AECOM Environment

Prepared for:
City of Kenosha
Kenosha, Wisconsin

Prepared by:
AECOM
Milwaukee, WI
60508055
December 2017

Remedial Action Documentation Report
Former Mankowski Property Soil Removal

WDNR FID 230113730, BRRTS #02-30-554934

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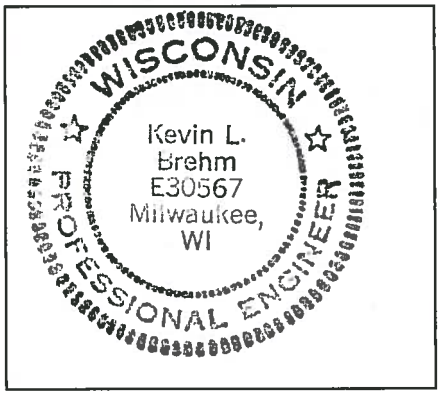
In conformance with NR 712.09 submittal certification requirements:

"I, Lanette Altenbach, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Lanette Altenbach, P.G., C.P.G.
Senior Hydrogeologist

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

Kevin L. Brehm, P.E.,
Principal/Office Manager



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Executive Summary

The Mankowski Property (Property) is located at 2600 - 50th Street in the city of Kenosha, Kenosha County, Wisconsin. The Property includes approximately 4 acres of land and is currently vacant. Investigation and remedial efforts were first conducted in 2000 when the original property (16 acres) was evaluated for development as an elementary school. In 2003, the Property (the southern 4 acres) was divided from the school property. Additional site investigations were completed on the Property from 2000 to 2014, by various consultants. A remedial design report was prepared by AECOM in March 2017 which described the planned implementation of the selected alternative limited soil excavation, in-situ soil treatment followed by excavation of the treated soil. This report was approved by the Wisconsin Department of Natural Resources (WDNR) on March 28, 2017.

A remedial design report, as well as public bidding documents (approved by the WDNR on May 1, 2017), were prepared by AECOM in March 2017 which described the planned implementation of the selected alternative. Subsequently, the remediation work was publicly bid. Orvine was the selected remedial contractor who performed the soil remediation activities.

The soil remediation plan identified two types of soil for the bidding contractors. Type A soil was soil that met the waste characterization criteria for direct disposal at a Wisconsin licensed landfill (Subtitle D landfill). Type A soil were identified in each of the three planned excavation areas. In Excavation 1 (E1), only a portion of the upper four feet of area was managed as a Type A soil. Excavation 2 (E2) and Excavation 3 (E3) included only Type A soil for the entire planned depth of the excavation. The remaining soil in E1 was Type B soils which required in-situ treatment to remove the TCE toxicity characteristic prior to excavation and disposal at the Wisconsin landfill. The soil treatment and removal activities began on June 20, 2017 and were completed on July 31, 2017.

The remedial activities included the following (in order of occurrence):

- Breaking and removal of the surface concrete in the vicinity of the excavation area.
- Abandonment of monitoring wells SMW-1 and MW-17.
- Excavation of Type A soils and disposal at the Kestrel Hawk RDF Landfill (Racine, WI).
- Backfilling of E2 and E3.
- Mixing Type B soils with Fenton's reagent and Bioavailable Absorbent Media (BAM™) within a 4,759 square foot area of E1.
- Collection of three post-treatment composite samples to demonstrate the removal of the toxicity characteristic from the soil.
- Excavation and disposal of the Type B treated TCE-impacted soil.
- Backfilling of E1.
- Completion of backfilling with crushed stone at the surface.

Type A soils were excavated on June 16, 2017 and transported via trucks for disposal at the Kestrel Hawk RDF Landfill in Racine, WI. Approximately 732 tons (28 truckloads) of Type A soils were transported to the landfill. Post-excavation samples were collected and TCE was detected in each of the sidewall and bottom samples that were analyzed with 11 of the 19 sidewall samples exceeding the industrial direct contact residual contaminant level (RCL). Dechlorination daughter products of TCE including cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride were detected in some of the post-excavation soil samples, but most of the concentrations only exceeded the groundwater pathway RCL. These results illustrate the widely dispersed nature of the TCE contamination at the Property. Excavations E2 and E3 were backfilled after sampling. Excavation E1 remained open for insitu treatment.

Type B soils in E1 were treated in-situ, in segments, over three days (June 21, 22 and 23, 2017). Type B soils were mixed with a modified Fenton's reagent, a solution of hydrogen peroxide with a ferrous sulfate/sulfuric acid catalyst in vertical segments. Immediately following mixing of the modified Fenton's reagent to sections of the Type B soils, the soils were mixed with BAM™. The soil was mixed in the excavation by a backhoe until it was homogenized. Treatment depths ranged from ground surface to a maximum depth of 12 feet bgs.

Twelve individual samples (aliquots) were collected from the treated soils and combined into three composite waste characterization samples after treatment. The three waste characterization samples were analyzed for TCE using the toxicity characteristic leaching procedure (TCLP). The TCE TCLP concentrations verified that post-treatment concentrations were not-hazardous.

Type B soils from E1 were excavated and disposed beginning July 14, 2017 and ending on July 18, 2017. Immediately following the removal of treated soil from E1, and prior to backfilling, the Contractor mixed 42 cubic yards of BAM^{TM} into the soil at the base of the excavation to provide additional treatment at the water table interface. Excavation E1 was backfilled after the BAM^{TM} was applied, with clean backfill soil.

The soil remediation was completed in general conformance with the plans and specifications developed for the public bidding process. A total of approximately 1,862 tons of impacted soil was removed from the three planned excavations at the Former Mankowski Property. Soil which exhibited a toxicity characteristic for TCE was successfully treated to remove the characteristic. Post-treatment samples were collected to verify the treated soils met the landfill acceptance criteria. The treated soils were excavated and the three excavations were backfilled.

Residual TCE impacted soil is still present, but the bulk of the contaminant mass has been removed from the Property consistent with the remedial objective as provided in the WDNR-approved Remedial Design report.

1.0 Introduction

The Mankowski Property (Property) is located at 2600 - 50th Street in the city of Kenosha, Kenosha County, Wisconsin. The Property location can also be described by civil land survey as the southwest ¼ of the northeast ¼ of Section 36, Township 2 North, Range 22 East and is shown on a topographic map in Figure 1. The Property includes approximately 4 acres of land and is currently vacant. The Property is relatively flat, with residences located to the east and west. An elementary school adjoins at the northern property boundary and south, across 50th Street is an industrial warehouse. The site layout is shown in Figure 2.

A range of alternatives for soil and groundwater remediation at the Property were evaluated in general accordance with WAC NR 722 and is documented in the *Site Investigation and Remedial Options Evaluation Report* (Sigma, 2013) and the *Additional Soil and Groundwater Characterization and Remedial Action Plan* (Sigma, 2014). A modified version of Option 6 proposed by Sigma that included limited excavation, in-situ treatment and excavation, and groundwater monitoring (Sigma, 2014) was identified to be the most technically and economically feasible alternative for implementation at the Property.

A remedial design report, as well as public bidding documents, were prepared by AECOM in March 2017 which described the planned implementation of the selected alternative. The remedial design report was approved by the WDNR and subsequently, the remediation work was publicly bid. Orvine was the selected remedial contractor for the soil remediation documented in this report.

1.1 Purpose and Scope

The purpose of this report is to document the soil remediation conducted at the Former Mankowski Property.

1.2 Project Participants

Site Owner: City of Kenosha
625 52nd Street, Room 305
Kenosha, WI 53140
Contact: Shelly Billingsley, P.E.
262-653-4050

Oversight Agencies
Wisconsin Department of Natural Resources
Southeast Region
141 NW Barstow St, Room 180
Waukesha, WI 53188
Contact: David Volkert
262-574-2166

US Environmental Protection Agency
Region V
77 W. Jackson Boulevard,
Chicago, Il 60606
Contact: Kyle Rogers

Consultant: AECOM
1555 RiverCenter Drive, Suite 214
Milwaukee, WI 53212
Contact: Lanette Altenbach, P.G.
414-944-6186

Laboratory: Pace Analytical Laboratory
1241 Bellevue Street, Suite 9
Green Bay, WI 54302
Contact: Chris Hyska
920-321-9407

Soil Removal Contractor: ORIVNE Inc.
55 E. Monroe, Suite 3800
Chicago, IL 60603
Contact: Mike Leyden
312-656-2009

Soil Disposal Location: Republic Services
Kestrel Hawk Park Landfill
1989 Oakes Rd
Racine, WI 53406
(262) 884-7080

2.0 Project Background

The Property has been vacant since 2001 and is approximately 80% covered by paving (asphalt and concrete. A portion of the central property surface is currently gravel due to a previous environmental soil excavation which was completed in 2004 and backfilled. The Property is secured by chain-link fencing on three sides (east, south and west). According to the 2016 City of Kenosha Zoning map, the Property is for heavy manufacturing (M-2).

Previous property use was residential until the late 1950s. The land was purchased and used by American Motors (and continued through the Chrysler name changes) and used for completed automotive vehicle storage prior to loading and shipment to other locations. Investigation and remedial efforts were first conducted in 2000 when the original property (16 acres) was evaluated for development as an elementary school. In 2003, the Property (the southern 4 acres) was divided from the school property. Additional site investigations were completed on the Property from 2000 to 2014, by various consultants.

2.1 Geology

Historically a topographic depression ("ravine") ran southwest to northeast across the property and contained a creek. According to the *Supplemental Site Investigation/Remedial Options Report* (ChemReport, 2002), a 78-inch storm sewer pipe was installed between 1908 and 1925 and placed perpendicular to 26th Avenue. A topographic depression provided drainage to the area prior to the installation of the storm sewer, which was backfilled with fill material (described as primarily foundry sand). Additional studies identified the site geology consisting of glacio-lacustrine sand and silt which compose the shallow aquifer unit of the water table. Beneath the sand and silt is clay till that acts as an aquitard to the deeper bedrock aquifers due to its low hydraulic conductivity and permeability, moderate thickness, density, and regional extent. This clay till contains groundwater at some locations, but is not capable of containing or transmitting significant quantities groundwater. A detailed description of the lithology encountered at the site includes the following:

- The fill layer generally consists of clay, sand, silt, crushed gravel, foundry sand, concrete, and brick. The fill ranges in thickness from approximately 0.5 to 12 feet deep (along the centerline of the ravine).
- Silt/Clayey Silt – a discontinuous layer of lacustrine silt and/or clay separates the fine sand aquifer from the glacial clay till below. This lacustrine layer is generally described as grayish brown, wet, cohesive, medium plasticity and firm to still.
- Clay till – a glacial till layer, which consists of dark gray, wet, cohesive, plastic, and hard clay with stones.

2.2 Hydrogeology

The water table at the Property typically occurs at a depth of 8 to 12 feet below ground surface (bgs). The groundwater flow direction is fairly consistent throughout the year with a general northeastward flow with little seasonal variation. The horizontal groundwater flow gradient observed across the Property is approximately 0.01 feet per foot (ft/ft, SMW-3 and MW-14R). The vertical groundwater gradient is low and downward (0.070 ft/ft, MW-9R and PZ-9).

The hydraulic conductivity observed during previous site investigations for the silt/clayey silt ranges from approximately 10^{-5} centimeters per second (cm/sec) to 10^{-7} cm/sec (Sigma, 2013).

2.3 Summary of Prior Remedial Actions

Environmental site investigations were initiated in 2000 to assess the original 16-acre property as part of site redevelopment efforts. The 4-acre Property was divided from the original 16 acres in 2003 and after remediation of several specific areas, a school was built on the northern 12 acre parcel. Based on a Wisconsin Department of Natural Resources (WDNR) Bureau for Remediation and Redevelopment Tracking System (BRRTS) search, the school property (BRRTS # 0230522702) was granted deed restricted closure in August 2005.

Between 2000 and 2009 various environmental investigations and remedial actions were conducted by Chrysler (or KUSD as part of the property transfer) at the Property. More recent work was conducted by the WDNR using environmental repair funds because the site's owner expired and the site was abandoned.

In 2004, a soil excavation was completed and approximately 1,300 tons of VOC-impacted soil was excavated from the west-central portion of the Property and transported offsite for disposal (Figure 3). The top six feet of soil was excavated and stockpiled on-site for use as backfill. Depths of the excavation ranged from 15 to 19 feet bgs. Nine sumps were installed in the excavation during backfilling activities. Initially the sumps were installed to facilitate biodegradation of the VOCs; however, the sumps were later used as monitoring points. Excavation results are documented in the *Site Update Report* (GZA, 2005).

In 2006 an investigation was performed around and within the 78-inch storm sewer line. Soil and groundwater results indicated that the VOC plume was not migrating downgradient through the storm sewer backfill material. Visual inspection of the storm sewer was completed after the investigation and groundwater seepages were noted at each pipe-joint location. Stained pipe-joint locations were sealed with grout. The storm sewer investigation is documented in the *Site Update Report* (GZA, August 6, 2006) and storm sewer grouting is documented in the *Site Update Report* (GZA, 2007).

In 2011 an additional site investigation was performed around the 2004 soil excavation to evaluate the site, in part, to confirm subsurface conditions and develop remedial action options for the Property (Sigma 2012). The purpose of the work included further definition of soil and groundwater impacts and evaluation of groundwater plume stability.

Trichloroethene (TCE) concentrations in soil were sufficiently high that an evaluation of the soil for hazard characteristic was conducted. Toxicity characteristic leaching procedure (TCLP) soil waste characterization samples were collected in 2013 from select soil borings around the excavation for waste profiling purposes (Sigma, 2014). Two TCLP soil samples exceeded the United States Environmental Protection Agency (USEPA) criteria for trichloroethene (TCE) and, if soil was excavated in the area of the sample, would be classified as hazardous waste.

Sigma conducted a treatability study consisting of in-situ biodegradation measurements and groundwater testing of dechlorination bacterial populations (Sigma, 2014) to assess remedial options to address groundwater impacts observed at the Property. Groundwater results indicated none to low concentrations of bacterial populations present which could degrade TCE according to the Sigma report. The study concluded that groundwater treatment would require augmentation particularly if using a biological degradation approach, additional injection of bacteria would be necessary.

3.0 Remediation Summary and Documentation

The soil remediation plan identified two types of soil for the bidding contractors. Type A soil was soil that met the waste characterization criteria for direct disposal at a Wisconsin licensed landfill (Subtitle D landfill). Type A soil were identified in each of the three planned excavation areas. In Excavation 1 (E1), only a portion of the upper four feet of area was managed as a Type A soil. Excavation 2 (E2) and Excavation 3 (E3) included only Type A soil, for the entire planned depth (four feet) of the excavation. The Type A soil excavation activities were completed on June 16, 2017 and the two shallow excavations were backfilled on June 19, 2017. The remaining soil in excavation area E1 was Type B soils which required in-situ treatment to remove the TCE toxicity characteristic prior to excavation and disposal at a Wisconsin landfill. The soil treatment activities began on June 20, 2017 and were completed on June 23, 2017. The excavation and disposal of Type B soils began on July 14, 2017 and were completed on July 18, 2017. The remedial activities included the following (in order of occurrence):

- Breaking and removal of the surface concrete in the vicinity of the excavation area.
- Abandonment of monitoring wells SMW-1 and MW-17.
- Excavation of Type A soils and disposal at the Kestrel Hawk RDF Landfill (Racine, WI).
- Backfilling of E2 and E3.
- Mixing Type B soils with Fenton's reagent and BAM within a 4,759 square foot area of E1.
- Collection of three post-treatment composite samples to demonstrate the removal of the toxicity characteristic from the soil.
- Excavation and disposal of the Type B treated TCE-impacted soil.
- Backfilling of E1.
- Completion of backfilling with crushed stone at the surface.

These activities are described below and the excavation areas are depicted on Figure 3. Select photographs of the activities are provided in Appendix A.

3.1 Surface Pavement Removal

The contractor began on June 16, 2017 by breaking the concrete surface around the excavation perimeters. Concrete over the planned excavation areas was removed by using a backhoe bucket to lift sections of the concrete. The concrete sections were placed in a pile and later transported off-site for crushing and recycling (Photo 1).

3.2 Monitoring Well Abandonment

Two monitoring wells located in E1 were abandoned by backfilling with bentonite after the surface protector pipe and surface concrete were removed. A portion of the PVC riser was later removed during excavation activities and transported to the landfill as demolition debris. Well abandonment forms for wells SMW-1 and MW-17 are provided in Appendix B.

3.3 Soil Remediation

Type A, non-hazardous soils were excavated and disposed. Type B soil (characteristically hazardous) were treated first, and then disposed. The soil remediation progressed with excavation of the Type A soil, followed by treatment of the Type B soil, treatment confirmation sampling and analysis, followed by excavation of the treated Type B soil.

3.3.1 Type A Soil Excavation and Disposal

Type A soils were identified in each of the three planned excavation areas. The Type A soils were non-hazardous contaminated soils identified from the surface to a depth of four feet. In E1, only a portion of the excavation contained Type A soil. Excavations E2 and E3 only contained Type A soil (Photo 2). Type A soils were excavated on June 16, 2017 (Photos 3 and 4) and transported via trucks for disposal at the Kestrel Hawk RDF Landfill in Racine, WI. Approximately 732 tons (28 truckloads) of Type A soils were transported to the landfill. A copy of the landfill weight ticket summary is provided in Appendix C.

3.3.2 Type A Soil Post-Excavation Documentation Samples and Results

Type A post-excavation sidewall samples were collected in each excavation; E1, E2, and E3, and bottom samples were also collected from E2 and E3. Bottom samples were not collected from E1 because the bottom soils were treated and remain in-situ consistent with the WDNR-approved Remedial Design report. The soil samples were collected from nine sidewall locations in E1, four sidewalls and one bottom location in E2, and six sidewalls and two bottom locations in E3. The sidewall samples were collected approximately two feet below ground surface (bgs), approximately halfway between the surface and bottom of the excavation (four feet bgs). The sidewall samples were collected preferentially from stained areas on the sidewall, if present. The soil samples were submitted for laboratory for analysis of VOCs by SW-846 method 8260. The laboratory analytical results are summarized on Table 1. Detected VOCs that exceeded the generic RCLs are depicted in Figure 4. Copies of the laboratory analytical reports are provided in Appendix D.

TCE was detected in each of the sidewall and bottom samples that were analyzed with 11 of the 19 sidewall samples exceeding the industrial direct contact residual contaminant level (RCL). Dechlorination daughter products of TCE including cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride were detected some of the soil samples, but most of the concentrations only exceeded the groundwater pathway RCL. These results illustrate the widely dispersed nature of the TCE contamination at the Property.

3.3.3 Type A Soil Excavation Backfill

The excavations were backfilled after the proposed extent and depth of the excavation was achieved and confirmation samples had been collected. The backfill material for E2 and E3 was crushed virgin limestone from Cretex Materials, Warren Quarry in Burlington, Wisconsin. The limestone was larger in grain size (Photo 5) than was specified by the contract, but was accepted as an alternate due to the shallow depths of the two excavations. The crushed limestone was placed into the excavation using a backhoe and skid steer and was backfilled to near the surface of the surrounding surface asphalt (Photos 6 and 7).

3.3.4 Type B Soil Treatment

Type B soils in E1 were treated using in-situ mixing by ORIN Technologies with equipment support from Orvine. The Type B soil in excavation E1 was treated in segments over three days (June 21, 22 and 23, 2017) and the treatment segments are depicted in Figure 5. Type B soils were mixed with a modified Fenton's reagent, a solution of hydrogen peroxide with a ferrous sulfate/sulfuric acid catalyst described below, in vertical sections. Immediately following mixing of the modified Fenton's reagent to sections of the Type B soils, the soils were mixed with BAM™ (bio-available absorbent media). The soil was mixed in the excavation by a backhoe until the soil was homogenized. Treatment depths ranged from ground surface to a maximum depth of 12 feet bgs (Photos 9 through 14).

The treatment dosage used by ORIN to treat 1,440 cubic yards of impacted soil at the site were:

- 13,362 gallons of 12.5%-25% Fenton's chemistry for soil conditioning with the Fenton's chemistry mix including 6,905 gallons of 50% hydrogen peroxide, 450 gallons of sulfuric acid, and 63 pounds of ferrous sulfate; and

- 140 cubic yards of BAM following the Fenton's application utilizing an excavator.

3.3.5 Type B Soil Treatment Confirmation Samples

Twelve individual samples (aliquots) were collected at varying points and depths across the treated soils and combined into three composite waste characterization samples following in-situ treatment by the Contractor. The waste characterization sample aliquots and the composites created with the aliquots are depicted in Figure 6. The three waste characterization samples were analyzed for TCE using the toxicity characteristic leaching procedure (TCLP) and free liquids. The results verified that post-treatment concentrations were non-hazardous and as such met the landfill acceptance criteria. A copy of the laboratory analytical report is included in Appendix D.

3.3.6 Type B Soil Excavation

The excavation of the treated Type B soils from 0 to 12 feet bgs in excavation 1 began on July 14, 2017 and was completed on July 18, 2017. The treated Type B soils were transported for disposal at the Kestrel Hawk RDF Landfill in Racine, WI. Approximately 1131 tons (45 truckloads) of treated Type B soils were disposed (Photo 15).

Immediately following the removal of treated soil from E1, and prior to backfilling, the Contractor mixed 42 cubic yards of BAM into the soil at the base of the excavation to provide additional treatment at the water table interface (Photo 16). The material at the base of the excavation was mixed using a backhoe.

3.3.7 Type B Soil Excavation Backfill

The backfill material for E1 was identified as blending sand that was obtained from the Thelen Sand & Gravel, Inc. quarry located in Antioch, Illinois. The quarry did not provide a grain size analysis of the sand, but stated the sand was washed sand obtained from a native sand and gravel deposit. The technical specification did not call for a specific gradation of material and the sand was accepted for use. The blending sand was initially placed into the deeper portion of the excavation using a backhoe which created a ramp so the excavation would be accessible for direct placement by the trucks transporting the material (Photo 17). After the sand was dumped into the excavation a skid steer was used to smooth and level the sand. The backfill was placed in 12-inch lifts and compacted with a smooth-roller compactor (Photo 18). The blending sand was backfilled to within 12-inches of the surrounding surface concrete.

The contractor had ordered more than backfill and as such the excavation was filled to a slightly higher depth than specified. The additional sand was accepted because it was washed sand (no fines) and dust derived from the backfill material was not expected. The contract item was lump sum and the additional backfill did not impact the overall cost of the project.

The three excavations were topped with crushed concrete obtained from the former Kenosha Engine Plant. The thickness of the crushed concrete ranged from 0.5 feet to one foot in E1 and from 0.3 feet to 0.75 feet in E2 and E3 (Photos 19 and 20).

4.0 Summary

The soil remediation was completed in general conformance with the remedial design report and plans and specifications developed for the public bidding process. Soil which exhibited a toxicity characteristic for TCE was successfully treated to remove the characteristic. A total of approximately 1,862 tons of impacted soil was removed from the three planned excavations at the Former Mankowski Property. Soil samples were collected from the sidewalls of the three excavations. Residual TCE impacted soil is still present, but a bulk of the contaminant mass has been removed from the Property.

5.0 References

AECOM, 2016a. *July 2016 Groundwater Sampling Summary*. Former Mankowski Property

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AECOM, 2017. *Remedial Design Report* Former Mankowski Property 2600 – 50th Street, Kenosha, Wisconsin

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ChemReport 2002. *Supplemental Site Investigation/Remedial Options Report.* Mankowski Property.

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GZA 2002. *Site Investigation Report.* Former Daimler Chrysler New Vehicle Storage Lot

GZA 2004. *Site Remediation Work Plan.* South Parcel of the Mankowski Site.

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Sigma 2013. *Site Investigation and Remedial Options Evaluation Report.* Mankowski Property.

Sigma 2014. *Additional Soil and Groundwater Characterization and Remedial Action Plan.* Mankowski Property.

WDNR, 2016. DRAFT Waste Soil Determination and Identifying Clean Soil. RR-WA-1820. http://dnr.wi.gov/news/input/documents/guidance/DraftWA1820.pdf

United States Geological Survey, *7.5-Minute Topographic Map of the Kenosha, Wisconsin Quadrangle* – 1994. Scale=1:24,000.

6.0 General Qualifications

This Remedial Action Documentation Report was conducted to document remedial activities conducted in a select area of the property. The results, conclusions and recommendations presented in this report are based upon the data obtained from the specific sampling locations and under the conditions stated in the report. This report should not be utilized for any purpose other than that specifically stated in evaluating the environmental character of the site at the time of the study.

Factual information regarding operations, conditions, regional geology and hydrogeology, and test data completed throughout the site assessment were obtained, in part from outside agents and third parties and have been assumed by AECOM to be correct and complete. Because some facts stated in this report are subject to professional interpretation, they could result in differing conclusions. In addition, the findings and conclusions contained in this report are based on various quantitative factors as they existed on or near the date during which the field work was completed.

