:32	01/17/18 16:41	7440-39-3	
Cadmium	**0.24J**	mg/kg	0.58	0.15	1	01/16/18 13:32	01/17/18 16:41	7440-43-9	
Chromium	**26.4**	mg/kg	1.2	0.32	1	01/16/18 13:32	01/17/18 16:41	7440-47-3	
Lead	**8.1**	mg/kg	1.5	0.50	1	01/16/18 13:32	01/17/18 16:41	7439-92-1	
Selenium	**<1.3**	mg/kg	5.8	1.3	1	01/16/18 13:32	01/17/18 16:41	7782-49-2	
Silver	**<0.40**	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:41	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.019J**	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 11:59	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	630-20-6	W
1,1,1-Trichloroethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	71-55-6	W
1,1,2,2-Tetrachloroethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-34-5	W
1,1,2-Trichloroethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-00-5	W
1,1-Dichloroethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-34-3	W
1,1-Dichloroethene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-35-4	W
1,1-Dichloropropene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	563-58-6	W
1,2,3-Trichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	87-61-6	W
1,2,3-Trichloropropane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	96-18-4	W
1,2,4-Trichlorobenzene	**<54.0**	ug/kg	284	54.0	1	01/16/18 08:45	01/16/18 17:14	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-63-6	W
1,2-Dibromo-3-chloropropane	**<104**	ug/kg	284	104	1	01/16/18 08:45	01/16/18 17:14	96-12-8	W
1,2-Dibromoethane (EDB)	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-93-4	W
1,2-Dichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-50-1	W
1,2-Dichloroethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	107-06-2	W
1,2-Dichloropropane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	78-87-5	W
1,3,5-Trimethylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-67-8	W
1,3-Dichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	541-73-1	W
1,3-Dichloropropane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	142-28-9	W
1,4-Dichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-46-7	W
2,2-Dichloropropane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	594-20-7	W
2-Chlorotoluene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-49-8	W
4-Chlorotoluene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	106-43-4	W
Benzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	71-43-2	W
Bromobenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-86-1	W
Bromochloromethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-97-5	W
Bromodichloromethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-27-4	W
Bromoform	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-25-2	W
Bromomethane	**<79.4**	ug/kg	284	79.4	1	01/16/18 08:45	01/16/18 17:14	74-83-9	W
Carbon tetrachloride	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	56-23-5	W
Chlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-90-7	W
Chloroethane	**<76.2**	ug/kg	284	76.2	1	01/16/18 08:45	01/16/18 17:14	75-00-3	W
Chloroform	**<52.8**	ug/kg	284	52.8	1	01/16/18 08:45	01/16/18 17:14	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-11-8 **Lab ID: 40163468014** Collected: 01/10/18 14:25 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-87-3	W
Dibromochloromethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	124-48-1	W
Dibromomethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	74-95-3	W
Dichlorodifluoromethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-71-8	W
Diisopropyl ether	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-20-3	W
Ethylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	100-41-4	W
Hexachloro-1,3-butadiene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	87-68-3	W
Isopropylbenzene (Cumene)	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	98-82-8	W
Methyl-tert-butyl ether	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	1634-04-4	W
Methylene Chloride	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-09-2	W
Naphthalene	**<45.5**	ug/kg	284	45.5	1	01/16/18 08:45	01/16/18 17:14	91-20-3	W
Styrene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	100-42-5	W
Tetrachloroethene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	127-18-4	W
Toluene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	108-88-3	W
Trichloroethene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	79-01-6	W
Trichlorofluoromethane	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-69-4	W
Vinyl chloride	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	75-01-4	W
Xylene (Total)	**<85.2**	ug/kg	205	85.2	1	01/16/18 08:45	01/16/18 17:14	1330-20-7	W
cis-1,2-Dichloroethene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	156-59-2	W
cis-1,3-Dichloropropene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	10061-01-5	W
m&p-Xylene	**<56.8**	ug/kg	136	56.8	1	01/16/18 08:45	01/16/18 17:14	179601-23-1	W
n-Butylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	104-51-8	W
n-Propylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	103-65-1	W
o-Xylene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	95-47-6	W
p-Isopropyltoluene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	99-87-6	W
sec-Butylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	135-98-8	W
tert-Butylbenzene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	98-06-6	W
trans-1,2-Dichloroethene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	156-60-5	W
trans-1,3-Dichloropropene	**<28.4**	ug/kg	68.2	28.4	1	01/16/18 08:45	01/16/18 17:14	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	120	%	68-130		1	01/16/18 08:45	01/16/18 17:14	1868-53-7	
Toluene-d8 (S)	96	%	68-149		1	01/16/18 08:45	01/16/18 17:14	2037-26-5	
4-Bromofluorobenzene (S)	81	%	58-141		1	01/16/18 08:45	01/16/18 17:14	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.0**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-3 **Lab ID: 40163468015** Collected: 01/10/18 14:40 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.0J**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:44	7440-38-2	
Barium	**21.8**	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:44	7440-39-3	
Cadmium	**0.28J**	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:44	7440-43-9	
Chromium	**10.1**	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:44	7440-47-3	
Lead	**7.6**	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:44	7439-92-1	
Selenium	**<1.3**	mg/kg	5.6	1.3	1	01/16/18 13:32	01/17/18 16:44	7782-49-2	
Silver	**<0.39**	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:44	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.029J**	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:02	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	630-20-6	W
1,1,1-Trichloroethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	71-55-6	W
1,1,2,2-Tetrachloroethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-34-5	W
1,1,2-Trichloroethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-00-5	W
1,1-Dichloroethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-34-3	W
1,1-Dichloroethene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-35-4	W
1,1-Dichloropropene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	563-58-6	W
1,2,3-Trichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	87-61-6	W
1,2,3-Trichloropropane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	96-18-4	W
1,2,4-Trichlorobenzene	**<51.7**	ug/kg	272	51.7	1	01/16/18 08:45	01/16/18 17:37	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-63-6	W
1,2-Dibromo-3-chloropropane	**<99.2**	ug/kg	272	99.2	1	01/16/18 08:45	01/16/18 17:37	96-12-8	W
1,2-Dibromoethane (EDB)	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-93-4	W
1,2-Dichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-50-1	W
1,2-Dichloroethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	107-06-2	W
1,2-Dichloropropane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	78-87-5	W
1,3,5-Trimethylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-67-8	W
1,3-Dichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	541-73-1	W
1,3-Dichloropropane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	142-28-9	W
1,4-Dichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-46-7	W
2,2-Dichloropropane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	594-20-7	W
2-Chlorotoluene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-49-8	W
4-Chlorotoluene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	106-43-4	W
Benzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	71-43-2	W
Bromobenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-86-1	W
Bromochloromethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-97-5	W
Bromodichloromethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-27-4	W
Bromoform	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-25-2	W
Bromomethane	**<76.0**	ug/kg	272	76.0	1	01/16/18 08:45	01/16/18 17:37	74-83-9	W
Carbon tetrachloride	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	56-23-5	W
Chlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-90-7	W
Chloroethane	**<72.8**	ug/kg	272	72.8	1	01/16/18 08:45	01/16/18 17:37	75-00-3	W
Chloroform	**<50.5**	ug/kg	272	50.5	1	01/16/18 08:45	01/16/18 17:37	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-3 **Lab ID: 40163468015** Collected: 01/10/18 14:40 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-87-3	W
Dibromochloromethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	124-48-1	W
Dibromomethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	74-95-3	W
Dichlorodifluoromethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-71-8	W
Diisopropyl ether	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-20-3	W
Ethylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	100-41-4	W
Hexachloro-1,3-butadiene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	87-68-3	W
Isopropylbenzene (Cumene)	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	98-82-8	W
Methyl-tert-butyl ether	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	1634-04-4	W
Methylene Chloride	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-09-2	W
Naphthalene	**<43.5**	ug/kg	272	43.5	1	01/16/18 08:45	01/16/18 17:37	91-20-3	W
Styrene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	100-42-5	W
Tetrachloroethene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	127-18-4	W
Toluene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	108-88-3	W
Trichloroethene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	79-01-6	W
Trichlorofluoromethane	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-69-4	W
Vinyl chloride	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	75-01-4	W
Xylene (Total)	**<81.5**	ug/kg	196	81.5	1	01/16/18 08:45	01/16/18 17:37	1330-20-7	W
cis-1,2-Dichloroethene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	156-59-2	W
cis-1,3-Dichloropropene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	10061-01-5	W
m&p-Xylene	**<54.3**	ug/kg	130	54.3	1	01/16/18 08:45	01/16/18 17:37	179601-23-1	W
n-Butylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	104-51-8	W
n-Propylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	103-65-1	W
o-Xylene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	95-47-6	W
p-Isopropyltoluene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	99-87-6	W
sec-Butylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	135-98-8	W
tert-Butylbenzene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	98-06-6	W
trans-1,2-Dichloroethene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	156-60-5	W
trans-1,3-Dichloropropene	**<27.2**	ug/kg	65.2	27.2	1	01/16/18 08:45	01/16/18 17:37	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	128	%	68-130		1	01/16/18 08:45	01/16/18 17:37	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	01/16/18 08:45	01/16/18 17:37	2037-26-5	
4-Bromofluorobenzene (S)	90	%	58-141		1	01/16/18 08:45	01/16/18 17:37	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.7**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-8 **Lab ID: 40163468016** Collected: 01/10/18 14:45 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.0J**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:46	7440-38-2	
Barium	**49.5**	mg/kg	0.56	0.17	1	01/16/18 13:32	01/17/18 16:46	7440-39-3	
Cadmium	**0.23J**	mg/kg	0.56	0.15	1	01/16/18 13:32	01/17/18 16:46	7440-43-9	
Chromium	**20.6**	mg/kg	1.1	0.31	1	01/16/18 13:32	01/17/18 16:46	7440-47-3	
Lead	**7.6**	mg/kg	1.5	0.49	1	01/16/18 13:32	01/17/18 16:46	7439-92-1	
Selenium	**<1.2**	mg/kg	5.6	1.2	1	01/16/18 13:32	01/17/18 16:46	7782-49-2	
Silver	**<0.39**	mg/kg	1.1	0.39	1	01/16/18 13:32	01/17/18 16:46	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.013J**	mg/kg	0.042	0.012	1	01/24/18 06:29	01/24/18 12:04	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 17:59	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 17:59	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 17:59	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 17:59	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 17:59	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-13-8 **Lab ID: 40163468016** Collected: 01/10/18 14:45 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 17:59	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 17:59	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 17:59	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 17:59	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	128	%	68-130		1	01/16/18 08:45	01/16/18 17:59	1868-53-7	
Toluene-d8 (S)	102	%	68-149		1	01/16/18 08:45	01/16/18 17:59	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	01/16/18 08:45	01/16/18 17:59	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.9**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-16-3 **Lab ID: 40163468017** Collected: 01/10/18 15:00 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.6J**	mg/kg	6.0	1.3	1	01/16/18 13:32	01/17/18 16:49	7440-38-2	
Barium	**59.8**	mg/kg	0.60	0.18	1	01/16/18 13:32	01/17/18 16:49	7440-39-3	
Cadmium	**0.18J**	mg/kg	0.60	0.16	1	01/16/18 13:32	01/17/18 16:49	7440-43-9	
Chromium	**26.1**	mg/kg	1.2	0.34	1	01/16/18 13:32	01/17/18 16:49	7440-47-3	
Lead	**10.3**	mg/kg	1.6	0.52	1	01/16/18 13:32	01/17/18 16:49	7439-92-1	
Selenium	**<1.3**	mg/kg	6.0	1.3	1	01/16/18 13:32	01/17/18 16:49	7782-49-2	
Silver	**<0.41**	mg/kg	1.2	0.41	1	01/16/18 13:32	01/17/18 16:49	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.055**	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:18	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 18:22	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 18:22	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 18:22	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 18:22	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 18:22	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-16-3 **Lab ID: 40163468017** Collected: 01/10/18 15:00 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 18:22	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 18:22	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 18:22	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:22	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	118	%	68-130		1	01/16/18 08:45	01/16/18 18:22	1868-53-7	
Toluene-d8 (S)	92	%	68-149		1	01/16/18 08:45	01/16/18 18:22	2037-26-5	
4-Bromofluorobenzene (S)	74	%	58-141		1	01/16/18 08:45	01/16/18 18:22	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.2**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-16-8 **Lab ID: 40163468018** Collected: 01/10/18 15:05 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.6**	mg/kg	5.2	1.1	1	01/16/18 13:32	01/17/18 16:51	7440-38-2	
Barium	**61.2**	mg/kg	0.52	0.16	1	01/16/18 13:32	01/17/18 16:51	7440-39-3	
Cadmium	**0.15J**	mg/kg	0.52	0.14	1	01/16/18 13:32	01/17/18 16:51	7440-43-9	
Chromium	**18.0**	mg/kg	1.0	0.29	1	01/16/18 13:32	01/17/18 16:51	7440-47-3	
Lead	**7.1**	mg/kg	1.4	0.45	1	01/16/18 13:32	01/17/18 16:51	7439-92-1	
Selenium	**<1.2**	mg/kg	5.2	1.2	1	01/16/18 13:32	01/17/18 16:51	7782-49-2	
Silver	**<0.36**	mg/kg	1.0	0.36	1	01/16/18 13:32	01/17/18 16:51	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.012**	mg/kg	0.041	0.012	1	01/24/18 06:29	01/24/18 12:25	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	01/16/18 08:45	01/16/18 18:45	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	01/16/18 08:45	01/16/18 18:45	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	01/16/18 08:45	01/16/18 18:45	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	01/16/18 08:45	01/16/18 18:45	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	01/16/18 08:45	01/16/18 18:45	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-16-8 **Lab ID: 40163468018** Collected: 01/10/18 15:05 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	01/16/18 08:45	01/16/18 18:45	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	100-42-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	01/16/18 08:45	01/16/18 18:45	1330-20-7	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	01/16/18 08:45	01/16/18 18:45	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	01/16/18 08:45	01/16/18 18:45	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	131	%	68-130		1	01/16/18 08:45	01/16/18 18:45	1868-53-7	S3
Toluene-d8 (S)	107	%	68-149		1	01/16/18 08:45	01/16/18 18:45	2037-26-5	
4-Bromofluorobenzene (S)	88	%	58-141		1	01/16/18 08:45	01/16/18 18:45	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.8**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-15-3 **Lab ID: 40163468019** Collected: 01/10/18 15:15 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.8J**	mg/kg	5.9	1.2	1	01/16/18 13:32	01/17/18 16:54	7440-38-2	
Barium	**71.1**	mg/kg	0.59	0.18	1	01/16/18 13:32	01/17/18 16:54	7440-39-3	
Cadmium	**<0.16**	mg/kg	0.59	0.16	1	01/16/18 13:32	01/17/18 16:54	7440-43-9	
Chromium	**22.2**	mg/kg	1.2	0.33	1	01/16/18 13:32	01/17/18 16:54	7440-47-3	
Lead	**11.2**	mg/kg	1.5	0.51	1	01/16/18 13:32	01/17/18 16:54	7439-92-1	
Selenium	**<1.3**	mg/kg	5.9	1.3	1	01/16/18 13:32	01/17/18 16:54	7782-49-2	
Silver	**<0.40**	mg/kg	1.2	0.40	1	01/16/18 13:32	01/17/18 16:54	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.016J**	mg/kg	0.044	0.013	1	01/24/18 06:29	01/24/18 12:27	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	630-20-6	W
1,1,1-Trichloroethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	71-55-6	W
1,1,2,2-Tetrachloroethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-34-5	W
1,1,2-Trichloroethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-00-5	W
1,1-Dichloroethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-34-3	W
1,1-Dichloroethene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-35-4	W
1,1-Dichloropropene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	563-58-6	W
1,2,3-Trichlorobenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	87-61-6	W
1,2,3-Trichloropropane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	96-18-4	W
1,2,4-Trichlorobenzene	**<52.8**	ug/kg	278	52.8	1	01/16/18 08:45	01/16/18 19:07	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-63-6	W
1,2-Dibromo-3-chloropropane	**<101**	ug/kg	278	101	1	01/16/18 08:45	01/16/18 19:07	96-12-8	W
1,2-Dibromoethane (EDB)	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-93-4	W
1,2-Dichlorobenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-50-1	W
1,2-Dichloroethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	107-06-2	W
1,2-Dichloropropane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	78-87-5	W
1,3,5-Trimethylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-67-8	W
1,3-Dichlorobenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	541-73-1	W
1,3-Dichloropropane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	142-28-9	W
1,4-Dichlorobenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-46-7	W
2,2-Dichloropropane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	594-20-7	W
2-Chlorotoluene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-49-8	W
4-Chlorotoluene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	106-43-4	W
Benzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	71-43-2	W
Bromobenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-86-1	W
Bromochloromethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-97-5	W
Bromodichloromethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-27-4	W
Bromoform	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-25-2	W
Bromomethane	**<77.7**	ug/kg	278	77.7	1	01/16/18 08:45	01/16/18 19:07	74-83-9	W
Carbon tetrachloride	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	56-23-5	W
Chlorobenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-90-7	W
Chloroethane	**<74.5**	ug/kg	278	74.5	1	01/16/18 08:45	01/16/18 19:07	75-00-3	W
Chloroform	**<51.6**	ug/kg	278	51.6	1	01/16/18 08:45	01/16/18 19:07	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-15-3 **Lab ID: 40163468019** Collected: 01/10/18 15:15 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-87-3	W
Dibromochloromethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	124-48-1	W
Dibromomethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	74-95-3	W
Dichlorodifluoromethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-71-8	W
Diisopropyl ether	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-20-3	W
Ethylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	100-41-4	W
Hexachloro-1,3-butadiene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	87-68-3	W
Isopropylbenzene (Cumene)	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	98-82-8	W
Methyl-tert-butyl ether	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	1634-04-4	W
Methylene Chloride	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-09-2	W
Naphthalene	**<44.5**	ug/kg	278	44.5	1	01/16/18 08:45	01/16/18 19:07	91-20-3	W
Styrene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	100-42-5	W
Tetrachloroethene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	127-18-4	W
Toluene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	108-88-3	W
Trichloroethene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	79-01-6	W
Trichlorofluoromethane	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-69-4	W
Vinyl chloride	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	75-01-4	W
Xylene (Total)	**<83.3**	ug/kg	200	83.3	1	01/16/18 08:45	01/16/18 19:07	1330-20-7	W
cis-1,2-Dichloroethene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	156-59-2	W
cis-1,3-Dichloropropene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	10061-01-5	W
m&p-Xylene	**<55.6**	ug/kg	133	55.6	1	01/16/18 08:45	01/16/18 19:07	179601-23-1	W
n-Butylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	104-51-8	W
n-Propylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	103-65-1	W
o-Xylene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	95-47-6	W
p-Isopropyltoluene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	99-87-6	W
sec-Butylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	135-98-8	W
tert-Butylbenzene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	98-06-6	W
trans-1,2-Dichloroethene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	156-60-5	W
trans-1,3-Dichloropropene	**<27.8**	ug/kg	66.7	27.8	1	01/16/18 08:45	01/16/18 19:07	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	136	%	68-130		1	01/16/18 08:45	01/16/18 19:07	1868-53-7	S3
Toluene-d8 (S)	109	%	68-149		1	01/16/18 08:45	01/16/18 19:07	2037-26-5	
4-Bromofluorobenzene (S)	93	%	58-141		1	01/16/18 08:45	01/16/18 19:07	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.2**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-15-8 **Lab ID: 40163468020** Collected: 01/10/18 15:20 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**6.5**	mg/kg	6.0	1.3	1	01/16/18 13:32	01/19/18 11:08	7440-38-2	
Barium	**67.3**	mg/kg	0.60	0.18	1	01/16/18 13:32	01/19/18 11:08	7440-39-3	
Cadmium	**0.29J**	mg/kg	0.60	0.16	1	01/16/18 13:32	01/19/18 11:08	7440-43-9	
Chromium	**27.3**	mg/kg	1.2	0.33	1	01/16/18 13:32	01/19/18 11:08	7440-47-3	
Lead	**9.8**	mg/kg	1.6	0.52	1	01/16/18 13:32	01/19/18 11:08	7439-92-1	
Selenium	**<1.3**	mg/kg	6.0	1.3	1	01/16/18 13:32	01/19/18 11:08	7782-49-2	
Silver	**<0.41**	mg/kg	1.2	0.41	1	01/16/18 13:32	01/19/18 11:08	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.045**	mg/kg	0.042	0.013	1	01/24/18 06:29	01/24/18 12:29	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	630-20-6	W
1,1,1-Trichloroethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	71-55-6	W
1,1,2,2-Tetrachloroethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-34-5	W
1,1,2-Trichloroethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-00-5	W
1,1-Dichloroethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-34-3	W
1,1-Dichloroethene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-35-4	W
1,1-Dichloropropene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	563-58-6	W
1,2,3-Trichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	87-61-6	W
1,2,3-Trichloropropane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	96-18-4	W
1,2,4-Trichlorobenzene	**<57.3**	ug/kg	301	57.3	1	01/16/18 08:45	01/16/18 19:30	120-82-1	L2,W
1,2,4-Trimethylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-63-6	W
1,2-Dibromo-3-chloropropane	**<110**	ug/kg	301	110	1	01/16/18 08:45	01/16/18 19:30	96-12-8	W
1,2-Dibromoethane (EDB)	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-93-4	W
1,2-Dichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-50-1	W
1,2-Dichloroethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	107-06-2	W
1,2-Dichloropropane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	78-87-5	W
1,3,5-Trimethylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-67-8	W
1,3-Dichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	541-73-1	W
1,3-Dichloropropane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	142-28-9	W
1,4-Dichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-46-7	W
2,2-Dichloropropane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	594-20-7	W
2-Chlorotoluene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-49-8	W
4-Chlorotoluene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	106-43-4	W
Benzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	71-43-2	W
Bromobenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-86-1	W
Bromochloromethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-97-5	W
Bromodichloromethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-27-4	W
Bromoform	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-25-2	W
Bromomethane	**<84.2**	ug/kg	301	84.2	1	01/16/18 08:45	01/16/18 19:30	74-83-9	W
Carbon tetrachloride	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	56-23-5	W
Chlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-90-7	W
Chloroethane	**<80.7**	ug/kg	301	80.7	1	01/16/18 08:45	01/16/18 19:30	75-00-3	W
Chloroform	**<56.0**	ug/kg	301	56.0	1	01/16/18 08:45	01/16/18 19:30	67-66-3	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: B-15-8 **Lab ID: 40163468020** Collected: 01/10/18 15:20 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chloromethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-87-3	W
Dibromochloromethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	124-48-1	W
Dibromomethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	74-95-3	W
Dichlorodifluoromethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-71-8	W
Diisopropyl ether	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-20-3	W
Ethylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	100-41-4	W
Hexachloro-1,3-butadiene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	87-68-3	W
Isopropylbenzene (Cumene)	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	98-82-8	W
Methyl-tert-butyl ether	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	1634-04-4	W
Methylene Chloride	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-09-2	W
Naphthalene	**<48.2**	ug/kg	301	48.2	1	01/16/18 08:45	01/16/18 19:30	91-20-3	W
Styrene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	100-42-5	W
Tetrachloroethene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	127-18-4	W
Toluene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	108-88-3	W
Trichloroethene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	79-01-6	W
Trichlorofluoromethane	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-69-4	W
Vinyl chloride	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	75-01-4	W
Xylene (Total)	**<90.4**	ug/kg	217	90.4	1	01/16/18 08:45	01/16/18 19:30	1330-20-7	W
cis-1,2-Dichloroethene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	156-59-2	W
cis-1,3-Dichloropropene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	10061-01-5	W
m&p-Xylene	**<60.2**	ug/kg	145	60.2	1	01/16/18 08:45	01/16/18 19:30	179601-23-1	W
n-Butylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	104-51-8	W
n-Propylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	103-65-1	W
o-Xylene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	95-47-6	W
p-Isopropyltoluene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	99-87-6	W
sec-Butylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	135-98-8	W
tert-Butylbenzene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	98-06-6	W
trans-1,2-Dichloroethene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	156-60-5	W
trans-1,3-Dichloropropene	**<30.1**	ug/kg	72.3	30.1	1	01/16/18 08:45	01/16/18 19:30	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	119	%	68-130		1	01/16/18 08:45	01/16/18 19:30	1868-53-7	
Toluene-d8 (S)	93	%	68-149		1	01/16/18 08:45	01/16/18 19:30	2037-26-5	
4-Bromofluorobenzene (S)	78	%	58-141		1	01/16/18 08:45	01/16/18 19:30	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.6**	%	0.10	0.10	1		01/15/18 11:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: TW-7 **Lab ID: 40163468021** Collected: 01/11/18 11:05 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<5.4**	ug/L	20.0	5.4	1		01/16/18 15:46	7440-38-2	2q
Barium, Dissolved	**170**	ug/L	5.0	1.5	1		01/16/18 15:46	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		01/16/18 15:46	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		01/16/18 15:46	7440-47-3	
Lead, Dissolved	**<4.3**	ug/L	13.0	4.3	1		01/16/18 15:46	7439-92-1	
Selenium, Dissolved	**<5.6**	ug/L	20.0	5.6	1		01/16/18 15:46	7782-49-2	3q
Silver, Dissolved	**3.4J**	ug/L	10.0	3.2	1		01/16/18 15:46	7440-22-4	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.50**	ug/L	1.7	0.50	1	01/23/18 11:10	01/24/18 09:40	7439-97-6	D3,P4
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/15/18 19:02	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/15/18 19:02	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/15/18 19:02	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/15/18 19:02	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/15/18 19:02	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/15/18 19:02	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/15/18 19:02	67-66-3	
Chloromethane	**1.7**	ug/L	1.0	0.50	1		01/15/18 19:02	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/15/18 19:02	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/15/18 19:02	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/15/18 19:02	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/15/18 19:02	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/15/18 19:02	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/15/18 19:02	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/15/18 19:02	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/15/18 19:02	75-35-4	
cis-1,2-Dichloroethene	**0.49J**	ug/L	1.0	0.26	1		01/15/18 19:02	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/15/18 19:02	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/15/18 19:02	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/15/18 19:02	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/15/18 19:02	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: TW-7 **Lab ID: 40163468021** Collected: 01/11/18 11:05 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/15/18 19:02	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/15/18 19:02	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/15/18 19:02	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/15/18 19:02	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/15/18 19:02	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/15/18 19:02	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/15/18 19:02	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/15/18 19:02	79-34-5	
Tetrachloroethene	**61.8**	ug/L	1.0	0.50	1		01/15/18 19:02	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/15/18 19:02	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/15/18 19:02	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/15/18 19:02	79-00-5	
Trichloroethene	**1.7**	ug/L	1.0	0.33	1		01/15/18 19:02	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/15/18 19:02	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/15/18 19:02	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		01/15/18 19:02	1330-20-7	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/15/18 19:02	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 19:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	61-130		1		01/15/18 19:02	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		01/15/18 19:02	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		01/15/18 19:02	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: TRIP BLANK **Lab ID: 40163468022** Collected: 01/11/18 00:00 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/15/18 20:31	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/15/18 20:31	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/15/18 20:31	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/15/18 20:31	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/15/18 20:31	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/15/18 20:31	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/15/18 20:31	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/15/18 20:31	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/15/18 20:31	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/15/18 20:31	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/15/18 20:31	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/15/18 20:31	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/15/18 20:31	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/15/18 20:31	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/15/18 20:31	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/15/18 20:31	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/15/18 20:31	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/15/18 20:31	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/15/18 20:31	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/15/18 20:31	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/15/18 20:31	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/15/18 20:31	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/15/18 20:31	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/15/18 20:31	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/15/18 20:31	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/15/18 20:31	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/15/18 20:31	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Sample: TRIP BLANK **Lab ID: 40163468022** Collected: 01/11/18 00:00 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/15/18 20:31	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/15/18 20:31	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/15/18 20:31	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/15/18 20:31	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		01/15/18 20:31	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/15/18 20:31	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/15/18 20:31	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		01/15/18 20:31	1330-20-7	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/15/18 20:31	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 20:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		01/15/18 20:31	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		1		01/15/18 20:31	1868-53-7	
Toluene-d8 (S)	91	%	70-130		1		01/15/18 20:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279176
QC Batch Method: EPA 6010
Analysis Method: EPA 6010
Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40163468021