AECOM assumes no responsibility for future discovery and elimination of hazards or their associated liabilities. The assessment conducted by AECOM in no way assures the elimination of all hazards or the fulfillment of a property owner's obligation under any local, state or federal laws or any modifications or changes thereto. It is the responsibility of the property owner to notify authorities of any future conditions that are in violation of the current legal standards.

AECOM has prepared this report at the request of the City of Kenosha. AECOM assumes responsibility for the accuracy of the report's contents, subject to what is stated elsewhere in this section, but recommends the report be used only for the purpose intended by our Client and AECOM when the report was prepared. The report may be unsuitable for other uses, and reliance on its contents by anyone other than our Client is done at the sole risk of the user. AECOM accepts no responsibility for application or interpretation of the results by anyone other than the City of Kenosha.

This report reflects conditions, as observed on the date(s) the site work was performed. Accordingly, changes or modifications to the property or surrounding facilities made after the assessment was completed are not reflected in this report.

Tables

Table 1
Post-Remediation Detected Volatile Organic Compounds in Soil
Laboratory Analytical Results
Mankowksi Site, Kenosha, Wisconsin
Project No. 60508055

				Excavation 1								
	Generic RCLs			**M1-1**	**M1-2**	**M1-3**	**M1-4**	**M1-5**	**M1-6**	**M1-7**	**M1-8**	**M1-9**
Parameters	Non-Industrial	Industrial	Groundwater Pathway	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 7/18/2017
VOCs (µg/kg)												
cis-1,2-Dichloroethene	156,000	2,340,000	41.2	**1,550** C	**1,240** C	**902** C	**285** C	**1,010** C	<29.1	**144** JC	**92.5** C	**7,610** C
trans-1,2-Dichloroethene	1,560,000	1,850,000	62.6	**321** C	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	**525** C
Ethylbenzene	8,020	35,400	1,570	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
Hexachlorobutadiene	1,630	7,190	--	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
Methylene chloride	61,800	1,150,000	2.6	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	**122** JbC
Naphthalene	5,520	24,100	658.2	<54.1	<132	<108	<98.9	<233	<46.6	<105	<51.3	<160
n-Butylbenzene	108,000	108,000	--	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
n-Propylbenzene	264,000	264,000	--	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
Tetrachloroethene	33,000	145,000	4.5	<33.8	<82.2	<67.6	<61.7	<145	<29.1	**182** C	**49.2** JC	<100
Toluene	818,000	818,000	1,107.2	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
Trichloroethene	1,300	8,410	3.6	**6,530** AC	**23,500** ABC	**16,900** ABC	**11,700** ABC	**34,800** ABC	**176** C	**18,900** ABC	**4,330** AC	**35,500** ABC
1,2,4-Trimethylbenzene	219,000	219,000	1,382.1	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
1,3,5-Trimethylbenzene	182,000	182,000	1,382.1	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
Vinyl chloride	67	2,080	0.1	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	**174** JAC
o-Xylene	434,000	434,000	3,960	<33.8	<82.2	<67.6	<61.7	<145	<29.1	<65.8	<32.1	<100
m&p-Xylene s	388,000	388,000	3,960	<67.6	<164	<135	<123	<291	<58.1	<132	<64.1	<100

Notes:

VOCs = Volatile Organic Compounds

µg/kg = micrograms per kilogram

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

b Analyte detected in the method blank at 27.2 ug/mg and is considered laboratory artifact

-- No Generic RCL established.

Generic RCLs WDNR RR-890 (2014)-RCLCalculator March 2017

A Parameter exceeds Generic RCL for Non-Industrial Direct Contact.

B Parameter exceeds Generic RCL for Industrial Direct Contact.

C Parameter exceeds Generic RCL for Groundwater Pathway.

Table 1
Post-Remediation Detected Volatile Organic Compounds in Soil
Laboratory Analytical Results
Mankowksi Site, Kenosha, Wisconsin
Project No. 60508055

				Excavation 2				
	Generic RCLs			**M2-1**	**M2-2**	**M2-3**	**M2-4**	**M2-5**
Parameters	Non-Industrial	Industrial	Groundwater Pathway	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Bottom 6/19/2017
VOCs (µg/kg)								
cis-1,2-Dichloroethene	156,000	2,340,000	41.2	**371** C	**175** C	**952** C	**1,240** C	**2,130** C
trans-1,2-Dichloroethene	1,560,000	1,850,000	62.6	52.5 J	<30.9	**86.8** C	**201** C	**344** C
Ethylbenzene	8,020	35,400	1,570	<30.1	62.5 J	<32.9	<32.5	<28.4
Hexachlorobutadiene	1,630	7,190	--	<30.1	<30.9	<32.9	<32.5	<28.4
Methylene chloride	61,800	1,150,000	2.6	<30.1	<30.9	<32.9	<32.5	<28.4
Naphthalene	5,520	24,100	658.2	<48.2	81.7 J	<52.7	<52.0	<45.5
n-Butylbenzene	108,000	108,000	--	<30.1	68.3 J	<32.9	<32.5	<28.4
n-Propylbenzene	264,000	264,000	--	<30.1	48.5 J	<32.9	<32.5	<28.4
Tetrachloroethene	33,000	145,000	4.5	<30.1	<30.9	<32.9	<32.5	<28.4
Toluene	818,000	818,000	1,107.2	<30.1	132	<32.9	<32.5	<28.4
Trichloroethene	1,300	8,410	3.6	**79.6** C	**435** C	**3,300** AC	**136** C	**131** C
1,2,4-Trimethylbenzene	219,000	219,000	1,382.1	<30.1	285	<32.9	<32.5	<28.4
1,3,5-Trimethylbenzene	182,000	182,000	1,382.1	<30.1	106	<32.9	<32.5	<28.4
Vinyl chloride	67	2,080	0.1	<30.1	<30.9	<32.9	<32.5	**370** AC
o-Xylene	434,000	434,000	3,960	<30.1	152	<32.9	<32.5	<28.4
m&p-Xylene s	388,000	388,000	3,960	<60.2	292	<65.8	<64.9	<56.8

Notes:

VOCs = Volatile Organic Compounds

µg/kg = micrograms per kilogram

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

b Analyte detected in the method blank at 27.2 ug/mg and is considered laboratory artifact

-- No Generic RCL established.

Generic RCLs WDNR RR-890 (2014)-RCLCalculator March 2017

A Parameter exceeds Generic RCL for Non-Industrial Direct Contac

B Parameter exceeds Generic RCL for Industrial Direct Contact.

C Parameter exceeds Generic RCL for Groundwater Pathway.

Table 1
Post-Remediation Detected Volatile Organic Compounds in Soil
Laboratory Analytical Results
Mankowksi Site, Kenosha, Wisconsin
Project No. 60508055

				Excavation 3							
	Generic RCLs			**M3-1**	**M3-2**	**M3-3**	**M3-4**	**M3-5**	**M3-6**	**M3-7**	**M3-8**
Parameters	Non-Industrial	Industrial	Groundwater Pathway	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Sidewall 6/19/2017	Bottom 6/19/2017	Bottom 6/19/2017
VOCs (µg/kg)											
cis-1,2-Dichloroethene	156,000	2,340,000	41.2	**5,010** C	**2,690** C	**1,310** C	**194** C	**307** C	**7,580** C	**2,240** C	**1,090** C
trans-1,2-Dichloroethene	1,560,000	1,850,000	62.6	**574** C	**112** JC	**72.3** JC	<59.5	**190** C	**567** C	**315** C	**170** JC
Ethylbenzene	8,020	35,400	1,570	34.4 J	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
Hexachlorobutadiene	1,630	7,190	--	<28.1	<58.8	<53.2	<59.5	<64.1	74 J	<28.7	<109
Methylene chloride	61,800	1,150,000	2.6	<28.1	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
Naphthalene	5,520	24,100	658.2	<45.0	<94.2	<85.2	<95.3	<103	<46.0	<46.0	<174
n-Butylbenzene	108,000	108,000	--	<28.1	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
n-Propylbenzene	264,000	264,000	--	<28.1	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
Tetrachloroethene	33,000	145,000	4.5	<28.1	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
Toluene	818,000	818,000	1,107.2	<28.1	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
Trichloroethene	1,300	8,410	3.6	**9,860** ABC	**21,300** ABC	**14,700** ABC	**18,900** ABC	**14,300** ABC	**132** C	**10,900** ABC	**31,900** ABC
1,2,4-Trimethylbenzene	219,000	219,000	1,382.1	80.8	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
1,3,5-Trimethylbenzene	182,000	182,000	1,382.1	<28.1	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
Vinyl chloride	67	2,080	0.1	<28.1	<58.8	<53.2	<59.5	<64.1	**125** AC	<28.7	<109
o-Xylene	434,000	434,000	3,960	38.3 J	<58.8	<53.2	<59.5	<64.1	<28.7	<28.7	<109
m&p-Xylene s	388,000	388,000	3,960	73.6 J	<118	<106	<119	<128	<57.5	<57.5	<217

Notes:

VOCs = Volatile Organic Compounds

µg/kg = micrograms per kilogram

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

b Analyte detected in the method blank at 27.2 ug/mg and is considered laboratory artifact

-- No Generic RCL established.

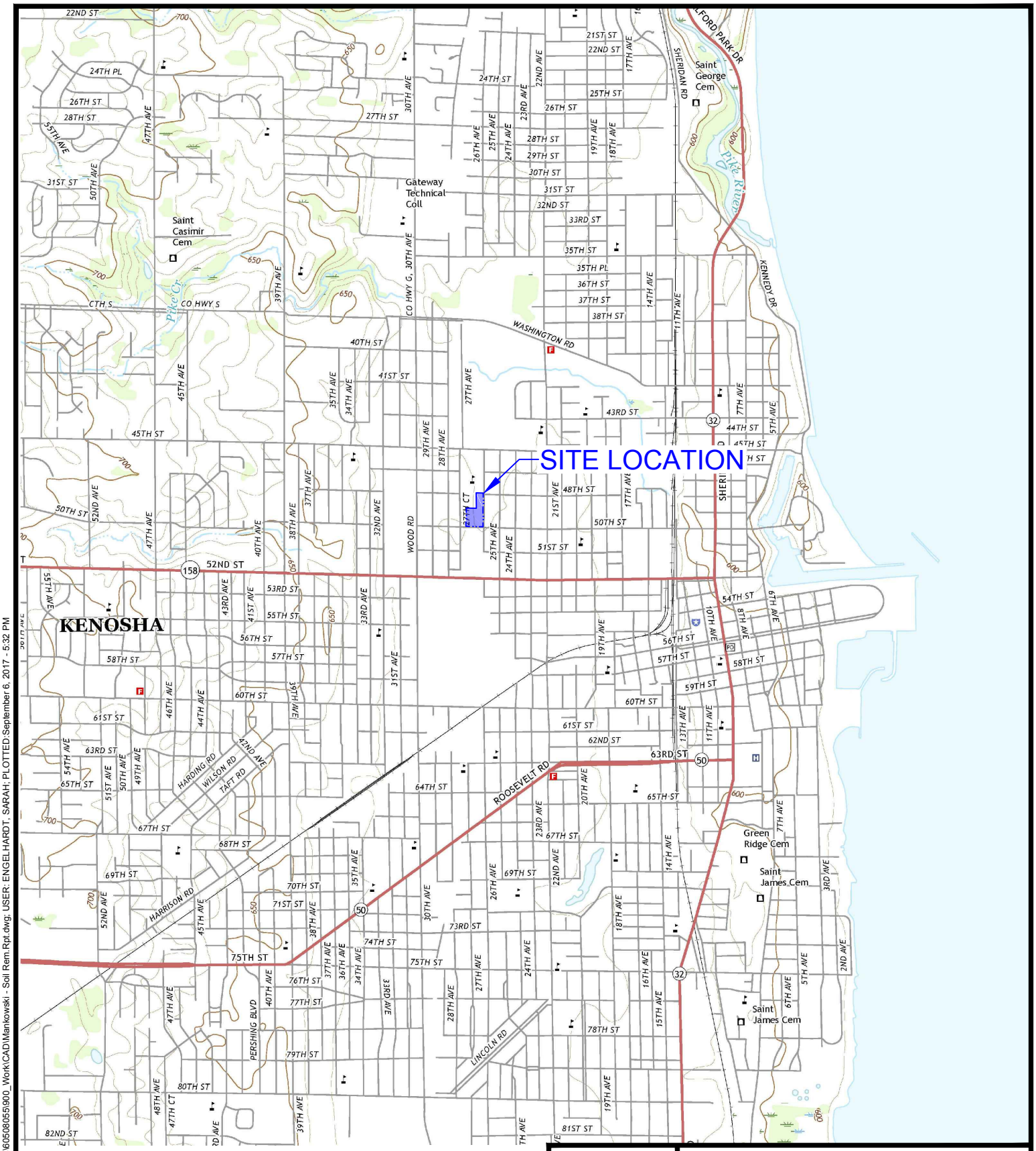
Generic RCLs WDNR RR-890 (2014)-RCLCalculator March 2017

A Parameter exceeds Generic RCL for Non-Industrial Direct Conta

B Parameter exceeds Generic RCL for Industrial Direct Contact.

C Parameter exceeds Generic RCL for Groundwater Pathway.

Figures



Notes:

1. TOPO map from http://store.usgs.gov
   Kenosha quadrangle, dated: 2016

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1555 RiverCenter Dr
Milwaukee, WI
414.944.6080

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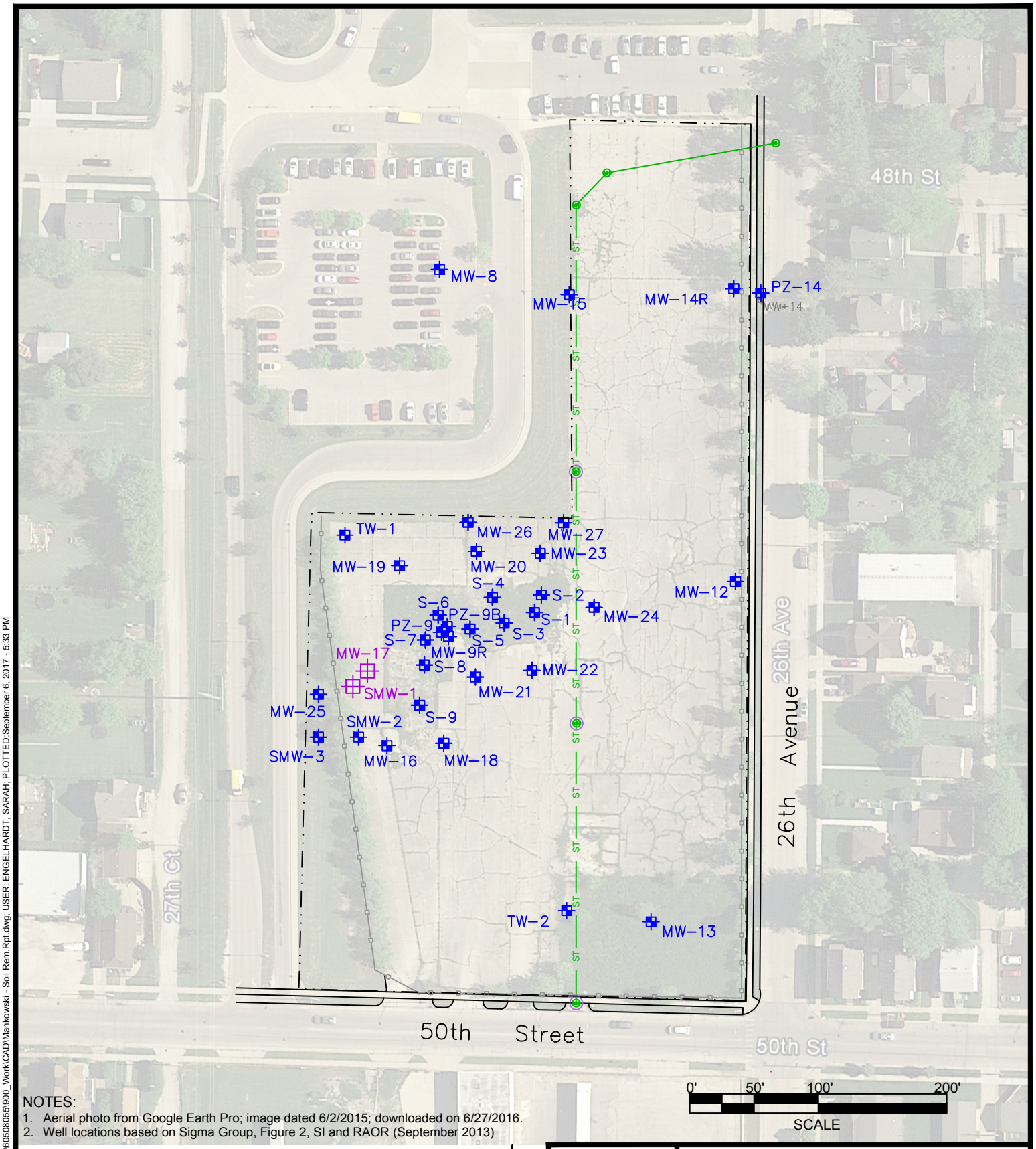
Mankowski Site
50th Street and 26th Avenue
Kenosha, WI

SITE LOCATION

Project Number:	Drawn By:	Date:	Figure No.
60508055	SAE	9/6/2017	1

File: \\usmwk1fs001\prod\Data\Projects\60508055\900_Work\CAD\Mankowski - Soil Rem Rpt.dwg; USER: ENGELHARDT, SARAH; PLOTTED:September 6, 2017 - 5:32 PM



NOTES:
1. Aerial photo from Google Earth Pro; image dated 6/2/2015; downloaded on 6/27/2016.
2. Well locations based on Sigma Group, Figure 2, SI and RAOR (September 2013)

LEGEND:

- MONITORING WELL
- ABANDONED MONITORING WELL
- STORM SEWER

N

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Mankowski Site
50th Street and 26th Avenue
Kenosha, WI

SITE LAYOUT

Project Number:	Drawn By:	Date:	Figure No.
60508055	SAE	9/6/2017	Figure No. 2

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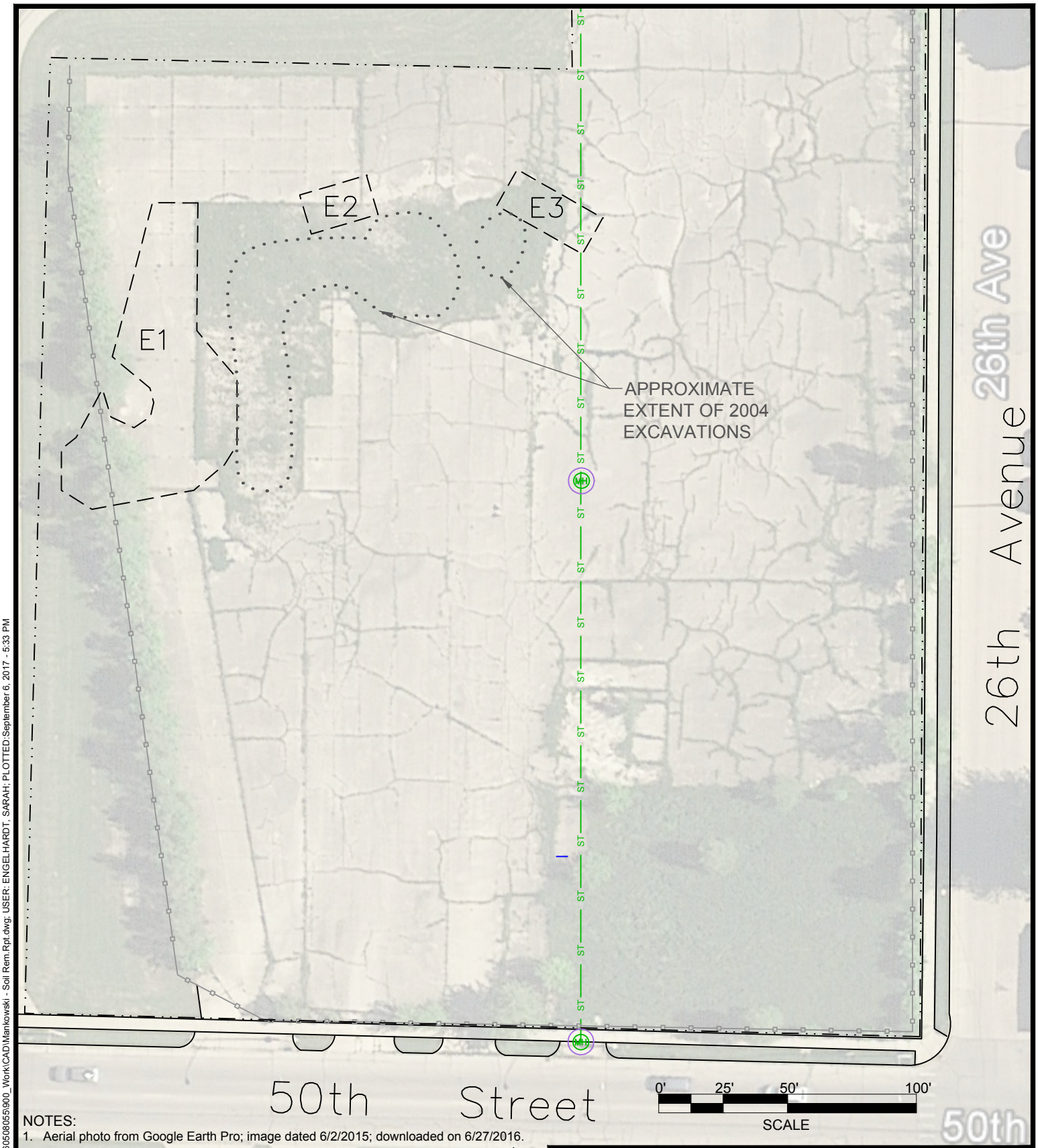

NOTES:
1. Aerial photo from Google Earth Pro; image dated 6/2/2015; downloaded on 6/27/2016.

LEGEND:

- 2004 EXCAVATION LIMITS (approximate)
- 2017 EXCAVATION LIMITS (approximate)
- STORM SEWER

N

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Mankowski Site
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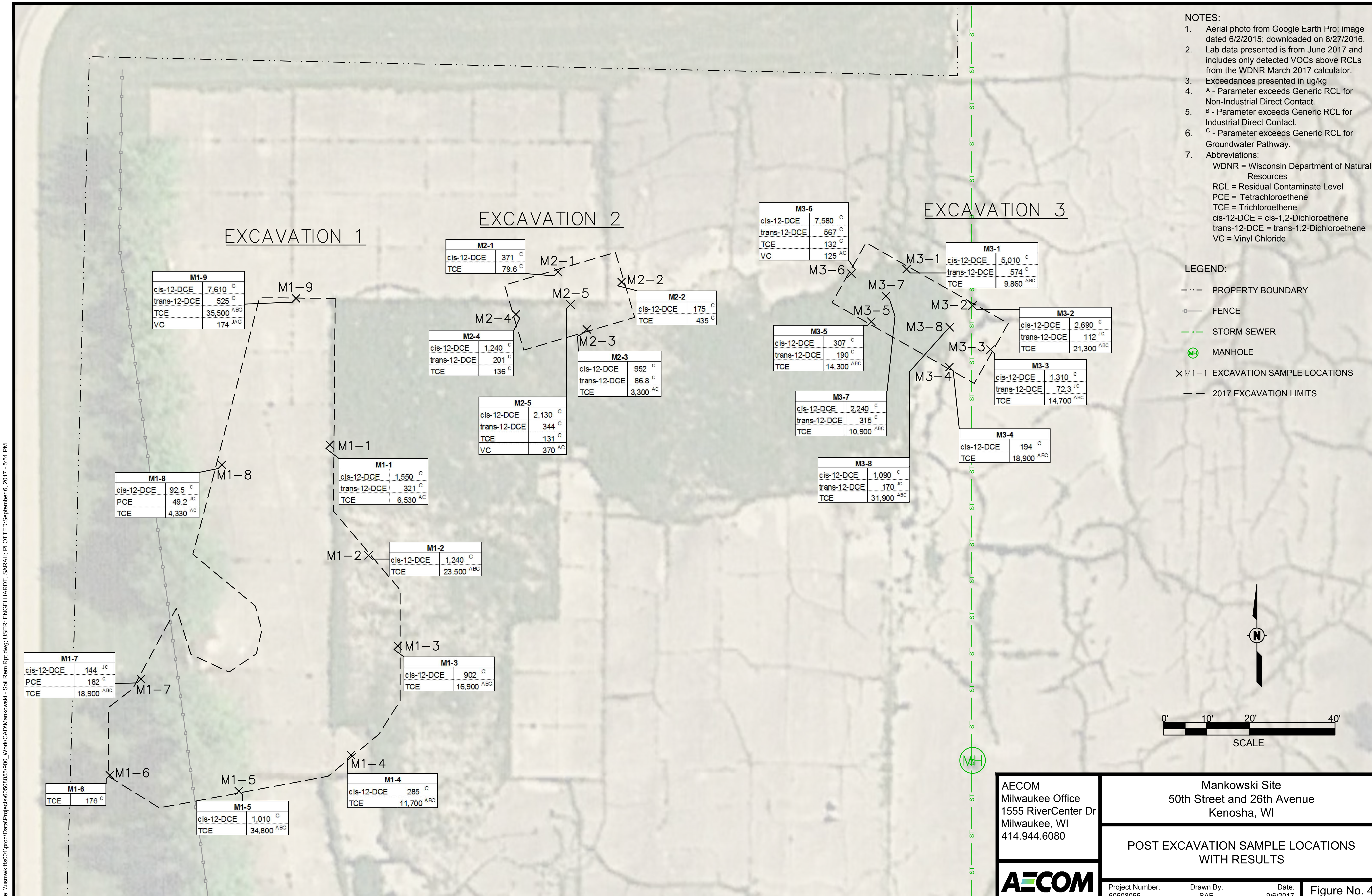
Kenosha, WI

EXCAVATION LOCATION

Project Number:	Drawn By:	Date:	Figure No. 3
60508055	SAE	9/6/2017	

File: \\usmwk1fs001\prod\Data\Projects\60508055\900_Work\CAD\Mankowski - Soil Rem Rpt.dwg; USER: ENGELHARDT, SARAH; PLOTTED:September 6, 2017 - 5:33 PM


EXCAVATION 1
EXCAVATION 2
EXCAVATION 3
M1-9: cis-12-DCE 7,610 C; trans-12-DCE 525 C; TCE 35,500 ABC; VC 174 JAC
M1-8: cis-12-DCE 92.5 C; PCE 49.2 JC; TCE 4,330 AC
M1-7: cis-12-DCE 144 JC; PCE 182 C; TCE 18,900 ABC
M1-6: TCE 176 C
M1-5: cis-12-DCE 1,010 C; TCE 34,800 ABC
M1-4: cis-12-DCE 285 C; TCE 11,700 ABC
M1-3: cis-12-DCE 902 C; TCE 16,900 ABC
M1-2: cis-12-DCE 1,240 C; TCE 23,500 ABC
M1-1: cis-12-DCE 1,550 C; trans-12-DCE 321 C; TCE 6,530 AC
M2-1: cis-12-DCE 371 C; TCE 79.6 C
M2-2: cis-12-DCE 175 C; TCE 435 C
M2-3: cis-12-DCE 952 C; trans-12-DCE 86.8 C; TCE 3,300 AC
M2-4: cis-12-DCE 1,240 C; trans-12-DCE 201 C; TCE 136 C
M2-5: cis-12-DCE 2,130 C; trans-12-DCE 344 C; TCE 131 C; VC 370 AC
M3-6: cis-12-DCE 7,580 C; trans-12-DCE 567 C; TCE 132 C; VC 125 AC
M3-1: cis-12-DCE 5,010 C; trans-12-DCE 574 C; TCE 9,860 ABC
M3-2: cis-12-DCE 2,690 C; trans-12-DCE 112 JC; TCE 21,300 ABC
M3-3: cis-12-DCE 1,310 C; trans-12-DCE 72.3 JC; TCE 14,700 ABC
M3-4: cis-12-DCE 194 C; TCE 18,900 ABC
M3-5: cis-12-DCE 307 C; trans-12-DCE 190 C; TCE 14,300 ABC
M3-7: cis-12-DCE 2,240 C; trans-12-DCE 315 C; TCE 10,900 ABC
M3-8: cis-12-DCE 1,090 C; trans-12-DCE 170 JC; TCE 31,900 ABC
M1-1 M1-2 M1-3 M1-4 M1-5 M1-6 M1-7 M1-8 M1-9
M2-1 M2-2 M2-3 M2-4 M2-5
M3-1 M3-2 M3-3 M3-4 M3-5 M3-6 M3-7 M3-8
ST
MH
NOTES:
1. Aerial photo from Google Earth Pro; image dated 6/2/2015; downloaded on 6/27/2016.
2. Lab data presented is from June 2017 and includes only detected VOCs above RCLs from the WDNR March 2017 calculator.
3. Exceedances presented in ug/kg
4. A - Parameter exceeds Generic RCL for Non-Industrial Direct Contact.
5. B - Parameter exceeds Generic RCL for Industrial Direct Contact.
6. C - Parameter exceeds Generic RCL for Groundwater Pathway.
7. Abbreviations:
WDNR = Wisconsin Department of Natural Resources
RCL = Residual Contaminate Level
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-12-DCE = cis-1,2-Dichloroethene
trans-12-DCE = trans-1,2-Dichloroethene
VC = Vinyl Chloride
LEGEND:
PROPERTY BOUNDARY
FENCE
STORM SEWER
MANHOLE
M1-1 EXCAVATION SAMPLE LOCATIONS
2017 EXCAVATION LIMITS
N
0' 10' 20' 40'
SCALE
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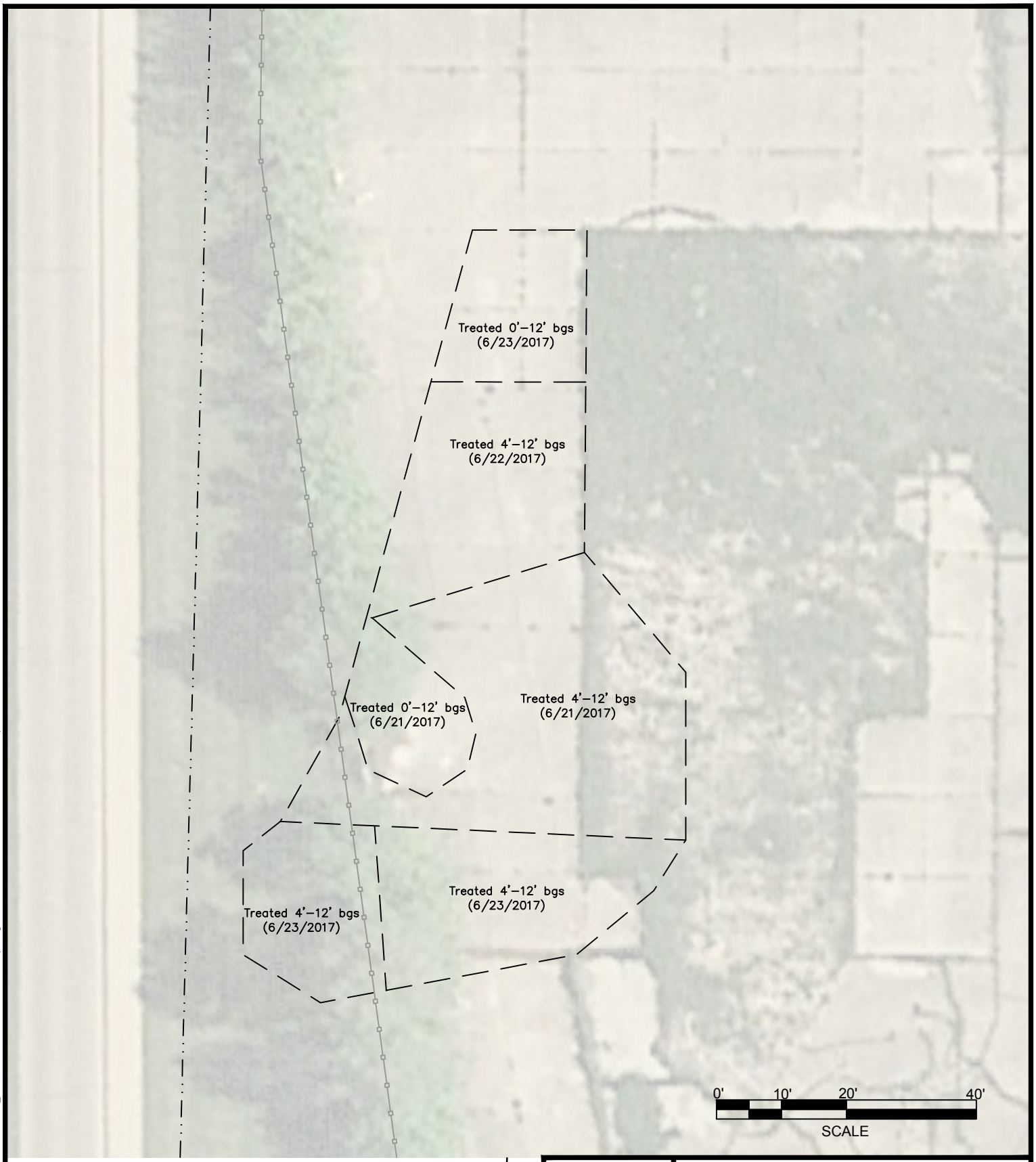
Mankowski Site
50th Street and 26th Avenue
Kenosha, WI
POST EXCAVATION SAMPLE LOCATIONS WITH RESULTS
Project Number: 60508055
Drawn By: SAE
Date: 9/6/2017
Figure No. 4
File: \\usmwk1fs001\prod\Data\Projects\60508055\900_Work\CAD\Mankowski - Soil Rem Rpt.dwg; USER: ENGELHARDT, SARAH; PLOTTED:September 6, 2017 - 5:51 PM



LEGEND:

- PROPERTY BOUNDARY
- FENCE
- STORM SEWER
- MANHOLE
- 2017 EXCAVATION LIMITS

NOTES:

1. Aerial photo from Google Earth Pro; image dated 6/2/2015; downloaded on 6/27/2016.

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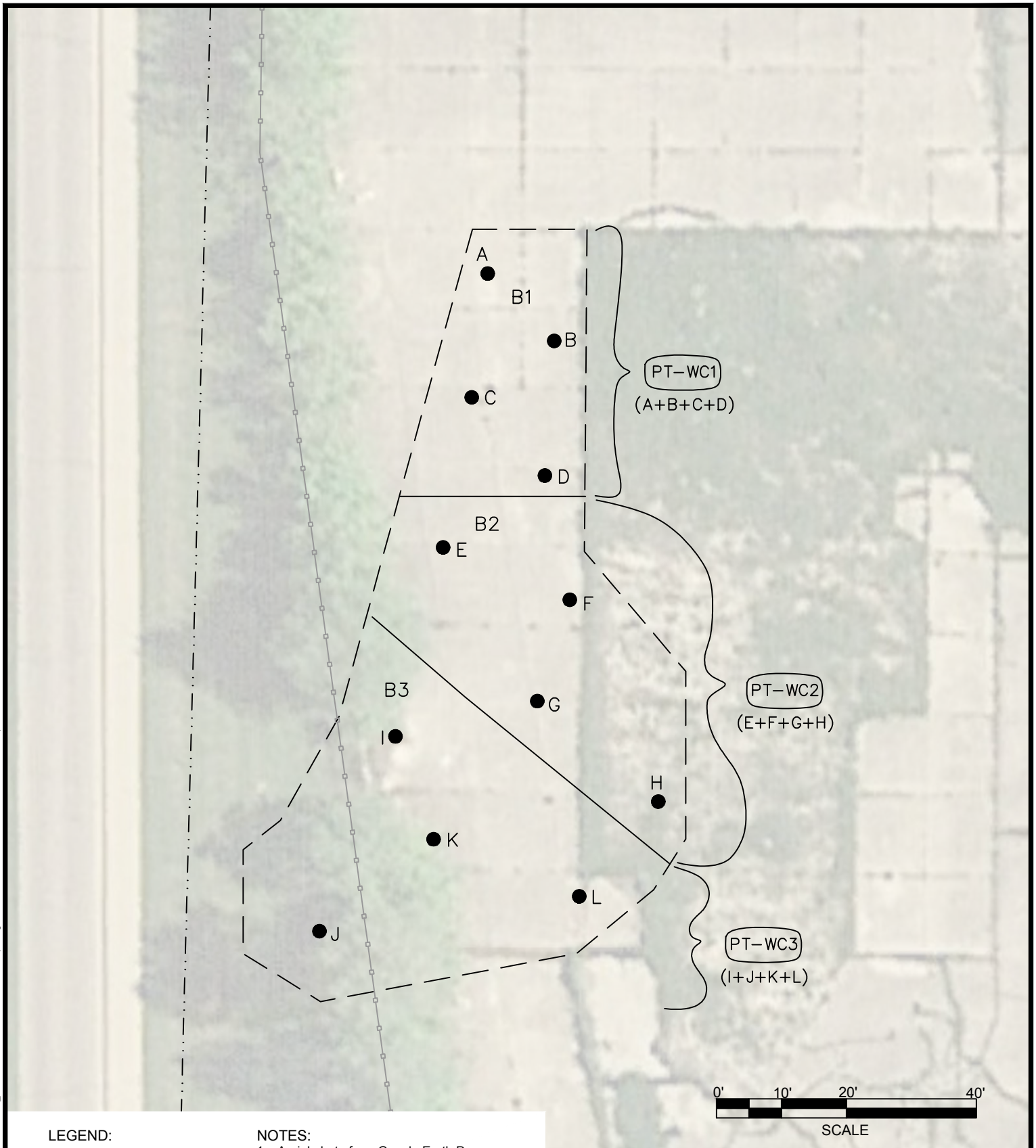
Mankowski Site
50th Street and 26th Avenue
Kenosha, WI

EXCAVATION 1
SOIL TREATMENT SEGMENTS
FOR TYPE B SOIL

Project Number:	Drawn By:	Date:	Figure No. 5
60508055	SAE	9/6/2017	



LEGEND:

- PROPERTY BOUNDARY
- FENCE
- ST — STORM SEWER
- MH — MANHOLE
- 2017 EXCAVATION LIMITS
- A ● SAMPLE ALIQUOT LOCATIONS
- PT–WC1 (A+B+C+D) SAMPLE ID NUMBER (ALIQUOTS INCLUDED IN COMPOSITE SAMPLE)

NOTES:

1. Aerial photo from Google Earth Pro; image dated 6/2/2015; downloaded on 6/27/2016.

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Mankowski Site
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Kenosha, WI

EXCAVATION 1
CONFIRMATION COMPOSITE SAMPLE LOCATIONS

Project Number:	Drawn By:	Date:	Figure No. 6
60508055	SAE	9/6/2017	

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Appendix A

Photographic Log

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 1	Date: 6-16-17

Direction Photo Taken:

Southwest

Description:

Removing surface concrete from excavation areas.

Photo No. 2	Date: 6-16-17

Direction Photo Taken:

Northwest

Description:

Excavation 2 Type A soil removal in progress

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 3	Date: 6-16-17
Direction Photo Taken: East	
Description: Excavation 3 Type A soil removal in-progress	

Photo No. 4	Date: 6-16-17
Direction Photo Taken: North	
Description: Excavation 3 – Type A soil removal area	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 5	Date: 6-17-17
Direction Photo Taken: East-northeast	
Description: Cretex virgin limestone used to backfill Excavations 2 and 3	

Photo No. 6	Date: 6-17-17
Direction Photo Taken: Northwest	
Description: Excavation 2 backfilled	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 7	Date: 6-17-17
Direction Photo Taken: East	
Description: Backfilling Excavation 3	

Photo No. 8	Date: 6-19-17
Direction Photo Taken: East	
Description: Loading surface concrete for off-site recycling	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 9	Date: 6-19-17

Direction Photo Taken:

Northeast and southeast

Description:

Upper=Trailer with mixing equipment

Lower=BAM (in white bags) and treatment chemicals in carboys

Photo No. 10	Date: 6-20-17

Direction Photo Taken:

Looking inside treatment trailer

Description:

Upper = mixing tanks

Lower = hydraulic lines and support equipment

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 11	Date: 6-20-17
Direction Photo Taken: West	
Description: Adding BAM to excavation as part of treatment	

Photo No. 12	Date: 6-20-17
Direction Photo Taken: West	
Description: Mixing BAM with soil	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 13	Date: 6-20-17
Direction Photo Taken: Southwest	
Description: Backhoe mixing soil during application of Fenton's reagent	

Photo No. 14	Date: 6-20-17
Direction Photo Taken: East	
Description: Mixing BAM and Fenton's reagent with impacted soil	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 15	Date: 7-14-17
Direction Photo Taken: North	
Description: Excavating treated Type B soil for disposal at the landfill.	

Photo No. 16	Date: 7-21-17
Direction Photo Taken: North	
Description: BAM spread on bottom of Excavation 1 prior to mixing with soil at bottom of excavation	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 17	Date: 7-24-17
Direction Photo Taken: Southwest	
Description: Truck dumping sand and backhoe spreading sand to create a ramp into Excavation 1 for backfilling	

Photo No. 18	Date: 7-24-17
Direction Photo Taken: West	
Description: Compacting the backfill in Excavation 1	

AECOM Imagine it. Delivered.

PHOTOGRAPH LOG

Facility Name: Mankowski	Site Location: 2600 50th Street, Kenosha, WI	Project No. 60508055

Photo No. 19	Date: 7-27-17
Direction Photo Taken: North	
Description: Placing crushed concrete as surface finish	

Photo No. 20	Date: 7-27-17
Direction Photo Taken: Looking south	
Description: Final surface finish	

Appendix B

Monitoring Well Abandonment Forms

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, 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: ☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Kenosha	V Z 9 6 7	

Lattitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

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

Well Street Address: 2600 50th Street

Well City, Village or Town	Well ZIP Code
Kenosha	53140

Subdivision Name	Lot #

Reason For Removal From Service	WI Unique Well # of Replacement Well
Soil Remediation	

3. Well / Drillhole / Borehole Information

☑ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 07/08/2011

If a Well Construction Report is available, please attach.

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

Formation Type:
☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
18	2
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
	8

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

If yes, to what depth (feet)?	Depth to Water (feet)
6	10

2. Facility / Owner Information

Facility Name: Mankowski Site - Monitoring Well ID - SMW-1

Facility ID (FID or PWS): 230113730

License/Permit/Monitoring #:

Original Well Owner:

Present Well Owner: City of Kenosha

Mailing Address of Present Owner: 625 52nd Street

City of Present Owner	State	ZIP Code
Kenosha	WI	53140

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

Pump and piping removed?	☐ Yes	☐ No	☑ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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
Bentonite Chips	Surface	18	3/4 bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Stacie Albert		June 19, 2017

Street or Route	Telephone Number
1555 RiverCenter Dr.	(414) 944-6080

City	State	ZIP Code
Milwaukee	WI	53212

Signature of Person Doing Work: Stacie Albert

Date Signed: 6/19/2017

DNR Use Only

Date Received	Noted By

Comments:

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, excluding the date of Filling and Sealing. It will be implied that you did not do the filling and sealing work as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) **WELL LOCATION INFORMATION**

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or ¼ /¼, ¼, Section, Township and Range).

Method Code: This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off
GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on
GPS008 - GPS receiver grade and or differential correction procedures unknown

(2) **FACILITY / OWNER INFORMATION**

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) **WELL/DRILLHOLE/BOREHOLE INFORMATION**

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

Depth to Water: Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, 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: ☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Kenosha	O W 8 8 2	

Lattitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

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

Well Street Address: 2600 50th Street

Well City, Village or Town	Well ZIP Code
Kenosha	53140

Subdivision Name	Lot #

Reason For Removal From Service	WI Unique Well # of Replacement Well
Soil Remediation	__ __ __ __ __

3. Well / Drillhole / Borehole Information

☑ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 10/08/2004

If a Well Construction Report is available, please attach.

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

Formation Type:
☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
18	2
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
	8

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

If yes, to what depth (feet)?	Depth to Water (feet)
6	10

2. Facility / Owner Information

Facility Name: Mankowski Site Monitoring Well - MW-17

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner:

Present Well Owner: City of Kenosha

Mailing Address of Present Owner: 625 52nd Street

City of Present Owner	State	ZIP Code
Kenosha	WI	53140

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

Pump and piping removed?	☐ Yes	☐ No	☑ N/A
Liner(s) removed?	☐ 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
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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

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Sealing Materials
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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
Bentonite Chips	Surface	18	1/2 bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Stacie Albert		June 16, 2017

Street or Route	Telephone Number
1555 RiverCenter Dr.	(414) 944-6080

City	State	ZIP Code
Milwaukee	WI	53212

Signature of Person Doing Work: Stacie Albert

Date Signed: 6/16/2017

DNR Use Only

Date Received	Noted By

Comments:

Instructions

Well Filling and Sealing

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Method Code: This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

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GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on
GPS008 - GPS receiver grade and or differential correction procedures unknown

(2) **FACILITY / OWNER INFORMATION**

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(3) **WELL/DRILLHOLE/BOREHOLE INFORMATION**

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

Depth to Water: Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

Appendix C

Soil Disposal Documentation

Detail Contract Activity Report

June 16, 2017 to June 16, 2017

Type A - Non-hazardous soil

3063170722

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
06/16/2017I	01 1011520	000023 - WE ENERGIES	WE001	SW-CONT SOIL-ALT D	7.00 F	12.80 TN	0.00	$0.00	$0.00	$89.60	$0.00	$89.60

Tickets Reported: 1 Items Reported: 1 Contract Totals: $89.60 $0.00 $89.60

Material Summary	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Quantity	Material Total	Tax Total	Total
VI - SW-CONT SOIL-ALT DAILY COVER	12.80	0.00 TN	30.00	0.00 YD	0.00	0.00	12.80 TN	$89.60	$0.00	$89.60

3063179030

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
06/16/2017I	01 1011449	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75 F	25.41 TN	0.00	$0.00	$0.00	$323.98	$330.33	$654.31
06/16/2017I	01 1011451	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75 F	31.19 TN	0.00	$0.00	$0.00	$397.67	$405.47	$803.14
06/16/2017I	01 1011454	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75 F	25.27 TN	0.00	$0.00	$0.00	$322.19	$328.51	$650.70
06/16/2017I	01 1011458	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75 F	27.24 TN	0.00	$0.00	$0.00	$347.31	$354.12	$701.43
06/16/2017I	01 1011464	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75 F	25.01 TN	0.00	$0.00	$0.00	$318.88	$325.13	$644.01
06/16/2017I	01 1011468	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75 F	26.17 TN	0.00	$0.00	$0.00	$333.67	$340.21	$673.88
06/16/2017I	01 1011471	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75 F	26.70 TN	0.00	$0.00	$0.00	$340.43	$347.10	$687.53
06/16/2017I	01 1011476	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75 F	26.31 TN	0.00	$0.00	$0.00	$335.45	$342.03	$677.48
06/16/2017I	01 1011482	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75 F	24.05 TN	0.00	$0.00	$0.00	$306.64	$312.65	$619.29
06/16/2017I	01 1011483	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75 F	27.00 TN	0.00	$0.00	$0.00	$344.25	$351.00	$695.25
06/16/2017I	01 1011486	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75 F	26.05 TN	0.00	$0.00	$0.00	$332.14	$338.65	$670.79
06/16/2017I	01 1011490	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75 F	23.48 TN	0.00	$0.00	$0.00	$299.37	$305.24	$604.61
06/16/2017I	01 1011498	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75 F	26.85 TN	0.00	$0.00	$0.00	$342.34	$349.05	$691.39
06/16/2017I	01 1011500	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75 F	25.70 TN	0.00	$0.00	$0.00	$327.68	$334.10	$661.78
06/16/2017I	01 1011501	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75 F	26.17 TN	0.00	$0.00	$0.00	$333.67	$340.21	$673.88
06/16/2017I	01 1011502	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75 F	26.67 TN	0.00	$0.00	$0.00	$340.04	$346.71	$686.75
06/16/2017I	01 1011506	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75 F	26.75 TN	0.00	$0.00	$0.00	$341.06	$347.75	$688.81
06/16/2017I	01 1011508	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75 F	26.62 TN	0.00	$0.00	$0.00	$339.41	$346.06	$685.47
06/16/2017I	01 1011509	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75 F	25.94 TN	0.00	$0.00	$0.00	$330.74	$337.22	$667.96
06/16/2017I	01 1011510	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75 F	25.33 TN	0.00	$0.00	$0.00	$322.96	$329.29	$652.25
06/16/2017I	01 1011521	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75 F	25.58 TN	0.00	$0.00	$0.00	$326.15	$332.54	$658.69
06/16/2017I	01 1011525	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75 F	27.04 TN	0.00	$0.00	$0.00	$344.76	$351.52	$696.28
06/16/2017I	01 1011530	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75 F	26.71 TN	0.00	$0.00	$0.00	$340.55	$347.23	$687.78

Detail Contract Activity Report

June 16, 2017 to June 16, 2017

Type A soil - continued

06/16/2017	I	01	1011532	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75	F	26.95	TN	0.00	$0.00	$0.00	$343.61	$350.35	$693.96
06/16/2017	I	01	1011541	100095 - KENOSHA	KIR306	SW-CONT SOIL	12.75	F	27.75	TN	0.00	$0.00	$0.00	$353.81	$360.75	$714.56
06/16/2017	I	01	1011543	100095 - KENOSHA	CLK705	SW-CONT SOIL	12.75	F	24.19	TN	0.00	$0.00	$0.00	$308.42	$314.47	$622.89
06/16/2017	I	01	1011546	100095 - KENOSHA	ZIZ681	SW-CONT SOIL	12.75	F	25.72	TN	0.00	$0.00	$0.00	$327.93	$334.36	$662.29
06/16/2017	I	01	1011548	100095 - KENOSHA	ZIZ680	SW-CONT SOIL	12.75	F	23.43	TN	0.00	$0.00	$0.00	$298.73	$304.59	$603.32