METHOD BLANK: 1639105 Matrix: Water
Associated Lab Samples: 40163468021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<5.4	20.0	01/16/18 14:57	
Barium, Dissolved	ug/L	<1.5	5.0	01/16/18 14:57	
Cadmium, Dissolved	ug/L	<1.3	5.0	01/16/18 14:57	
Chromium, Dissolved	ug/L	<2.5	10.0	01/16/18 14:57	
Lead, Dissolved	ug/L	<4.3	13.0	01/16/18 14:57	
Selenium, Dissolved	ug/L	<5.6	20.0	01/16/18 14:57	
Silver, Dissolved	ug/L	<3.2	10.0	01/16/18 14:57	

LABORATORY CONTROL SAMPLE: 1639106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	490	98	80-120	
Barium, Dissolved	ug/L	500	519	104	80-120	
Cadmium, Dissolved	ug/L	500	497	99	80-120	
Chromium, Dissolved	ug/L	500	500	100	80-120	
Lead, Dissolved	ug/L	500	495	99	80-120	
Selenium, Dissolved	ug/L	500	515	103	80-120	
Silver, Dissolved	ug/L	250	254	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639107 1639108

Parameter	Units	40163434003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	<5.4	500	500	514	529	103	106	75-125	3	20	
Barium, Dissolved	ug/L	146	500	500	658	666	102	104	75-125	1	20	
Cadmium, Dissolved	ug/L	<1.3	500	500	507	516	101	103	75-125	2	20	
Chromium, Dissolved	ug/L	<2.5	500	500	505	511	101	102	75-125	1	20	
Lead, Dissolved	ug/L	<4.3	500	500	496	505	99	101	75-125	2	20	
Selenium, Dissolved	ug/L	7.4J	500	500	580	594	115	117	75-125	2	20	
Silver, Dissolved	ug/L	<3.2	250	250	253	255	101	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279605
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40163468021

METHOD BLANK: 1641124 Matrix: Water
Associated Lab Samples: 40163468021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.13	0.42	01/24/18 08:51	

LABORATORY CONTROL SAMPLE: 1641125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641126 1641127

Parameter	Units	40163543008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.13	5	5	4.8	4.9	96	97	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279631 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016

METHOD BLANK: 1641289 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	01/24/18 11:02	

LABORATORY CONTROL SAMPLE: 1641290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.86	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641291 1641292

Parameter	Units	40163452011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.011	.86	.86	0.89	0.87	103	101	85-115	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279632 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1641294 Matrix: Solid
Associated Lab Samples: 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.011	0.037	01/24/18 12:06	

LABORATORY CONTROL SAMPLE: 1641295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.85	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641296 1641297

Parameter	Units	40163617001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.013	1	.99	1.0	1.0	101	101	85-115	2	20	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279186 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1639170 Matrix: Solid
Associated Lab Samples: 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	01/17/18 16:07	
Barium	mg/kg	<0.15	0.50	01/17/18 16:07	
Cadmium	mg/kg	<0.13	0.50	01/17/18 16:07	
Chromium	mg/kg	<0.28	1.0	01/17/18 16:07	
Lead	mg/kg	<0.43	1.3	01/17/18 16:07	
Selenium	mg/kg	<1.1	5.0	01/17/18 16:07	
Silver	mg/kg	<0.34	1.0	01/17/18 16:07	

LABORATORY CONTROL SAMPLE: 1639171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.8	102	80-120	
Barium	mg/kg	50	50.6	101	80-120	
Cadmium	mg/kg	50	51.0	102	80-120	
Chromium	mg/kg	50	51.4	103	80-120	
Lead	mg/kg	50	50.7	101	80-120	
Selenium	mg/kg	50	50.4	101	80-120	
Silver	mg/kg	25	24.5	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639172 1639173

Parameter	Units	40163468008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	5.3J	56.3	56.5	56.5	56.9	91	91	75-125	1	20	
Barium	mg/kg	17.7	56.3	56.5	79.2	77.0	109	105	75-125	3	20	
Cadmium	mg/kg	0.20J	56.3	56.5	56.1	56.1	99	99	75-125	0	20	
Chromium	mg/kg	10.2	56.3	56.5	64.8	64.7	97	96	75-125	0	20	
Lead	mg/kg	6.4	56.3	56.5	59.3	57.8	94	91	75-125	3	20	
Selenium	mg/kg	<1.3	56.3	56.5	53.1	52.2	94	92	75-125	2	20	
Silver	mg/kg	<0.39	28.1	28.3	27.6	27.9	98	99	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279315 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005

METHOD BLANK: 1639610 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	01/19/18 11:21	
Barium	mg/kg	<0.15	0.50	01/19/18 11:21	
Cadmium	mg/kg	<0.13	0.50	01/19/18 11:21	
Chromium	mg/kg	<0.28	1.0	01/19/18 11:21	
Lead	mg/kg	<0.43	1.3	01/19/18 11:21	
Selenium	mg/kg	<1.1	5.0	01/19/18 11:21	
Silver	mg/kg	<0.34	1.0	01/19/18 11:21	

LABORATORY CONTROL SAMPLE: 1639611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.6	99	80-120	
Barium	mg/kg	50	49.8	100	80-120	
Cadmium	mg/kg	50	50.5	101	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	50.9	102	80-120	
Selenium	mg/kg	50	51.7	103	80-120	
Silver	mg/kg	25	25.4	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639612 1639613

Parameter	Units	40163515001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	5.3J	62.6	62.8	62.8	62.6	92	91	75-125	0	20	
Barium	mg/kg	166	62.6	62.8	228	222	99	89	75-125	2	20	
Cadmium	mg/kg	0.24J	62.6	62.8	58.7	59.3	93	94	75-125	1	20	
Chromium	mg/kg	19.9	62.6	62.8	80.3	85.2	97	104	75-125	6	20	
Lead	mg/kg	17.1	62.6	62.8	72.9	72.3	89	88	75-125	1	20	
Selenium	mg/kg	<1.4	62.6	62.8	59.0	59.2	94	94	75-125	0	20	
Silver	mg/kg	<0.43	31.3	31.4	28.3	29.8	91	95	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279205 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

METHOD BLANK: 1639215 Matrix: Solid
Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	01/16/18 09:34	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	01/16/18 09:34	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	01/16/18 09:34	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	01/16/18 09:34	
1,1-Dichloroethane	ug/kg	<17.6	50.0	01/16/18 09:34	
1,1-Dichloroethene	ug/kg	<17.6	50.0	01/16/18 09:34	
1,1-Dichloropropene	ug/kg	<14.0	50.0	01/16/18 09:34	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	01/16/18 09:34	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	01/16/18 09:34	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	01/16/18 09:34	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	01/16/18 09:34	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	01/16/18 09:34	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	01/16/18 09:34	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	01/16/18 09:34	
1,2-Dichloroethane	ug/kg	<15.0	50.0	01/16/18 09:34	
1,2-Dichloropropane	ug/kg	<16.8	50.0	01/16/18 09:34	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	01/16/18 09:34	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	01/16/18 09:34	
1,3-Dichloropropane	ug/kg	<12.0	50.0	01/16/18 09:34	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	01/16/18 09:34	
2,2-Dichloropropane	ug/kg	<12.6	50.0	01/16/18 09:34	
2-Chlorotoluene	ug/kg	<15.8	50.0	01/16/18 09:34	
4-Chlorotoluene	ug/kg	<13.0	50.0	01/16/18 09:34	
Benzene	ug/kg	<9.2	20.0	01/16/18 09:34	
Bromobenzene	ug/kg	<20.6	50.0	01/16/18 09:34	
Bromochloromethane	ug/kg	<21.4	50.0	01/16/18 09:34	
Bromodichloromethane	ug/kg	<9.8	50.0	01/16/18 09:34	
Bromoform	ug/kg	<19.8	50.0	01/16/18 09:34	
Bromomethane	ug/kg	<69.9	250	01/16/18 09:34	
Carbon tetrachloride	ug/kg	<12.1	50.0	01/16/18 09:34	
Chlorobenzene	ug/kg	<14.8	50.0	01/16/18 09:34	
Chloroethane	ug/kg	<67.0	250	01/16/18 09:34	
Chloroform	ug/kg	<46.4	250	01/16/18 09:34	
Chloromethane	ug/kg	<20.4	50.0	01/16/18 09:34	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	01/16/18 09:34	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	01/16/18 09:34	
Dibromochloromethane	ug/kg	<17.9	50.0	01/16/18 09:34	
Dibromomethane	ug/kg	<19.3	50.0	01/16/18 09:34	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

METHOD BLANK: 1639215 Matrix: Solid

Associated Lab Samples: 40163468001, 40163468002, 40163468003, 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/kg	<12.3	50.0	01/16/18 09:34	
Diisopropyl ether	ug/kg	<17.7	50.0	01/16/18 09:34	
Ethylbenzene	ug/kg	<12.4	50.0	01/16/18 09:34	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	01/16/18 09:34	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	01/16/18 09:34	
m&p-Xylene	ug/kg	<34.4	100	01/16/18 09:34	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	01/16/18 09:34	
Methylene Chloride	ug/kg	<16.2	50.0	01/16/18 09:34	
n-Butylbenzene	ug/kg	<10.5	50.0	01/16/18 09:34	
n-Propylbenzene	ug/kg	<11.6	50.0	01/16/18 09:34	
Naphthalene	ug/kg	<40.0	250	01/16/18 09:34	
o-Xylene	ug/kg	<14.0	50.0	01/16/18 09:34	
p-Isopropyltoluene	ug/kg	<12.0	50.0	01/16/18 09:34	
sec-Butylbenzene	ug/kg	<11.9	50.0	01/16/18 09:34	
Styrene	ug/kg	<9.0	50.0	01/16/18 09:34	
tert-Butylbenzene	ug/kg	<9.5	50.0	01/16/18 09:34	
Tetrachloroethene	ug/kg	<12.9	50.0	01/16/18 09:34	
Toluene	ug/kg	<11.2	50.0	01/16/18 09:34	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	01/16/18 09:34	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	01/16/18 09:34	
Trichloroethene	ug/kg	<23.6	50.0	01/16/18 09:34	
Trichlorofluoromethane	ug/kg	<24.7	50.0	01/16/18 09:34	
Vinyl chloride	ug/kg	<21.1	50.0	01/16/18 09:34	
Xylene (Total)	ug/kg	<48.4	150	01/16/18 09:34	
4-Bromofluorobenzene (S)	%	85	58-141	01/16/18 09:34	
Dibromofluoromethane (S)	%	117	68-130	01/16/18 09:34	
Toluene-d8 (S)	%	101	68-149	01/16/18 09:34	

LABORATORY CONTROL SAMPLE: 1639216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2480	99	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2120	85	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2360	94	70-130	
1,1-Dichloroethane	ug/kg	2500	2360	94	63-124	
1,1-Dichloroethene	ug/kg	2500	2500	100	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	1900	76	78-130	L2
1,2-Dibromo-3-chloropropane	ug/kg	2500	1910	76	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2350	94	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2310	93	70-130	
1,2-Dichloroethane	ug/kg	2500	2590	104	56-135	
1,2-Dichloropropane	ug/kg	2500	2490	100	77-122	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

LABORATORY CONTROL SAMPLE: 1639216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/kg	2500	2230	89	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2380	95	70-130	
Benzene	ug/kg	2500	2420	97	66-130	
Bromodichloromethane	ug/kg	2500	2670	107	62-135	
Bromoform	ug/kg	2500	2180	87	68-130	
Bromomethane	ug/kg	2500	2230	89	29-137	
Carbon tetrachloride	ug/kg	2500	2750	110	57-130	
Chlorobenzene	ug/kg	2500	2460	98	70-130	
Chloroethane	ug/kg	2500	2360	94	36-144	
Chloroform	ug/kg	2500	2470	99	69-115	
Chloromethane	ug/kg	2500	1510	60	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2260	90	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2250	90	70-130	
Dibromochloromethane	ug/kg	2500	2540	102	70-130	
Dichlorodifluoromethane	ug/kg	2500	1130	45	10-99	
Ethylbenzene	ug/kg	2500	2330	93	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2430	97	70-130	
m&p-Xylene	ug/kg	5000	5050	101	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2260	90	63-134	
Methylene Chloride	ug/kg	2500	2600	104	56-123	
o-Xylene	ug/kg	2500	2400	96	70-130	
Styrene	ug/kg	2500	2460	98	70-130	
Tetrachloroethene	ug/kg	2500	2480	99	70-131	
Toluene	ug/kg	2500	2350	94	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2530	101	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2310	93	68-130	
Trichloroethene	ug/kg	2500	2510	101	70-130	
Trichlorofluoromethane	ug/kg	2500	2620	105	37-149	
Vinyl chloride	ug/kg	2500	1960	78	43-128	
Xylene (Total)	ug/kg	7500	7450	99	70-130	
4-Bromofluorobenzene (S)	%			91	58-141	
Dibromofluoromethane (S)	%			107	68-130	
Toluene-d8 (S)	%			96	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639217 1639218

Parameter	Units	40163468002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<25.0	1340	1340	1310	1340	98	101	57-123	3	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1340	1340	1230	1160	92	87	73-135	6	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1340	1340	1130	1210	84	91	70-130	7	20	
1,1-Dichloroethane	ug/kg	<25.0	1340	1340	1270	1270	95	95	63-124	0	20	
1,1-Dichloroethene	ug/kg	<25.0	1340	1340	1410	1290	106	96	48-117	9	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1340	1340	1150	1100	84	80	78-145	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639217 1639218

Parameter	Units	40163468002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1340	1340	1010	1040	76	78	38-168	2	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1340	1340	1140	1200	85	90	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1340	1340	1320	1310	99	98	70-130	0	20	
1,2-Dichloroethane	ug/kg	<25.0	1340	1340	1370	1450	102	109	56-145	6	20	
1,2-Dichloropropane	ug/kg	<25.0	1340	1340	1400	1380	105	103	77-123	2	20	
1,3-Dichlorobenzene	ug/kg	<25.0	1340	1340	1220	1240	91	93	70-130	2	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1340	1340	1320	1250	99	94	70-130	5	20	
Benzene	ug/kg	<25.0	1340	1340	1180	1300	88	97	65-130	10	20	
Bromodichloromethane	ug/kg	<25.0	1340	1340	1490	1430	112	107	59-141	5	20	
Bromoform	ug/kg	<25.0	1340	1340	1240	1250	93	93	59-141	0	20	
Bromomethane	ug/kg	<69.9	1340	1340	1230	1250	92	94	28-139	2	20	
Carbon tetrachloride	ug/kg	<25.0	1340	1340	1470	1440	110	107	50-130	2	20	
Chlorobenzene	ug/kg	<25.0	1340	1340	1330	1340	100	100	70-130	0	20	
Chloroethane	ug/kg	<67.0	1340	1340	1320	1370	99	103	36-144	4	20	
Chloroform	ug/kg	<46.4	1340	1340	1350	1340	101	100	68-122	1	20	
Chloromethane	ug/kg	<25.0	1340	1340	894	844	67	63	30-126	6	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1240	1280	93	96	63-130	3	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1220	1190	91	89	70-130	2	20	
Dibromochloromethane	ug/kg	<25.0	1340	1340	1190	1280	89	96	66-136	7	20	
Dichlorodifluoromethane	ug/kg	<25.0	1340	1340	533	568	40	42	10-99	6	33	
Ethylbenzene	ug/kg	<25.0	1340	1340	1180	1160	89	87	80-122	2	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1340	1340	1230	1190	92	89	70-130	4	20	
m&p-Xylene	ug/kg	<50.0	2670	2670	2560	2570	96	96	70-130	0	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1340	1340	1170	1170	88	87	63-134	1	20	
Methylene Chloride	ug/kg	<25.0	1340	1340	1470	1440	110	107	56-127	2	20	
o-Xylene	ug/kg	<25.0	1340	1340	1220	1210	91	91	70-130	0	20	
Styrene	ug/kg	<25.0	1340	1340	1270	1210	95	91	70-130	4	20	
Tetrachloroethene	ug/kg	29.5J	1340	1340	1220	1310	89	96	70-131	7	20	
Toluene	ug/kg	<25.0	1340	1340	1160	1240	87	93	80-120	6	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1340	1340	1450	1450	108	108	60-130	0	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1340	1340	1020	1090	76	81	68-130	6	20	
Trichloroethene	ug/kg	<25.0	1340	1340	1390	1350	104	101	70-130	3	20	
Trichlorofluoromethane	ug/kg	<25.0	1340	1340	1690	1620	126	121	37-149	4	24	
Vinyl chloride	ug/kg	<25.0	1340	1340	1080	1040	80	78	39-128	4	20	
Xylene (Total)	ug/kg	<75.0	4010	4010	3770	3780	94	94	70-130	0	20	
4-Bromofluorobenzene (S)	%						103	100	58-141			
Dibromofluoromethane (S)	%						121	124	68-130			
Toluene-d8 (S)	%						100	105	68-149			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279069 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40163468021, 40163468022

METHOD BLANK: 1638744 Matrix: Water
Associated Lab Samples: 40163468021, 40163468022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/15/18 12:41	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/15/18 12:41	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/15/18 12:41	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/15/18 12:41	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/15/18 12:41	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/15/18 12:41	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/15/18 12:41	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/15/18 12:41	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/15/18 12:41	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/15/18 12:41	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/15/18 12:41	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/15/18 12:41	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/15/18 12:41	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/15/18 12:41	
2-Chlorotoluene	ug/L	<0.50	1.0	01/15/18 12:41	
4-Chlorotoluene	ug/L	<0.21	1.0	01/15/18 12:41	
Benzene	ug/L	<0.50	1.0	01/15/18 12:41	
Bromobenzene	ug/L	<0.23	1.0	01/15/18 12:41	
Bromochloromethane	ug/L	<0.34	1.0	01/15/18 12:41	
Bromodichloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Bromoform	ug/L	<0.50	1.0	01/15/18 12:41	
Bromomethane	ug/L	<2.4	5.0	01/15/18 12:41	
Carbon tetrachloride	ug/L	<0.50	1.0	01/15/18 12:41	
Chlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Chloroethane	ug/L	<0.37	1.0	01/15/18 12:41	
Chloroform	ug/L	<2.5	5.0	01/15/18 12:41	
Chloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromochloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromomethane	ug/L	<0.43	1.0	01/15/18 12:41	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/15/18 12:41	
Diisopropyl ether	ug/L	<0.50	1.0	01/15/18 12:41	
Ethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

METHOD BLANK: 1638744 Matrix: Water
Associated Lab Samples: 40163468021, 40163468022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/15/18 12:41	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/15/18 12:41	
m&p-Xylene	ug/L	<1.0	2.0	01/15/18 12:41	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/15/18 12:41	
Methylene Chloride	ug/L	<0.23	1.0	01/15/18 12:41	
n-Butylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
n-Propylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Naphthalene	ug/L	<2.5	5.0	01/15/18 12:41	
o-Xylene	ug/L	<0.50	1.0	01/15/18 12:41	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/15/18 12:41	
sec-Butylbenzene	ug/L	<2.2	5.0	01/15/18 12:41	
Styrene	ug/L	<0.50	1.0	01/15/18 12:41	
tert-Butylbenzene	ug/L	<0.18	1.0	01/15/18 12:41	
Tetrachloroethene	ug/L	<0.50	1.0	01/15/18 12:41	
Toluene	ug/L	<0.50	1.0	01/15/18 12:41	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/15/18 12:41	
Trichloroethene	ug/L	<0.33	1.0	01/15/18 12:41	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/15/18 12:41	
Vinyl chloride	ug/L	<0.18	1.0	01/15/18 12:41	
Xylene (Total)	ug/L	<1.5	3.0	01/15/18 12:41	
4-Bromofluorobenzene (S)	%	86	61-130	01/15/18 12:41	
Dibromofluoromethane (S)	%	105	67-130	01/15/18 12:41	
Toluene-d8 (S)	%	93	70-130	01/15/18 12:41	

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.1	84	70-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	42.6	85	71-132	
1,1-Dichloroethene	ug/L	50	41.1	82	75-130	
1,2,4-Trichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	34.6	69	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	46.0	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,2-Dichloroethane	ug/L	50	41.4	83	70-131	
1,2-Dichloropropane	ug/L	50	43.9	88	80-120	
1,3-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,4-Dichlorobenzene	ug/L	50	49.4	99	70-130	
Benzene	ug/L	50	44.8	90	73-145	
Bromodichloromethane	ug/L	50	47.7	95	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.6	63	26-128	
Carbon tetrachloride	ug/L	50	51.8	104	70-133	
Chlorobenzene	ug/L	50	54.0	108	70-130	
Chloroethane	ug/L	50	36.2	72	58-120	
Chloroform	ug/L	50	50.0	100	80-121	
Chloromethane	ug/L	50	23.3	47	40-127	
cis-1,2-Dichloroethene	ug/L	50	42.0	84	70-130	
cis-1,3-Dichloropropene	ug/L	50	42.6	85	70-130	
Dibromochloromethane	ug/L	50	55.8	112	70-130	
Dichlorodifluoromethane	ug/L	50	15.5	31	20-135	
Ethylbenzene	ug/L	50	50.5	101	87-129	
Isopropylbenzene (Cumene)	ug/L	50	54.7	109	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	38.1	76	66-143	
Methylene Chloride	ug/L	50	37.8	76	70-130	
o-Xylene	ug/L	50	52.7	105	70-130	
Styrene	ug/L	50	54.0	108	70-130	
Tetrachloroethene	ug/L	50	51.3	103	70-130	
Toluene	ug/L	50	48.9	98	82-130	
trans-1,2-Dichloroethene	ug/L	50	41.1	82	75-132	
trans-1,3-Dichloropropene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	50.6	101	70-130	
Trichlorofluoromethane	ug/L	50	45.2	90	76-133	
Vinyl chloride	ug/L	50	28.5	57	57-136	
Xylene (Total)	ug/L	150	160	107	70-130	
4-Bromofluorobenzene (S)	%			96	61-130	
Dibromofluoromethane (S)	%			103	67-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	40163465004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	52.0	53.2	104	106	70-134	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	44.1	42.4	88	85	70-130	4	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.2	50.4	98	101	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	44.9	45.1	90	90	71-133	1	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	48.5	50.3	97	101	75-136	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.6	46.1	94	91	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	34.5	35.0	69	70	63-123	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.7	49.8	93	100	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.4	50.0	99	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	43.8	44.7	88	89	70-131	2	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	43.9	45.7	88	91	80-120	4	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	40163465004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.50	50	50	49.9	50.9	100	102	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	53.3	52.4	107	105	70-130	2	20	
Benzene	ug/L	<0.50	50	50	45.7	48.0	91	96	73-145	5	20	
Bromodichloromethane	ug/L	<0.50	50	50	47.0	47.7	94	95	70-130	1	20	
Bromoform	ug/L	<0.50	50	50	56.5	57.9	113	116	67-130	2	20	
Bromomethane	ug/L	<2.4	50	50	42.6	51.2	85	102	26-129	18	20	
Carbon tetrachloride	ug/L	<0.50	50	50	55.3	56.4	111	113	70-134	2	20	
Chlorobenzene	ug/L	<0.50	50	50	53.7	57.5	107	115	70-130	7	20	
Chloroethane	ug/L	<0.37	50	50	42.2	46.4	84	93	58-120	9	20	
Chloroform	ug/L	<2.5	50	50	51.8	52.4	104	105	80-121	1	20	
Chloromethane	ug/L	<0.50	50	50	34.7	36.6	69	73	40-128	5	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	44.6	45.9	89	91	70-130	3	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	44.9	44.4	90	89	70-130	1	20	
Dibromochloromethane	ug/L	<0.50	50	50	56.7	60.4	113	121	70-130	6	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	42.1	42.9	84	86	20-146	2	20	
Ethylbenzene	ug/L	<0.50	50	50	50.1	53.8	100	108	87-129	7	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	58.2	111	116	70-130	5	20	
m&p-Xylene	ug/L	<1.0	100	100	106	113	106	113	70-130	6	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	40.0	40.2	80	80	66-143	0	20	
Methylene Chloride	ug/L	<0.23	50	50	40.1	40.4	80	81	70-130	1	20	
o-Xylene	ug/L	<0.50	50	50	53.8	56.4	108	113	70-130	5	20	
Styrene	ug/L	<0.50	50	50	53.9	56.2	108	112	70-130	4	20	
Tetrachloroethene	ug/L	<0.50	50	50	54.3	57.4	109	115	70-130	6	20	
Toluene	ug/L	<0.50	50	50	51.9	55.2	104	110	82-131	6	20	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	46.7	46.1	93	92	75-135	1	20	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	45.5	46.8	91	94	70-130	3	20	
Trichloroethene	ug/L	1.4	50	50	53.4	54.8	104	107	70-130	3	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	57.2	57.1	114	114	76-150	0	20	
Vinyl chloride	ug/L	<0.18	50	50	43.6	45.8	87	92	56-143	5	20	
Xylene (Total)	ug/L	<1.5	150	150	160	169	106	113	70-130	6	20	
4-Bromofluorobenzene (S)	%						96	95	61-130			
Dibromofluoromethane (S)	%						100	100	67-130			
Toluene-d8 (S)	%						91	94	70-130			

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279082 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40163468001, 40163468002, 40163468003

SAMPLE DUPLICATE: 1638820

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.1	17.5	8	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

QC Batch: 279095 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40163468004, 40163468005, 40163468006, 40163468007, 40163468008, 40163468009, 40163468010, 40163468011, 40163468012, 40163468013, 40163468014, 40163468015, 40163468016, 40163468017, 40163468018, 40163468019, 40163468020

SAMPLE DUPLICATE: 1638858

Parameter	Units	40163468004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.0	16.9	1	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

1q	Analyte was detected in the associated method blank at a concentration of -0.66 mg/kg.
2q	Analyte was detected in the associated method blank at a concentration of -7.65 ug/L.
3q	Analyte was detected in the associated method blank at a concentration of -9.13 ug/L.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
W	Non-detect results are reported on a wet weight basis.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163468001	**B-7-3**	EPA 3050	279315	EPA 6010	279400
40163468002	**B-7-7.5**	EPA 3050	279315	EPA 6010	279400
40163468003	**B-14-3**	EPA 3050	279315	EPA 6010	279400
40163468004	**B-14-8**	EPA 3050	279315	EPA 6010	279400
40163468005	**B-12-3**	EPA 3050	279315	EPA 6010	279400
40163468006	**B-12-8**	EPA 3050	279186	EPA 6010	279321
40163468007	**B-10-3**	EPA 3050	279186	EPA 6010	279321
40163468008	**B-10-8**	EPA 3050	279186	EPA 6010	279321
40163468009	**B-9-3**	EPA 3050	279186	EPA 6010	279321
40163468010	**B-9-8**	EPA 3050	279186	EPA 6010	279321
40163468011	**B-8-3**	EPA 3050	279186	EPA 6010	279321
40163468012	**B-8-8**	EPA 3050	279186	EPA 6010	279321
40163468013	**B-11-3**	EPA 3050	279186	EPA 6010	279321
40163468014	**B-11-8**	EPA 3050	279186	EPA 6010	279321
40163468015	**B-13-3**	EPA 3050	279186	EPA 6010	279321
40163468016	**B-13-8**	EPA 3050	279186	EPA 6010	279321
40163468017	**B-16-3**	EPA 3050	279186	EPA 6010	279321
40163468018	**B-16-8**	EPA 3050	279186	EPA 6010	279321
40163468019	**B-15-3**	EPA 3050	279186	EPA 6010	279321
40163468020	**B-15-8**	EPA 3050	279186	EPA 6010	279321
40163468021	**TW-7**	EPA 6010	279176		
40163468021	**TW-7**	EPA 7470	279605	EPA 7470	279673
40163468001	**B-7-3**	EPA 7471	279631	EPA 7471	279690
40163468002	**B-7-7.5**	EPA 7471	279631	EPA 7471	279690
40163468003	**B-14-3**	EPA 7471	279631	EPA 7471	279690
40163468004	**B-14-8**	EPA 7471	279631	EPA 7471	279690
40163468005	**B-12-3**	EPA 7471	279631	EPA 7471	279690
40163468006	**B-12-8**	EPA 7471	279631	EPA 7471	279690
40163468007	**B-10-3**	EPA 7471	279631	EPA 7471	279690
40163468008	**B-10-8**	EPA 7471	279631	EPA 7471	279690
40163468009	**B-9-3**	EPA 7471	279631	EPA 7471	279690
40163468010	**B-9-8**	EPA 7471	279631	EPA 7471	279690
40163468011	**B-8-3**	EPA 7471	279631	EPA 7471	279690
40163468012	**B-8-8**	EPA 7471	279631	EPA 7471	279690
40163468013	**B-11-3**	EPA 7471	279631	EPA 7471	279690
40163468014	**B-11-8**	EPA 7471	279631	EPA 7471	279690
40163468015	**B-13-3**	EPA 7471	279631	EPA 7471	279690
40163468016	**B-13-8**	EPA 7471	279631	EPA 7471	279690
40163468017	**B-16-3**	EPA 7471	279632	EPA 7471	279691
40163468018	**B-16-8**	EPA 7471	279632	EPA 7471	279691
40163468019	**B-15-3**	EPA 7471	279632	EPA 7471	279691
40163468020	**B-15-8**	EPA 7471	279632	EPA 7471	279691
40163468001	**B-7-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468002	**B-7-7.5**	EPA 5035/5030B	279205	EPA 8260	279206
40163468003	**B-14-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468004	**B-14-8**	EPA 5035/5030B	279205	EPA 8260	279206

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163468005	**B-12-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468006	**B-12-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468007	**B-10-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468008	**B-10-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468009	**B-9-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468010	**B-9-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468011	**B-8-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468012	**B-8-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468013	**B-11-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468014	**B-11-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468015	**B-13-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468016	**B-13-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468017	**B-16-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468018	**B-16-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468019	**B-15-3**	EPA 5035/5030B	279205	EPA 8260	279206
40163468020	**B-15-8**	EPA 5035/5030B	279205	EPA 8260	279206
40163468021	**TW-7**	EPA 8260	279069		
40163468022	**TRIP BLANK**	EPA 8260	279069		
40163468001	**B-7-3**	ASTM D2974-87	279082		
40163468002	**B-7-7.5**	ASTM D2974-87	279082		
40163468003	**B-14-3**	ASTM D2974-87	279082		
40163468004	**B-14-8**	ASTM D2974-87	279095		
40163468005	**B-12-3**	ASTM D2974-87	279095		
40163468006	**B-12-8**	ASTM D2974-87	279095		
40163468007	**B-10-3**	ASTM D2974-87	279095		
40163468008	**B-10-8**	ASTM D2974-87	279095		
40163468009	**B-9-3**	ASTM D2974-87	279095		
40163468010	**B-9-8**	ASTM D2974-87	279095		
40163468011	**B-8-3**	ASTM D2974-87	279095		
40163468012	**B-8-8**	ASTM D2974-87	279095		
40163468013	**B-11-3**	ASTM D2974-87	279095		
40163468014	**B-11-8**	ASTM D2974-87	279095		
40163468015	**B-13-3**	ASTM D2974-87	279095		
40163468016	**B-13-8**	ASTM D2974-87	279095		
40163468017	**B-16-3**	ASTM D2974-87	279095		
40163468018	**B-16-8**	ASTM D2974-87	279095		
40163468019	**B-15-3**	ASTM D2974-87	279095		
40163468020	**B-15-8**	ASTM D2974-87	279095		

40163468

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

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:	Ram6011
Branch/Location:	
Project Contact:	Susan Pedersen
Phone:	262-391-5990
Project Number:	169000255-001
Project Name:	MW APRC Site
Project State:	WI
Sampled By (Print):	Brad Marschke
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
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	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	A	RSK-8 Methane			
					N	F	VOCs			
001	B-7-3	1-10-18	0945	S					1-4ozpA 1-40mlvF	
002	B-7-7.5		0955							
003	B-14-3		1138							
004	B-14-8		1142							
005	B-12-3		1213							
006	B-12-8		1215							
007	B-10-3		1306							
008	B-10-8		1305							
009	B-9-3		1330							
010	B-9-8		1335							
011	B-8-3		1350							
012	B-8-8		1355							
013	B-11-3		1420							

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:
[signature]	1-12-18 9:10	Mary Jannini	1/12/18 9:10
Mary Jannini	1/12/18 1300		
[signature]	1-13-18 0845	[signature]	1-13-18 0845

PACE Project No.: 40163468

Receipt Temp = ROT °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

40163468

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

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:	Ramboll
Branch/Location:	
Project Contact:	Susan Petrofske
Phone:	262-301-5996
Project Number:	1690005265-001
Project Name:	MU APRC Site
Project State:	WI
Sampled By (Print):	Brad Marschke
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only) / Profile #

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: RCRA 8 Metals	Analyses Requested: VOCs	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	A					
					N	F					
014	B-11-8	1-10-18	1425	S						1-40zp A	1-40mlvF
015	B-13-3		1410								
016	B-13-8		1445								
017	B-16-3		1500								
018	B-16-8		1505								
019	B-15-3		1515								
020	B-15-8		1526								
021	TW-7	1-11-18	1105	GW					Please filter metals sample prior to analysis	3-40mlvB 1-250mlp A 1-40mlvB	
022	Trip Blank										

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:
	1-12-18 9:10	Mary Fanning	1/12/18 9:10
Mary Fanning	1/12/18 1300		
Cassie Logsdon	1-12-18 0845	Brad Marschke	1-13-18 0845