Tickets Reported: 28 Items Reported: 28 Contract Totals: $9,323.84 $9,506.64 $18,830.48

Material Summary	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Quantity	Material Total	Tax Total	Total
VG - SW-CONT SOIL	731.28	0.00 TN	840.00	0.00 YD	0.00	0.00	731.28 TN	$9,323.84	9,506.64	$18,830.48

C&D

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate		Billing Quantity		Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
06/16/2017 I	01 1011446	000713 - FIVE STAR DISPOSAL SERV	FIV004	C&D	28.74	F	2.89	TN	0.00	$0.00	$0.00	$83.06	$37.57	$120.63
06/16/2017 I	01 1011460	000713 - FIVE STAR DISPOSAL SERV	FIV004	C&D	28.74	F	0.76	TN	0.00	$0.00	$0.00	$21.84	$9.88	$31.72
06/16/2017 I	01 1011488	000713 - FIVE STAR DISPOSAL SERV	FIV004	C&D	28.74	F	3.03	TN	0.00	$0.00	$0.00	$87.08	$39.39	$126.47
06/16/2017 I	01 1011536	000713 - FIVE STAR DISPOSAL SERV	FIV004	C&D	28.74	F	1.40	TN	0.00	$0.00	$0.00	$40.24	$18.20	$58.44
06/16/2017 I	01 1011545	000713 - FIVE STAR DISPOSAL SERV	Fiv008	C&D	28.74	F	1.60	TN	0.00	$0.00	$0.00	$45.98	$20.80	$66.78
06/16/2017 I	01 1011554	000713 - FIVE STAR DISPOSAL SERV	FIV004	C&D	28.74	F	4.58	TN	0.00	$0.00	$0.00	$131.63	$59.54	$191.17

Tickets Reported: 6 Items Reported: 6 Contract Totals: $409.83 $185.38 $595.21

Material Summary	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Quantity	Material Total	Tax Total	Total
CA - C&D	14.26	0.00 TN	125.00	0.00 YD	0.00	0.00	14.26 TN	$409.83	$185.38	$595.21

C&D

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate		Billing Quantity		Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
06/16/2017 I	01 1011481	333336 - EXCEL DISPOSAL	EXC009	C&D	31.83	F	1.78	TN	0.00	$0.00	$0.00	$56.66	$23.14	$79.80
06/16/2017 I	01 1011531	333336 - EXCEL DISPOSAL	EXC009	C&D	31.83	F	5.54	TN	0.00	$0.00	$0.00	$176.34	$72.02	$248.36

Detail Customer Activity Report

All Ticket Types | July 10, 2017 to July 14, 2017 | All Facilities

Type B Soil

History and Waiting | Specific Customer(s) : 100095

100095- KENOSHA

Ticket Date	Facility & Ticket Number	Contract	Truck #	Container	Material	Material Rate		Billing Quantity		Material Total	Tax Total	Total
07/14/2017	I 01 1013637	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	27.28	TN	$347.82	$354.64	$702.46
07/14/2017	I 01 1013638	30631710697	KIR333		SW-CONT SOIL	12.75	F	27.91	TN	$355.85	$362.83	$718.68
07/14/2017	I 01 1013639	30631710697	KIR286		SW-CONT SOIL	12.75	F	29.00	TN	$369.75	$377.00	$746.75
07/14/2017	I 01 1013641	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	26.51	TN	$338.00	$344.63	$682.63
07/14/2017	I 01 1013654	30631710697	KIR306		SW-CONT SOIL	12.75	F	25.96	TN	$330.99	$337.48	$668.47
07/14/2017	I 01 1013659	30631710697	KIR333		SW-CONT SOIL	12.75	F	23.05	TN	$293.89	$299.65	$593.54
07/14/2017	I 01 1013661	30631710697	KIR286		SW-CONT SOIL	12.75	F	26.89	TN	$342.85	$349.57	$692.42
07/14/2017	I 01 1013664	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	25.09	TN	$319.90	$326.17	$646.07
07/14/2017	I 01 1013667	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	22.72	TN	$289.68	$295.36	$585.04
07/14/2017	I 01 1013677	30631710697	KIR286		SW-CONT SOIL	12.75	F	24.68	TN	$314.67	$320.84	$635.51
07/14/2017	I 01 1013682	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	27.67	TN	$352.79	$359.71	$712.50
07/14/2017	I 01 1013684	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	26.77	TN	$341.32	$348.01	$689.33
07/14/2017	I 01 1013697	30631710697	KIR286		SW-CONT SOIL	12.75	F	23.69	TN	$302.05	$307.97	$610.02
07/14/2017	I 01 1013701	30631710697	KIR306		SW-CONT SOIL	12.75	F	25.26	TN	$322.07	$328.38	$650.45
07/14/2017	I 01 1013703	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	25.60	TN	$326.40	$332.80	$659.20
07/14/2017	I 01 1013705	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	25.52	TN	$325.38	$331.76	$657.14
07/14/2017	I 01 1013708	30631710697	KIR286		SW-CONT SOIL	12.75	F	26.88	TN	$342.72	$349.44	$692.16
07/14/2017	I 01 1013710	30631710697	KIR306		SW-CONT SOIL	12.75	F	24.38	TN	$310.85	$316.94	$627.79
07/14/2017	I 01 1013712	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	27.71	TN	$353.30	$360.23	$713.53
07/14/2017	I 01 1013714	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	25.28	TN	$322.32	$328.64	$650.96
07/14/2017	I 01 1013722	30631710697	KIR286		SW-CONT SOIL	12.75	F	27.46	TN	$350.12	$356.98	$707.10
07/14/2017	I 01 1013723	30631710697	KIR333		SW-CONT SOIL	12.75	F	25.64	TN	$326.91	$333.32	$660.23
07/14/2017	I 01 1013724	30631710697	KIR306		SW-CONT SOIL	12.75	F	26.20	TN	$334.05	$340.60	$674.65
07/14/2017	I 01 1013727	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	26.12	TN	$333.03	$339.56	$672.59
07/14/2017	I 01 1013730	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	22.07	TN	$281.39	$286.91	$568.30
07/14/2017	I 01 1013740	30631710697	KIR286		SW-CONT SOIL	12.75	F	26.32	TN	$335.58	$342.16	$677.74
07/14/2017	I 01 1013741	30631710697	KIR333		SW-CONT SOIL	12.75	F	24.96	TN	$318.24	$324.48	$642.72
07/14/2017	I 01 1013744	30631710697	KIR306		SW-CONT SOIL	12.75	F	30.36	TN	$387.09	$394.68	$781.77
07/14/2017	I 01 1013748	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	22.92	TN	$292.23	$297.96	$590.19
07/14/2017	I 01 1013751	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	26.17	TN	$333.67	$340.21	$673.88
07/14/2017	I 01 1013755	30631710697	KIR333		SW-CONT SOIL	12.75	F	23.88	TN	$304.47	$310.44	$614.91
07/14/2017	I 01 1013757	30631710697	KIR306		SW-CONT SOIL	12.75	F	25.40	TN	$323.85	$330.20	$654.05
07/14/2017	I 01 1013758	30631710697	KIR295		SW-CONT SOIL	12.75	F	21.61	TN	$275.53	$280.93	$556.46

Tickets 33 Items Reported: 33 Customer Totals: $10,798.76 ####### $21,809.24

Material Summary	Weight Inbound	Weight Outbound		Volume Inbound	Volume Outbound		Count Inbound	Count Outbound	Billing Quantit		Material Total	Tax Total	Total
VG - SW-CONT SOIL	846.96	0.00	TN	1,320.00	0.00	YD	0.00	0.00	846.96	TN	$10,798.76	$11,010.48	$21,809.24

Cash Totals:

Invoice Totals: $10,798.76 ###### $21,809.24

Tickets Reported: 33 Items Reported: 33 Report Totals: $10,798.76 ###### $21,809.24

Detail Customer Activity Report

All Ticket Types | July 17, 2017 to July 21, 2017 | All Facilities

History and Waiting | Specific Customer(s) : 100095,100053

Type B soil

100095- KENOSHA

Ticket Date	Facility & Ticket Number	Contract	Truck #	Container	Material	Material Rate		Billing Quantity		Material Total	Tax Total	Total	
07/18/2017	I 01 1013886	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	27.18	TN	$346.55	$353.34	$699.89	Mankowski
07/18/2017	I 01 1013888	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	24.54	TN	$312.89	$319.02	$631.91	Mankowski
07/18/2017	I 01 1013904	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	25.61	TN	$326.53	$332.93	$659.46	Mankowski
07/18/2017	I 01 1013906	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	24.98	TN	$318.50	$324.74	$643.24	Mankowski
07/18/2017	I 01 1013924	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	25.23	TN	$321.68	$327.99	$649.67	Mankowski
07/18/2017	I 01 1013930	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	26.15	TN	$333.41	$339.95	$673.36	Mankowski
07/18/2017	I 01 1013942	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	23.01	TN	$293.38	$299.13	$592.51	Mankowski
07/18/2017	I 01 1013949	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	24.20	TN	$308.55	$314.60	$623.15	Mankowski
07/18/2017	I 01 1013956	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	26.33	TN	$335.71	$342.29	$678.00	Mankowski
07/18/2017	I 01 1013960	30631710697	ZIZ680		SW-CONT SOIL	12.75	F	25.03	TN	$319.13	$325.39	$644.52	Mankowski
07/18/2017	I 01 1013973	30631710697	CLK706		SW-CONT SOIL	12.75	F	24.04	TN	$306.51	$312.52	$619.03	Mankowski
07/18/2017	I 01 1013974	30631710697	ZIZ681		SW-CONT SOIL	12.75	F	7.37	TN	$93.97	$95.81	$189.78	Mankowski
~~07/20/2017~~	~~I 01 1014128~~	~~30631710175~~	~~OAK851~~		~~SW-CONT SOIL~~	~~12.75~~	~~F~~	~~18.82~~	~~TN~~	~~$239.96~~	~~$244.66~~	~~$484.62~~	KEP
~~07/20/2017~~	~~I 01 1014131~~	~~30631710175~~	~~OAK840~~		~~SW-CONT SOIL~~	~~12.75~~	~~F~~	~~20.11~~	~~TN~~	~~$256.40~~	~~$261.43~~	~~$517.83~~	KEP
~~07/20/2017~~	~~I 01 1014145~~	~~30631710175~~	~~OAK840~~		~~SW-CONT SOIL~~	~~12.75~~	~~F~~	~~20.59~~	~~TN~~	~~$262.52~~	~~$267.67~~	~~$530.19~~	KEP
~~07/20/2017~~	~~I 01 1014149~~	~~30631710175~~	~~OAK851~~		~~SW-CONT SOIL~~	~~12.75~~	~~F~~	~~18.08~~	~~TN~~	~~$230.52~~	~~$235.04~~	~~$465.56~~	KEP
~~07/20/2017~~	~~I 01 1014156~~	~~30631710175~~	~~OAK840~~		~~SW-CONT SOIL~~	~~12.75~~	~~F~~	~~20.05~~	~~TN~~	~~$255.64~~	~~$260.65~~	~~$516.29~~	KEP
~~07/20/2017~~	~~I 01 1014160~~	~~30631710175~~	~~OAK851~~		~~SW-CONT SOIL~~	~~12.75~~	~~F~~	~~19.36~~	~~TN~~	~~$246.84~~	~~$251.68~~	~~$498.52~~	KEP

Tickets 18 Items Reported: 18 Customer Totals: $5,108.69 $5,208.84 $10,317.53

Material Summary	Weight Inbound	Weight Outbound		Volume Inbound	Volume Outbound		Count Inbound	Count Outbound	Billing Quantit		Material Total	Tax Total	Total
VG - SW-CONT SOIL	400.68	0.00	TN	570.00	0.00	YD	0.00	0.00	400.68	TN	$5,108.69	$5,208.84	$10,317.53

Cash Totals:
Invoice Totals: $5,108.69 $5,208.84 $10,317.53
Report Totals: $5,108.69 $5,208.84 $10,317.53

Tickets Reported: 18 Items Reported: 18

ACHESONJ 07/25/2017 9:38 AM

KESTRAL HAWK LANDFILL - 3063

Mankowski total tons for July 18, 2017 = 283.67

Appendix D

Laboratory Analytical Reports

Waste Characterization – Post treatment

Post-excavation Sidewall and Bottom Samples

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

June 30, 2017

Lanette Altenbach
AECOM, Inc.
1555 N River Center Drive
Suite 214
Milwaukee, WI 53212

RE: Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Dear Lanette Altenbach:
Enclosed are the analytical results for sample(s) received by the laboratory on June 27, 2017. 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,

Christopher Hyska

Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Susan Petrofske, AECOM, Inc.

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

CERTIFICATIONS

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

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: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152338001	**PT-WC1**	Solid	06/26/17 10:00	06/27/17 09:50
40152338002	**PT-WC2**	Solid	06/26/17 10:45	06/27/17 09:50
40152338003	**PT-WC3**	Solid	06/26/17 11:25	06/27/17 09:50

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SAMPLE ANALYTE COUNT

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40152338001	**PT-WC1**	EPA 8260	LAP	4	PASI-G
		EPA 9095	DEY	1	PASI-G
40152338002	**PT-WC2**	EPA 8260	LAP	4	PASI-G
		EPA 9095	DEY	1	PASI-G
40152338003	**PT-WC3**	EPA 8260	LAP	4	PASI-G
		EPA 9095	DEY	1	PASI-G

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40152338001	**PT-WC1**					
EPA 8260	Trichloroethene	0.10	mg/L	0.010	06/29/17 13:33	
EPA 9095	Free Liquids	Pass	no units		06/28/17 11:42	
40152338002	**PT-WC2**					
EPA 8260	Trichloroethene	0.10	mg/L	0.010	06/29/17 13:55	
EPA 9095	Free Liquids	Pass	no units		06/28/17 11:44	
40152338003	**PT-WC3**					
EPA 8260	Trichloroethene	0.11	mg/L	0.010	06/29/17 14:17	
EPA 9095	Free Liquids	Pass	no units		06/28/17 11:47	

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Sample: PT-WC1 **Lab ID: 40152338001** Collected: 06/26/17 10:00 Received: 06/27/17 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 06/29/17 00:00								
Trichloroethene	**0.10**	mg/L	0.010	0.0033	10		06/29/17 13:33	79-01-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		10		06/29/17 13:33	2037-26-5	
4-Bromofluorobenzene (S)	96	%	61-130		10		06/29/17 13:33	460-00-4	
Dibromofluoromethane (S)	100	%	67-130		10		06/29/17 13:33	1868-53-7	
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095								
Free Liquids	**Pass**	no units			1		06/28/17 11:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Sample: PT-WC2 **Lab ID: 40152338002** Collected: 06/26/17 10:45 Received: 06/27/17 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 06/29/17 00:00								
Trichloroethene	**0.10**	mg/L	0.010	0.0033	10		06/29/17 13:55	79-01-6	
Surrogates									
Toluene-d8 (S)	100	%	70-130		10		06/29/17 13:55	2037-26-5	
4-Bromofluorobenzene (S)	88	%	61-130		10		06/29/17 13:55	460-00-4	
Dibromofluoromethane (S)	100	%	67-130		10		06/29/17 13:55	1868-53-7	
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095								
Free Liquids	**Pass**	no units			1		06/28/17 11:44		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Sample: PT-WC3 **Lab ID: 40152338003** Collected: 06/26/17 11:25 Received: 06/27/17 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 06/29/17 00:00								
Trichloroethene	**0.11**	mg/L	0.010	0.0033	10		06/29/17 14:17	79-01-6	
Surrogates									
Toluene-d8 (S)	100	%	70-130		10		06/29/17 14:17	2037-26-5	
4-Bromofluorobenzene (S)	94	%	61-130		10		06/29/17 14:17	460-00-4	
Dibromofluoromethane (S)	101	%	67-130		10		06/29/17 14:17	1868-53-7	
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095								
Free Liquids	**Pass**	no units			1		06/28/17 11:47		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

QC Batch: 260100 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 40152338001, 40152338002, 40152338003

METHOD BLANK: 1532288 Matrix: Water
Associated Lab Samples: 40152338001, 40152338002, 40152338003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	mg/L	<0.00033	0.0010	06/29/17 10:58	
4-Bromofluorobenzene (S)	%	90	61-130	06/29/17 10:58	
Dibromofluoromethane (S)	%	101	67-130	06/29/17 10:58	
Toluene-d8 (S)	%	104	70-130	06/29/17 10:58	

METHOD BLANK: 1531130 Matrix: Solid
Associated Lab Samples: 40152338001, 40152338002, 40152338003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	mg/L	<0.0033	0.010	06/29/17 13:11	
4-Bromofluorobenzene (S)	%	97	61-130	06/29/17 13:11	
Dibromofluoromethane (S)	%	100	67-130	06/29/17 13:11	
Toluene-d8 (S)	%	101	70-130	06/29/17 13:11	

LABORATORY CONTROL SAMPLE: 1532289

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	mg/L	.05	0.053	107	70-130	
4-Bromofluorobenzene (S)	%			100	61-130	
Dibromofluoromethane (S)	%			101	67-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1532788 1532789

Parameter	Units	40152338001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichloroethene	mg/L	0.10	.5	.5	0.65	0.67	110	113	70-130	2	20	
4-Bromofluorobenzene (S)	%						103	99	61-130			
Dibromofluoromethane (S)	%						102	103	67-130			
Toluene-d8 (S)	%						100	100	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

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(920)469-2436

QUALITY CONTROL DATA

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

QC Batch: 260014 Analysis Method: EPA 9095
QC Batch Method: EPA 9095 Analysis Description: 9095 PAINT FILTER LIQUID TEST
Associated Lab Samples: 40152338001, 40152338002, 40152338003

METHOD BLANK: 1531367 Matrix: Solid
Associated Lab Samples: 40152338001, 40152338002, 40152338003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Free Liquids	no units	Fail		06/28/17 11:39	

LABORATORY CONTROL SAMPLE: 1531368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Free Liquids	no units		Pass			

SAMPLE DUPLICATE: 1531369

Parameter	Units	40152352002 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	Pass	Pass			

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: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60508055.1 MANKOWSKI
Pace Project No.: 40152338

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40152338001	**PT-WC1**	EPA 8260	260100		
40152338002	**PT-WC2**	EPA 8260	260100		
40152338003	**PT-WC3**	EPA 8260	260100		
40152338001	**PT-WC1**	EPA 9095	260014		
40152338002	**PT-WC2**	EPA 9095	260014		
40152338003	**PT-WC3**	EPA 9095	260014		

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

40152338

Page: of

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: AECOM - Milw	Report To: Lanette Altenbach	Attention: Accounts Payable/Finance Department
Address: 1555 N. River Center Dr., Suite 214	Copy To: Susan Petrofske	Company Name: City of Kenosha
Milwaukee, WI 53212		Address: 652 52nd St., Kenosha, WI 53140
Email To: Lanette.Altenbach@aecom.com	Purchase Order No.:	Pace Quote Reference:
Phone: 414-577-1363 Fax:	Project Name: Mankowski	Pace Project Manager: Chris Hyska
Requested Due Date/TAT: Standard	Project Number: 60508055.1	Pace Profile #: (2430) Kenosha work

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ ☑ WI ☐ OTHER___

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	Section D Required Client Information / SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G+GRAB C=COMP	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: TCL/TCE Free Liquids	Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
001	PT-WC1	SL	C	6/24	0940	6/26/17	1000	1000	3	X								N	2	1	34020ag A
002	PT-WC2	SL	C	↓	1010	↓	1045	1045	3	X								N	2	1	
003	PT-WC3	SL	C	↓	1050	↓	1125	1130	3	X								N	2	1	
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Additional Comments:

Post-treatment samples

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Heather Thiel	6/27/17	1330			
[signature]	6/27/17	0952	[signature]	6/27/17	0952

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
ROI	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: HEATHER THIEL

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 6/26/17 @ 1300

Sample Condition Upon Receipt

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

Pace Analytical™

Client Name: AECOM Project #

WO# : 40152338

40152338

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

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: 6-27-17
Initials: SC

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. Original and a copy 6-27-17 SC
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: CK **Date:** 6-27-17

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

June 26, 2017

Lanette Altenbach
AECOM, Inc.
1555 N River Center Drive
Suite 214
Milwaukee, WI 53212

RE: Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Dear Lanette Altenbach:
Enclosed are the analytical results for sample(s) received by the laboratory on June 21, 2017. 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,

Christopher Hyska

Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Susan Petrofske, AECOM, Inc.

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

CERTIFICATIONS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

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: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40152051001	M3-1	Solid	06/19/17 08:00	06/21/17 10:35
40152051002	M3-2	Solid	06/19/17 08:03	06/21/17 10:35
40152051003	M3-3	Solid	06/19/17 08:05	06/21/17 10:35
40152051004	M3-4	Solid	06/19/17 08:10	06/21/17 10:35
40152051005	M3-5	Solid	06/19/17 08:12	06/21/17 10:35
40152051006	M3-6	Solid	06/19/17 08:15	06/21/17 10:35
40152051007	M3-7	Solid	06/19/17 08:20	06/21/17 10:35
40152051008	M3-8	Solid	06/19/17 08:25	06/21/17 10:35
40152051009	M2-1	Solid	06/19/17 09:45	06/21/17 10:35
40152051010	M2-2	Solid	06/19/17 09:38	06/21/17 10:35
40152051011	M2-3	Solid	06/19/17 09:35	06/21/17 10:35
40152051012	M2-4	Solid	06/19/17 09:43	06/21/17 10:35
40152051013	M2-5	Solid	06/19/17 09:40	06/21/17 10:35
40152051014	M1-1	Solid	06/19/17 14:45	06/21/17 10:35
40152051015	M1-2	Solid	06/19/17 14:42	06/21/17 10:35
40152051016	M1-3	Solid	06/19/17 14:40	06/21/17 10:35
40152051017	M1-4	Solid	06/19/17 14:38	06/21/17 10:35
40152051018	M1-5	Solid	06/19/17 14:35	06/21/17 10:35
40152051019	M1-6	Solid	06/19/17 14:33	06/21/17 10:35
40152051020	M1-7	Solid	06/19/17 14:30	06/21/17 10:35
40152051021	M1-8	Solid	06/19/17 14:48	06/21/17 10:35
40152051022	FIELD BLANK	Solid	06/16/17 09:30	06/21/17 10:35

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SAMPLE ANALYTE COUNT

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40152051001	M3-1	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051002	M3-2	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051003	M3-3	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051004	M3-4	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051005	M3-5	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051006	M3-6	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051007	M3-7	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051008	M3-8	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051009	M2-1	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051010	M2-2	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051011	M2-3	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051012	M2-4	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051013	M2-5	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051014	M1-1	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051015	M1-2	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051016	M1-3	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051017	M1-4	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051018	M1-5	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051019	M1-6	EPA 8260	SMT	64	PASI-G

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

SAMPLE ANALYTE COUNT

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	AH	1	PASI-G
40152051020	**M1-7**	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051021	**M1-8**	EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40152051022	**FIELD BLANK**	EPA 8260	MDS	64	PASI-G

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40152051001	**M3-1**					
EPA 8260	1,2,4-Trimethylbenzene	80.8	ug/kg	74.7	06/22/17 14:38	
EPA 8260	Ethylbenzene	34.4J	ug/kg	74.7	06/22/17 14:38	
EPA 8260	Trichloroethene	9860	ug/kg	74.7	06/22/17 14:38	
EPA 8260	cis-1,2-Dichloroethene	5010	ug/kg	74.7	06/22/17 14:38	
EPA 8260	m&p-Xylene	73.6J	ug/kg	149	06/22/17 14:38	
EPA 8260	o-Xylene	38.3J	ug/kg	74.7	06/22/17 14:38	
EPA 8260	trans-1,2-Dichloroethene	574	ug/kg	74.7	06/22/17 14:38	
ASTM D2974-87	Percent Moisture	9.8	%	0.10	06/24/17 09:01	
40152051002	**M3-2**					
EPA 8260	Trichloroethene	21300	ug/kg	173	06/22/17 15:47	
EPA 8260	cis-1,2-Dichloroethene	2690	ug/kg	173	06/22/17 15:47	
EPA 8260	trans-1,2-Dichloroethene	112J	ug/kg	173	06/22/17 15:47	
ASTM D2974-87	Percent Moisture	18.5	%	0.10	06/24/17 09:01	
40152051003	**M3-3**					
EPA 8260	Trichloroethene	14700	ug/kg	155	06/22/17 16:11	
EPA 8260	cis-1,2-Dichloroethene	1310	ug/kg	155	06/22/17 16:11	
EPA 8260	trans-1,2-Dichloroethene	72.3J	ug/kg	155	06/22/17 16:11	
ASTM D2974-87	Percent Moisture	17.5	%	0.10	06/24/17 09:01	
40152051004	**M3-4**					
EPA 8260	Trichloroethene	18900	ug/kg	174	06/22/17 16:34	
EPA 8260	cis-1,2-Dichloroethene	194	ug/kg	174	06/22/17 16:34	
ASTM D2974-87	Percent Moisture	18.0	%	0.10	06/24/17 09:02	
40152051005	**M3-5**					
EPA 8260	Trichloroethene	14300	ug/kg	173	06/22/17 16:57	
EPA 8260	cis-1,2-Dichloroethene	307	ug/kg	173	06/22/17 16:57	
EPA 8260	trans-1,2-Dichloroethene	190	ug/kg	173	06/22/17 16:57	
ASTM D2974-87	Percent Moisture	11.1	%	0.10	06/24/17 09:02	
40152051006	**M3-6**					
EPA 8260	Hexachloro-1,3-butadiene	74.0J	ug/kg	76.5	06/22/17 11:56	
EPA 8260	Trichloroethene	132	ug/kg	76.5	06/22/17 11:56	
EPA 8260	Vinyl chloride	125	ug/kg	76.5	06/22/17 11:56	R1
EPA 8260	cis-1,2-Dichloroethene	7580	ug/kg	76.5	06/22/17 11:56	M1
EPA 8260	trans-1,2-Dichloroethene	567	ug/kg	76.5	06/22/17 11:56	
ASTM D2974-87	Percent Moisture	9.8	%	0.10	06/24/17 09:02	
40152051007	**M3-7**					
EPA 8260	Trichloroethene	10900	ug/kg	78.6	06/22/17 15:01	
EPA 8260	cis-1,2-Dichloroethene	2240	ug/kg	78.6	06/22/17 15:01	
EPA 8260	trans-1,2-Dichloroethene	315	ug/kg	78.6	06/22/17 15:01	
ASTM D2974-87	Percent Moisture	12.3	%	0.10	06/24/17 09:02	
40152051008	**M3-8**					
EPA 8260	Trichloroethene	31900	ug/kg	323	06/22/17 19:16	
EPA 8260	cis-1,2-Dichloroethene	1090	ug/kg	323	06/22/17 19:16	
EPA 8260	trans-1,2-Dichloroethene	170J	ug/kg	323	06/22/17 19:16	

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

SUMMARY OF DETECTION

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40152051008	**M3-8**					
ASTM D2974-87	Percent Moisture	19.1	%	0.10	06/24/17 09:02	
40152051009	**M2-1**					
EPA 8260	Trichloroethene	79.6	ug/kg	78.6	06/22/17 12:19	
EPA 8260	cis-1,2-Dichloroethene	371	ug/kg	78.6	06/22/17 12:19	
EPA 8260	trans-1,2-Dichloroethene	52.5J	ug/kg	78.6	06/22/17 12:19	
ASTM D2974-87	Percent Moisture	8.0	%	0.10	06/24/17 09:02	
40152051010	**M2-2**					
EPA 8260	1,2,4-Trimethylbenzene	285	ug/kg	85.2	06/22/17 12:42	
EPA 8260	1,3,5-Trimethylbenzene	106	ug/kg	85.2	06/22/17 12:42	
EPA 8260	Ethylbenzene	62.5J	ug/kg	85.2	06/22/17 12:42	
EPA 8260	Naphthalene	81.7J	ug/kg	355	06/22/17 12:42	
EPA 8260	Toluene	132	ug/kg	85.2	06/22/17 12:42	
EPA 8260	Trichloroethene	435	ug/kg	85.2	06/22/17 12:42	
EPA 8260	cis-1,2-Dichloroethene	175	ug/kg	85.2	06/22/17 12:42	
EPA 8260	m&p-Xylene	292	ug/kg	170	06/22/17 12:42	
EPA 8260	n-Butylbenzene	68.3J	ug/kg	85.2	06/22/17 12:42	
EPA 8260	n-Propylbenzene	48.5J	ug/kg	85.2	06/22/17 12:42	
EPA 8260	o-Xylene	152	ug/kg	85.2	06/22/17 12:42	
ASTM D2974-87	Percent Moisture	13.1	%	0.10	06/24/17 09:02	
40152051011	**M2-3**					
EPA 8260	Trichloroethene	3300	ug/kg	82.7	06/22/17 13:06	
EPA 8260	cis-1,2-Dichloroethene	952	ug/kg	82.7	06/22/17 13:06	
EPA 8260	trans-1,2-Dichloroethene	86.8	ug/kg	82.7	06/22/17 13:06	
ASTM D2974-87	Percent Moisture	4.5	%	0.10	06/24/17 09:15	
40152051012	**M2-4**					
EPA 8260	Trichloroethene	136	ug/kg	81.5	06/22/17 13:29	
EPA 8260	cis-1,2-Dichloroethene	1240	ug/kg	81.5	06/22/17 13:29	
EPA 8260	trans-1,2-Dichloroethene	201	ug/kg	81.5	06/22/17 13:29	
ASTM D2974-87	Percent Moisture	4.4	%	0.10	06/24/17 09:15	
40152051013	**M2-5**					
EPA 8260	Trichloroethene	131	ug/kg	77.9	06/22/17 13:52	
EPA 8260	Vinyl chloride	370	ug/kg	77.9	06/22/17 13:52	
EPA 8260	cis-1,2-Dichloroethene	2130	ug/kg	77.9	06/22/17 13:52	
EPA 8260	trans-1,2-Dichloroethene	344	ug/kg	77.9	06/22/17 13:52	
ASTM D2974-87	Percent Moisture	12.4	%	0.10	06/24/17 09:15	
40152051014	**M1-1**					
EPA 8260	Trichloroethene	6530	ug/kg	88.8	06/22/17 15:24	
EPA 8260	cis-1,2-Dichloroethene	1550	ug/kg	88.8	06/22/17 15:24	
EPA 8260	trans-1,2-Dichloroethene	321	ug/kg	88.8	06/22/17 15:24	
ASTM D2974-87	Percent Moisture	8.7	%	0.10	06/24/17 09:16	
40152051015	**M1-2**					
EPA 8260	Trichloroethene	23500	ug/kg	206	06/22/17 18:29	
EPA 8260	cis-1,2-Dichloroethene	1240	ug/kg	206	06/22/17 18:29	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40152051015	**M1-2**					
ASTM D2974-87	Percent Moisture	4.4	%	0.10	06/24/17 09:16	
40152051016	**M1-3**					
EPA 8260	Trichloroethene	16900	ug/kg	168	06/22/17 17:20	
EPA 8260	cis-1,2-Dichloroethene	902	ug/kg	168	06/22/17 17:20	
ASTM D2974-87	Percent Moisture	3.4	%	0.10	06/24/17 09:16	
40152051017	**M1-4**					
EPA 8260	Trichloroethene	11700	ug/kg	154	06/22/17 17:43	
EPA 8260	cis-1,2-Dichloroethene	285	ug/kg	154	06/22/17 17:43	
ASTM D2974-87	Percent Moisture	3.7	%	0.10	06/24/17 09:16	
40152051018	**M1-5**					
EPA 8260	Trichloroethene	34800	ug/kg	369	06/22/17 18:52	
EPA 8260	cis-1,2-Dichloroethene	1010	ug/kg	369	06/22/17 18:52	
ASTM D2974-87	Percent Moisture	5.4	%	0.10	06/24/17 09:16	
40152051019	**M1-6**					
EPA 8260	Trichloroethene	176	ug/kg	81.3	06/22/17 14:15	
ASTM D2974-87	Percent Moisture	14.2	%	0.10	06/22/17 15:28	
40152051020	**M1-7**					
EPA 8260	Tetrachloroethene	182	ug/kg	162	06/22/17 18:06	
EPA 8260	Trichloroethene	18900	ug/kg	162	06/22/17 18:06	
EPA 8260	cis-1,2-Dichloroethene	144J	ug/kg	162	06/22/17 18:06	
ASTM D2974-87	Percent Moisture	2.7	%	0.10	06/22/17 15:28	
40152051021	**M1-8**					
EPA 8260	Tetrachloroethene	49.2J	ug/kg	79.7	06/23/17 19:35	
EPA 8260	Trichloroethene	4330	ug/kg	79.7	06/23/17 19:35	
EPA 8260	cis-1,2-Dichloroethene	92.5	ug/kg	79.7	06/23/17 19:35	
ASTM D2974-87	Percent Moisture	3.5	%	0.10	06/22/17 15:28	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-1 **Lab ID: 40152051001** Collected: 06/19/17 08:00 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	630-20-6	W
1,1,1-Trichloroethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	71-55-6	W
1,1,2,2-Tetrachloroethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	79-34-5	W
1,1,2-Trichloroethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	79-00-5	W
1,1-Dichloroethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-34-3	W
1,1-Dichloroethene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-35-4	W
1,1-Dichloropropene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	563-58-6	W
1,2,3-Trichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	87-61-6	W
1,2,3-Trichloropropane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	96-18-4	W
1,2,4-Trichlorobenzene	**<53.4**	ug/kg	281	53.4	1	06/22/17 08:15	06/22/17 14:38	120-82-1	W
1,2,4-Trimethylbenzene	**80.8**	ug/kg	74.7	31.1	1	06/22/17 08:15	06/22/17 14:38	95-63-6	
1,2-Dibromo-3-chloropropane	**<103**	ug/kg	281	103	1	06/22/17 08:15	06/22/17 14:38	96-12-8	W
1,2-Dibromoethane (EDB)	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	106-93-4	W
1,2-Dichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	95-50-1	W
1,2-Dichloroethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	107-06-2	W
1,2-Dichloropropane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	78-87-5	W
1,3,5-Trimethylbenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	108-67-8	W
1,3-Dichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	541-73-1	W
1,3-Dichloropropane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	142-28-9	W
1,4-Dichlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	106-46-7	W
2,2-Dichloropropane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	594-20-7	W
2-Chlorotoluene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	95-49-8	W
4-Chlorotoluene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	106-43-4	W
Benzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	71-43-2	W
Bromobenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	108-86-1	W
Bromochloromethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	74-97-5	W
Bromodichloromethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-27-4	W
Bromoform	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-25-2	W
Bromomethane	**<78.5**	ug/kg	281	78.5	1	06/22/17 08:15	06/22/17 14:38	74-83-9	W
Carbon tetrachloride	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	56-23-5	W
Chlorobenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	108-90-7	W
Chloroethane	**<75.3**	ug/kg	281	75.3	1	06/22/17 08:15	06/22/17 14:38	75-00-3	W
Chloroform	**<52.2**	ug/kg	281	52.2	1	06/22/17 08:15	06/22/17 14:38	67-66-3	W
Chloromethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	74-87-3	W
Dibromochloromethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	124-48-1	W
Dibromomethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	74-95-3	W
Dichlorodifluoromethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-71-8	W
Diisopropyl ether	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	108-20-3	W
Ethylbenzene	**34.4J**	ug/kg	74.7	31.1	1	06/22/17 08:15	06/22/17 14:38	100-41-4	
Hexachloro-1,3-butadiene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	87-68-3	W
Isopropylbenzene (Cumene)	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	98-82-8	W
Methyl-tert-butyl ether	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	1634-04-4	W
Methylene Chloride	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-09-2	W
Naphthalene	**<45.0**	ug/kg	281	45.0	1	06/22/17 08:15	06/22/17 14:38	91-20-3	W
Styrene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-1 **Lab ID: 40152051001** Collected: 06/19/17 08:00 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	127-18-4	W
Toluene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	108-88-3	W
Trichloroethene	**9860**	ug/kg	74.7	31.1	1	06/22/17 08:15	06/22/17 14:38	79-01-6	
Trichlorofluoromethane	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-69-4	W
Vinyl chloride	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	75-01-4	W
cis-1,2-Dichloroethene	**5010**	ug/kg	74.7	31.1	1	06/22/17 08:15	06/22/17 14:38	156-59-2	
cis-1,3-Dichloropropene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	10061-01-5	W
m&p-Xylene	**73.6J**	ug/kg	149	62.3	1	06/22/17 08:15	06/22/17 14:38	179601-23-1	
n-Butylbenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	104-51-8	W
n-Propylbenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	103-65-1	W
o-Xylene	**38.3J**	ug/kg	74.7	31.1	1	06/22/17 08:15	06/22/17 14:38	95-47-6	
p-Isopropyltoluene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	99-87-6	W
sec-Butylbenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	135-98-8	W
tert-Butylbenzene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	98-06-6	W
trans-1,2-Dichloroethene	**574**	ug/kg	74.7	31.1	1	06/22/17 08:15	06/22/17 14:38	156-60-5	
trans-1,3-Dichloropropene	**<28.1**	ug/kg	67.4	28.1	1	06/22/17 08:15	06/22/17 14:38	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	115	%	68-130		1	06/22/17 08:15	06/22/17 14:38	1868-53-7	
Toluene-d8 (S)	116	%	68-149		1	06/22/17 08:15	06/22/17 14:38	2037-26-5	
4-Bromofluorobenzene (S)	113	%	58-141		1	06/22/17 08:15	06/22/17 14:38	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.8**	%	0.10	0.10	1		06/24/17 09:01		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-2 **Lab ID: 40152051002** Collected: 06/19/17 08:03 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	630-20-6	W
1,1,1-Trichloroethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	71-55-6	W
1,1,2,2-Tetrachloroethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	79-34-5	W
1,1,2-Trichloroethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	79-00-5	W
1,1-Dichloroethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-34-3	W
1,1-Dichloroethene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-35-4	W
1,1-Dichloropropene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	563-58-6	W
1,2,3-Trichlorobenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	87-61-6	W
1,2,3-Trichloropropane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	96-18-4	W
1,2,4-Trichlorobenzene	**<112**	ug/kg	588	112	2	06/22/17 08:15	06/22/17 15:47	120-82-1	W
1,2,4-Trimethylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	95-63-6	W
1,2-Dibromo-3-chloropropane	**<215**	ug/kg	588	215	2	06/22/17 08:15	06/22/17 15:47	96-12-8	W
1,2-Dibromoethane (EDB)	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	106-93-4	W
1,2-Dichlorobenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	95-50-1	W
1,2-Dichloroethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	107-06-2	W
1,2-Dichloropropane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	78-87-5	W
1,3,5-Trimethylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	108-67-8	W
1,3-Dichlorobenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	541-73-1	W
1,3-Dichloropropane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	142-28-9	W
1,4-Dichlorobenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	106-46-7	W
2,2-Dichloropropane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	594-20-7	W
2-Chlorotoluene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	95-49-8	W
4-Chlorotoluene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	106-43-4	W
Benzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	71-43-2	W
Bromobenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	108-86-1	W
Bromochloromethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	74-97-5	W
Bromodichloromethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-27-4	W
Bromoform	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-25-2	W
Bromomethane	**<164**	ug/kg	588	164	2	06/22/17 08:15	06/22/17 15:47	74-83-9	W
Carbon tetrachloride	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	56-23-5	W
Chlorobenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	108-90-7	W
Chloroethane	**<158**	ug/kg	588	158	2	06/22/17 08:15	06/22/17 15:47	75-00-3	W
Chloroform	**<109**	ug/kg	588	109	2	06/22/17 08:15	06/22/17 15:47	67-66-3	W
Chloromethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	74-87-3	W
Dibromochloromethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	124-48-1	W
Dibromomethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	74-95-3	W
Dichlorodifluoromethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-71-8	W
Diisopropyl ether	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	108-20-3	W
Ethylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	100-41-4	W
Hexachloro-1,3-butadiene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	87-68-3	W
Isopropylbenzene (Cumene)	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	98-82-8	W
Methyl-tert-butyl ether	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	1634-04-4	W
Methylene Chloride	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-09-2	W
Naphthalene	**<94.2**	ug/kg	588	94.2	2	06/22/17 08:15	06/22/17 15:47	91-20-3	W
Styrene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-2 **Lab ID: 40152051002** Collected: 06/19/17 08:03 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	127-18-4	W
Toluene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	108-88-3	W
Trichloroethene	**21300**	ug/kg	173	72.1	2	06/22/17 08:15	06/22/17 15:47	79-01-6	
Trichlorofluoromethane	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-69-4	W
Vinyl chloride	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	75-01-4	W
cis-1,2-Dichloroethene	**2690**	ug/kg	173	72.1	2	06/22/17 08:15	06/22/17 15:47	156-59-2	
cis-1,3-Dichloropropene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	10061-01-5	W
m&p-Xylene	**<118**	ug/kg	282	118	2	06/22/17 08:15	06/22/17 15:47	179601-23-1	W
n-Butylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	104-51-8	W
n-Propylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	103-65-1	W
o-Xylene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	95-47-6	W
p-Isopropyltoluene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	99-87-6	W
sec-Butylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	135-98-8	W
tert-Butylbenzene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	98-06-6	W
trans-1,2-Dichloroethene	**112J**	ug/kg	173	72.1	2	06/22/17 08:15	06/22/17 15:47	156-60-5	
trans-1,3-Dichloropropene	**<58.8**	ug/kg	141	58.8	2	06/22/17 08:15	06/22/17 15:47	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	111	%	68-130		2	06/22/17 08:15	06/22/17 15:47	1868-53-7	
Toluene-d8 (S)	111	%	68-149		2	06/22/17 08:15	06/22/17 15:47	2037-26-5	
4-Bromofluorobenzene (S)	99	%	58-141		2	06/22/17 08:15	06/22/17 15:47	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.5**	%	0.10	0.10	1		06/24/17 09:01		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-3 **Lab ID: 40152051003** Collected: 06/19/17 08:05 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	630-20-6	W
1,1,1-Trichloroethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	71-55-6	W
1,1,2,2-Tetrachloroethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	79-34-5	W
1,1,2-Trichloroethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	79-00-5	W
1,1-Dichloroethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-34-3	W
1,1-Dichloroethene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-35-4	W
1,1-Dichloropropene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	563-58-6	W
1,2,3-Trichlorobenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	87-61-6	W
1,2,3-Trichloropropane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	96-18-4	W
1,2,4-Trichlorobenzene	**<101**	ug/kg	532	101	2	06/22/17 08:15	06/22/17 16:11	120-82-1	W
1,2,4-Trimethylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	95-63-6	W
1,2-Dibromo-3-chloropropane	**<194**	ug/kg	532	194	2	06/22/17 08:15	06/22/17 16:11	96-12-8	W
1,2-Dibromoethane (EDB)	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	106-93-4	W
1,2-Dichlorobenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	95-50-1	W
1,2-Dichloroethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	107-06-2	W
1,2-Dichloropropane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	78-87-5	W
1,3,5-Trimethylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	108-67-8	W
1,3-Dichlorobenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	541-73-1	W
1,3-Dichloropropane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	142-28-9	W
1,4-Dichlorobenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	106-46-7	W
2,2-Dichloropropane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	594-20-7	W
2-Chlorotoluene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	95-49-8	W
4-Chlorotoluene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	106-43-4	W
Benzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	71-43-2	W
Bromobenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	108-86-1	W
Bromochloromethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	74-97-5	W
Bromodichloromethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-27-4	W
Bromoform	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-25-2	W
Bromomethane	**<149**	ug/kg	532	149	2	06/22/17 08:15	06/22/17 16:11	74-83-9	W
Carbon tetrachloride	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	56-23-5	W
Chlorobenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	108-90-7	W
Chloroethane	**<143**	ug/kg	532	143	2	06/22/17 08:15	06/22/17 16:11	75-00-3	W
Chloroform	**<98.8**	ug/kg	532	98.8	2	06/22/17 08:15	06/22/17 16:11	67-66-3	W
Chloromethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	74-87-3	W
Dibromochloromethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	124-48-1	W
Dibromomethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	74-95-3	W
Dichlorodifluoromethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-71-8	W
Diisopropyl ether	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	108-20-3	W
Ethylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	100-41-4	W
Hexachloro-1,3-butadiene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	87-68-3	W
Isopropylbenzene (Cumene)	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	98-82-8	W
Methyl-tert-butyl ether	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	1634-04-4	W
Methylene Chloride	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-09-2	W
Naphthalene	**<85.2**	ug/kg	532	85.2	2	06/22/17 08:15	06/22/17 16:11	91-20-3	W
Styrene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-3 **Lab ID: 40152051003** Collected: 06/19/17 08:05 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	127-18-4	W
Toluene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	108-88-3	W
Trichloroethene	**14700**	ug/kg	155	64.5	2	06/22/17 08:15	06/22/17 16:11	79-01-6	
Trichlorofluoromethane	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-69-4	W
Vinyl chloride	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	75-01-4	W
cis-1,2-Dichloroethene	**1310**	ug/kg	155	64.5	2	06/22/17 08:15	06/22/17 16:11	156-59-2	
cis-1,3-Dichloropropene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	10061-01-5	W
m&p-Xylene	**<106**	ug/kg	255	106	2	06/22/17 08:15	06/22/17 16:11	179601-23-1	W
n-Butylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	104-51-8	W
n-Propylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	103-65-1	W
o-Xylene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	95-47-6	W
p-Isopropyltoluene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	99-87-6	W
sec-Butylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	135-98-8	W
tert-Butylbenzene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	98-06-6	W
trans-1,2-Dichloroethene	**72.3J**	ug/kg	155	64.5	2	06/22/17 08:15	06/22/17 16:11	156-60-5	
trans-1,3-Dichloropropene	**<53.2**	ug/kg	128	53.2	2	06/22/17 08:15	06/22/17 16:11	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	113	%	68-130		2	06/22/17 08:15	06/22/17 16:11	1868-53-7	
Toluene-d8 (S)	107	%	68-149		2	06/22/17 08:15	06/22/17 16:11	2037-26-5	
4-Bromofluorobenzene (S)	95	%	58-141		2	06/22/17 08:15	06/22/17 16:11	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.5**	%	0.10	0.10	1		06/24/17 09:01		

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-4 **Lab ID: 40152051004** Collected: 06/19/17 08:10 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	630-20-6	W
1,1,1-Trichloroethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	71-55-6	W
1,1,2,2-Tetrachloroethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	79-34-5	W
1,1,2-Trichloroethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	79-00-5	W
1,1-Dichloroethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-34-3	W
1,1-Dichloroethene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-35-4	W
1,1-Dichloropropene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	563-58-6	W
1,2,3-Trichlorobenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	87-61-6	W
1,2,3-Trichloropropane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	96-18-4	W
1,2,4-Trichlorobenzene	**<113**	ug/kg	595	113	2	06/22/17 08:15	06/22/17 16:34	120-82-1	W
1,2,4-Trimethylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	95-63-6	W
1,2-Dibromo-3-chloropropane	**<217**	ug/kg	595	217	2	06/22/17 08:15	06/22/17 16:34	96-12-8	W
1,2-Dibromoethane (EDB)	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	106-93-4	W
1,2-Dichlorobenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	95-50-1	W
1,2-Dichloroethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	107-06-2	W
1,2-Dichloropropane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	78-87-5	W
1,3,5-Trimethylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	108-67-8	W
1,3-Dichlorobenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	541-73-1	W
1,3-Dichloropropane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	142-28-9	W
1,4-Dichlorobenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	106-46-7	W
2,2-Dichloropropane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	594-20-7	W
2-Chlorotoluene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	95-49-8	W
4-Chlorotoluene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	106-43-4	W
Benzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	71-43-2	W
Bromobenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	108-86-1	W
Bromochloromethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	74-97-5	W
Bromodichloromethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-27-4	W
Bromoform	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-25-2	W
Bromomethane	**<166**	ug/kg	595	166	2	06/22/17 08:15	06/22/17 16:34	74-83-9	W
Carbon tetrachloride	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	56-23-5	W
Chlorobenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	108-90-7	W
Chloroethane	**<160**	ug/kg	595	160	2	06/22/17 08:15	06/22/17 16:34	75-00-3	W
Chloroform	**<111**	ug/kg	595	111	2	06/22/17 08:15	06/22/17 16:34	67-66-3	W
Chloromethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	74-87-3	W
Dibromochloromethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	124-48-1	W
Dibromomethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	74-95-3	W
Dichlorodifluoromethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-71-8	W
Diisopropyl ether	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	108-20-3	W
Ethylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	100-41-4	W
Hexachloro-1,3-butadiene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	87-68-3	W
Isopropylbenzene (Cumene)	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	98-82-8	W
Methyl-tert-butyl ether	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	1634-04-4	W
Methylene Chloride	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-09-2	W
Naphthalene	**<95.3**	ug/kg	595	95.3	2	06/22/17 08:15	06/22/17 16:34	91-20-3	W
Styrene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-4 **Lab ID: 40152051004** Collected: 06/19/17 08:10 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	127-18-4	W
Toluene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	108-88-3	W
Trichloroethene	**18900**	ug/kg	174	72.6	2	06/22/17 08:15	06/22/17 16:34	79-01-6	
Trichlorofluoromethane	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-69-4	W
Vinyl chloride	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	75-01-4	W
cis-1,2-Dichloroethene	**194**	ug/kg	174	72.6	2	06/22/17 08:15	06/22/17 16:34	156-59-2	
cis-1,3-Dichloropropene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	10061-01-5	W
m&p-Xylene	**<119**	ug/kg	286	119	2	06/22/17 08:15	06/22/17 16:34	179601-23-1	W
n-Butylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	104-51-8	W
n-Propylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	103-65-1	W
o-Xylene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	95-47-6	W
p-Isopropyltoluene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	99-87-6	W
sec-Butylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	135-98-8	W
tert-Butylbenzene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	98-06-6	W
trans-1,2-Dichloroethene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	156-60-5	W
trans-1,3-Dichloropropene	**<59.5**	ug/kg	143	59.5	2	06/22/17 08:15	06/22/17 16:34	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	68-130		2	06/22/17 08:15	06/22/17 16:34	1868-53-7	
Toluene-d8 (S)	108	%	68-149		2	06/22/17 08:15	06/22/17 16:34	2037-26-5	
4-Bromofluorobenzene (S)	107	%	58-141		2	06/22/17 08:15	06/22/17 16:34	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.0**	%	0.10	0.10	1		06/24/17 09:02		