PACE Project No.: 40163468

Receipt Temp: ROT °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: (Present) / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Client Name: Ramboll

Project #: **WO#: 40163468**

40163468

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CSLogistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 1-13-18
Initials: SW

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☐Yes	☑No	☐N/A	8. No MS/MSD Volume 1-13-18 SW
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10. 001- Client covered tared
Filtered volume received for Dissolved tests	☐Yes	☒No	☐N/A	11. weight on 40mlV2
Sample Labels match COC:	☑Yes	☐No	☐N/A	12. Lab added 1-250mlp D for
-Includes date/time/ID/Analysis Matrix: SW				filtering 1-13-18 SW
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☐No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	14.
Trip Blank Present:	☑Yes	☐No	☐N/A	15.
Trip Blank Custody Seals Present	☑Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): 388				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 1/15/18

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 29, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Dear Jeanne Tarvin:
Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Steven Mleczko
steve.mleczko@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163466001	**COMP-1**	Solid	01/10/18 15:40	01/13/18 08:45
40163466002	**TRIP BLANK**	Water	01/10/18 00:00	01/13/18 08:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163466001	**COMP-1**	EPA 8082	BLM	10	PASI-G
		EPA 6010	JLD	10	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	17	PASI-G
		EPA 8260	HNW	13	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9045	ALY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
		SM 2710F	DEY	1	PASI-G
		EPA 9014	PAS	1	PASI-PA
		SM4500S2F-00	PAS	1	PASI-PA
40163466002	**TRIP BLANK**	EPA 8260	HNW	65	PASI-G

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163466001	**COMP-1**					
EPA 6010	Barium	0.52	mg/L	0.075	01/23/18 13:13	
EPA 7470	Mercury	0.37J	ug/L	0.42	01/25/18 10:11	
ASTM D2974-87	Percent Moisture	16.1	%	0.10	01/15/18 11:00	
EPA 1010	Flashpoint	>210	deg F		01/16/18 12:05	
EPA 9045	pH at 25 Degrees C	8.69	Std. Units	0.100	01/23/18 09:12	H6
EPA 9095	Free Liquids	Pass	no units		01/18/18 11:21	
SM 2710F	Specific Gravity	2.2	no units		01/17/18 11:59	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Sample: COMP-1 **Lab ID: 40163466001** Collected: 01/10/18 15:40 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	12674-11-2	
PCB-1221 (Aroclor 1221)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11104-28-2	
PCB-1232 (Aroclor 1232)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11141-16-5	
PCB-1242 (Aroclor 1242)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	53469-21-9	
PCB-1248 (Aroclor 1248)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	12672-29-6	
PCB-1254 (Aroclor 1254)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11097-69-1	
PCB-1260 (Aroclor 1260)	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	11096-82-5	
PCB, Total	**<29.8**	ug/kg	59.6	29.8	1	01/23/18 12:11	01/24/18 11:52	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-102		1	01/23/18 12:11	01/24/18 11:52	877-09-8	
Decachlorobiphenyl (S)	83	%	53-105		1	01/23/18 12:11	01/24/18 11:52	2051-24-3	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 01/17/18 12:05								
Arsenic	**<0.042**	mg/L	0.12	0.042	1	01/18/18 09:55	01/23/18 13:13	7440-38-2	
Barium	**0.52**	mg/L	0.075	0.025	1	01/18/18 09:55	01/23/18 13:13	7440-39-3	
Cadmium	**<0.0066**	mg/L	0.025	0.0066	1	01/18/18 09:55	01/23/18 13:13	7440-43-9	
Chromium	**<0.013**	mg/L	0.050	0.013	1	01/18/18 09:55	01/23/18 13:13	7440-47-3	
Copper	**<0.031**	mg/L	0.10	0.031	1	01/18/18 09:55	01/23/18 13:13	7440-50-8	
Lead	**<0.022**	mg/L	0.065	0.022	1	01/18/18 09:55	01/23/18 13:13	7439-92-1	
Nickel	**<0.013**	mg/L	0.050	0.013	1	01/18/18 09:55	01/23/18 13:13	7440-02-0	
Selenium	**<0.083**	mg/L	0.25	0.083	1	01/18/18 09:55	01/23/18 13:13	7782-49-2	
Silver	**<0.017**	mg/L	0.050	0.017	1	01/18/18 09:55	01/23/18 13:13	7440-22-4	
Zinc	**<0.047**	mg/L	0.20	0.047	1	01/18/18 09:55	01/23/18 13:13	7440-66-6	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 01/17/18 12:05								
Mercury	**0.37J**	ug/L	0.42	0.13	1	01/24/18 12:40	01/25/18 10:11	7439-97-6	
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 01/17/18 12:05								
1,4-Dichlorobenzene	**<18.8**	ug/L	62.5	18.8	1	01/22/18 08:00	01/23/18 11:21	106-46-7	
2,4-Dinitrotoluene	**<7.9**	ug/L	26.4	7.9	1	01/22/18 08:00	01/23/18 11:21	121-14-2	
Hexachloro-1,3-butadiene	**<24.6**	ug/L	82.0	24.6	1	01/22/18 08:00	01/23/18 11:21	87-68-3	
Hexachlorobenzene	**<16.9**	ug/L	56.4	16.9	1	01/22/18 08:00	01/23/18 11:21	118-74-1	
Hexachloroethane	**<26.6**	ug/L	88.6	26.6	1	01/22/18 08:00	01/23/18 11:21	67-72-1	
2-Methylphenol(o-Cresol)	**<8.7**	ug/L	28.9	8.7	1	01/22/18 08:00	01/23/18 11:21	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<15.6**	ug/L	52.0	15.6	1	01/22/18 08:00	01/23/18 11:21		
Nitrobenzene	**<14.5**	ug/L	48.3	14.5	1	01/22/18 08:00	01/23/18 11:21	98-95-3	
Pentachlorophenol	**<14.3**	ug/L	47.8	14.3	1	01/22/18 08:00	01/23/18 11:21	87-86-5	
Phenol	**<6.0**	ug/L	20.0	6.0	1	01/22/18 08:00	01/23/18 11:21	108-95-2	
Pyridine	**<17.9**	ug/L	59.6	17.9	1	01/22/18 08:00	01/23/18 11:21	110-86-1	
2,4,5-Trichlorophenol	**<8.4**	ug/L	28.0	8.4	1	01/22/18 08:00	01/23/18 11:21	95-95-4	
2,4,6-Trichlorophenol	**<21.1**	ug/L	70.4	21.1	1	01/22/18 08:00	01/23/18 11:21	88-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Sample: COMP-1 **Lab ID: 40163466001** Collected: 01/10/18 15:40 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 01/17/18 12:05								
Surrogates									
Nitrobenzene-d5 (S)	73	%	56-120		1	01/22/18 08:00	01/23/18 11:21	4165-60-0	
2-Fluorobiphenyl (S)	62	%	54-122		1	01/22/18 08:00	01/23/18 11:21	321-60-8	
2,4,6-Tribromophenol (S)	90	%	58-134		1	01/22/18 08:00	01/23/18 11:21	118-79-6	
Phenol-d6 (S)	31	%	16-120		1	01/22/18 08:00	01/23/18 11:21	13127-88-3	
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 01/18/18 11:50								
Benzene	**<5.0**	ug/L	10.0	5.0	10		01/19/18 11:43	71-43-2	
2-Butanone (MEK)	**<29.8**	ug/L	200	29.8	10		01/19/18 11:43	78-93-3	
Carbon tetrachloride	**<5.0**	ug/L	10.0	5.0	10		01/19/18 11:43	56-23-5	
Chlorobenzene	**<5.0**	ug/L	10.0	5.0	10		01/19/18 11:43	108-90-7	
Chloroform	**<25.0**	ug/L	50.0	25.0	10		01/19/18 11:43	67-66-3	
1,2-Dichloroethane	**<1.7**	ug/L	10.0	1.7	10		01/19/18 11:43	107-06-2	
1,1-Dichloroethene	**<4.1**	ug/L	10.0	4.1	10		01/19/18 11:43	75-35-4	
Tetrachloroethene	**<5.0**	ug/L	10.0	5.0	10		01/19/18 11:43	127-18-4	
Trichloroethene	**<3.3**	ug/L	10.0	3.3	10		01/19/18 11:43	79-01-6	
Vinyl chloride	**<1.8**	ug/L	10.0	1.8	10		01/19/18 11:43	75-01-4	
Surrogates									
Toluene-d8 (S)	96	%	70-130		10		01/19/18 11:43	2037-26-5	
4-Bromofluorobenzene (S)	86	%	61-130		10		01/19/18 11:43	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		10		01/19/18 11:43	1868-53-7	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.1**	%	0.10	0.10	1		01/15/18 11:00		
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010								
Flashpoint	**>210**	deg F			1		01/16/18 12:05		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.69**	Std. Units	0.100	0.0100	1		01/23/18 09:12		H6
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095								
Free Liquids	**Pass**	no units			1		01/18/18 11:21		
Specific Gravity	Analytical Method: SM 2710F								
Specific Gravity	**2.2**	no units			1		01/17/18 11:59		
733C S Reactive Cyanide	Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2								
Cyanide, Reactive	**<0.48**	mg/kg	1.2	0.48	1	01/18/18 16:09	01/18/18 23:36		
734S Reactive Sulfide	Analytical Method: SM4500S2F-00 Preparation Method: SW-846 7.3.4.2								
Sulfide, Reactive	**<11.9**	mg/kg	11.9	11.9	1	01/18/18 16:09	01/18/18 21:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Sample: TRIP BLANK **Lab ID: 40163466002** Collected: 01/10/18 00:00 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		01/15/18 21:39	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		01/15/18 21:39	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		01/15/18 21:39	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		01/15/18 21:39	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		01/15/18 21:39	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		01/15/18 21:39	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		01/15/18 21:39	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		01/15/18 21:39	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		01/15/18 21:39	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		01/15/18 21:39	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		01/15/18 21:39	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		01/15/18 21:39	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		01/15/18 21:39	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		01/15/18 21:39	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		01/15/18 21:39	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/15/18 21:39	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		01/15/18 21:39	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		01/15/18 21:39	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		01/15/18 21:39	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		01/15/18 21:39	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		01/15/18 21:39	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		01/15/18 21:39	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		01/15/18 21:39	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		01/15/18 21:39	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		01/15/18 21:39	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		01/15/18 21:39	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		01/15/18 21:39	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Sample: TRIP BLANK **Lab ID: 40163466002** Collected: 01/10/18 00:00 Received: 01/13/18 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		01/15/18 21:39	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		01/15/18 21:39	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		01/15/18 21:39	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		01/15/18 21:39	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		01/15/18 21:39	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		01/15/18 21:39	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		01/15/18 21:39	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		01/15/18 21:39	1330-20-7	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		01/15/18 21:39	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		01/15/18 21:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	80	%	61-130		1		01/15/18 21:39	460-00-4	
Dibromofluoromethane (S)	110	%	67-130		1		01/15/18 21:39	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		01/15/18 21:39	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279724 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 40163466001

METHOD BLANK: 1641660 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 10:06	

METHOD BLANK: 1638859 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 10:55	

METHOD BLANK: 1639054 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 10:27	

METHOD BLANK: 1641148 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	01/25/18 11:00	

LABORATORY CONTROL SAMPLE: 1641661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641662 1641663

Parameter	Units	40163466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.37J	5	5	5.1	5.1	95	95	85-115	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE SAMPLE: 1641664

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.13	5	4.9	96	85-115	

MATRIX SPIKE SAMPLE: 1641665

Parameter	Units	40163606001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.34J	5	4.8	90	85-115	

MATRIX SPIKE SAMPLE: 1641666

Parameter	Units	40163614001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.20J	5	4.8	92	85-115	

MATRIX SPIKE SAMPLE: 1641667

Parameter	Units	40163634001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.13	5	4.8	95	85-115	

MATRIX SPIKE SAMPLE: 1641668

Parameter	Units	40163638001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.00020J mg/L	5	5.4	103	85-115	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279371
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40163466001

METHOD BLANK: 1639883 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0083	0.025	01/23/18 13:01	
Barium	mg/L	<0.0050	0.015	01/23/18 13:01	
Cadmium	mg/L	<0.0013	0.0050	01/23/18 13:01	
Chromium	mg/L	<0.0025	0.010	01/23/18 13:01	
Copper	mg/L	<0.0063	0.020	01/23/18 13:01	
Lead	mg/L	<0.0043	0.013	01/23/18 13:01	
Nickel	mg/L	<0.0026	0.010	01/23/18 13:01	
Selenium	mg/L	<0.017	0.050	01/23/18 13:01	
Silver	mg/L	<0.0033	0.010	01/23/18 13:01	
Zinc	mg/L	<0.0093	0.040	01/23/18 13:01	

METHOD BLANK: 1639052 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.042	0.12	01/23/18 13:21	
Barium	mg/L	<0.025	0.075	01/23/18 13:21	
Cadmium	mg/L	<0.0066	0.025	01/23/18 13:21	
Chromium	mg/L	<0.013	0.050	01/23/18 13:21	
Copper	mg/L	<0.031	0.10	01/23/18 13:21	
Lead	mg/L	<0.022	0.065	01/23/18 13:21	
Nickel	mg/L	<0.013	0.050	01/23/18 13:21	
Selenium	mg/L	<0.083	0.25	01/23/18 13:21	
Silver	mg/L	<0.017	0.050	01/23/18 13:21	
Zinc	mg/L	<0.047	0.20	01/23/18 13:21	

METHOD BLANK: 1639449 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0083	0.025	01/23/18 13:37	
Barium	mg/L	<0.0050	0.015	01/23/18 13:37	
Cadmium	mg/L	<0.0013	0.0050	01/23/18 13:37	
Chromium	mg/L	<0.0025	0.010	01/23/18 13:37	
Copper	mg/L	<0.0063	0.020	01/23/18 13:37	
Lead	mg/L	<0.0043	0.013	01/23/18 13:37	
Nickel	mg/L	0.0032J	0.010	01/23/18 13:37	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

METHOD BLANK: 1639449 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Selenium	mg/L	<0.017	0.050	01/23/18 13:37	
Silver	mg/L	<0.0033	0.010	01/23/18 13:37	
Zinc	mg/L	<0.0093	0.040	01/23/18 13:37	

LABORATORY CONTROL SAMPLE: 1639884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.5	0.50	99	80-120	
Barium	mg/L	.5	0.51	103	80-120	
Cadmium	mg/L	.5	0.50	101	80-120	
Chromium	mg/L	.5	0.51	102	80-120	
Copper	mg/L	.5	0.51	103	80-120	
Lead	mg/L	.5	0.51	102	80-120	
Nickel	mg/L	.5	0.51	102	80-120	
Selenium	mg/L	.5	0.52	103	80-120	
Silver	mg/L	.25	0.25	101	80-120	
Zinc	mg/L	.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639885 1639886

Parameter	Units	40163519001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	<0.042	2.5	2.5	2.4	2.4	96	95	75-125	1	20	
Barium	mg/L	0.33	2.5	2.5	2.8	2.8	99	98	75-125	2	20	
Cadmium	mg/L	<0.0066	2.5	2.5	2.5	2.4	99	98	75-125	1	20	
Chromium	mg/L	<0.013	2.5	2.5	2.4	2.4	97	96	75-125	1	20	
Copper	mg/L	<0.031	2.5	2.5	2.5	2.5	99	98	75-125	2	20	
Lead	mg/L	<0.022	2.5	2.5	2.4	2.4	97	95	75-125	2	20	
Nickel	mg/L	0.016J	2.5	2.5	2.4	2.4	95	95	75-125	1	20	
Selenium	mg/L	<0.083	2.5	2.5	2.5	2.5	100	98	75-125	2	20	
Silver	mg/L	<0.017	1.2	1.2	1.2	1.2	100	98	75-125	2	20	
Zinc	mg/L	<0.047	2.5	2.5	2.5	2.5	99	98	75-125	1	20	

MATRIX SPIKE SAMPLE: 1639887

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	<0.042	2.5	2.4	96	75-125	
Barium	mg/L	0.38	2.5	2.9	100	75-125	
Cadmium	mg/L	<0.0066	2.5	2.5	98	75-125	
Chromium	mg/L	<0.013	2.5	2.4	97	75-125	
Copper	mg/L	<0.031	2.5	2.5	100	75-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE SAMPLE: 1639887

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.022	2.5	2.5	98	75-125	
Nickel	mg/L	<0.013	2.5	2.4	96	75-125	
Selenium	mg/L	<0.083	2.5	2.6	102	75-125	
Silver	mg/L	<0.017	1.2	1.2	100	75-125	
Zinc	mg/L	0.20J	2.5	2.7	100	75-125	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279431 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40163466001

METHOD BLANK: 1640299 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.41	1.0	01/19/18 08:59	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/19/18 08:59	
2-Butanone (MEK)	ug/L	<3.0	20.0	01/19/18 08:59	
Benzene	ug/L	<0.50	1.0	01/19/18 08:59	
Carbon tetrachloride	ug/L	<0.50	1.0	01/19/18 08:59	
Chlorobenzene	ug/L	<0.50	1.0	01/19/18 08:59	
Chloroform	ug/L	<2.5	5.0	01/19/18 08:59	
Tetrachloroethene	ug/L	<0.50	1.0	01/19/18 08:59	
Trichloroethene	ug/L	<0.33	1.0	01/19/18 08:59	
Vinyl chloride	ug/L	<0.18	1.0	01/19/18 08:59	
4-Bromofluorobenzene (S)	%	84	61-130	01/19/18 08:59	
Dibromofluoromethane (S)	%	111	67-130	01/19/18 08:59	
Toluene-d8 (S)	%	93	70-130	01/19/18 08:59	

METHOD BLANK: 1639849 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<4.1	10.0	01/19/18 09:22	
1,2-Dichloroethane	ug/L	<1.7	10.0	01/19/18 09:22	
2-Butanone (MEK)	ug/L	<29.8	200	01/19/18 09:22	
Benzene	ug/L	<5.0	10.0	01/19/18 09:22	
Carbon tetrachloride	ug/L	<5.0	10.0	01/19/18 09:22	
Chlorobenzene	ug/L	<5.0	10.0	01/19/18 09:22	
Chloroform	ug/L	<25.0	50.0	01/19/18 09:22	
Tetrachloroethene	ug/L	<5.0	10.0	01/19/18 09:22	
Trichloroethene	ug/L	<3.3	10.0	01/19/18 09:22	
Vinyl chloride	ug/L	<1.8	10.0	01/19/18 09:22	
4-Bromofluorobenzene (S)	%	85	61-130	01/19/18 09:22	
Dibromofluoromethane (S)	%	104	67-130	01/19/18 09:22	
Toluene-d8 (S)	%	93	70-130	01/19/18 09:22	

LABORATORY CONTROL SAMPLE: 1640300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	47.9	96	75-130	
1,2-Dichloroethane	ug/L	50	43.3	87	70-131	
Benzene	ug/L	50	44.3	89	73-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

LABORATORY CONTROL SAMPLE: 1640300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	56.6	113	70-133	
Chlorobenzene	ug/L	50	56.2	112	70-130	
Chloroform	ug/L	50	52.0	104	80-121	
Tetrachloroethene	ug/L	50	55.3	111	70-130	
Trichloroethene	ug/L	50	52.9	106	70-130	
Vinyl chloride	ug/L	50	36.2	72	57-136	
4-Bromofluorobenzene (S)	%			98	61-130	
Dibromofluoromethane (S)	%			99	67-130	
Toluene-d8 (S)	%			92	70-130	

MATRIX SPIKE SAMPLE: 1640329

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<4.1	500	461	92	75-136	
1,2-Dichloroethane	ug/L	<1.7	500	453	91	70-131	
2-Butanone (MEK)	ug/L	<29.8		<29.8			
Benzene	ug/L	<5.0	500	454	91	73-145	
Carbon tetrachloride	ug/L	<5.0	500	574	115	70-134	
Chlorobenzene	ug/L	<5.0	500	547	109	70-130	
Chloroform	ug/L	<25.0	500	534	107	80-121	
Tetrachloroethene	ug/L	<5.0	500	551	110	70-130	
Trichloroethene	ug/L	<3.3	500	522	104	70-130	
Vinyl chloride	ug/L	<1.8	500	371	74	56-143	
4-Bromofluorobenzene (S)	%				100	61-130	
Dibromofluoromethane (S)	%				100	67-130	
Toluene-d8 (S)	%				94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640335 1640336