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-5 **Lab ID: 40152051005** Collected: 06/19/17 08:12 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	630-20-6	W
1,1,1-Trichloroethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	71-55-6	W
1,1,2,2-Tetrachloroethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	79-34-5	W
1,1,2-Trichloroethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	79-00-5	W
1,1-Dichloroethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-34-3	W
1,1-Dichloroethene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-35-4	W
1,1-Dichloropropene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	563-58-6	W
1,2,3-Trichlorobenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	87-61-6	W
1,2,3-Trichloropropane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	96-18-4	W
1,2,4-Trichlorobenzene	**<122**	ug/kg	641	122	2	06/22/17 08:15	06/22/17 16:57	120-82-1	W
1,2,4-Trimethylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	95-63-6	W
1,2-Dibromo-3-chloropropane	**<234**	ug/kg	641	234	2	06/22/17 08:15	06/22/17 16:57	96-12-8	W
1,2-Dibromoethane (EDB)	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	106-93-4	W
1,2-Dichlorobenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	95-50-1	W
1,2-Dichloroethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	107-06-2	W
1,2-Dichloropropane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	78-87-5	W
1,3,5-Trimethylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	108-67-8	W
1,3-Dichlorobenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	541-73-1	W
1,3-Dichloropropane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	142-28-9	W
1,4-Dichlorobenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	106-46-7	W
2,2-Dichloropropane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	594-20-7	W
2-Chlorotoluene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	95-49-8	W
4-Chlorotoluene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	106-43-4	W
Benzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	71-43-2	W
Bromobenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	108-86-1	W
Bromochloromethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	74-97-5	W
Bromodichloromethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-27-4	W
Bromoform	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-25-2	W
Bromomethane	**<179**	ug/kg	641	179	2	06/22/17 08:15	06/22/17 16:57	74-83-9	W
Carbon tetrachloride	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	56-23-5	W
Chlorobenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	108-90-7	W
Chloroethane	**<172**	ug/kg	641	172	2	06/22/17 08:15	06/22/17 16:57	75-00-3	W
Chloroform	**<119**	ug/kg	641	119	2	06/22/17 08:15	06/22/17 16:57	67-66-3	W
Chloromethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	74-87-3	W
Dibromochloromethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	124-48-1	W
Dibromomethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	74-95-3	W
Dichlorodifluoromethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-71-8	W
Diisopropyl ether	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	108-20-3	W
Ethylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	100-41-4	W
Hexachloro-1,3-butadiene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	87-68-3	W
Isopropylbenzene (Cumene)	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	98-82-8	W
Methyl-tert-butyl ether	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	1634-04-4	W
Methylene Chloride	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-09-2	W
Naphthalene	**<103**	ug/kg	641	103	2	06/22/17 08:15	06/22/17 16:57	91-20-3	W
Styrene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-5 **Lab ID: 40152051005** Collected: 06/19/17 08:12 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	127-18-4	W
Toluene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	108-88-3	W
Trichloroethene	**14300**	ug/kg	173	72.1	2	06/22/17 08:15	06/22/17 16:57	79-01-6	
Trichlorofluoromethane	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-69-4	W
Vinyl chloride	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	75-01-4	W
cis-1,2-Dichloroethene	**307**	ug/kg	173	72.1	2	06/22/17 08:15	06/22/17 16:57	156-59-2	
cis-1,3-Dichloropropene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	10061-01-5	W
m&p-Xylene	**<128**	ug/kg	308	128	2	06/22/17 08:15	06/22/17 16:57	179601-23-1	W
n-Butylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	104-51-8	W
n-Propylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	103-65-1	W
o-Xylene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	95-47-6	W
p-Isopropyltoluene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	99-87-6	W
sec-Butylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	135-98-8	W
tert-Butylbenzene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	98-06-6	W
trans-1,2-Dichloroethene	**190**	ug/kg	173	72.1	2	06/22/17 08:15	06/22/17 16:57	156-60-5	
trans-1,3-Dichloropropene	**<64.1**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 16:57	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	68-130		2	06/22/17 08:15	06/22/17 16:57	1868-53-7	
Toluene-d8 (S)	107	%	68-149		2	06/22/17 08:15	06/22/17 16:57	2037-26-5	
4-Bromofluorobenzene (S)	96	%	58-141		2	06/22/17 08:15	06/22/17 16:57	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.1**	%	0.10	0.10	1		06/24/17 09:02		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-6 **Lab ID: 40152051006** Collected: 06/19/17 08:15 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	630-20-6	W
1,1,1-Trichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	71-55-6	W
1,1,2,2-Tetrachloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	79-34-5	W
1,1,2-Trichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	79-00-5	W
1,1-Dichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-34-3	W
1,1-Dichloroethene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-35-4	W
1,1-Dichloropropene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	563-58-6	W
1,2,3-Trichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	87-61-6	W
1,2,3-Trichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	96-18-4	W
1,2,4-Trichlorobenzene	**<54.7**	ug/kg	287	54.7	1	06/22/17 08:15	06/22/17 11:56	120-82-1	W
1,2,4-Trimethylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	95-63-6	W
1,2-Dibromo-3-chloropropane	**<105**	ug/kg	287	105	1	06/22/17 08:15	06/22/17 11:56	96-12-8	W
1,2-Dibromoethane (EDB)	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	106-93-4	W
1,2-Dichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	95-50-1	W
1,2-Dichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	107-06-2	W
1,2-Dichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	78-87-5	W
1,3,5-Trimethylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	108-67-8	W
1,3-Dichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	541-73-1	W
1,3-Dichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	142-28-9	W
1,4-Dichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	106-46-7	W
2,2-Dichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	594-20-7	W
2-Chlorotoluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	95-49-8	W
4-Chlorotoluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	106-43-4	W
Benzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	71-43-2	W
Bromobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	108-86-1	W
Bromochloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	74-97-5	W
Bromodichloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-27-4	W
Bromoform	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-25-2	W
Bromomethane	**<80.4**	ug/kg	287	80.4	1	06/22/17 08:15	06/22/17 11:56	74-83-9	R1,W
Carbon tetrachloride	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	56-23-5	W
Chlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	108-90-7	W
Chloroethane	**<77.0**	ug/kg	287	77.0	1	06/22/17 08:15	06/22/17 11:56	75-00-3	W
Chloroform	**<53.4**	ug/kg	287	53.4	1	06/22/17 08:15	06/22/17 11:56	67-66-3	W
Chloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	74-87-3	W
Dibromochloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	124-48-1	W
Dibromomethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	74-95-3	W
Dichlorodifluoromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-71-8	W
Diisopropyl ether	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	108-20-3	W
Ethylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	100-41-4	W
Hexachloro-1,3-butadiene	**74.0J**	ug/kg	76.5	31.9	1	06/22/17 08:15	06/22/17 11:56	87-68-3	
Isopropylbenzene (Cumene)	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	98-82-8	W
Methyl-tert-butyl ether	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	1634-04-4	W
Methylene Chloride	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-09-2	W
Naphthalene	**<46.0**	ug/kg	287	46.0	1	06/22/17 08:15	06/22/17 11:56	91-20-3	W
Styrene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-6 **Lab ID: 40152051006** Collected: 06/19/17 08:15 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	127-18-4	W
Toluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	108-88-3	W
Trichloroethene	**132**	ug/kg	76.5	31.9	1	06/22/17 08:15	06/22/17 11:56	79-01-6	
Trichlorofluoromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	75-69-4	W
Vinyl chloride	**125**	ug/kg	76.5	31.9	1	06/22/17 08:15	06/22/17 11:56	75-01-4	R1
cis-1,2-Dichloroethene	**7580**	ug/kg	76.5	31.9	1	06/22/17 08:15	06/22/17 11:56	156-59-2	M1
cis-1,3-Dichloropropene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	10061-01-5	W
m&p-Xylene	**<57.5**	ug/kg	138	57.5	1	06/22/17 08:15	06/22/17 11:56	179601-23-1	W
n-Butylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	104-51-8	W
n-Propylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	103-65-1	W
o-Xylene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	95-47-6	W
p-Isopropyltoluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	99-87-6	W
sec-Butylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	135-98-8	W
tert-Butylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	98-06-6	W
trans-1,2-Dichloroethene	**567**	ug/kg	76.5	31.9	1	06/22/17 08:15	06/22/17 11:56	156-60-5	
trans-1,3-Dichloropropene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 11:56	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	68-130		1	06/22/17 08:15	06/22/17 11:56	1868-53-7	
Toluene-d8 (S)	105	%	68-149		1	06/22/17 08:15	06/22/17 11:56	2037-26-5	
4-Bromofluorobenzene (S)	99	%	58-141		1	06/22/17 08:15	06/22/17 11:56	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.8**	%	0.10	0.10	1		06/24/17 09:02		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-7 **Lab ID: 40152051007** Collected: 06/19/17 08:20 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	630-20-6	W
1,1,1-Trichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	71-55-6	W
1,1,2,2-Tetrachloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	79-34-5	W
1,1,2-Trichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	79-00-5	W
1,1-Dichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-34-3	W
1,1-Dichloroethene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-35-4	W
1,1-Dichloropropene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	563-58-6	W
1,2,3-Trichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	87-61-6	W
1,2,3-Trichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	96-18-4	W
1,2,4-Trichlorobenzene	**<54.7**	ug/kg	287	54.7	1	06/22/17 08:15	06/22/17 15:01	120-82-1	W
1,2,4-Trimethylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	95-63-6	W
1,2-Dibromo-3-chloropropane	**<105**	ug/kg	287	105	1	06/22/17 08:15	06/22/17 15:01	96-12-8	W
1,2-Dibromoethane (EDB)	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	106-93-4	W
1,2-Dichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	95-50-1	W
1,2-Dichloroethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	107-06-2	W
1,2-Dichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	78-87-5	W
1,3,5-Trimethylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	108-67-8	W
1,3-Dichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	541-73-1	W
1,3-Dichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	142-28-9	W
1,4-Dichlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	106-46-7	W
2,2-Dichloropropane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	594-20-7	W
2-Chlorotoluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	95-49-8	W
4-Chlorotoluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	106-43-4	W
Benzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	71-43-2	W
Bromobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	108-86-1	W
Bromochloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	74-97-5	W
Bromodichloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-27-4	W
Bromoform	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-25-2	W
Bromomethane	**<80.4**	ug/kg	287	80.4	1	06/22/17 08:15	06/22/17 15:01	74-83-9	W
Carbon tetrachloride	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	56-23-5	W
Chlorobenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	108-90-7	W
Chloroethane	**<77.0**	ug/kg	287	77.0	1	06/22/17 08:15	06/22/17 15:01	75-00-3	W
Chloroform	**<53.4**	ug/kg	287	53.4	1	06/22/17 08:15	06/22/17 15:01	67-66-3	W
Chloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	74-87-3	W
Dibromochloromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	124-48-1	W
Dibromomethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	74-95-3	W
Dichlorodifluoromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-71-8	W
Diisopropyl ether	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	108-20-3	W
Ethylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	100-41-4	W
Hexachloro-1,3-butadiene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	87-68-3	W
Isopropylbenzene (Cumene)	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	98-82-8	W
Methyl-tert-butyl ether	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	1634-04-4	W
Methylene Chloride	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-09-2	W
Naphthalene	**<46.0**	ug/kg	287	46.0	1	06/22/17 08:15	06/22/17 15:01	91-20-3	W
Styrene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-7 **Lab ID: 40152051007** Collected: 06/19/17 08:20 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	127-18-4	W
Toluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	108-88-3	W
Trichloroethene	**10900**	ug/kg	78.6	32.8	1	06/22/17 08:15	06/22/17 15:01	79-01-6	
Trichlorofluoromethane	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-69-4	W
Vinyl chloride	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	75-01-4	W
cis-1,2-Dichloroethene	**2240**	ug/kg	78.6	32.8	1	06/22/17 08:15	06/22/17 15:01	156-59-2	
cis-1,3-Dichloropropene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	10061-01-5	W
m&p-Xylene	**<57.5**	ug/kg	138	57.5	1	06/22/17 08:15	06/22/17 15:01	179601-23-1	W
n-Butylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	104-51-8	W
n-Propylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	103-65-1	W
o-Xylene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	95-47-6	W
p-Isopropyltoluene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	99-87-6	W
sec-Butylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	135-98-8	W
tert-Butylbenzene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	98-06-6	W
trans-1,2-Dichloroethene	**315**	ug/kg	78.6	32.8	1	06/22/17 08:15	06/22/17 15:01	156-60-5	
trans-1,3-Dichloropropene	**<28.7**	ug/kg	69.0	28.7	1	06/22/17 08:15	06/22/17 15:01	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	91	%	68-130		1	06/22/17 08:15	06/22/17 15:01	1868-53-7	
Toluene-d8 (S)	97	%	68-149		1	06/22/17 08:15	06/22/17 15:01	2037-26-5	
4-Bromofluorobenzene (S)	93	%	58-141		1	06/22/17 08:15	06/22/17 15:01	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.3**	%	0.10	0.10	1		06/24/17 09:02		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-8 **Lab ID: 40152051008** Collected: 06/19/17 08:25 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	630-20-6	W
1,1,1-Trichloroethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	71-55-6	W
1,1,2,2-Tetrachloroethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	79-34-5	W
1,1,2-Trichloroethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	79-00-5	W
1,1-Dichloroethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-34-3	W
1,1-Dichloroethene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-35-4	W
1,1-Dichloropropene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	563-58-6	W
1,2,3-Trichlorobenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	87-61-6	W
1,2,3-Trichloropropane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	96-18-4	W
1,2,4-Trichlorobenzene	**<207**	ug/kg	1090	207	4	06/22/17 08:15	06/22/17 19:16	120-82-1	W
1,2,4-Trimethylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	95-63-6	W
1,2-Dibromo-3-chloropropane	**<397**	ug/kg	1090	397	4	06/22/17 08:15	06/22/17 19:16	96-12-8	W
1,2-Dibromoethane (EDB)	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	106-93-4	W
1,2-Dichlorobenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	95-50-1	W
1,2-Dichloroethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	107-06-2	W
1,2-Dichloropropane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	78-87-5	W
1,3,5-Trimethylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	108-67-8	W
1,3-Dichlorobenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	541-73-1	W
1,3-Dichloropropane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	142-28-9	W
1,4-Dichlorobenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	106-46-7	W
2,2-Dichloropropane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	594-20-7	W
2-Chlorotoluene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	95-49-8	W
4-Chlorotoluene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	106-43-4	W
Benzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	71-43-2	W
Bromobenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	108-86-1	W
Bromochloromethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	74-97-5	W
Bromodichloromethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-27-4	W
Bromoform	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-25-2	W
Bromomethane	**<304**	ug/kg	1090	304	4	06/22/17 08:15	06/22/17 19:16	74-83-9	W
Carbon tetrachloride	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	56-23-5	W
Chlorobenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	108-90-7	W
Chloroethane	**<291**	ug/kg	1090	291	4	06/22/17 08:15	06/22/17 19:16	75-00-3	W
Chloroform	**<202**	ug/kg	1090	202	4	06/22/17 08:15	06/22/17 19:16	67-66-3	W
Chloromethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	74-87-3	W
Dibromochloromethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	124-48-1	W
Dibromomethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	74-95-3	W
Dichlorodifluoromethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-71-8	W
Diisopropyl ether	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	108-20-3	W
Ethylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	100-41-4	W
Hexachloro-1,3-butadiene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	87-68-3	W
Isopropylbenzene (Cumene)	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	98-82-8	W
Methyl-tert-butyl ether	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	1634-04-4	W
Methylene Chloride	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-09-2	W
Naphthalene	**<174**	ug/kg	1090	174	4	06/22/17 08:15	06/22/17 19:16	91-20-3	W
Styrene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	100-42-5	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: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M3-8 **Lab ID: 40152051008** Collected: 06/19/17 08:25 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	127-18-4	W
Toluene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	108-88-3	W
Trichloroethene	**31900**	ug/kg	323	134	4	06/22/17 08:15	06/22/17 19:16	79-01-6	
Trichlorofluoromethane	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-69-4	W
Vinyl chloride	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	75-01-4	W
cis-1,2-Dichloroethene	**1090**	ug/kg	323	134	4	06/22/17 08:15	06/22/17 19:16	156-59-2	
cis-1,3-Dichloropropene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	10061-01-5	W
m&p-Xylene	**<217**	ug/kg	522	217	4	06/22/17 08:15	06/22/17 19:16	179601-23-1	W
n-Butylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	104-51-8	W
n-Propylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	103-65-1	W
o-Xylene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	95-47-6	W
p-Isopropyltoluene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	99-87-6	W
sec-Butylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	135-98-8	W
tert-Butylbenzene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	98-06-6	W
trans-1,2-Dichloroethene	**170J**	ug/kg	323	134	4	06/22/17 08:15	06/22/17 19:16	156-60-5	
trans-1,3-Dichloropropene	**<109**	ug/kg	261	109	4	06/22/17 08:15	06/22/17 19:16	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	68-130		4	06/22/17 08:15	06/22/17 19:16	1868-53-7	
Toluene-d8 (S)	104	%	68-149		4	06/22/17 08:15	06/22/17 19:16	2037-26-5	
4-Bromofluorobenzene (S)	87	%	58-141		4	06/22/17 08:15	06/22/17 19:16	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.1**	%	0.10	0.10	1		06/24/17 09:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-1 **Lab ID: 40152051009** Collected: 06/19/17 09:45 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	630-20-6	W
1,1,1-Trichloroethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	71-55-6	W
1,1,2,2-Tetrachloroethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	79-34-5	W
1,1,2-Trichloroethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	79-00-5	W
1,1-Dichloroethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-34-3	W
1,1-Dichloroethene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-35-4	W
1,1-Dichloropropene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	563-58-6	W
1,2,3-Trichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	87-61-6	W
1,2,3-Trichloropropane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	96-18-4	W
1,2,4-Trichlorobenzene	**<57.3**	ug/kg	301	57.3	1	06/22/17 08:15	06/22/17 12:19	120-82-1	W
1,2,4-Trimethylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	95-63-6	W
1,2-Dibromo-3-chloropropane	**<110**	ug/kg	301	110	1	06/22/17 08:15	06/22/17 12:19	96-12-8	W
1,2-Dibromoethane (EDB)	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	106-93-4	W
1,2-Dichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	95-50-1	W
1,2-Dichloroethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	107-06-2	W
1,2-Dichloropropane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	78-87-5	W
1,3,5-Trimethylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	108-67-8	W
1,3-Dichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	541-73-1	W
1,3-Dichloropropane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	142-28-9	W
1,4-Dichlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	106-46-7	W
2,2-Dichloropropane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	594-20-7	W
2-Chlorotoluene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	95-49-8	W
4-Chlorotoluene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	106-43-4	W
Benzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	71-43-2	W
Bromobenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	108-86-1	W
Bromochloromethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	74-97-5	W
Bromodichloromethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-27-4	W
Bromoform	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-25-2	W
Bromomethane	**<84.2**	ug/kg	301	84.2	1	06/22/17 08:15	06/22/17 12:19	74-83-9	W
Carbon tetrachloride	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	56-23-5	W
Chlorobenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	108-90-7	W
Chloroethane	**<80.7**	ug/kg	301	80.7	1	06/22/17 08:15	06/22/17 12:19	75-00-3	W
Chloroform	**<56.0**	ug/kg	301	56.0	1	06/22/17 08:15	06/22/17 12:19	67-66-3	W
Chloromethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	74-87-3	W
Dibromochloromethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	124-48-1	W
Dibromomethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	74-95-3	W
Dichlorodifluoromethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-71-8	W
Diisopropyl ether	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	108-20-3	W
Ethylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	100-41-4	W
Hexachloro-1,3-butadiene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	87-68-3	W
Isopropylbenzene (Cumene)	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	98-82-8	W
Methyl-tert-butyl ether	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	1634-04-4	W
Methylene Chloride	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-09-2	W
Naphthalene	**<48.2**	ug/kg	301	48.2	1	06/22/17 08:15	06/22/17 12:19	91-20-3	W
Styrene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-1 **Lab ID: 40152051009** Collected: 06/19/17 09:45 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	127-18-4	W
Toluene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	108-88-3	W
Trichloroethene	**79.6**	ug/kg	78.6	32.7	1	06/22/17 08:15	06/22/17 12:19	79-01-6	
Trichlorofluoromethane	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-69-4	W
Vinyl chloride	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	75-01-4	W
cis-1,2-Dichloroethene	**371**	ug/kg	78.6	32.7	1	06/22/17 08:15	06/22/17 12:19	156-59-2	
cis-1,3-Dichloropropene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	10061-01-5	W
m&p-Xylene	**<60.2**	ug/kg	145	60.2	1	06/22/17 08:15	06/22/17 12:19	179601-23-1	W
n-Butylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	104-51-8	W
n-Propylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	103-65-1	W
o-Xylene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	95-47-6	W
p-Isopropyltoluene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	99-87-6	W
sec-Butylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	135-98-8	W
tert-Butylbenzene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	98-06-6	W
trans-1,2-Dichloroethene	**52.5J**	ug/kg	78.6	32.7	1	06/22/17 08:15	06/22/17 12:19	156-60-5	
trans-1,3-Dichloropropene	**<30.1**	ug/kg	72.3	30.1	1	06/22/17 08:15	06/22/17 12:19	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	107	%	68-130		1	06/22/17 08:15	06/22/17 12:19	1868-53-7	
Toluene-d8 (S)	108	%	68-149		1	06/22/17 08:15	06/22/17 12:19	2037-26-5	
4-Bromofluorobenzene (S)	101	%	58-141		1	06/22/17 08:15	06/22/17 12:19	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.0**	%	0.10	0.10	1		06/24/17 09:02		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-2 **Lab ID: 40152051010** Collected: 06/19/17 09:38 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	630-20-6	W
1,1,1-Trichloroethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	71-55-6	W
1,1,2,2-Tetrachloroethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	79-34-5	W
1,1,2-Trichloroethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	79-00-5	W
1,1-Dichloroethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-34-3	W
1,1-Dichloroethene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-35-4	W
1,1-Dichloropropene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	563-58-6	W
1,2,3-Trichlorobenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	87-61-6	W
1,2,3-Trichloropropane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	96-18-4	W
1,2,4-Trichlorobenzene	**<58.7**	ug/kg	309	58.7	1	06/22/17 08:15	06/22/17 12:42	120-82-1	W
1,2,4-Trimethylbenzene	**285**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	95-63-6	
1,2-Dibromo-3-chloropropane	**<113**	ug/kg	309	113	1	06/22/17 08:15	06/22/17 12:42	96-12-8	W
1,2-Dibromoethane (EDB)	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	106-93-4	W
1,2-Dichlorobenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	95-50-1	W
1,2-Dichloroethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	107-06-2	W
1,2-Dichloropropane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	78-87-5	W
1,3,5-Trimethylbenzene	**106**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	108-67-8	
1,3-Dichlorobenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	541-73-1	W
1,3-Dichloropropane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	142-28-9	W
1,4-Dichlorobenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	106-46-7	W
2,2-Dichloropropane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	594-20-7	W
2-Chlorotoluene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	95-49-8	W
4-Chlorotoluene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	106-43-4	W
Benzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	71-43-2	W
Bromobenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	108-86-1	W
Bromochloromethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	74-97-5	W
Bromodichloromethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-27-4	W
Bromoform	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-25-2	W
Bromomethane	**<86.3**	ug/kg	309	86.3	1	06/22/17 08:15	06/22/17 12:42	74-83-9	W
Carbon tetrachloride	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	56-23-5	W
Chlorobenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	108-90-7	W
Chloroethane	**<82.7**	ug/kg	309	82.7	1	06/22/17 08:15	06/22/17 12:42	75-00-3	W
Chloroform	**<57.3**	ug/kg	309	57.3	1	06/22/17 08:15	06/22/17 12:42	67-66-3	W
Chloromethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	74-87-3	W
Dibromochloromethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	124-48-1	W
Dibromomethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	74-95-3	W
Dichlorodifluoromethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-71-8	W
Diisopropyl ether	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	108-20-3	W
Ethylbenzene	**62.5J**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	100-41-4	
Hexachloro-1,3-butadiene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	87-68-3	W
Isopropylbenzene (Cumene)	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	98-82-8	W
Methyl-tert-butyl ether	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	1634-04-4	W
Methylene Chloride	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-09-2	W
Naphthalene	**81.7J**	ug/kg	355	56.9	1	06/22/17 08:15	06/22/17 12:42	91-20-3	
Styrene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-2 **Lab ID: 40152051010** Collected: 06/19/17 09:38 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	127-18-4	W