Parameter	Units	40163466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	<4.1	500	500	469	486	94	97	75-136	4	20	
1,2-Dichloroethane	ug/L	<1.7	500	500	435	454	87	91	70-131	4	20	
2-Butanone (MEK)	ug/L	<29.8			<29.8	<29.8					20	
Benzene	ug/L	<5.0	500	500	444	469	89	94	73-145	5	20	
Carbon tetrachloride	ug/L	<5.0	500	500	572	603	114	121	70-134	5	20	
Chlorobenzene	ug/L	<5.0	500	500	556	570	111	114	70-130	3	20	
Chloroform	ug/L	<25.0	500	500	516	539	103	108	80-121	4	20	
Tetrachloroethene	ug/L	<5.0	500	500	549	551	110	110	70-130	0	20	
Trichloroethene	ug/L	<3.3	500	500	559	565	112	113	70-130	1	20	
Vinyl chloride	ug/L	<1.8	500	500	388	396	78	79	56-143	2	20	
4-Bromofluorobenzene (S)	%						98	98	61-130			
Dibromofluoromethane (S)	%						98	105	67-130			
Toluene-d8 (S)	%						95	94	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279069 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40163466002

METHOD BLANK: 1638744 Matrix: Water
Associated Lab Samples: 40163466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/15/18 12:41	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/15/18 12:41	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/15/18 12:41	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/15/18 12:41	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/15/18 12:41	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/15/18 12:41	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/15/18 12:41	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/15/18 12:41	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/15/18 12:41	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/15/18 12:41	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/15/18 12:41	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/15/18 12:41	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/15/18 12:41	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/15/18 12:41	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/15/18 12:41	
2-Chlorotoluene	ug/L	<0.50	1.0	01/15/18 12:41	
4-Chlorotoluene	ug/L	<0.21	1.0	01/15/18 12:41	
Benzene	ug/L	<0.50	1.0	01/15/18 12:41	
Bromobenzene	ug/L	<0.23	1.0	01/15/18 12:41	
Bromochloromethane	ug/L	<0.34	1.0	01/15/18 12:41	
Bromodichloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Bromoform	ug/L	<0.50	1.0	01/15/18 12:41	
Bromomethane	ug/L	<2.4	5.0	01/15/18 12:41	
Carbon tetrachloride	ug/L	<0.50	1.0	01/15/18 12:41	
Chlorobenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Chloroethane	ug/L	<0.37	1.0	01/15/18 12:41	
Chloroform	ug/L	<2.5	5.0	01/15/18 12:41	
Chloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromochloromethane	ug/L	<0.50	1.0	01/15/18 12:41	
Dibromomethane	ug/L	<0.43	1.0	01/15/18 12:41	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/15/18 12:41	
Diisopropyl ether	ug/L	<0.50	1.0	01/15/18 12:41	
Ethylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

METHOD BLANK: 1638744 Matrix: Water
Associated Lab Samples: 40163466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/15/18 12:41	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/15/18 12:41	
m&p-Xylene	ug/L	<1.0	2.0	01/15/18 12:41	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/15/18 12:41	
Methylene Chloride	ug/L	<0.23	1.0	01/15/18 12:41	
n-Butylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
n-Propylbenzene	ug/L	<0.50	1.0	01/15/18 12:41	
Naphthalene	ug/L	<2.5	5.0	01/15/18 12:41	
o-Xylene	ug/L	<0.50	1.0	01/15/18 12:41	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/15/18 12:41	
sec-Butylbenzene	ug/L	<2.2	5.0	01/15/18 12:41	
Styrene	ug/L	<0.50	1.0	01/15/18 12:41	
tert-Butylbenzene	ug/L	<0.18	1.0	01/15/18 12:41	
Tetrachloroethene	ug/L	<0.50	1.0	01/15/18 12:41	
Toluene	ug/L	<0.50	1.0	01/15/18 12:41	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/15/18 12:41	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/15/18 12:41	
Trichloroethene	ug/L	<0.33	1.0	01/15/18 12:41	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/15/18 12:41	
Vinyl chloride	ug/L	<0.18	1.0	01/15/18 12:41	
Xylene (Total)	ug/L	<1.5	3.0	01/15/18 12:41	
4-Bromofluorobenzene (S)	%	86	61-130	01/15/18 12:41	
Dibromofluoromethane (S)	%	105	67-130	01/15/18 12:41	
Toluene-d8 (S)	%	93	70-130	01/15/18 12:41	

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.1	84	70-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	42.6	85	71-132	
1,1-Dichloroethene	ug/L	50	41.1	82	75-130	
1,2,4-Trichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	34.6	69	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	46.0	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,2-Dichloroethane	ug/L	50	41.4	83	70-131	
1,2-Dichloropropane	ug/L	50	43.9	88	80-120	
1,3-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,4-Dichlorobenzene	ug/L	50	49.4	99	70-130	
Benzene	ug/L	50	44.8	90	73-145	
Bromodichloromethane	ug/L	50	47.7	95	70-130	
Bromoform	ug/L	50	56.4	113	67-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

LABORATORY CONTROL SAMPLE: 1638745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.6	63	26-128	
Carbon tetrachloride	ug/L	50	51.8	104	70-133	
Chlorobenzene	ug/L	50	54.0	108	70-130	
Chloroethane	ug/L	50	36.2	72	58-120	
Chloroform	ug/L	50	50.0	100	80-121	
Chloromethane	ug/L	50	23.3	47	40-127	
cis-1,2-Dichloroethene	ug/L	50	42.0	84	70-130	
cis-1,3-Dichloropropene	ug/L	50	42.6	85	70-130	
Dibromochloromethane	ug/L	50	55.8	112	70-130	
Dichlorodifluoromethane	ug/L	50	15.5	31	20-135	
Ethylbenzene	ug/L	50	50.5	101	87-129	
Isopropylbenzene (Cumene)	ug/L	50	54.7	109	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	38.1	76	66-143	
Methylene Chloride	ug/L	50	37.8	76	70-130	
o-Xylene	ug/L	50	52.7	105	70-130	
Styrene	ug/L	50	54.0	108	70-130	
Tetrachloroethene	ug/L	50	51.3	103	70-130	
Toluene	ug/L	50	48.9	98	82-130	
trans-1,2-Dichloroethene	ug/L	50	41.1	82	75-132	
trans-1,3-Dichloropropene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	50.6	101	70-130	
Trichlorofluoromethane	ug/L	50	45.2	90	76-133	
Vinyl chloride	ug/L	50	28.5	57	57-136	
Xylene (Total)	ug/L	150	160	107	70-130	
4-Bromofluorobenzene (S)	%			96	61-130	
Dibromofluoromethane (S)	%			103	67-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	40163465004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	52.0	53.2	104	106	70-134	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	44.1	42.4	88	85	70-130	4	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.2	50.4	98	101	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	44.9	45.1	90	90	71-133	1	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	48.5	50.3	97	101	75-136	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.6	46.1	94	91	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	34.5	35.0	69	70	63-123	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.7	49.8	93	100	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.4	50.0	99	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	43.8	44.7	88	89	70-131	2	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	43.9	45.7	88	91	80-120	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638896 1638897

Parameter	Units	40163465004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.50	50	50	49.9	50.9	100	102	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	53.3	52.4	107	105	70-130	2	20	
Benzene	ug/L	<0.50	50	50	45.7	48.0	91	96	73-145	5	20	
Bromodichloromethane	ug/L	<0.50	50	50	47.0	47.7	94	95	70-130	1	20	
Bromoform	ug/L	<0.50	50	50	56.5	57.9	113	116	67-130	2	20	
Bromomethane	ug/L	<2.4	50	50	42.6	51.2	85	102	26-129	18	20	
Carbon tetrachloride	ug/L	<0.50	50	50	55.3	56.4	111	113	70-134	2	20	
Chlorobenzene	ug/L	<0.50	50	50	53.7	57.5	107	115	70-130	7	20	
Chloroethane	ug/L	<0.37	50	50	42.2	46.4	84	93	58-120	9	20	
Chloroform	ug/L	<2.5	50	50	51.8	52.4	104	105	80-121	1	20	
Chloromethane	ug/L	<0.50	50	50	34.7	36.6	69	73	40-128	5	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	44.6	45.9	89	91	70-130	3	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	44.9	44.4	90	89	70-130	1	20	
Dibromochloromethane	ug/L	<0.50	50	50	56.7	60.4	113	121	70-130	6	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	42.1	42.9	84	86	20-146	2	20	
Ethylbenzene	ug/L	<0.50	50	50	50.1	53.8	100	108	87-129	7	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	58.2	111	116	70-130	5	20	
m&p-Xylene	ug/L	<1.0	100	100	106	113	106	113	70-130	6	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	40.0	40.2	80	80	66-143	0	20	
Methylene Chloride	ug/L	<0.23	50	50	40.1	40.4	80	81	70-130	1	20	
o-Xylene	ug/L	<0.50	50	50	53.8	56.4	108	113	70-130	5	20	
Styrene	ug/L	<0.50	50	50	53.9	56.2	108	112	70-130	4	20	
Tetrachloroethene	ug/L	<0.50	50	50	54.3	57.4	109	115	70-130	6	20	
Toluene	ug/L	<0.50	50	50	51.9	55.2	104	110	82-131	6	20	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	46.7	46.1	93	92	75-135	1	20	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	45.5	46.8	91	94	70-130	3	20	
Trichloroethene	ug/L	1.4	50	50	53.4	54.8	104	107	70-130	3	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	57.2	57.1	114	114	76-150	0	20	
Vinyl chloride	ug/L	<0.18	50	50	43.6	45.8	87	92	56-143	5	20	
Xylene (Total)	ug/L	<1.5	150	150	160	169	106	113	70-130	6	20	
4-Bromofluorobenzene (S)	%						96	95	61-130			
Dibromofluoromethane (S)	%						100	100	67-130			
Toluene-d8 (S)	%						91	94	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279622 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40163466001

METHOD BLANK: 1641251 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	01/24/18 08:28	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	01/24/18 08:28	
Decachlorobiphenyl (S)	%	82	53-105	01/24/18 08:28	
Tetrachloro-m-xylene (S)	%	80	50-102	01/24/18 08:28	

LABORATORY CONTROL SAMPLE: 1641252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	453	91	59-106	
Decachlorobiphenyl (S)	%			87	53-105	
Tetrachloro-m-xylene (S)	%			84	50-102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641253 1641254

Parameter	Units	40163717011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<27.1			<27.1	<27.1					20	
PCB-1221 (Aroclor 1221)	ug/kg	<27.1			<27.1	<27.1					20	
PCB-1232 (Aroclor 1232)	ug/kg	<27.1			<27.1	<27.1					20	
PCB-1242 (Aroclor 1242)	ug/kg	<27.1			<27.1	<27.1					20	
PCB-1248 (Aroclor 1248)	ug/kg	<27.1			<27.1	<27.1					20	
PCB-1254 (Aroclor 1254)	ug/kg	<27.1			<27.1	<27.1					20	
PCB-1260 (Aroclor 1260)	ug/kg	<27.1	542	542	471	476	87	88	51-109	1	20	
Decachlorobiphenyl (S)	%						83	83	53-105			
Tetrachloro-m-xylene (S)	%						86	89	50-102			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279487
QC Batch Method: EPA 3510
Analysis Method: EPA 8270
Analysis Description: 8270 TCLP MSSV
Associated Lab Samples: 40163466001

METHOD BLANK: 1640804
Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<3.8	12.5	01/23/18 08:28	
2,4,5-Trichlorophenol	ug/L	<1.7	5.6	01/23/18 08:28	
2,4,6-Trichlorophenol	ug/L	<4.2	14.1	01/23/18 08:28	
2,4-Dinitrotoluene	ug/L	<1.6	5.3	01/23/18 08:28	
2-Methylphenol(o-Cresol)	ug/L	<1.7	5.8	01/23/18 08:28	
3&4-Methylphenol(m&p Cresol)	ug/L	<3.1	10.4	01/23/18 08:28	
Hexachloro-1,3-butadiene	ug/L	<4.9	16.4	01/23/18 08:28	
Hexachlorobenzene	ug/L	<3.4	11.3	01/23/18 08:28	
Hexachloroethane	ug/L	<5.3	17.7	01/23/18 08:28	
Nitrobenzene	ug/L	<2.9	9.7	01/23/18 08:28	
Pentachlorophenol	ug/L	<2.9	9.6	01/23/18 08:28	
Phenol	ug/L	<1.2	4.0	01/23/18 08:28	
Pyridine	ug/L	<3.6	11.9	01/23/18 08:28	
2,4,6-Tribromophenol (S)	%	105	58-134	01/23/18 08:28	
2-Fluorobiphenyl (S)	%	93	54-122	01/23/18 08:28	
Nitrobenzene-d5 (S)	%	93	56-120	01/23/18 08:28	
Phenol-d6 (S)	%	35	16-120	01/23/18 08:28	

METHOD BLANK: 1638643
Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	62.5	01/23/18 11:43	
2,4,5-Trichlorophenol	ug/L	<8.4	28.0	01/23/18 11:43	
2,4,6-Trichlorophenol	ug/L	<21.1	70.4	01/23/18 11:43	
2,4-Dinitrotoluene	ug/L	<7.9	26.4	01/23/18 11:43	
2-Methylphenol(o-Cresol)	ug/L	<8.7	28.9	01/23/18 11:43	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	52.0	01/23/18 11:43	
Hexachloro-1,3-butadiene	ug/L	<24.6	82.0	01/23/18 11:43	
Hexachlorobenzene	ug/L	<16.9	56.4	01/23/18 11:43	
Hexachloroethane	ug/L	<26.6	88.6	01/23/18 11:43	
Nitrobenzene	ug/L	<14.5	48.3	01/23/18 11:43	
Pentachlorophenol	ug/L	<14.3	47.8	01/23/18 11:43	
Phenol	ug/L	<6.0	20.0	01/23/18 11:43	
Pyridine	ug/L	<17.9	59.6	01/23/18 11:43	
2,4,6-Tribromophenol (S)	%	99	58-134	01/23/18 11:43	
2-Fluorobiphenyl (S)	%	80	54-122	01/23/18 11:43	
Nitrobenzene-d5 (S)	%	84	56-120	01/23/18 11:43	
Phenol-d6 (S)	%	35	16-120	01/23/18 11:43	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

METHOD BLANK: 1639448 Matrix: Water
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	62.5	01/23/18 12:04	
2,4,5-Trichlorophenol	ug/L	<8.4	28.0	01/23/18 12:04	
2,4,6-Trichlorophenol	ug/L	<21.1	70.4	01/23/18 12:04	
2,4-Dinitrotoluene	ug/L	<7.9	26.4	01/23/18 12:04	
2-Methylphenol(o-Cresol)	ug/L	<8.7	28.9	01/23/18 12:04	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	52.0	01/23/18 12:04	
Hexachloro-1,3-butadiene	ug/L	<24.6	82.0	01/23/18 12:04	
Hexachlorobenzene	ug/L	<16.9	56.4	01/23/18 12:04	
Hexachloroethane	ug/L	<26.6	88.6	01/23/18 12:04	
Nitrobenzene	ug/L	<14.5	48.3	01/23/18 12:04	
Pentachlorophenol	ug/L	<14.3	47.8	01/23/18 12:04	
Phenol	ug/L	<6.0	20.0	01/23/18 12:04	
Pyridine	ug/L	<17.9	59.6	01/23/18 12:04	
2,4,6-Tribromophenol (S)	%	100	58-134	01/23/18 12:04	
2-Fluorobiphenyl (S)	%	89	54-122	01/23/18 12:04	
Nitrobenzene-d5 (S)	%	87	56-120	01/23/18 12:04	
Phenol-d6 (S)	%	35	16-120	01/23/18 12:04	

LABORATORY CONTROL SAMPLE: 1640805

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	38.3	77	44-84	
2,4,5-Trichlorophenol	ug/L	50	45.3	91	63-127	
2,4,6-Trichlorophenol	ug/L	50	48.5	97	65-125	
2,4-Dinitrotoluene	ug/L	50	49.6	99	68-137	
2-Methylphenol(o-Cresol)	ug/L	50	45.3	91	54-103	
3&4-Methylphenol(m&p Cresol)	ug/L	50	39.3	79	50-95	
Hexachloro-1,3-butadiene	ug/L	50	43.0	86	57-100	
Hexachlorobenzene	ug/L	50	54.1	108	70-130	
Hexachloroethane	ug/L	50	35.5	71	41-130	
Nitrobenzene	ug/L	50	46.3	93	70-130	
Pentachlorophenol	ug/L	50	41.9	84	57-121	
Phenol	ug/L	50	20.0	40	25-120	
Pyridine	ug/L	50	20.6	41	10-79	
2,4,6-Tribromophenol (S)	%			104	58-134	
2-Fluorobiphenyl (S)	%			88	54-122	
Nitrobenzene-d5 (S)	%			94	56-120	
Phenol-d6 (S)	%			40	16-120	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE SAMPLE: 1640806

Parameter	Units	40163429001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<1.5 mg/L	250	<1500	115	42-96	M6
2,4,5-Trichlorophenol	ug/L	<0.67 mg/L	250	<674	95	49-127	
2,4,6-Trichlorophenol	ug/L	<1.7 mg/L	250	<1690	96	52-125	
2,4-Dinitrotoluene	ug/L	<0.63 mg/L	250	<633	85	56-137	
2-Methylphenol(o-Cresol)	ug/L	<0.69 mg/L	250	<694	87	29-103	
3&4-Methylphenol(m&p Cresol)	ug/L	1.3J mg/L	250	1940J	250	21-95	M6
Hexachloro-1,3-butadiene	ug/L	<2.0 mg/L	250	<1970	107	52-100	M6
Hexachlorobenzene	ug/L	<1.4 mg/L	250	<1350	111	67-130	
Hexachloroethane	ug/L	<2.1 mg/L	250	<2130	159	41-130	M6
Nitrobenzene	ug/L	<1.2 mg/L	250	<1160	130	61-130	
Pentachlorophenol	ug/L	<1.1 mg/L	250	<1150	87	44-134	
Phenol	ug/L	1.2J mg/L	250	1390J	68	16-120	
Pyridine	ug/L	<1.4 mg/L	250	<1430	0	10-79	M6
2,4,6-Tribromophenol (S)	%				106	58-134	
2-Fluorobiphenyl (S)	%				123	54-122	S4
Nitrobenzene-d5 (S)	%				122	56-120	S4
Phenol-d6 (S)	%				40	16-120	

MATRIX SPIKE SAMPLE: 1640807

Parameter	Units	40163466001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	250	197	79	42-96	
2,4,5-Trichlorophenol	ug/L	<8.4	250	237	95	49-127	
2,4,6-Trichlorophenol	ug/L	<21.1	250	239	96	52-125	
2,4-Dinitrotoluene	ug/L	<7.9	250	253	101	56-137	
2-Methylphenol(o-Cresol)	ug/L	<8.7	250	210	84	29-103	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	250	193	77	21-95	
Hexachloro-1,3-butadiene	ug/L	<24.6	250	208	83	52-100	
Hexachlorobenzene	ug/L	<16.9	250	268	107	67-130	
Hexachloroethane	ug/L	<26.6	250	182	73	41-130	
Nitrobenzene	ug/L	<14.5	250	228	91	61-130	
Pentachlorophenol	ug/L	<14.3	250	229	91	44-134	
Phenol	ug/L	<6.0	250	97.3	39	16-120	
Pyridine	ug/L	<17.9	250	131	52	10-79	
2,4,6-Tribromophenol (S)	%				104	58-134	
2-Fluorobiphenyl (S)	%				90	54-122	
Nitrobenzene-d5 (S)	%				92	56-120	
Phenol-d6 (S)	%				38	16-120	

MATRIX SPIKE SAMPLE: 1640808

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<18.8	250	163	65	42-96	
2,4,5-Trichlorophenol	ug/L	<8.4	250	232	93	49-127	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

MATRIX SPIKE SAMPLE: 1640808

Parameter	Units	40163551001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2,4,6-Trichlorophenol	ug/L	<21.1	250	239	96	52-125	
2,4-Dinitrotoluene	ug/L	<7.9	250	241	96	56-137	
2-Methylphenol(o-Cresol)	ug/L	<8.7	250	212	85	29-103	
3&4-Methylphenol(m&p Cresol)	ug/L	<15.6	250	187	75	21-95	
Hexachloro-1,3-butadiene	ug/L	<24.6	250	192	77	52-100	
Hexachlorobenzene	ug/L	<16.9	250	260	104	67-130	
Hexachloroethane	ug/L	<26.6	250	153	61	41-130	
Nitrobenzene	ug/L	<14.5	250	220	88	61-130	
Pentachlorophenol	ug/L	<14.3	250	226	91	44-134	
Phenol	ug/L	6.3J	250	98.5	37	16-120	
Pyridine	ug/L	<17.9	250	141	56	10-79	
2,4,6-Tribromophenol (S)	%				102	58-134	
2-Fluorobiphenyl (S)	%				83	54-122	
Nitrobenzene-d5 (S)	%				88	56-120	
Phenol-d6 (S)	%				37	16-120	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279082
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40163466001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1638820

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.1	17.5	8	10	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279181
QC Batch Method: EPA 1010
Analysis Method: EPA 1010
Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 40163466001

LABORATORY CONTROL SAMPLE: 1639113

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		81.6			

LABORATORY CONTROL SAMPLE: 1639114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		81.0			

SAMPLE DUPLICATE: 1639264

Parameter	Units	10416843001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

SAMPLE DUPLICATE: 1639269

Parameter	Units	40163535001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279569
QC Batch Method: EPA 9045
Analysis Method: EPA 9045
Analysis Description: 9045 pH
Associated Lab Samples: 40163466001

SAMPLE DUPLICATE: 1641046

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.69	8.75	1	5	H6

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279381 Analysis Method: EPA 9095
QC Batch Method: EPA 9095 Analysis Description: 9095 PAINT FILTER LIQUID TEST
Associated Lab Samples: 40163466001

METHOD BLANK: 1639962 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Free Liquids	no units	Fail		01/18/18 11:18	

LABORATORY CONTROL SAMPLE: 1639963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Free Liquids	no units		Pass			

SAMPLE DUPLICATE: 1639990

Parameter	Units	40163588002 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	Pass	Pass			

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 279305
QC Batch Method: SM 2710F
Analysis Method: SM 2710F
Analysis Description: Spec.Gravity
Associated Lab Samples: 40163466001

SAMPLE DUPLICATE: 1639557

Parameter	Units	40163466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity	no units	2.2	2.3	5	20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 285348 Analysis Method: EPA 9014
QC Batch Method: SW-846 7.3.3.2 Analysis Description: 733C Reactive Cyanide
Associated Lab Samples: 40163466001

METHOD BLANK: 1399466 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	<0.40	1.0	01/18/18 23:14	

LABORATORY CONTROL SAMPLE: 1399467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	99.2	<0.40	0	0-8	

SAMPLE DUPLICATE: 1399468

Parameter	Units	30240704001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	<0.97		20	

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

QC Batch: 285346 Analysis Method: SM4500S2F-00
QC Batch Method: SW-846 7.3.4.2 Analysis Description: 734S Reactive Sulfide
Associated Lab Samples: 40163466001

METHOD BLANK: 1399456 Matrix: Solid
Associated Lab Samples: 40163466001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	<10	10	01/18/18 21:37	

LABORATORY CONTROL SAMPLE: 1399457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	35.9	18	0-52	

SAMPLE DUPLICATE: 1399458

Parameter	Units	30240704001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	<24.3		20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

SAMPLE QUALIFIERS

Sample: 40163466001

[1]	Sample container used for ZHE had head space.

ANALYTE QUALIFIERS

H6	Analysis initiated outside of the 15 minute EPA required holding time.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163466001	**COMP-1**	EPA 3541	279622	EPA 8082	279623
40163466001	**COMP-1**	EPA 3010	279371	EPA 6010	279592
40163466001	**COMP-1**	EPA 7470	279724	EPA 7470	279808
40163466001	**COMP-1**	EPA 3510	279487	EPA 8270	279542
40163466001	**COMP-1**	EPA 8260	279431		
40163466002	**TRIP BLANK**	EPA 8260	279069		
40163466001	**COMP-1**	ASTM D2974-87	279082		
40163466001	**COMP-1**	EPA 1010	279181		
40163466001	**COMP-1**	EPA 9045	279569		
40163466001	**COMP-1**	EPA 9095	279381		
40163466001	**COMP-1**	SM 2710F	279305		
40163466001	**COMP-1**	SW-846 7.3.3.2	285348	EPA 9014	285377
40163466001	**COMP-1**	SW-846 7.3.4.2	285346	SM4500S2F-00	285376

Pace Analytical®
www.pacelabs.com

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

401634666

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:	Rambøll
Branch/Location:	
Project Contact:	Susan Petrofske
Phone:	262-391-5990
Project Number:	1690005255-001
Project Name:	MW APRC Site
Project State:	WI
Sampled By (Print):	Brad Marschke
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only) / Profile #

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

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested	LAB COMMENTS (Lab Use Only)
001	Comp-1	1-10-18	1540	S	N	A	Pcb's (8082) B; TCLP VOC; TCLP RCRA 8; Free liquids; Flashpoint; PUB's (reactivity, sulfide); reactive cyanide	3-4ozag A; 2-40mlv B
002	Trip Blank							

1318 SW

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:
	1-12-18 9:10	Mary Jannin	1/12/18 9:10
Mary Jannin	1/12/18 1300		
Ecologistics	1-13-18 0845	Susan Uffelman	1-13-18 0845
		Pace	

PACE Project No.: 401634666

Receipt Temp = ROT °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

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: Ramboll

Project #: **WO# : 40163466**

40163466

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CSLogistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 11.8.19
Initials:

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 11/5/19

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

February 09, 2018

Jeanne Tarvin
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Dear Jeanne Tarvin:
Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Steven Mleczko
steve.mleczko@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jim Hutchens, Ramboll Environ
Jim Kane, Ramboll Environ
Snejana Karakis, Environ
David L. Markelz, Ramboll Environ
Michelle Murphy, Environ
Susan Petrofske, Ramboll Environ
Scott Tarmann, Ramboll Environ
Abigail M. Wedig, Environ International Corp

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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CERTIFICATIONS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163467001	**B-7-COMP**	Solid	01/10/18 09:55	01/13/18 10:01
40163467002	**B-14-COMP**	Solid	01/10/18 11:45	01/13/18 10:01
40163467003	**B-12-COMP**	Solid	01/10/18 12:45	01/13/18 10:01
40163467004	**B-10-COMP**	Solid	01/10/18 13:05	01/13/18 10:01
40163467005	**B-9-COMP**	Solid	01/10/18 13:35	01/13/18 10:01
40163467006	**B-8-COMP**	Solid	01/10/18 13:55	01/13/18 10:01
40163467007	**B-11-COMP**	Solid	01/10/18 14:25	01/13/18 10:01
40163467008	**B-13-COMP**	Solid	01/10/18 14:45	01/13/18 10:01
40163467009	**COMP-2**	Solid	01/10/18 00:00	01/13/18 08:45

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SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40163467001	**B-7-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467002	**B-14-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467003	**B-12-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467004	**B-10-COMP**	EPA 6010	JLD	1	PASI-G
		EPA 8260	LAP	13	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
40163467005	**B-9-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467006	**B-8-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467007	**B-11-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467008	**B-13-COMP**	ASTM D2974-87	KTS	1	PASI-G
40163467009	**COMP-2**	EPA 6010	JLD	1	PASI-G

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SUMMARY OF DETECTION

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163467001	**B-7-COMP**					
ASTM D2974-87	Percent Moisture	15.7	%	0.10	01/17/18 15:52	
40163467002	**B-14-COMP**					
ASTM D2974-87	Percent Moisture	17.8	%	0.10	01/17/18 15:52	
40163467003	**B-12-COMP**					
ASTM D2974-87	Percent Moisture	15.5	%	0.10	01/17/18 15:52	
40163467004	**B-10-COMP**					
ASTM D2974-87	Percent Moisture	14.3	%	0.10	01/17/18 15:52	
40163467005	**B-9-COMP**					
ASTM D2974-87	Percent Moisture	12.9	%	0.10	01/17/18 18:14	
40163467006	**B-8-COMP**					
ASTM D2974-87	Percent Moisture	17.6	%	0.10	01/17/18 18:14	
40163467007	**B-11-COMP**					
ASTM D2974-87	Percent Moisture	15.8	%	0.10	01/17/18 18:14	
40163467008	**B-13-COMP**					
ASTM D2974-87	Percent Moisture	15.4	%	0.10	01/17/18 18:14	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-7-COMP **Lab ID: 40163467001** Collected: 01/10/18 09:55 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.7**	%	0.10	0.10	1		01/17/18 15:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-14-COMP **Lab ID: 40163467002** Collected: 01/10/18 11:45 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.8**	%	0.10	0.10	1		01/17/18 15:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-12-COMP **Lab ID: 40163467003** Collected: 01/10/18 12:45 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.5**	%	0.10	0.10	1		01/17/18 15:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-10-COMP **Lab ID: 40163467004** Collected: 01/10/18 13:05 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 01/31/18 12:08								
Lead	**<0.022**	mg/L	0.065	0.022	1	02/01/18 09:55	02/01/18 17:05	7439-92-1	
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 01/31/18 12:08								
Benzene	**<5.0**	ug/L	10.0	5.0	10		02/01/18 19:07	71-43-2	H1,H2
2-Butanone (MEK)	**<29.8**	ug/L	200	29.8	10		02/01/18 19:07	78-93-3	H2
Carbon tetrachloride	**<5.0**	ug/L	10.0	5.0	10		02/01/18 19:07	56-23-5	H1,H2
Chlorobenzene	**<5.0**	ug/L	10.0	5.0	10		02/01/18 19:07	108-90-7	H1,H2
Chloroform	**<25.0**	ug/L	50.0	25.0	10		02/01/18 19:07	67-66-3	H1,H2
1,2-Dichloroethane	**<1.7**	ug/L	10.0	1.7	10		02/01/18 19:07	107-06-2	H1,H2
1,1-Dichloroethene	**<4.1**	ug/L	10.0	4.1	10		02/01/18 19:07	75-35-4	H1,H2
Tetrachloroethene	**<5.0**	ug/L	10.0	5.0	10		02/01/18 19:07	127-18-4	H1,H2
Trichloroethene	**<3.3**	ug/L	10.0	3.3	10		02/01/18 19:07	79-01-6	H1,H2
Vinyl chloride	**<1.8**	ug/L	10.0	1.8	10		02/01/18 19:07	75-01-4	H1,H2
Surrogates									
Toluene-d8 (S)	96	%	70-130		10		02/01/18 19:07	2037-26-5	
4-Bromofluorobenzene (S)	91	%	61-130		10		02/01/18 19:07	460-00-4	
Dibromofluoromethane (S)	101	%	67-130		10		02/01/18 19:07	1868-53-7	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.3**	%	0.10	0.10	1		01/17/18 15:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-9-COMP **Lab ID: 40163467005** Collected: 01/10/18 13:35 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.9**	%	0.10	0.10	1		01/17/18 18:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-8-COMP **Lab ID: 40163467006** Collected: 01/10/18 13:55 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.6**	%	0.10	0.10	1		01/17/18 18:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-11-COMP **Lab ID: 40163467007** Collected: 01/10/18 14:25 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.8**	%	0.10	0.10	1		01/17/18 18:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: B-13-COMP **Lab ID: 40163467008** Collected: 01/10/18 14:45 Received: 01/13/18 10:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.4**	%	0.10	0.10	1		01/17/18 18:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Sample: COMP-2 **Lab ID: 40163467009** Collected: 01/10/18 00:00 Received: 01/13/18 08:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 02/05/18 11:55								
Lead	**<0.022**	mg/L	0.065	0.022	1	02/06/18 14:51	02/08/18 13:05	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 280341 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40163467004

METHOD BLANK: 1644632 Matrix: Water
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0043	0.013	02/01/18 16:55	

METHOD BLANK: 1643396 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/01/18 17:17	

METHOD BLANK: 1644169 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/01/18 17:22	

METHOD BLANK: 1644282 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/01/18 17:12	

LABORATORY CONTROL SAMPLE: 1644633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644634 1644635

Parameter	Units	40163467004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	<0.022	2.5	2.5	2.4	2.6	98	103	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 280631 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 40163467009

METHOD BLANK: 1645650 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/07/18 18:33	

METHOD BLANK: 1645686 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/07/18 18:41	

METHOD BLANK: 1646087 Matrix: Water
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0043	0.013	02/08/18 13:01	

METHOD BLANK: 1645607 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/08/18 13:18	

METHOD BLANK: 1645676 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/08/18 13:30	

METHOD BLANK: 1644549 Matrix: Solid
Associated Lab Samples: 40163467009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.022	0.065	02/08/18 13:37	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

LABORATORY CONTROL SAMPLE: 1646088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.49	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1646089 1646090

Parameter	Units	40163467009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	<0.022	2.5	2.5	2.5	2.4	98	97	75-125	1	20	

MATRIX SPIKE SAMPLE: 1646091

Parameter	Units	40163822001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	0.023J	2.5	2.5	99	75-125	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 280332 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40163467004

METHOD BLANK: 1644605 Matrix: Water
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.41	1.0	02/01/18 09:46	
1,2-Dichloroethane	ug/L	<0.17	1.0	02/01/18 09:46	
2-Butanone (MEK)	ug/L	<3.0	20.0	02/01/18 09:46	
Benzene	ug/L	<0.50	1.0	02/01/18 09:46	
Carbon tetrachloride	ug/L	<0.50	1.0	02/01/18 09:46	
Chlorobenzene	ug/L	<0.50	1.0	02/01/18 09:46	
Chloroform	ug/L	<2.5	5.0	02/01/18 09:46	
Tetrachloroethene	ug/L	<0.50	1.0	02/01/18 09:46	
Trichloroethene	ug/L	<0.33	1.0	02/01/18 09:46	
Vinyl chloride	ug/L	<0.18	1.0	02/01/18 09:46	
4-Bromofluorobenzene (S)	%	90	61-130	02/01/18 09:46	
Dibromofluoromethane (S)	%	107	67-130	02/01/18 09:46	
Toluene-d8 (S)	%	96	70-130	02/01/18 09:46	

METHOD BLANK: 1644170 Matrix: Solid
Associated Lab Samples: 40163467004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<4.1	10.0	02/01/18 18:45	
1,2-Dichloroethane	ug/L	<1.7	10.0	02/01/18 18:45	
2-Butanone (MEK)	ug/L	<29.8	200	02/01/18 18:45	
Benzene	ug/L	<5.0	10.0	02/01/18 18:45	
Carbon tetrachloride	ug/L	<5.0	10.0	02/01/18 18:45	
Chlorobenzene	ug/L	<5.0	10.0	02/01/18 18:45	
Chloroform	ug/L	<25.0	50.0	02/01/18 18:45	
Tetrachloroethene	ug/L	<5.0	10.0	02/01/18 18:45	
Trichloroethene	ug/L	<3.3	10.0	02/01/18 18:45	
Vinyl chloride	ug/L	<1.8	10.0	02/01/18 18:45	
4-Bromofluorobenzene (S)	%	88	61-130	02/01/18 18:45	
Dibromofluoromethane (S)	%	99	67-130	02/01/18 18:45	
Toluene-d8 (S)	%	93	70-130	02/01/18 18:45	

LABORATORY CONTROL SAMPLE: 1644606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	52.1	104	75-130	
1,2-Dichloroethane	ug/L	50	53.4	107	70-131	
Benzene	ug/L	50	54.0	108	73-145	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

LABORATORY CONTROL SAMPLE: 1644606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	59.2	118	70-133	
Chlorobenzene	ug/L	50	53.8	108	70-130	
Chloroform	ug/L	50	53.4	107	80-121	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Trichloroethene	ug/L	50	53.4	107	70-130	
Vinyl chloride	ug/L	50	45.1	90	57-136	
4-Bromofluorobenzene (S)	%			98	61-130	
Dibromofluoromethane (S)	%			104	67-130	
Toluene-d8 (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644607 1644608

Parameter	Units	40163467004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	<4.1	500	500	464	507	93	101	75-136	9	20	H1
1,2-Dichloroethane	ug/L	<1.7	500	500	483	509	97	102	70-131	5	20	H1
Benzene	ug/L	<5.0	500	500	491	534	98	107	73-145	8	20	H1
Carbon tetrachloride	ug/L	<5.0	500	500	550	579	110	116	70-134	5	20	H1
Chlorobenzene	ug/L	<5.0	500	500	538	526	108	105	70-130	2	20	H1
Chloroform	ug/L	<25.0	500	500	489	529	98	106	80-121	8	20	H1
Tetrachloroethene	ug/L	<5.0	500	500	504	519	101	104	70-130	3	20	H1
Trichloroethene	ug/L	<3.3	500	500	562	574	112	115	70-130	2	20	H1
Vinyl chloride	ug/L	<1.8	500	500	428	448	86	90	56-143	5	20	H1
4-Bromofluorobenzene (S)	%						99	100	61-130			
Dibromofluoromethane (S)	%						94	100	67-130			
Toluene-d8 (S)	%						94	94	70-130			

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 279331 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40163467001, 40163467002, 40163467003, 40163467004

SAMPLE DUPLICATE: 1639690

Parameter	Units	40163522002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.5	6.4	1	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

QC Batch: 279333 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40163467005, 40163467006, 40163467007, 40163467008

SAMPLE DUPLICATE: 1639770

Parameter	Units	40163567001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.2	6.2	0	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

SAMPLE QUALIFIERS

Sample: 40163467004

[1]	The sample was leached with a TCLP 1 solution that exceeded the acceptable pH range of 4.88 to 4.89 pH units with a pH of 4.86. There is insufficient sample volume available to re-leach the samples.

ANALYTE QUALIFIERS

H1	Analysis conducted outside the recognized method holding time.
H2	Extraction or preparation was conducted outside of the recognized method holding time.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC SITE
Pace Project No.: 40163467

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163467004	**B-10-COMP**	EPA 3010	280341	EPA 6010	280381
40163467009	**COMP-2**	EPA 3010	280631	EPA 6010	280744
40163467004	**B-10-COMP**	EPA 8260	280332		
40163467001	**B-7-COMP**	ASTM D2974-87	279331		
40163467002	**B-14-COMP**	ASTM D2974-87	279331		
40163467003	**B-12-COMP**	ASTM D2974-87	279331		
40163467004	**B-10-COMP**	ASTM D2974-87	279331		
40163467005	**B-9-COMP**	ASTM D2974-87	279333		
40163467006	**B-8-COMP**	ASTM D2974-87	279333		
40163467007	**B-11-COMP**	ASTM D2974-87	279333		
40163467008	**B-13-COMP**	ASTM D2974-87	279333		

Pace Analytical®
www.pacelabs.com

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

40163467

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:	Ram6011
Branch/Location:	
Project Contact:	Susan Petrofske
Phone:	262-391-5990
Project Number:	1690005255-001
Project Name:	MU APRC Site
Project State:	WI
Sampled By (Print):	Brad Macschke
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
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

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: PCB Protocol B	TCLP VOCs	TCLP RCRA 8	Free liquids	Flashpoint	PCBs, percent solids	Reactive Cyanide*	TCLP Lead	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	B-7-Comp	1-10-18	0955	S	N	A	X									1-4ozag A	
002	B-14-Comp		1145				X										
003	B-12-Comp		1245														
004	B-10-Comp		1305				X						0	X	Hold All Samples on this COC until further Notice		
005	B-9-Comp		1335														
006	B-8-Comp		1355														
007	B-11-Comp		1425														
008	B-13-Comp		1445														
009	Comp-2 D	1-10-18	Sum 4/1/18	S									0	X	composite of -001 & -002 sum 4/1/18		
	Dedded per client Sum 4/1/18																

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:
	1-12-18 9:10	Mary Jannin	1/12/18 9:10
Mary Jannin	1/12/18 1300		
C Logsdon	1-13-18 0845	Susan Kluge Pace	1-13-18 0845

PACE Project No.
40163467

Receipt Temp = R0 T °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 08/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Client Name: Ramboll

Project #: **WO# : 40163467**

40163467

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CSLogistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used N/A **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 11/3/18
Initials: SW

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 11/5/18

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

January 25, 2018

Susan Petrofske
Ramboll Environ
175 North Corporate Drive
Suite 160
Brookfield, WI 53045

RE: Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Dear Susan Petrofske:
Enclosed are the analytical results for sample(s) received by the laboratory on January 12, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Megan McCabe
megan.mccabe@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #:MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10417103001	**SG-1**	Air	01/11/18 12:58	01/12/18 12:30
10417103002	**SG-2**	Air	01/11/18 13:09	01/12/18 12:30
10417103003	**SG-3**	Air	01/11/18 13:15	01/12/18 12:30

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10417103001	**SG-1**	TO-15	NCK	61
10417103002	**SG-2**	TO-15	NCK	61
10417103003	**SG-3**	TO-15	NCK	61

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Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Method: **TO-15**
Description: TO15 MSV AIR
Client: Ramboll Environ- WI
Date: January 25, 2018

General Information:
3 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 518323

A3: The sample was analyzed by serial dilution.
- SG-2 (Lab ID: 10417103002)
  - Tetrachloroethene

C8: Result may be biased high due to carryover from previously analyzed sample.
- SG-2 (Lab ID: 10417103002)
  - Cyclohexane
  - n-Heptane

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

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Sample: SG-1 **Lab ID: 10417103001** Collected: 01/11/18 12:58 Received: 01/12/18 12:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**<2.3**	ug/m3	3.7	2.3	1.55		01/16/18 22:15	67-64-1	
Benzene	**138**	ug/m3	1.0	0.23	1.55		01/16/18 22:15	71-43-2	
Benzyl chloride	**<0.37**	ug/m3	1.6	0.37	1.55		01/16/18 22:15	100-44-7	
Bromodichloromethane	**<0.55**	ug/m3	2.1	0.55	1.55		01/16/18 22:15	75-27-4	
Bromoform	**<1.1**	ug/m3	3.3	1.1	1.55		01/16/18 22:15	75-25-2	
Bromomethane	**<0.32**	ug/m3	1.2	0.32	1.55		01/16/18 22:15	74-83-9	
1,3-Butadiene	**<0.32**	ug/m3	0.70	0.32	1.55		01/16/18 22:15	106-99-0	
2-Butanone (MEK)	**<0.31**	ug/m3	4.6	0.31	1.55		01/16/18 22:15	78-93-3	
Carbon disulfide	**13.7**	ug/m3	0.98	0.28	1.55		01/16/18 22:15	75-15-0	
Carbon tetrachloride	**<0.49**	ug/m3	2.0	0.49	1.55		01/16/18 22:15	56-23-5	
Chlorobenzene	**<0.28**	ug/m3	1.5	0.28	1.55		01/16/18 22:15	108-90-7	
Chloroethane	**<0.32**	ug/m3	0.84	0.32	1.55		01/16/18 22:15	75-00-3	
Chloroform	**<0.36**	ug/m3	1.5	0.36	1.55		01/16/18 22:15	67-66-3	
Chloromethane	**1.4**	ug/m3	0.65	0.21	1.55		01/16/18 22:15	74-87-3	
Cyclohexane	**6270**	ug/m3	56.4	18.3	80.5		01/17/18 12:45	110-82-7	
Dibromochloromethane	**<0.69**	ug/m3	2.7	0.69	1.55		01/16/18 22:15	124-48-1	
1,2-Dibromoethane (EDB)	**<0.52**	ug/m3	2.4	0.52	1.55		01/16/18 22:15	106-93-4	
1,2-Dichlorobenzene	**<0.51**	ug/m3	1.9	0.51	1.55		01/16/18 22:15	95-50-1	
1,3-Dichlorobenzene	**<0.72**	ug/m3	1.9	0.72	1.55		01/16/18 22:15	541-73-1	
1,4-Dichlorobenzene	**<0.34**	ug/m3	1.9	0.34	1.55		01/16/18 22:15	106-46-7	
Dichlorodifluoromethane	**1.7**	ug/m3	1.6	0.64	1.55		01/16/18 22:15	75-71-8	
1,1-Dichloroethane	**<0.33**	ug/m3	1.3	0.33	1.55		01/16/18 22:15	75-34-3	
1,2-Dichloroethane	**<0.31**	ug/m3	1.3	0.31	1.55		01/16/18 22:15	107-06-2	
1,1-Dichloroethene	**<0.37**	ug/m3	1.3	0.37	1.55		01/16/18 22:15	75-35-4	
cis-1,2-Dichloroethene	**28.6**	ug/m3	1.3	0.53	1.55		01/16/18 22:15	156-59-2	
trans-1,2-Dichloroethene	**<0.46**	ug/m3	1.3	0.46	1.55		01/16/18 22:15	156-60-5	
1,2-Dichloropropane	**<0.47**	ug/m3	1.5	0.47	1.55		01/16/18 22:15	78-87-5	
cis-1,3-Dichloropropene	**<0.38**	ug/m3	1.4	0.38	1.55		01/16/18 22:15	10061-01-5	
trans-1,3-Dichloropropene	**<0.65**	ug/m3	1.4	0.65	1.55		01/16/18 22:15	10061-02-6	
Dichlorotetrafluoroethane	**<0.69**	ug/m3	2.2	0.69	1.55		01/16/18 22:15	76-14-2	
Ethanol	**10.2**	ug/m3	3.0	0.72	1.55		01/16/18 22:15	64-17-5	
Ethyl acetate	**<0.30**	ug/m3	1.1	0.30	1.55		01/16/18 22:15	141-78-6	
Ethylbenzene	**54.2**	ug/m3	1.4	0.27	1.55		01/16/18 22:15	100-41-4	
4-Ethyltoluene	**16.6**	ug/m3	1.6	0.33	1.55		01/16/18 22:15	622-96-8	
n-Heptane	**1760**	ug/m3	66.8	16.9	80.5		01/17/18 12:45	142-82-5	
Hexachloro-1,3-butadiene	**<1.3**	ug/m3	3.4	1.3	1.55		01/16/18 22:15	87-68-3	
n-Hexane	**1890**	ug/m3	58.0	26.8	80.5		01/17/18 12:45	110-54-3	
2-Hexanone	**<0.95**	ug/m3	6.5	0.95	1.55		01/16/18 22:15	591-78-6	
Methylene Chloride	**<2.4**	ug/m3	5.5	2.4	1.55		01/16/18 22:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.55**	ug/m3	6.5	0.55	1.55		01/16/18 22:15	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/m3	5.7	1.0	1.55		01/16/18 22:15	1634-04-4	
Naphthalene	**4.9**	ug/m3	4.1	0.93	1.55		01/16/18 22:15	91-20-3	
2-Propanol	**<1.9**	ug/m3	3.9	1.9	1.55		01/16/18 22:15	67-63-0	
Propylene	**142**	ug/m3	28.2	12.6	80.5		01/17/18 12:45	115-07-1	
Styrene	**0.85J**	ug/m3	1.3	0.26	1.55		01/16/18 22:15	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.45**	ug/m3	1.1	0.45	1.55		01/16/18 22:15	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Sample: SG-1 **Lab ID: 10417103001** Collected: 01/11/18 12:58 Received: 01/12/18 12:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	**259**	ug/m3	2.1	0.44	1.55		01/16/18 22:15	127-18-4	
Tetrahydrofuran	**<0.42**	ug/m3	0.93	0.42	1.55		01/16/18 22:15	109-99-9	
Toluene	**482**	ug/m3	62.0	12.8	80.5		01/17/18 12:45	108-88-3	
1,2,4-Trichlorobenzene	**<1.5**	ug/m3	5.8	1.5	1.55		01/16/18 22:15	120-82-1	
1,1,1-Trichloroethane	**<0.53**	ug/m3	1.7	0.53	1.55		01/16/18 22:15	71-55-6	
1,1,2-Trichloroethane	**<0.35**	ug/m3	1.7	0.35	1.55		01/16/18 22:15	79-00-5	
Trichloroethene	**<0.42**	ug/m3	1.7	0.42	1.55		01/16/18 22:15	79-01-6	
Trichlorofluoromethane	**<0.65**	ug/m3	1.8	0.65	1.55		01/16/18 22:15	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.57**	ug/m3	2.5	0.57	1.55		01/16/18 22:15	76-13-1	
1,2,4-Trimethylbenzene	**40.6**	ug/m3	1.5	0.27	1.55		01/16/18 22:15	95-63-6	
1,3,5-Trimethylbenzene	**22.3**	ug/m3	1.5	0.64	1.55		01/16/18 22:15	108-67-8	
Vinyl acetate	**<0.26**	ug/m3	1.1	0.26	1.55		01/16/18 22:15	108-05-4	
Vinyl chloride	**<0.20**	ug/m3	0.40	0.20	1.55		01/16/18 22:15	75-01-4	
m&p-Xylene	**234**	ug/m3	2.7	0.54	1.55		01/16/18 22:15	179601-23-1	
o-Xylene	**78.2**	ug/m3	1.4	0.58	1.55		01/16/18 22:15	95-47-6	

Sample: SG-2 **Lab ID: 10417103002** Collected: 01/11/18 13:09 Received: 01/12/18 12:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**26.9**	ug/m3	4.0	2.5	1.64		01/16/18 22:53	67-64-1	
Benzene	**4.8**	ug/m3	1.1	0.25	1.64		01/16/18 22:53	71-43-2	
Benzyl chloride	**<0.39**	ug/m3	1.7	0.39	1.64		01/16/18 22:53	100-44-7	
Bromodichloromethane	**<0.58**	ug/m3	2.2	0.58	1.64		01/16/18 22:53	75-27-4	
Bromoform	**<1.1**	ug/m3	3.4	1.1	1.64		01/16/18 22:53	75-25-2	
Bromomethane	**<0.34**	ug/m3	1.3	0.34	1.64		01/16/18 22:53	74-83-9	
1,3-Butadiene	**<0.34**	ug/m3	0.74	0.34	1.64		01/16/18 22:53	106-99-0	
2-Butanone (MEK)	**8.6**	ug/m3	4.9	0.33	1.64		01/16/18 22:53	78-93-3	
Carbon disulfide	**3.6**	ug/m3	1.0	0.29	1.64		01/16/18 22:53	75-15-0	
Carbon tetrachloride	**<0.52**	ug/m3	2.1	0.52	1.64		01/16/18 22:53	56-23-5	
Chlorobenzene	**<0.29**	ug/m3	1.5	0.29	1.64		01/16/18 22:53	108-90-7	
Chloroethane	**<0.33**	ug/m3	0.89	0.33	1.64		01/16/18 22:53	75-00-3	
Chloroform	**<0.38**	ug/m3	1.6	0.38	1.64		01/16/18 22:53	67-66-3	
Chloromethane	**<0.22**	ug/m3	0.69	0.22	1.64		01/16/18 22:53	74-87-3	
Cyclohexane	**9.7**	ug/m3	1.1	0.37	1.64		01/16/18 22:53	110-82-7	C8
Dibromochloromethane	**<0.72**	ug/m3	2.8	0.72	1.64		01/16/18 22:53	124-48-1	
1,2-Dibromoethane (EDB)	**<0.55**	ug/m3	2.6	0.55	1.64		01/16/18 22:53	106-93-4	
1,2-Dichlorobenzene	**<0.53**	ug/m3	2.0	0.53	1.64		01/16/18 22:53	95-50-1	
1,3-Dichlorobenzene	**<0.76**	ug/m3	2.0	0.76	1.64		01/16/18 22:53	541-73-1	
1,4-Dichlorobenzene	**<0.36**	ug/m3	2.0	0.36	1.64		01/16/18 22:53	106-46-7	
Dichlorodifluoromethane	**1.0J**	ug/m3	1.7	0.68	1.64		01/16/18 22:53	75-71-8	
1,1-Dichloroethane	**<0.35**	ug/m3	1.3	0.35	1.64		01/16/18 22:53	75-34-3	
1,2-Dichloroethane	**<0.32**	ug/m3	1.3	0.32	1.64		01/16/18 22:53	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Sample: SG-2 **Lab ID: 10417103002** Collected: 01/11/18 13:09 Received: 01/12/18 12:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1-Dichloroethene	**<0.39**	ug/m3	1.3	0.39	1.64		01/16/18 22:53	75-35-4	
cis-1,2-Dichloroethene	**<0.56**	ug/m3	1.3	0.56	1.64		01/16/18 22:53	156-59-2	
trans-1,2-Dichloroethene	**<0.48**	ug/m3	1.3	0.48	1.64		01/16/18 22:53	156-60-5	
1,2-Dichloropropane	**<0.50**	ug/m3	1.5	0.50	1.64		01/16/18 22:53	78-87-5	
cis-1,3-Dichloropropene	**<0.40**	ug/m3	1.5	0.40	1.64		01/16/18 22:53	10061-01-5	
trans-1,3-Dichloropropene	**<0.69**	ug/m3	1.5	0.69	1.64		01/16/18 22:53	10061-02-6	
Dichlorotetrafluoroethane	**<0.72**	ug/m3	2.3	0.72	1.64		01/16/18 22:53	76-14-2	
Ethanol	**8.7**	ug/m3	3.1	0.76	1.64		01/16/18 22:53	64-17-5	
Ethyl acetate	**<0.32**	ug/m3	1.2	0.32	1.64		01/16/18 22:53	141-78-6	
Ethylbenzene	**12.9**	ug/m3	1.4	0.28	1.64		01/16/18 22:53	100-41-4	
4-Ethyltoluene	**6.3**	ug/m3	1.6	0.35	1.64		01/16/18 22:53	622-96-8	
n-Heptane	**11.2**	ug/m3	1.4	0.34	1.64		01/16/18 22:53	142-82-5	C8
Hexachloro-1,3-butadiene	**<1.4**	ug/m3	3.6	1.4	1.64		01/16/18 22:53	87-68-3	
n-Hexane	**15.5**	ug/m3	1.2	0.55	1.64		01/16/18 22:53	110-54-3	
2-Hexanone	**<1.0**	ug/m3	6.8	1.0	1.64		01/16/18 22:53	591-78-6	
Methylene Chloride	**5.3J**	ug/m3	5.8	2.5	1.64		01/16/18 22:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.58**	ug/m3	6.8	0.58	1.64		01/16/18 22:53	108-10-1	
Methyl-tert-butyl ether	**<1.1**	ug/m3	6.0	1.1	1.64		01/16/18 22:53	1634-04-4	
Naphthalene	**4.6**	ug/m3	4.4	0.98	1.64		01/16/18 22:53	91-20-3	
2-Propanol	**<2.0**	ug/m3	4.1	2.0	1.64		01/16/18 22:53	67-63-0	
Propylene	**35.7**	ug/m3	0.57	0.26	1.64		01/16/18 22:53	115-07-1	
Styrene	**0.86J**	ug/m3	1.4	0.27	1.64		01/16/18 22:53	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.48**	ug/m3	1.1	0.48	1.64		01/16/18 22:53	79-34-5	
Tetrachloroethene	**15500**	ug/m3	362	75.3	262.4		01/17/18 13:19	127-18-4	A3
Tetrahydrofuran	**<0.45**	ug/m3	0.98	0.45	1.64		01/16/18 22:53	109-99-9	
Toluene	**51.0**	ug/m3	1.3	0.26	1.64		01/16/18 22:53	108-88-3	
1,2,4-Trichlorobenzene	**<1.6**	ug/m3	6.2	1.6	1.64		01/16/18 22:53	120-82-1	
1,1,1-Trichloroethane	**<0.56**	ug/m3	1.8	0.56	1.64		01/16/18 22:53	71-55-6	
1,1,2-Trichloroethane	**<0.37**	ug/m3	1.8	0.37	1.64		01/16/18 22:53	79-00-5	
Trichloroethene	**23.3**	ug/m3	1.8	0.44	1.64		01/16/18 22:53	79-01-6	
Trichlorofluoromethane	**<0.69**	ug/m3	1.9	0.69	1.64		01/16/18 22:53	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.61**	ug/m3	2.6	0.61	1.64		01/16/18 22:53	76-13-1	
1,2,4-Trimethylbenzene	**14.6**	ug/m3	1.6	0.28	1.64		01/16/18 22:53	95-63-6	
1,3,5-Trimethylbenzene	**4.2**	ug/m3	1.6	0.68	1.64		01/16/18 22:53	108-67-8	
Vinyl acetate	**<0.27**	ug/m3	1.2	0.27	1.64		01/16/18 22:53	108-05-4	
Vinyl chloride	**<0.21**	ug/m3	0.43	0.21	1.64		01/16/18 22:53	75-01-4	
m&p-Xylene	**54.0**	ug/m3	2.9	0.57	1.64		01/16/18 22:53	179601-23-1	
o-Xylene	**18.6**	ug/m3	1.4	0.61	1.64		01/16/18 22:53	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Sample: SG-3 **Lab ID: 10417103003** Collected: 01/11/18 13:15 Received: 01/12/18 12:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**20.1**	ug/m3	3.9	2.4	1.61		01/16/18 23:29	67-64-1	
Benzene	**3.6**	ug/m3	1.0	0.24	1.61		01/16/18 23:29	71-43-2	
Benzyl chloride	**<0.38**	ug/m3	1.7	0.38	1.61		01/16/18 23:29	100-44-7	
Bromodichloromethane	**<0.57**	ug/m3	2.2	0.57	1.61		01/16/18 23:29	75-27-4	
Bromoform	**<1.1**	ug/m3	3.4	1.1	1.61		01/16/18 23:29	75-25-2	
Bromomethane	**<0.33**	ug/m3	1.3	0.33	1.61		01/16/18 23:29	74-83-9	
1,3-Butadiene	**<0.33**	ug/m3	0.72	0.33	1.61		01/16/18 23:29	106-99-0	
2-Butanone (MEK)	**5.9**	ug/m3	4.8	0.33	1.61		01/16/18 23:29	78-93-3	
Carbon disulfide	**3.3**	ug/m3	1.0	0.29	1.61		01/16/18 23:29	75-15-0	
Carbon tetrachloride	**<0.51**	ug/m3	2.1	0.51	1.61		01/16/18 23:29	56-23-5	
Chlorobenzene	**<0.29**	ug/m3	1.5	0.29	1.61		01/16/18 23:29	108-90-7	
Chloroethane	**<0.33**	ug/m3	0.87	0.33	1.61		01/16/18 23:29	75-00-3	
Chloroform	**<0.37**	ug/m3	1.6	0.37	1.61		01/16/18 23:29	67-66-3	
Chloromethane	**<0.22**	ug/m3	0.68	0.22	1.61		01/16/18 23:29	74-87-3	
Cyclohexane	**7.0**	ug/m3	1.1	0.37	1.61		01/16/18 23:29	110-82-7	
Dibromochloromethane	**<0.71**	ug/m3	2.8	0.71	1.61		01/16/18 23:29	124-48-1	
1,2-Dibromoethane (EDB)	**<0.54**	ug/m3	2.5	0.54	1.61		01/16/18 23:29	106-93-4	
1,2-Dichlorobenzene	**<0.52**	ug/m3	2.0	0.52	1.61		01/16/18 23:29	95-50-1	
1,3-Dichlorobenzene	**<0.75**	ug/m3	2.0	0.75	1.61		01/16/18 23:29	541-73-1	
1,4-Dichlorobenzene	**<0.35**	ug/m3	2.0	0.35	1.61		01/16/18 23:29	106-46-7	
Dichlorodifluoromethane	**1.3J**	ug/m3	1.6	0.67	1.61		01/16/18 23:29	75-71-8	
1,1-Dichloroethane	**<0.34**	ug/m3	1.3	0.34	1.61		01/16/18 23:29	75-34-3	
1,2-Dichloroethane	**<0.32**	ug/m3	1.3	0.32	1.61		01/16/18 23:29	107-06-2	
1,1-Dichloroethene	**<0.38**	ug/m3	1.3	0.38	1.61		01/16/18 23:29	75-35-4	
cis-1,2-Dichloroethene	**<0.55**	ug/m3	1.3	0.55	1.61		01/16/18 23:29	156-59-2	
trans-1,2-Dichloroethene	**<0.47**	ug/m3	1.3	0.47	1.61		01/16/18 23:29	156-60-5	
1,2-Dichloropropane	**<0.49**	ug/m3	1.5	0.49	1.61		01/16/18 23:29	78-87-5	
cis-1,3-Dichloropropene	**<0.39**	ug/m3	1.5	0.39	1.61		01/16/18 23:29	10061-01-5	
trans-1,3-Dichloropropene	**<0.68**	ug/m3	1.5	0.68	1.61		01/16/18 23:29	10061-02-6	
Dichlorotetrafluoroethane	**<0.71**	ug/m3	2.3	0.71	1.61		01/16/18 23:29	76-14-2	
Ethanol	**7.2**	ug/m3	3.1	0.75	1.61		01/16/18 23:29	64-17-5	
Ethyl acetate	**<0.32**	ug/m3	1.2	0.32	1.61		01/16/18 23:29	141-78-6	
Ethylbenzene	**7.5**	ug/m3	1.4	0.28	1.61		01/16/18 23:29	100-41-4	
4-Ethyltoluene	**4.8**	ug/m3	1.6	0.34	1.61		01/16/18 23:29	622-96-8	
n-Heptane	**7.5**	ug/m3	1.3	0.34	1.61		01/16/18 23:29	142-82-5	
Hexachloro-1,3-butadiene	**<1.4**	ug/m3	3.5	1.4	1.61		01/16/18 23:29	87-68-3	
n-Hexane	**9.3**	ug/m3	1.2	0.54	1.61		01/16/18 23:29	110-54-3	
2-Hexanone	**<0.99**	ug/m3	6.7	0.99	1.61		01/16/18 23:29	591-78-6	
Methylene Chloride	**<2.4**	ug/m3	5.7	2.4	1.61		01/16/18 23:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.57**	ug/m3	6.7	0.57	1.61		01/16/18 23:29	108-10-1	
Methyl-tert-butyl ether	**<1.1**	ug/m3	5.9	1.1	1.61		01/16/18 23:29	1634-04-4	
Naphthalene	**10**	ug/m3	4.3	0.96	1.61		01/16/18 23:29	91-20-3	
2-Propanol	**<2.0**	ug/m3	4.0	2.0	1.61		01/16/18 23:29	67-63-0	
Propylene	**18.4**	ug/m3	0.56	0.25	1.61		01/16/18 23:29	115-07-1	
Styrene	**0.77J**	ug/m3	1.4	0.27	1.61		01/16/18 23:29	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.47**	ug/m3	1.1	0.47	1.61		01/16/18 23:29	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Sample: SG-3 **Lab ID: 10417103003** Collected: 01/11/18 13:15 Received: 01/12/18 12:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	**151**	ug/m3	2.2	0.46	1.61		01/16/18 23:29	127-18-4	
Tetrahydrofuran	**<0.44**	ug/m3	0.97	0.44	1.61		01/16/18 23:29	109-99-9	
Toluene	**25.0**	ug/m3	1.2	0.26	1.61		01/16/18 23:29	108-88-3	
1,2,4-Trichlorobenzene	**<1.5**	ug/m3	6.1	1.5	1.61		01/16/18 23:29	120-82-1	
1,1,1-Trichloroethane	**<0.55**	ug/m3	1.8	0.55	1.61		01/16/18 23:29	71-55-6	
1,1,2-Trichloroethane	**<0.36**	ug/m3	1.8	0.36	1.61		01/16/18 23:29	79-00-5	
Trichloroethene	**<0.43**	ug/m3	1.8	0.43	1.61		01/16/18 23:29	79-01-6	
Trichlorofluoromethane	**<0.67**	ug/m3	1.8	0.67	1.61		01/16/18 23:29	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.59**	ug/m3	2.6	0.59	1.61		01/16/18 23:29	76-13-1	
1,2,4-Trimethylbenzene	**13.0**	ug/m3	1.6	0.28	1.61		01/16/18 23:29	95-63-6	
1,3,5-Trimethylbenzene	**3.4**	ug/m3	1.6	0.66	1.61		01/16/18 23:29	108-67-8	
Vinyl acetate	**<0.27**	ug/m3	1.2	0.27	1.61		01/16/18 23:29	108-05-4	
Vinyl chloride	**<0.20**	ug/m3	0.42	0.20	1.61		01/16/18 23:29	75-01-4	
m&p-Xylene	**33.7**	ug/m3	2.8	0.56	1.61		01/16/18 23:29	179601-23-1	
o-Xylene	**11.9**	ug/m3	1.4	0.60	1.61		01/16/18 23:29	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

QC Batch: 518323 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10417103001, 10417103002, 10417103003

METHOD BLANK: 2815128 Matrix: Air
Associated Lab Samples: 10417103001, 10417103002, 10417103003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.34	1.1	01/16/18 14:20	
1,1,2,2-Tetrachloroethane	ug/m3	<0.29	0.70	01/16/18 14:20	
1,1,2-Trichloroethane	ug/m3	<0.22	1.1	01/16/18 14:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.37	1.6	01/16/18 14:20	MN
1,1-Dichloroethane	ug/m3	<0.21	0.82	01/16/18 14:20	
1,1-Dichloroethene	ug/m3	<0.24	0.81	01/16/18 14:20	
1,2,4-Trichlorobenzene	ug/m3	<0.96	3.8	01/16/18 14:20	
1,2,4-Trimethylbenzene	ug/m3	<0.17	1.0	01/16/18 14:20	
1,2-Dibromoethane (EDB)	ug/m3	<0.33	1.6	01/16/18 14:20	
1,2-Dichlorobenzene	ug/m3	<0.33	1.2	01/16/18 14:20	
1,2-Dichloroethane	ug/m3	<0.20	0.82	01/16/18 14:20	MN
1,2-Dichloropropane	ug/m3	<0.31	0.94	01/16/18 14:20	
1,3,5-Trimethylbenzene	ug/m3	<0.41	1.0	01/16/18 14:20	
1,3-Butadiene	ug/m3	<0.21	0.45	01/16/18 14:20	
1,3-Dichlorobenzene	ug/m3	<0.47	1.2	01/16/18 14:20	
1,4-Dichlorobenzene	ug/m3	<0.22	1.2	01/16/18 14:20	
2-Butanone (MEK)	ug/m3	<0.20	3.0	01/16/18 14:20	
2-Hexanone	ug/m3	<0.61	4.2	01/16/18 14:20	
2-Propanol	ug/m3	<1.2	2.5	01/16/18 14:20	
4-Ethyltoluene	ug/m3	<0.21	1.0	01/16/18 14:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.36	4.2	01/16/18 14:20	
Acetone	ug/m3	<1.5	2.4	01/16/18 14:20	
Benzene	ug/m3	<0.15	0.65	01/16/18 14:20	MN
Benzyl chloride	ug/m3	<0.24	1.0	01/16/18 14:20	
Bromodichloromethane	ug/m3	<0.36	1.4	01/16/18 14:20	
Bromoform	ug/m3	<0.69	2.1	01/16/18 14:20	
Bromomethane	ug/m3	<0.21	0.79	01/16/18 14:20	
Carbon disulfide	ug/m3	<0.18	0.63	01/16/18 14:20	
Carbon tetrachloride	ug/m3	<0.32	1.3	01/16/18 14:20	MN
Chlorobenzene	ug/m3	<0.18	0.94	01/16/18 14:20	
Chloroethane	ug/m3	<0.20	0.54	01/16/18 14:20	
Chloroform	ug/m3	<0.23	0.99	01/16/18 14:20	MN
Chloromethane	ug/m3	<0.13	0.42	01/16/18 14:20	
cis-1,2-Dichloroethene	ug/m3	<0.34	0.81	01/16/18 14:20	
cis-1,3-Dichloropropene	ug/m3	<0.24	0.92	01/16/18 14:20	
Cyclohexane	ug/m3	<0.23	0.70	01/16/18 14:20	
Dibromochloromethane	ug/m3	<0.44	1.7	01/16/18 14:20	
Dichlorodifluoromethane	ug/m3	<0.42	1.0	01/16/18 14:20	
Dichlorotetrafluoroethane	ug/m3	<0.44	1.4	01/16/18 14:20	
Ethanol	ug/m3	<0.46	1.9	01/16/18 14:20	MN
Ethyl acetate	ug/m3	<0.20	0.73	01/16/18 14:20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

METHOD BLANK: 2815128 Matrix: Air
Associated Lab Samples: 10417103001, 10417103002, 10417103003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/m3	<0.17	0.88	01/16/18 14:20	
Hexachloro-1,3-butadiene	ug/m3	<0.87	2.2	01/16/18 14:20	
m&p-Xylene	ug/m3	<0.35	1.8	01/16/18 14:20	
Methyl-tert-butyl ether	ug/m3	<0.67	3.7	01/16/18 14:20	
Methylene Chloride	ug/m3	<1.5	3.5	01/16/18 14:20	
n-Heptane	ug/m3	<0.21	0.83	01/16/18 14:20	
n-Hexane	ug/m3	<0.33	0.72	01/16/18 14:20	
Naphthalene	ug/m3	<0.60	2.7	01/16/18 14:20	
o-Xylene	ug/m3	<0.37	0.88	01/16/18 14:20	
Propylene	ug/m3	<0.16	0.35	01/16/18 14:20	
Styrene	ug/m3	<0.17	0.87	01/16/18 14:20	
Tetrachloroethene	ug/m3	0.46J	1.4	01/16/18 14:20	MN
Tetrahydrofuran	ug/m3	<0.27	0.60	01/16/18 14:20	
Toluene	ug/m3	<0.16	0.77	01/16/18 14:20	
trans-1,2-Dichloroethene	ug/m3	<0.30	0.81	01/16/18 14:20	
trans-1,3-Dichloropropene	ug/m3	<0.42	0.92	01/16/18 14:20	
Trichloroethene	ug/m3	<0.27	1.1	01/16/18 14:20	MN
Trichlorofluoromethane	ug/m3	<0.42	1.1	01/16/18 14:20	
Vinyl acetate	ug/m3	<0.17	0.72	01/16/18 14:20	
Vinyl chloride	ug/m3	<0.13	0.26	01/16/18 14:20	

LABORATORY CONTROL SAMPLE: 2815129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	59.3	55.0	93	75-135	
1,1,2,2-Tetrachloroethane	ug/m3	76.1	75.4	99	74-146	
1,1,2-Trichloroethane	ug/m3	61	57.6	94	75-135	
1,1,2-Trichlorotrifluoroethane	ug/m3	80.2	85.8	107	63-139	
1,1-Dichloroethane	ug/m3	43.6	40.4	93	75-134	
1,1-Dichloroethene	ug/m3	39.9	38.3	96	74-137	
1,2,4-Trichlorobenzene	ug/m3	81.5	79.3	97	60-133	
1,2,4-Trimethylbenzene	ug/m3	53.5	54.0	101	70-137	
1,2-Dibromoethane (EDB)	ug/m3	85.1	80.8	95	75-140	
1,2-Dichlorobenzene	ug/m3	66	65.8	100	72-137	
1,2-Dichloroethane	ug/m3	44	41.4	94	75-136	
1,2-Dichloropropane	ug/m3	51.2	47.7	93	75-136	
1,3,5-Trimethylbenzene	ug/m3	53.5	53.1	99	73-133	
1,3-Butadiene	ug/m3	22.9	21.3	93	64-141	
1,3-Dichlorobenzene	ug/m3	63.6	65.1	102	74-137	
1,4-Dichlorobenzene	ug/m3	66	64.4	98	72-134	
2-Butanone (MEK)	ug/m3	33	31.5	95	65-143	
2-Hexanone	ug/m3	45.8	49.8	109	60-148	
2-Propanol	ug/m3	26.7	25.3	95	65-135	
4-Ethyltoluene	ug/m3	54	53.2	99	75-132	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

LABORATORY CONTROL SAMPLE: 2815129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/m3	45.8	48.7	106	70-135	
Acetone	ug/m3	25.8	22.8	88	59-132	
Benzene	ug/m3	35.1	31.8	91	75-134	
Benzyl chloride	ug/m3	54.7	67.0	122	56-150	
Bromodichloromethane	ug/m3	72.9	68.7	94	74-142	
Bromoform	ug/m3	111	126	114	69-150	
Bromomethane	ug/m3	40.3	36.8	91	61-141	
Carbon disulfide	ug/m3	33.2	27.8	84	66-134	
Carbon tetrachloride	ug/m3	65.2	63.9	98	60-145	
Chlorobenzene	ug/m3	51.5	48.8	95	75-128	
Chloroethane	ug/m3	26.6	26.8	101	65-143	
Chloroform	ug/m3	50.6	47.9	95	75-132	
Chloromethane	ug/m3	22.9	19.7	86	58-140	
cis-1,2-Dichloroethene	ug/m3	42.7	40.1	94	75-136	
cis-1,3-Dichloropropene	ug/m3	50.7	49.7	98	75-136	
Cyclohexane	ug/m3	35	33.9	97	70-133	
Dibromochloromethane	ug/m3	90.9	96.4	106	68-149	
Dichlorodifluoromethane	ug/m3	53.8	46.2	86	69-130	
Dichlorotetrafluoroethane	ug/m3	75.3	65.8	87	68-129	
Ethanol	ug/m3	20.3	19.7	97	65-146	
Ethyl acetate	ug/m3	37.4	34.1	91	68-136	
Ethylbenzene	ug/m3	47.7	45.8	96	75-133	
Hexachloro-1,3-butadiene	ug/m3	119	110	93	59-140	
m&p-Xylene	ug/m3	92.7	90.6	98	73-133	
Methyl-tert-butyl ether	ug/m3	38.5	34.2	89	73-132	
Methylene Chloride	ug/m3	38.8	38.3	99	67-132	
n-Heptane	ug/m3	45.8	40.6	89	64-136	
n-Hexane	ug/m3	35.8	32.5	91	72-129	
Naphthalene	ug/m3	58.6	53.8	92	55-136	
o-Xylene	ug/m3	48.1	45.2	94	71-132	
Propylene	ug/m3	18.9	16.3	86	37-150	
Styrene	ug/m3	47.2	48.9	104	74-139	
Tetrachloroethene	ug/m3	73.8	69.2	94	75-133	
Tetrahydrofuran	ug/m3	32.1	29.9	93	62-141	
Toluene	ug/m3	41.4	42.2	102	75-128	
trans-1,2-Dichloroethene	ug/m3	36.3	37.4	103	75-132	
trans-1,3-Dichloropropene	ug/m3	47.5	50.6	106	75-135	
Trichloroethene	ug/m3	58.4	55.0	94	75-135	
Trichlorofluoromethane	ug/m3	60.5	52.2	86	59-140	
Vinyl acetate	ug/m3	36.9	36.4	99	57-150	
Vinyl chloride	ug/m3	25.7	27.0	105	72-141	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

SAMPLE DUPLICATE: 2816474

Parameter	Units	10416900001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.53	<0.53		25	
1,1,2,2-Tetrachloroethane	ug/m3	<0.45	<0.45		25	
1,1,2-Trichloroethane	ug/m3	<0.35	<0.35		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.57	<0.57		25	
1,1-Dichloroethane	ug/m3	<0.33	<0.33		25	
1,1-Dichloroethene	ug/m3	<0.37	<0.37		25	
1,2,4-Trichlorobenzene	ug/m3	<1.5	<1.5		25	
1,2,4-Trimethylbenzene	ug/m3	3.8	3.8	0	25	
1,2-Dibromoethane (EDB)	ug/m3	<0.52	<0.52		25	
1,2-Dichlorobenzene	ug/m3	<0.51	<0.51		25	
1,2-Dichloroethane	ug/m3	<0.31	<0.31		25	
1,2-Dichloropropane	ug/m3	<0.47	<0.47		25	
1,3,5-Trimethylbenzene	ug/m3	0.93J	0.97J		25	
1,3-Butadiene	ug/m3	<0.32	<0.32		25	
1,3-Dichlorobenzene	ug/m3	<0.72	<0.72		25	
1,4-Dichlorobenzene	ug/m3	<0.34	<0.34		25	
2-Butanone (MEK)	ug/m3	1.7J	1.9J		25	
2-Hexanone	ug/m3	<0.95	<0.95		25	
2-Propanol	ug/m3	<1.9	<1.9		25	
4-Ethyltoluene	ug/m3	1.2J	1.2J		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.55	<0.55		25	
Acetone	ug/m3	14.4	14.6	1	25	
Benzene	ug/m3	4.8	4.8	1	25	
Benzyl chloride	ug/m3	<0.37	<0.37		25	
Bromodichloromethane	ug/m3	<0.55	<0.55		25	
Bromoform	ug/m3	<1.1	<1.1		25	
Bromomethane	ug/m3	<0.32	<0.32		25	
Carbon disulfide	ug/m3	0.38J	0.39J		25	
Carbon tetrachloride	ug/m3	<0.49	<0.49		25	
Chlorobenzene	ug/m3	<0.28	<0.28		25	
Chloroethane	ug/m3	<0.32	<0.32		25	
Chloroform	ug/m3	<0.36	<0.36		25	
Chloromethane	ug/m3	0.67	0.66	2	25	
cis-1,2-Dichloroethene	ug/m3	<0.53	<0.53		25	
cis-1,3-Dichloropropene	ug/m3	<0.38	<0.38		25	
Cyclohexane	ug/m3	<0.35	<0.35		25	
Dibromochloromethane	ug/m3	<0.69	<0.69		25	
Dichlorodifluoromethane	ug/m3	1.4J	1.6J		25	
Dichlorotetrafluoroethane	ug/m3	<0.69	<0.69		25	
Ethanol	ug/m3	5.3	5.4	1	25	
Ethyl acetate	ug/m3	<0.30	<0.30		25	
Ethylbenzene	ug/m3	1.7	1.7	1	25	
Hexachloro-1,3-butadiene	ug/m3	<1.3	<1.3		25	
m&p-Xylene	ug/m3	5.6	5.7	2	25	
Methyl-tert-butyl ether	ug/m3	<1.0	<1.0		25	
Methylene Chloride	ug/m3	<2.4	<2.4		25	
n-Heptane	ug/m3	2.5	2.4	1	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

SAMPLE DUPLICATE: 2816474

Parameter	Units	10416900001 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	6.5	6.6	1	25	
Naphthalene	ug/m3	<0.93	<0.93		25	
o-Xylene	ug/m3	2.0	2.1	3	25	
Propylene	ug/m3	25.9	26.5	2	25	
Styrene	ug/m3	<0.26	<0.26		25	
Tetrachloroethene	ug/m3	11.4	10.9	5	25	
Tetrahydrofuran	ug/m3	<0.42	<0.42		25	
Toluene	ug/m3	12.2	12.4	2	25	
trans-1,2-Dichloroethene	ug/m3	<0.46	<0.46		25	
trans-1,3-Dichloropropene	ug/m3	<0.65	<0.65		25	
Trichloroethene	ug/m3	<0.42	<0.42		25	
Trichlorofluoromethane	ug/m3	0.83J	0.90J		25	
Vinyl acetate	ug/m3	<0.26	<0.26		25	
Vinyl chloride	ug/m3	<0.20	<0.20		25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

A3	The sample was analyzed by serial dilution.
C8	Result may be biased high due to carryover from previously analyzed sample.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690005255-001 MU APRC Site
Pace Project No.: 10417103

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10417103001	**SG-1**	TO-15	518323		
10417103002	**SG-2**	TO-15	518323		
10417103003	**SG-3**	TO-15	518323		

Pace Analytical®
www.pacelabs.com

10417103

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

30707 Page: 1 of 1

Section A Required Client Information:

Company: Rambøll
Address: 175 Corporate dr.
Rockford, WI
Email To: Spetrofsky@Rambøll
Phone: 262-301-5900 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Susan Petrofske
Copy To:
Purchase Order No.:
Project Name: MU APDC Site
Project Number: 160000552.55-001

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #:

Program
☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act
☒ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other

Location of Sampling by State: WI

Reporting Units: ug/m³ ☒ mg/m³ ___ PPBV ___ PPMV ___ Other ___

Report Level II. ___ III. ___ IV. ___ Other ___

'Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method: PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	SG-1	6LC		1-11-18	1219	1-11-18	1258	29	5	1653	12206						X				001
2	SG-2			1-11-18	1232	1-11-18	1309	28	5	1740	11336						X				002
3	SG-3			1-11-18	1238	1-11-18	1315	30	5	2139	07235						X				003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Rambøll	1-11-18	1500	Pace	1/12/18	12:30

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM / DD / YY)

2

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 28Dec2017 Page 1 of 1
	Document No.: F-MN-A-106-rev.14	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: Ramboll

Project #: WO# : 10417103

10417103

Courier: [X] Fed Ex [ ] UPS [ ] Speedee [ ] Client [ ] Commercial [ ] Pace [ ] Other:

Tracking Number: 7476 3003 9691

Custody Seal on Cooler/Box Present? [ ] Yes [X] No **Seals Intact?** [ ] Yes [X] No

Optional: Proj. Due Date: Proj. Name:

Packing Material: [ ] Bubble Wrap [ ] Bubble Bags [X] Foam [ ] None [ ] Tin Can [ ] Other: **Temp Blank rec:** [ ] Yes [X] No

Temp. (TO17 and TO13 samples only) (°C): — **Corrected Temp (°C):** — **Thermom. Used:** [ ] 151401163 [ ] G87A9155100842

Temp should be above freezing to 6°C **Correction Factor:** — **Date & Initials of Person Examining Contents:** RC 1/12/18

Type of ice Received [ ] Blue [ ] Wet [X] None

				Comments:
Chain of Custody Present?	[X] Yes	[ ] No	[ ] N/A	1.
Chain of Custody Filled Out?	[X] Yes	[ ] No	[ ] N/A	2.
Chain of Custody Relinquished?	[X] Yes	[ ] No	[ ] N/A	3.
Sampler Name and/or Signature on COC?	[ ] Yes	[X] No	[ ] N/A	4.
Samples Arrived within Hold Time?	[X] Yes	[ ] No	[ ] N/A	5.
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No	[ ] N/A	6.
Rush Turn Around Time Requested?	[ ] Yes	[X] No	[ ] N/A	7.
Sufficient Volume?	[X] Yes	[ ] No	[ ] N/A	8.
Correct Containers Used?	[X] Yes	[ ] No	[ ] N/A	9.
-Pace Containers Used?	[X] Yes	[ ] No	[ ] N/A	
Containers Intact?	[X] Yes	[ ] No	[ ] N/A	10.
Media: Air Can Airbag Filter TDT Passive				11. Individually Certified Cans Y (N) (list which samples)
Sample Labels Match COC?	[X] Yes	[ ] No	[ ] N/A	12.

Samples Received: Pressure Gauge # 10AIR26

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
SC-1			-5	5					
-2			-5.5	"					
-3			-5	"					

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Carolyne Trout **Date:** 1/15/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)