Toluene	**132**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	108-88-3	
Trichloroethene	**435**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	79-01-6	
Trichlorofluoromethane	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-69-4	W
Vinyl chloride	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	75-01-4	W
cis-1,2-Dichloroethene	**175**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	156-59-2	
cis-1,3-Dichloropropene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	10061-01-5	W
m&p-Xylene	**292**	ug/kg	170	71.0	1	06/22/17 08:15	06/22/17 12:42	179601-23-1	
n-Butylbenzene	**68.3J**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	104-51-8	
n-Propylbenzene	**48.5J**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	103-65-1	
o-Xylene	**152**	ug/kg	85.2	35.5	1	06/22/17 08:15	06/22/17 12:42	95-47-6	
p-Isopropyltoluene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	99-87-6	W
sec-Butylbenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	135-98-8	W
tert-Butylbenzene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	98-06-6	W
trans-1,2-Dichloroethene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	156-60-5	W
trans-1,3-Dichloropropene	**<30.9**	ug/kg	74.1	30.9	1	06/22/17 08:15	06/22/17 12:42	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	68-130		1	06/22/17 08:15	06/22/17 12:42	1868-53-7	
Toluene-d8 (S)	107	%	68-149		1	06/22/17 08:15	06/22/17 12:42	2037-26-5	
4-Bromofluorobenzene (S)	97	%	58-141		1	06/22/17 08:15	06/22/17 12:42	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.1**	%	0.10	0.10	1		06/24/17 09:02		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-3 **Lab ID: 40152051011** Collected: 06/19/17 09:35 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	630-20-6	W
1,1,1-Trichloroethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	71-55-6	W
1,1,2,2-Tetrachloroethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	79-34-5	W
1,1,2-Trichloroethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	79-00-5	W
1,1-Dichloroethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-34-3	W
1,1-Dichloroethene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-35-4	W
1,1-Dichloropropene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	563-58-6	W
1,2,3-Trichlorobenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	87-61-6	W
1,2,3-Trichloropropane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	96-18-4	W
1,2,4-Trichlorobenzene	**<62.6**	ug/kg	329	62.6	1	06/22/17 08:15	06/22/17 13:06	120-82-1	W
1,2,4-Trimethylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	95-63-6	W
1,2-Dibromo-3-chloropropane	**<120**	ug/kg	329	120	1	06/22/17 08:15	06/22/17 13:06	96-12-8	W
1,2-Dibromoethane (EDB)	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	106-93-4	W
1,2-Dichlorobenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	95-50-1	W
1,2-Dichloroethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	107-06-2	W
1,2-Dichloropropane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	78-87-5	W
1,3,5-Trimethylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	108-67-8	W
1,3-Dichlorobenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	541-73-1	W
1,3-Dichloropropane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	142-28-9	W
1,4-Dichlorobenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	106-46-7	W
2,2-Dichloropropane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	594-20-7	W
2-Chlorotoluene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	95-49-8	W
4-Chlorotoluene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	106-43-4	W
Benzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	71-43-2	W
Bromobenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	108-86-1	W
Bromochloromethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	74-97-5	W
Bromodichloromethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-27-4	W
Bromoform	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-25-2	W
Bromomethane	**<92.0**	ug/kg	329	92.0	1	06/22/17 08:15	06/22/17 13:06	74-83-9	W
Carbon tetrachloride	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	56-23-5	W
Chlorobenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	108-90-7	W
Chloroethane	**<88.2**	ug/kg	329	88.2	1	06/22/17 08:15	06/22/17 13:06	75-00-3	W
Chloroform	**<61.1**	ug/kg	329	61.1	1	06/22/17 08:15	06/22/17 13:06	67-66-3	W
Chloromethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	74-87-3	W
Dibromochloromethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	124-48-1	W
Dibromomethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	74-95-3	W
Dichlorodifluoromethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-71-8	W
Diisopropyl ether	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	108-20-3	W
Ethylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	100-41-4	W
Hexachloro-1,3-butadiene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	87-68-3	W
Isopropylbenzene (Cumene)	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	98-82-8	W
Methyl-tert-butyl ether	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	1634-04-4	W
Methylene Chloride	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-09-2	W
Naphthalene	**<52.7**	ug/kg	329	52.7	1	06/22/17 08:15	06/22/17 13:06	91-20-3	W
Styrene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-3 **Lab ID: 40152051011** Collected: 06/19/17 09:35 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	127-18-4	W
Toluene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	108-88-3	W
Trichloroethene	**3300**	ug/kg	82.7	34.5	1	06/22/17 08:15	06/22/17 13:06	79-01-6	
Trichlorofluoromethane	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-69-4	W
Vinyl chloride	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	75-01-4	W
cis-1,2-Dichloroethene	**952**	ug/kg	82.7	34.5	1	06/22/17 08:15	06/22/17 13:06	156-59-2	
cis-1,3-Dichloropropene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	10061-01-5	W
m&p-Xylene	**<65.8**	ug/kg	158	65.8	1	06/22/17 08:15	06/22/17 13:06	179601-23-1	W
n-Butylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	104-51-8	W
n-Propylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	103-65-1	W
o-Xylene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	95-47-6	W
p-Isopropyltoluene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	99-87-6	W
sec-Butylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	135-98-8	W
tert-Butylbenzene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	98-06-6	W
trans-1,2-Dichloroethene	**86.8**	ug/kg	82.7	34.5	1	06/22/17 08:15	06/22/17 13:06	156-60-5	
trans-1,3-Dichloropropene	**<32.9**	ug/kg	78.9	32.9	1	06/22/17 08:15	06/22/17 13:06	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	86	%	68-130		1	06/22/17 08:15	06/22/17 13:06	1868-53-7	
Toluene-d8 (S)	85	%	68-149		1	06/22/17 08:15	06/22/17 13:06	2037-26-5	
4-Bromofluorobenzene (S)	80	%	58-141		1	06/22/17 08:15	06/22/17 13:06	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**4.5**	%	0.10	0.10	1		06/24/17 09:15		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-4 **Lab ID: 40152051012** Collected: 06/19/17 09:43 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	630-20-6	W
1,1,1-Trichloroethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	71-55-6	W
1,1,2,2-Tetrachloroethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	79-34-5	W
1,1,2-Trichloroethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	79-00-5	W
1,1-Dichloroethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-34-3	W
1,1-Dichloroethene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-35-4	W
1,1-Dichloropropene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	563-58-6	W
1,2,3-Trichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	87-61-6	W
1,2,3-Trichloropropane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	96-18-4	W
1,2,4-Trichlorobenzene	**<61.8**	ug/kg	325	61.8	1	06/22/17 08:15	06/22/17 13:29	120-82-1	W
1,2,4-Trimethylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	95-63-6	W
1,2-Dibromo-3-chloropropane	**<118**	ug/kg	325	118	1	06/22/17 08:15	06/22/17 13:29	96-12-8	W
1,2-Dibromoethane (EDB)	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	106-93-4	W
1,2-Dichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	95-50-1	W
1,2-Dichloroethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	107-06-2	W
1,2-Dichloropropane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	78-87-5	W
1,3,5-Trimethylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	108-67-8	W
1,3-Dichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	541-73-1	W
1,3-Dichloropropane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	142-28-9	W
1,4-Dichlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	106-46-7	W
2,2-Dichloropropane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	594-20-7	W
2-Chlorotoluene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	95-49-8	W
4-Chlorotoluene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	106-43-4	W
Benzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	71-43-2	W
Bromobenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	108-86-1	W
Bromochloromethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	74-97-5	W
Bromodichloromethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-27-4	W
Bromoform	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-25-2	W
Bromomethane	**<90.8**	ug/kg	325	90.8	1	06/22/17 08:15	06/22/17 13:29	74-83-9	W
Carbon tetrachloride	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	56-23-5	W
Chlorobenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	108-90-7	W
Chloroethane	**<87.0**	ug/kg	325	87.0	1	06/22/17 08:15	06/22/17 13:29	75-00-3	W
Chloroform	**<60.3**	ug/kg	325	60.3	1	06/22/17 08:15	06/22/17 13:29	67-66-3	W
Chloromethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	74-87-3	W
Dibromochloromethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	124-48-1	W
Dibromomethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	74-95-3	W
Dichlorodifluoromethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-71-8	W
Diisopropyl ether	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	108-20-3	W
Ethylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	100-41-4	W
Hexachloro-1,3-butadiene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	87-68-3	W
Isopropylbenzene (Cumene)	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	98-82-8	W
Methyl-tert-butyl ether	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	1634-04-4	W
Methylene Chloride	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-09-2	W
Naphthalene	**<52.0**	ug/kg	325	52.0	1	06/22/17 08:15	06/22/17 13:29	91-20-3	W
Styrene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-4 **Lab ID: 40152051012** Collected: 06/19/17 09:43 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	127-18-4	W
Toluene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	108-88-3	W
Trichloroethene	**136**	ug/kg	81.5	34.0	1	06/22/17 08:15	06/22/17 13:29	79-01-6	
Trichlorofluoromethane	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-69-4	W
Vinyl chloride	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	75-01-4	W
cis-1,2-Dichloroethene	**1240**	ug/kg	81.5	34.0	1	06/22/17 08:15	06/22/17 13:29	156-59-2	
cis-1,3-Dichloropropene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	10061-01-5	W
m&p-Xylene	**<64.9**	ug/kg	156	64.9	1	06/22/17 08:15	06/22/17 13:29	179601-23-1	W
n-Butylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	104-51-8	W
n-Propylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	103-65-1	W
o-Xylene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	95-47-6	W
p-Isopropyltoluene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	99-87-6	W
sec-Butylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	135-98-8	W
tert-Butylbenzene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	98-06-6	W
trans-1,2-Dichloroethene	**201**	ug/kg	81.5	34.0	1	06/22/17 08:15	06/22/17 13:29	156-60-5	
trans-1,3-Dichloropropene	**<32.5**	ug/kg	77.9	32.5	1	06/22/17 08:15	06/22/17 13:29	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	102	%	68-130		1	06/22/17 08:15	06/22/17 13:29	1868-53-7	
Toluene-d8 (S)	110	%	68-149		1	06/22/17 08:15	06/22/17 13:29	2037-26-5	
4-Bromofluorobenzene (S)	100	%	58-141		1	06/22/17 08:15	06/22/17 13:29	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**4.4**	%	0.10	0.10	1		06/24/17 09:15		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-5 **Lab ID: 40152051013** Collected: 06/19/17 09:40 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	630-20-6	W
1,1,1-Trichloroethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	71-55-6	W
1,1,2,2-Tetrachloroethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	79-34-5	W
1,1,2-Trichloroethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	79-00-5	W
1,1-Dichloroethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-34-3	W
1,1-Dichloroethene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-35-4	W
1,1-Dichloropropene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	563-58-6	W
1,2,3-Trichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	87-61-6	W
1,2,3-Trichloropropane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	96-18-4	W
1,2,4-Trichlorobenzene	**<54.0**	ug/kg	284	54.0	1	06/22/17 08:15	06/22/17 13:52	120-82-1	W
1,2,4-Trimethylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	95-63-6	W
1,2-Dibromo-3-chloropropane	**<104**	ug/kg	284	104	1	06/22/17 08:15	06/22/17 13:52	96-12-8	W
1,2-Dibromoethane (EDB)	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	106-93-4	W
1,2-Dichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	95-50-1	W
1,2-Dichloroethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	107-06-2	W
1,2-Dichloropropane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	78-87-5	W
1,3,5-Trimethylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	108-67-8	W
1,3-Dichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	541-73-1	W
1,3-Dichloropropane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	142-28-9	W
1,4-Dichlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	106-46-7	W
2,2-Dichloropropane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	594-20-7	W
2-Chlorotoluene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	95-49-8	W
4-Chlorotoluene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	106-43-4	W
Benzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	71-43-2	W
Bromobenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	108-86-1	W
Bromochloromethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	74-97-5	W
Bromodichloromethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-27-4	W
Bromoform	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-25-2	W
Bromomethane	**<79.4**	ug/kg	284	79.4	1	06/22/17 08:15	06/22/17 13:52	74-83-9	W
Carbon tetrachloride	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	56-23-5	W
Chlorobenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	108-90-7	W
Chloroethane	**<76.2**	ug/kg	284	76.2	1	06/22/17 08:15	06/22/17 13:52	75-00-3	W
Chloroform	**<52.8**	ug/kg	284	52.8	1	06/22/17 08:15	06/22/17 13:52	67-66-3	W
Chloromethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	74-87-3	W
Dibromochloromethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	124-48-1	W
Dibromomethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	74-95-3	W
Dichlorodifluoromethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-71-8	W
Diisopropyl ether	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	108-20-3	W
Ethylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	100-41-4	W
Hexachloro-1,3-butadiene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	87-68-3	W
Isopropylbenzene (Cumene)	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	98-82-8	W
Methyl-tert-butyl ether	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	1634-04-4	W
Methylene Chloride	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-09-2	W
Naphthalene	**<45.5**	ug/kg	284	45.5	1	06/22/17 08:15	06/22/17 13:52	91-20-3	W
Styrene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M2-5 **Lab ID: 40152051013** Collected: 06/19/17 09:40 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	127-18-4	W
Toluene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	108-88-3	W
Trichloroethene	**131**	ug/kg	77.9	32.4	1	06/22/17 08:15	06/22/17 13:52	79-01-6	
Trichlorofluoromethane	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	75-69-4	W
Vinyl chloride	**370**	ug/kg	77.9	32.4	1	06/22/17 08:15	06/22/17 13:52	75-01-4	
cis-1,2-Dichloroethene	**2130**	ug/kg	77.9	32.4	1	06/22/17 08:15	06/22/17 13:52	156-59-2	
cis-1,3-Dichloropropene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	10061-01-5	W
m&p-Xylene	**<56.8**	ug/kg	136	56.8	1	06/22/17 08:15	06/22/17 13:52	179601-23-1	W
n-Butylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	104-51-8	W
n-Propylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	103-65-1	W
o-Xylene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	95-47-6	W
p-Isopropyltoluene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	99-87-6	W
sec-Butylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	135-98-8	W
tert-Butylbenzene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	98-06-6	W
trans-1,2-Dichloroethene	**344**	ug/kg	77.9	32.4	1	06/22/17 08:15	06/22/17 13:52	156-60-5	
trans-1,3-Dichloropropene	**<28.4**	ug/kg	68.2	28.4	1	06/22/17 08:15	06/22/17 13:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	68-130		1	06/22/17 08:15	06/22/17 13:52	1868-53-7	
Toluene-d8 (S)	107	%	68-149		1	06/22/17 08:15	06/22/17 13:52	2037-26-5	
4-Bromofluorobenzene (S)	94	%	58-141		1	06/22/17 08:15	06/22/17 13:52	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.4**	%	0.10	0.10	1		06/24/17 09:15		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-1 **Lab ID: 40152051014** Collected: 06/19/17 14:45 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	630-20-6	W
1,1,1-Trichloroethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	71-55-6	W
1,1,2,2-Tetrachloroethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	79-34-5	W
1,1,2-Trichloroethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	79-00-5	W
1,1-Dichloroethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-34-3	W
1,1-Dichloroethene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-35-4	W
1,1-Dichloropropene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	563-58-6	W
1,2,3-Trichlorobenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	87-61-6	W
1,2,3-Trichloropropane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	96-18-4	W
1,2,4-Trichlorobenzene	**<64.3**	ug/kg	338	64.3	1	06/22/17 08:15	06/22/17 15:24	120-82-1	W
1,2,4-Trimethylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	95-63-6	W
1,2-Dibromo-3-chloropropane	**<123**	ug/kg	338	123	1	06/22/17 08:15	06/22/17 15:24	96-12-8	W
1,2-Dibromoethane (EDB)	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	106-93-4	W
1,2-Dichlorobenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	95-50-1	W
1,2-Dichloroethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	107-06-2	W
1,2-Dichloropropane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	78-87-5	W
1,3,5-Trimethylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	108-67-8	W
1,3-Dichlorobenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	541-73-1	W
1,3-Dichloropropane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	142-28-9	W
1,4-Dichlorobenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	106-46-7	W
2,2-Dichloropropane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	594-20-7	W
2-Chlorotoluene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	95-49-8	W
4-Chlorotoluene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	106-43-4	W
Benzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	71-43-2	W
Bromobenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	108-86-1	W
Bromochloromethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	74-97-5	W
Bromodichloromethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-27-4	W
Bromoform	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-25-2	W
Bromomethane	**<94.5**	ug/kg	338	94.5	1	06/22/17 08:15	06/22/17 15:24	74-83-9	W
Carbon tetrachloride	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	56-23-5	W
Chlorobenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	108-90-7	W
Chloroethane	**<90.6**	ug/kg	338	90.6	1	06/22/17 08:15	06/22/17 15:24	75-00-3	W
Chloroform	**<62.8**	ug/kg	338	62.8	1	06/22/17 08:15	06/22/17 15:24	67-66-3	W
Chloromethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	74-87-3	W
Dibromochloromethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	124-48-1	W
Dibromomethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	74-95-3	W
Dichlorodifluoromethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-71-8	W
Diisopropyl ether	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	108-20-3	W
Ethylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	100-41-4	W
Hexachloro-1,3-butadiene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	87-68-3	W
Isopropylbenzene (Cumene)	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	98-82-8	W
Methyl-tert-butyl ether	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	1634-04-4	W
Methylene Chloride	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-09-2	W
Naphthalene	**<54.1**	ug/kg	338	54.1	1	06/22/17 08:15	06/22/17 15:24	91-20-3	W
Styrene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-1 **Lab ID: 40152051014** Collected: 06/19/17 14:45 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	127-18-4	W
Toluene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	108-88-3	W
Trichloroethene	**6530**	ug/kg	88.8	37.0	1	06/22/17 08:15	06/22/17 15:24	79-01-6	
Trichlorofluoromethane	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-69-4	W
Vinyl chloride	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	75-01-4	W
cis-1,2-Dichloroethene	**1550**	ug/kg	88.8	37.0	1	06/22/17 08:15	06/22/17 15:24	156-59-2	
cis-1,3-Dichloropropene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	10061-01-5	W
m&p-Xylene	**<67.6**	ug/kg	162	67.6	1	06/22/17 08:15	06/22/17 15:24	179601-23-1	W
n-Butylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	104-51-8	W
n-Propylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	103-65-1	W
o-Xylene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	95-47-6	W
p-Isopropyltoluene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	99-87-6	W
sec-Butylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	135-98-8	W
tert-Butylbenzene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	98-06-6	W
trans-1,2-Dichloroethene	**321**	ug/kg	88.8	37.0	1	06/22/17 08:15	06/22/17 15:24	156-60-5	
trans-1,3-Dichloropropene	**<33.8**	ug/kg	81.1	33.8	1	06/22/17 08:15	06/22/17 15:24	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	93	%	68-130		1	06/22/17 08:15	06/22/17 15:24	1868-53-7	
Toluene-d8 (S)	94	%	68-149		1	06/22/17 08:15	06/22/17 15:24	2037-26-5	
4-Bromofluorobenzene (S)	85	%	58-141		1	06/22/17 08:15	06/22/17 15:24	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.7**	%	0.10	0.10	1		06/24/17 09:16		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-2 **Lab ID: 40152051015** Collected: 06/19/17 14:42 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	630-20-6	W
1,1,1-Trichloroethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	71-55-6	W
1,1,2,2-Tetrachloroethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	79-34-5	W
1,1,2-Trichloroethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	79-00-5	W
1,1-Dichloroethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-34-3	W
1,1-Dichloroethene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-35-4	W
1,1-Dichloropropene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	563-58-6	W
1,2,3-Trichlorobenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	87-61-6	W
1,2,3-Trichloropropane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	96-18-4	W
1,2,4-Trichlorobenzene	**<156**	ug/kg	822	156	2.5	06/22/17 08:15	06/22/17 18:29	120-82-1	W
1,2,4-Trimethylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	95-63-6	W
1,2-Dibromo-3-chloropropane	**<300**	ug/kg	822	300	2.5	06/22/17 08:15	06/22/17 18:29	96-12-8	W
1,2-Dibromoethane (EDB)	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	106-93-4	W
1,2-Dichlorobenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	95-50-1	W
1,2-Dichloroethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	107-06-2	W
1,2-Dichloropropane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	78-87-5	W
1,3,5-Trimethylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	108-67-8	W
1,3-Dichlorobenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	541-73-1	W
1,3-Dichloropropane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	142-28-9	W
1,4-Dichlorobenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	106-46-7	W
2,2-Dichloropropane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	594-20-7	W
2-Chlorotoluene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	95-49-8	W
4-Chlorotoluene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	106-43-4	W
Benzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	71-43-2	W
Bromobenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	108-86-1	W
Bromochloromethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	74-97-5	W
Bromodichloromethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-27-4	W
Bromoform	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-25-2	W
Bromomethane	**<230**	ug/kg	822	230	2.5	06/22/17 08:15	06/22/17 18:29	74-83-9	W
Carbon tetrachloride	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	56-23-5	W
Chlorobenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	108-90-7	W
Chloroethane	**<220**	ug/kg	822	220	2.5	06/22/17 08:15	06/22/17 18:29	75-00-3	W
Chloroform	**<153**	ug/kg	822	153	2.5	06/22/17 08:15	06/22/17 18:29	67-66-3	W
Chloromethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	74-87-3	W
Dibromochloromethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	124-48-1	W
Dibromomethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	74-95-3	W
Dichlorodifluoromethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-71-8	W
Diisopropyl ether	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	108-20-3	W
Ethylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	100-41-4	W
Hexachloro-1,3-butadiene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	87-68-3	W
Isopropylbenzene (Cumene)	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	98-82-8	W
Methyl-tert-butyl ether	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	1634-04-4	W
Methylene Chloride	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-09-2	W
Naphthalene	**<132**	ug/kg	822	132	2.5	06/22/17 08:15	06/22/17 18:29	91-20-3	W
Styrene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-2 **Lab ID: 40152051015** Collected: 06/19/17 14:42 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	127-18-4	W
Toluene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	108-88-3	W
Trichloroethene	**23500**	ug/kg	206	86.0	2.5	06/22/17 08:15	06/22/17 18:29	79-01-6	
Trichlorofluoromethane	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-69-4	W
Vinyl chloride	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	75-01-4	W
cis-1,2-Dichloroethene	**1240**	ug/kg	206	86.0	2.5	06/22/17 08:15	06/22/17 18:29	156-59-2	
cis-1,3-Dichloropropene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	10061-01-5	W
m&p-Xylene	**<164**	ug/kg	395	164	2.5	06/22/17 08:15	06/22/17 18:29	179601-23-1	W
n-Butylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	104-51-8	W
n-Propylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	103-65-1	W
o-Xylene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	95-47-6	W
p-Isopropyltoluene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	99-87-6	W
sec-Butylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	135-98-8	W
tert-Butylbenzene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	98-06-6	W
trans-1,2-Dichloroethene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	156-60-5	W
trans-1,3-Dichloropropene	**<82.2**	ug/kg	197	82.2	2.5	06/22/17 08:15	06/22/17 18:29	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	100	%	68-130		2.5	06/22/17 08:15	06/22/17 18:29	1868-53-7	
Toluene-d8 (S)	103	%	68-149		2.5	06/22/17 08:15	06/22/17 18:29	2037-26-5	
4-Bromofluorobenzene (S)	86	%	58-141		2.5	06/22/17 08:15	06/22/17 18:29	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**4.4**	%	0.10	0.10	1		06/24/17 09:16		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-3 **Lab ID: 40152051016** Collected: 06/19/17 14:40 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	630-20-6	W
1,1,1-Trichloroethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	71-55-6	W
1,1,2,2-Tetrachloroethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	79-34-5	W
1,1,2-Trichloroethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	79-00-5	W
1,1-Dichloroethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-34-3	W
1,1-Dichloroethene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-35-4	W
1,1-Dichloropropene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	563-58-6	W
1,2,3-Trichlorobenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	87-61-6	W
1,2,3-Trichloropropane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	96-18-4	W
1,2,4-Trichlorobenzene	**<129**	ug/kg	676	129	2	06/22/17 08:15	06/22/17 17:20	120-82-1	W
1,2,4-Trimethylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	95-63-6	W
1,2-Dibromo-3-chloropropane	**<247**	ug/kg	676	247	2	06/22/17 08:15	06/22/17 17:20	96-12-8	W
1,2-Dibromoethane (EDB)	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	106-93-4	W
1,2-Dichlorobenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	95-50-1	W
1,2-Dichloroethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	107-06-2	W
1,2-Dichloropropane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	78-87-5	W
1,3,5-Trimethylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	108-67-8	W
1,3-Dichlorobenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	541-73-1	W
1,3-Dichloropropane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	142-28-9	W
1,4-Dichlorobenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	106-46-7	W
2,2-Dichloropropane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	594-20-7	W
2-Chlorotoluene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	95-49-8	W
4-Chlorotoluene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	106-43-4	W
Benzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	71-43-2	W
Bromobenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	108-86-1	W
Bromochloromethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	74-97-5	W
Bromodichloromethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-27-4	W
Bromoform	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-25-2	W
Bromomethane	**<189**	ug/kg	676	189	2	06/22/17 08:15	06/22/17 17:20	74-83-9	W
Carbon tetrachloride	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	56-23-5	W
Chlorobenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	108-90-7	W
Chloroethane	**<181**	ug/kg	676	181	2	06/22/17 08:15	06/22/17 17:20	75-00-3	W
Chloroform	**<126**	ug/kg	676	126	2	06/22/17 08:15	06/22/17 17:20	67-66-3	W
Chloromethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	74-87-3	W
Dibromochloromethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	124-48-1	W
Dibromomethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	74-95-3	W
Dichlorodifluoromethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-71-8	W
Diisopropyl ether	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	108-20-3	W
Ethylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	100-41-4	W
Hexachloro-1,3-butadiene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	87-68-3	W
Isopropylbenzene (Cumene)	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	98-82-8	W
Methyl-tert-butyl ether	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	1634-04-4	W
Methylene Chloride	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-09-2	W
Naphthalene	**<108**	ug/kg	676	108	2	06/22/17 08:15	06/22/17 17:20	91-20-3	W
Styrene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-3 **Lab ID: 40152051016** Collected: 06/19/17 14:40 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	127-18-4	W
Toluene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	108-88-3	W
Trichloroethene	**16900**	ug/kg	168	69.9	2	06/22/17 08:15	06/22/17 17:20	79-01-6	
Trichlorofluoromethane	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-69-4	W
Vinyl chloride	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	75-01-4	W
cis-1,2-Dichloroethene	**902**	ug/kg	168	69.9	2	06/22/17 08:15	06/22/17 17:20	156-59-2	
cis-1,3-Dichloropropene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	10061-01-5	W
m&p-Xylene	**<135**	ug/kg	324	135	2	06/22/17 08:15	06/22/17 17:20	179601-23-1	W
n-Butylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	104-51-8	W
n-Propylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	103-65-1	W
o-Xylene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	95-47-6	W
p-Isopropyltoluene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	99-87-6	W
sec-Butylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	135-98-8	W
tert-Butylbenzene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	98-06-6	W
trans-1,2-Dichloroethene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	156-60-5	W
trans-1,3-Dichloropropene	**<67.6**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 17:20	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	97	%	68-130		2	06/22/17 08:15	06/22/17 17:20	1868-53-7	
Toluene-d8 (S)	107	%	68-149		2	06/22/17 08:15	06/22/17 17:20	2037-26-5	
4-Bromofluorobenzene (S)	91	%	58-141		2	06/22/17 08:15	06/22/17 17:20	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**3.4**	%	0.10	0.10	1		06/24/17 09:16		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-4 **Lab ID: 40152051017** Collected: 06/19/17 14:38 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	630-20-6	W
1,1,1-Trichloroethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	71-55-6	W
1,1,2,2-Tetrachloroethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	79-34-5	W
1,1,2-Trichloroethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	79-00-5	W
1,1-Dichloroethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-34-3	W
1,1-Dichloroethene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-35-4	W
1,1-Dichloropropene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	563-58-6	W
1,2,3-Trichlorobenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	87-61-6	W
1,2,3-Trichloropropane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	96-18-4	W
1,2,4-Trichlorobenzene	**<117**	ug/kg	617	117	2	06/22/17 08:15	06/22/17 17:43	120-82-1	W
1,2,4-Trimethylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	95-63-6	W
1,2-Dibromo-3-chloropropane	**<225**	ug/kg	617	225	2	06/22/17 08:15	06/22/17 17:43	96-12-8	W
1,2-Dibromoethane (EDB)	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	106-93-4	W
1,2-Dichlorobenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	95-50-1	W
1,2-Dichloroethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	107-06-2	W
1,2-Dichloropropane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	78-87-5	W
1,3,5-Trimethylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	108-67-8	W
1,3-Dichlorobenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	541-73-1	W
1,3-Dichloropropane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	142-28-9	W
1,4-Dichlorobenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	106-46-7	W
2,2-Dichloropropane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	594-20-7	W
2-Chlorotoluene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	95-49-8	W
4-Chlorotoluene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	106-43-4	W
Benzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	71-43-2	W
Bromobenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	108-86-1	W
Bromochloromethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	74-97-5	W
Bromodichloromethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-27-4	W
Bromoform	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-25-2	W
Bromomethane	**<173**	ug/kg	617	173	2	06/22/17 08:15	06/22/17 17:43	74-83-9	W
Carbon tetrachloride	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	56-23-5	W
Chlorobenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	108-90-7	W
Chloroethane	**<165**	ug/kg	617	165	2	06/22/17 08:15	06/22/17 17:43	75-00-3	W
Chloroform	**<115**	ug/kg	617	115	2	06/22/17 08:15	06/22/17 17:43	67-66-3	W
Chloromethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	74-87-3	W
Dibromochloromethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	124-48-1	W
Dibromomethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	74-95-3	W
Dichlorodifluoromethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-71-8	W
Diisopropyl ether	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	108-20-3	W
Ethylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	100-41-4	W
Hexachloro-1,3-butadiene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	87-68-3	W
Isopropylbenzene (Cumene)	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	98-82-8	W
Methyl-tert-butyl ether	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	1634-04-4	W
Methylene Chloride	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-09-2	W
Naphthalene	**<98.9**	ug/kg	617	98.9	2	06/22/17 08:15	06/22/17 17:43	91-20-3	W
Styrene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-4 **Lab ID: 40152051017** Collected: 06/19/17 14:38 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	127-18-4	W
Toluene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	108-88-3	W
Trichloroethene	**11700**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 17:43	79-01-6	
Trichlorofluoromethane	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-69-4	W
Vinyl chloride	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	75-01-4	W
cis-1,2-Dichloroethene	**285**	ug/kg	154	64.1	2	06/22/17 08:15	06/22/17 17:43	156-59-2	
cis-1,3-Dichloropropene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	10061-01-5	W
m&p-Xylene	**<123**	ug/kg	296	123	2	06/22/17 08:15	06/22/17 17:43	179601-23-1	W
n-Butylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	104-51-8	W
n-Propylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	103-65-1	W
o-Xylene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	95-47-6	W
p-Isopropyltoluene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	99-87-6	W
sec-Butylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	135-98-8	W
tert-Butylbenzene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	98-06-6	W
trans-1,2-Dichloroethene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	156-60-5	W
trans-1,3-Dichloropropene	**<61.7**	ug/kg	148	61.7	2	06/22/17 08:15	06/22/17 17:43	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	115	%	68-130		2	06/22/17 08:15	06/22/17 17:43	1868-53-7	
Toluene-d8 (S)	106	%	68-149		2	06/22/17 08:15	06/22/17 17:43	2037-26-5	
4-Bromofluorobenzene (S)	93	%	58-141		2	06/22/17 08:15	06/22/17 17:43	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**3.7**	%	0.10	0.10	1		06/24/17 09:16		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-5 **Lab ID: 40152051018** Collected: 06/19/17 14:35 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	630-20-6	W
1,1,1-Trichloroethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	71-55-6	W
1,1,2,2-Tetrachloroethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	79-34-5	W
1,1,2-Trichloroethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	79-00-5	W
1,1-Dichloroethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-34-3	W
1,1-Dichloroethene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-35-4	W
1,1-Dichloropropene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	563-58-6	W
1,2,3-Trichlorobenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	87-61-6	W
1,2,3-Trichloropropane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	96-18-4	W
1,2,4-Trichlorobenzene	**<276**	ug/kg	1450	276	5	06/22/17 08:15	06/22/17 18:52	120-82-1	W
1,2,4-Trimethylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	95-63-6	W
1,2-Dibromo-3-chloropropane	**<530**	ug/kg	1450	530	5	06/22/17 08:15	06/22/17 18:52	96-12-8	W
1,2-Dibromoethane (EDB)	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	106-93-4	W
1,2-Dichlorobenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	95-50-1	W
1,2-Dichloroethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	107-06-2	W
1,2-Dichloropropane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	78-87-5	W
1,3,5-Trimethylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	108-67-8	W
1,3-Dichlorobenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	541-73-1	W
1,3-Dichloropropane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	142-28-9	W
1,4-Dichlorobenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	106-46-7	W
2,2-Dichloropropane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	594-20-7	W
2-Chlorotoluene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	95-49-8	W
4-Chlorotoluene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	106-43-4	W
Benzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	71-43-2	W
Bromobenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	108-86-1	W
Bromochloromethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	74-97-5	W
Bromodichloromethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-27-4	W
Bromoform	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-25-2	W
Bromomethane	**<406**	ug/kg	1450	406	5	06/22/17 08:15	06/22/17 18:52	74-83-9	W
Carbon tetrachloride	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	56-23-5	W
Chlorobenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	108-90-7	W
Chloroethane	**<390**	ug/kg	1450	390	5	06/22/17 08:15	06/22/17 18:52	75-00-3	W
Chloroform	**<270**	ug/kg	1450	270	5	06/22/17 08:15	06/22/17 18:52	67-66-3	W
Chloromethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	74-87-3	W
Dibromochloromethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	124-48-1	W
Dibromomethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	74-95-3	W
Dichlorodifluoromethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-71-8	W
Diisopropyl ether	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	108-20-3	W
Ethylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	100-41-4	W
Hexachloro-1,3-butadiene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	87-68-3	W
Isopropylbenzene (Cumene)	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	98-82-8	W
Methyl-tert-butyl ether	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	1634-04-4	W
Methylene Chloride	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-09-2	W
Naphthalene	**<233**	ug/kg	1450	233	5	06/22/17 08:15	06/22/17 18:52	91-20-3	W
Styrene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-5 **Lab ID: 40152051018** Collected: 06/19/17 14:35 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	127-18-4	W
Toluene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	108-88-3	W
Trichloroethene	**34800**	ug/kg	369	154	5	06/22/17 08:15	06/22/17 18:52	79-01-6	
Trichlorofluoromethane	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-69-4	W
Vinyl chloride	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	75-01-4	W
cis-1,2-Dichloroethene	**1010**	ug/kg	369	154	5	06/22/17 08:15	06/22/17 18:52	156-59-2	
cis-1,3-Dichloropropene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	10061-01-5	W
m&p-Xylene	**<291**	ug/kg	698	291	5	06/22/17 08:15	06/22/17 18:52	179601-23-1	W
n-Butylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	104-51-8	W
n-Propylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	103-65-1	W
o-Xylene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	95-47-6	W
p-Isopropyltoluene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	99-87-6	W
sec-Butylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	135-98-8	W
tert-Butylbenzene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	98-06-6	W
trans-1,2-Dichloroethene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	156-60-5	W
trans-1,3-Dichloropropene	**<145**	ug/kg	349	145	5	06/22/17 08:15	06/22/17 18:52	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	110	%	68-130		5	06/22/17 08:15	06/22/17 18:52	1868-53-7	
Toluene-d8 (S)	107	%	68-149		5	06/22/17 08:15	06/22/17 18:52	2037-26-5	
4-Bromofluorobenzene (S)	94	%	58-141		5	06/22/17 08:15	06/22/17 18:52	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**5.4**	%	0.10	0.10	1		06/24/17 09:16		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-6 **Lab ID: 40152051019** Collected: 06/19/17 14:33 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	630-20-6	W
1,1,1-Trichloroethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	71-55-6	W
1,1,2,2-Tetrachloroethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	79-34-5	W
1,1,2-Trichloroethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	79-00-5	W
1,1-Dichloroethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-34-3	W
1,1-Dichloroethene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-35-4	W
1,1-Dichloropropene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	563-58-6	W
1,2,3-Trichlorobenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	87-61-6	W
1,2,3-Trichloropropane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	96-18-4	W
1,2,4-Trichlorobenzene	**<55.3**	ug/kg	291	55.3	1	06/22/17 08:15	06/22/17 14:15	120-82-1	W
1,2,4-Trimethylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	95-63-6	W
1,2-Dibromo-3-chloropropane	**<106**	ug/kg	291	106	1	06/22/17 08:15	06/22/17 14:15	96-12-8	W
1,2-Dibromoethane (EDB)	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	106-93-4	W
1,2-Dichlorobenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	95-50-1	W
1,2-Dichloroethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	107-06-2	W
1,2-Dichloropropane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	78-87-5	W
1,3,5-Trimethylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	108-67-8	W
1,3-Dichlorobenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	541-73-1	W
1,3-Dichloropropane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	142-28-9	W
1,4-Dichlorobenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	106-46-7	W
2,2-Dichloropropane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	594-20-7	W
2-Chlorotoluene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	95-49-8	W
4-Chlorotoluene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	106-43-4	W
Benzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	71-43-2	W
Bromobenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	108-86-1	W
Bromochloromethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	74-97-5	W
Bromodichloromethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-27-4	W
Bromoform	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-25-2	W
Bromomethane	**<81.3**	ug/kg	291	81.3	1	06/22/17 08:15	06/22/17 14:15	74-83-9	W
Carbon tetrachloride	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	56-23-5	W
Chlorobenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	108-90-7	W
Chloroethane	**<77.9**	ug/kg	291	77.9	1	06/22/17 08:15	06/22/17 14:15	75-00-3	W
Chloroform	**<54.0**	ug/kg	291	54.0	1	06/22/17 08:15	06/22/17 14:15	67-66-3	W
Chloromethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	74-87-3	W
Dibromochloromethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	124-48-1	W
Dibromomethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	74-95-3	W
Dichlorodifluoromethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-71-8	W
Diisopropyl ether	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	108-20-3	W
Ethylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	100-41-4	W
Hexachloro-1,3-butadiene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	87-68-3	W
Isopropylbenzene (Cumene)	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	98-82-8	W
Methyl-tert-butyl ether	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	1634-04-4	W
Methylene Chloride	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-09-2	W
Naphthalene	**<46.6**	ug/kg	291	46.6	1	06/22/17 08:15	06/22/17 14:15	91-20-3	W
Styrene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-6 **Lab ID: 40152051019** Collected: 06/19/17 14:33 Received: 06/21/17 10:35 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								
Tetrachloroethene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	127-18-4	W
Toluene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	108-88-3	W
Trichloroethene	**176**	ug/kg	81.3	33.9	1	06/22/17 08:15	06/22/17 14:15	79-01-6	
Trichlorofluoromethane	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-69-4	W
Vinyl chloride	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	75-01-4	W
cis-1,2-Dichloroethene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	156-59-2	W
cis-1,3-Dichloropropene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	10061-01-5	W
m&p-Xylene	**<58.1**	ug/kg	140	58.1	1	06/22/17 08:15	06/22/17 14:15	179601-23-1	W
n-Butylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	104-51-8	W
n-Propylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	103-65-1	W
o-Xylene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	95-47-6	W
p-Isopropyltoluene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	99-87-6	W
sec-Butylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	135-98-8	W
tert-Butylbenzene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	98-06-6	W
trans-1,2-Dichloroethene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	156-60-5	W
trans-1,3-Dichloropropene	**<29.1**	ug/kg	69.8	29.1	1	06/22/17 08:15	06/22/17 14:15	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	104	%	68-130		1	06/22/17 08:15	06/22/17 14:15	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	06/22/17 08:15	06/22/17 14:15	2037-26-5	
4-Bromofluorobenzene (S)	100	%	58-141		1	06/22/17 08:15	06/22/17 14:15	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.2**	%	0.10	0.10	1		06/22/17 15:28		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-7 **Lab ID: 40152051020** Collected: 06/19/17 14:30 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	630-20-6	W
1,1,1-Trichloroethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	71-55-6	W
1,1,2,2-Tetrachloroethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	79-34-5	W
1,1,2-Trichloroethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	79-00-5	W
1,1-Dichloroethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-34-3	W
1,1-Dichloroethene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-35-4	W
1,1-Dichloropropene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	563-58-6	W
1,2,3-Trichlorobenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	87-61-6	W
1,2,3-Trichloropropane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	96-18-4	W
1,2,4-Trichlorobenzene	**<125**	ug/kg	658	125	2	06/22/17 08:15	06/22/17 18:06	120-82-1	W
1,2,4-Trimethylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	95-63-6	W
1,2-Dibromo-3-chloropropane	**<240**	ug/kg	658	240	2	06/22/17 08:15	06/22/17 18:06	96-12-8	W
1,2-Dibromoethane (EDB)	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	106-93-4	W
1,2-Dichlorobenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	95-50-1	W
1,2-Dichloroethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	107-06-2	W
1,2-Dichloropropane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	78-87-5	W
1,3,5-Trimethylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	108-67-8	W
1,3-Dichlorobenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	541-73-1	W
1,3-Dichloropropane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	142-28-9	W
1,4-Dichlorobenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	106-46-7	W
2,2-Dichloropropane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	594-20-7	W
2-Chlorotoluene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	95-49-8	W
4-Chlorotoluene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	106-43-4	W
Benzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	71-43-2	W
Bromobenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	108-86-1	W
Bromochloromethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	74-97-5	W
Bromodichloromethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-27-4	W
Bromoform	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-25-2	W
Bromomethane	**<184**	ug/kg	658	184	2	06/22/17 08:15	06/22/17 18:06	74-83-9	W
Carbon tetrachloride	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	56-23-5	W
Chlorobenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	108-90-7	W
Chloroethane	**<176**	ug/kg	658	176	2	06/22/17 08:15	06/22/17 18:06	75-00-3	W
Chloroform	**<122**	ug/kg	658	122	2	06/22/17 08:15	06/22/17 18:06	67-66-3	W
Chloromethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	74-87-3	W
Dibromochloromethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	124-48-1	W
Dibromomethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	74-95-3	W
Dichlorodifluoromethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-71-8	W
Diisopropyl ether	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	108-20-3	W
Ethylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	100-41-4	W
Hexachloro-1,3-butadiene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	87-68-3	W
Isopropylbenzene (Cumene)	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	98-82-8	W
Methyl-tert-butyl ether	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	1634-04-4	W
Methylene Chloride	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-09-2	W
Naphthalene	**<105**	ug/kg	658	105	2	06/22/17 08:15	06/22/17 18:06	91-20-3	W
Styrene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-7 **Lab ID: 40152051020** Collected: 06/19/17 14:30 Received: 06/21/17 10:35 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								
Tetrachloroethene	**182**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 18:06	127-18-4	
Toluene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	108-88-3	W
Trichloroethene	**18900**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 18:06	79-01-6	
Trichlorofluoromethane	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-69-4	W
Vinyl chloride	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	75-01-4	W
cis-1,2-Dichloroethene	**144J**	ug/kg	162	67.6	2	06/22/17 08:15	06/22/17 18:06	156-59-2	
cis-1,3-Dichloropropene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	10061-01-5	W
m&p-Xylene	**<132**	ug/kg	316	132	2	06/22/17 08:15	06/22/17 18:06	179601-23-1	W
n-Butylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	104-51-8	W
n-Propylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	103-65-1	W
o-Xylene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	95-47-6	W
p-Isopropyltoluene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	99-87-6	W
sec-Butylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	135-98-8	W
tert-Butylbenzene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	98-06-6	W
trans-1,2-Dichloroethene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	156-60-5	W
trans-1,3-Dichloropropene	**<65.8**	ug/kg	158	65.8	2	06/22/17 08:15	06/22/17 18:06	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	68-130		2	06/22/17 08:15	06/22/17 18:06	1868-53-7	
Toluene-d8 (S)	107	%	68-149		2	06/22/17 08:15	06/22/17 18:06	2037-26-5	
4-Bromofluorobenzene (S)	95	%	58-141		2	06/22/17 08:15	06/22/17 18:06	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**2.7**	%	0.10	0.10	1		06/22/17 15:28		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-8 **Lab ID: 40152051021** Collected: 06/19/17 14:48 Received: 06/21/17 10:35 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								
1,1,1,2-Tetrachloroethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	630-20-6	W
1,1,1-Trichloroethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	71-55-6	W
1,1,2,2-Tetrachloroethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	79-34-5	W
1,1,2-Trichloroethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	79-00-5	W
1,1-Dichloroethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-34-3	W
1,1-Dichloroethene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-35-4	W
1,1-Dichloropropene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	563-58-6	W
1,2,3-Trichlorobenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	87-61-6	W
1,2,3-Trichloropropane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	96-18-4	W
1,2,4-Trichlorobenzene	**<61.0**	ug/kg	321	61.0	1	06/23/17 07:45	06/23/17 19:35	120-82-1	W
1,2,4-Trimethylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	95-63-6	W
1,2-Dibromo-3-chloropropane	**<117**	ug/kg	321	117	1	06/23/17 07:45	06/23/17 19:35	96-12-8	W
1,2-Dibromoethane (EDB)	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	106-93-4	W
1,2-Dichlorobenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	95-50-1	W
1,2-Dichloroethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	107-06-2	W
1,2-Dichloropropane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	78-87-5	W
1,3,5-Trimethylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	108-67-8	W
1,3-Dichlorobenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	541-73-1	W
1,3-Dichloropropane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	142-28-9	W
1,4-Dichlorobenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	106-46-7	W
2,2-Dichloropropane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	594-20-7	W
2-Chlorotoluene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	95-49-8	W
4-Chlorotoluene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	106-43-4	W
Benzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	71-43-2	W
Bromobenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	108-86-1	W
Bromochloromethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	74-97-5	W
Bromodichloromethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-27-4	W
Bromoform	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-25-2	W
Bromomethane	**<89.6**	ug/kg	321	89.6	1	06/23/17 07:45	06/23/17 19:35	74-83-9	W
Carbon tetrachloride	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	56-23-5	W
Chlorobenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	108-90-7	W
Chloroethane	**<85.9**	ug/kg	321	85.9	1	06/23/17 07:45	06/23/17 19:35	75-00-3	W
Chloroform	**<59.5**	ug/kg	321	59.5	1	06/23/17 07:45	06/23/17 19:35	67-66-3	W
Chloromethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	74-87-3	W
Dibromochloromethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	124-48-1	W
Dibromomethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	74-95-3	W
Dichlorodifluoromethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-71-8	W
Diisopropyl ether	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	108-20-3	W
Ethylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	100-41-4	W
Hexachloro-1,3-butadiene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	87-68-3	W
Isopropylbenzene (Cumene)	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	98-82-8	W
Methyl-tert-butyl ether	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	1634-04-4	W
Methylene Chloride	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-09-2	W
Naphthalene	**<51.3**	ug/kg	321	51.3	1	06/23/17 07:45	06/23/17 19:35	91-20-3	W
Styrene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: M1-8 **Lab ID: 40152051021** Collected: 06/19/17 14:48 Received: 06/21/17 10:35 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								
Tetrachloroethene	**49.2J**	ug/kg	79.7	33.2	1	06/23/17 07:45	06/23/17 19:35	127-18-4	
Toluene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	108-88-3	W
Trichloroethene	**4330**	ug/kg	79.7	33.2	1	06/23/17 07:45	06/23/17 19:35	79-01-6	
Trichlorofluoromethane	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-69-4	W
Vinyl chloride	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	75-01-4	W
cis-1,2-Dichloroethene	**92.5**	ug/kg	79.7	33.2	1	06/23/17 07:45	06/23/17 19:35	156-59-2	
cis-1,3-Dichloropropene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	10061-01-5	W
m&p-Xylene	**<64.1**	ug/kg	154	64.1	1	06/23/17 07:45	06/23/17 19:35	179601-23-1	W
n-Butylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	104-51-8	W
n-Propylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	103-65-1	W
o-Xylene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	95-47-6	W
p-Isopropyltoluene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	99-87-6	W
sec-Butylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	135-98-8	W
tert-Butylbenzene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	98-06-6	W
trans-1,2-Dichloroethene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	156-60-5	W
trans-1,3-Dichloropropene	**<32.1**	ug/kg	76.9	32.1	1	06/23/17 07:45	06/23/17 19:35	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	95	%	68-130		1	06/23/17 07:45	06/23/17 19:35	1868-53-7	
Toluene-d8 (S)	99	%	68-149		1	06/23/17 07:45	06/23/17 19:35	2037-26-5	
4-Bromofluorobenzene (S)	86	%	58-141		1	06/23/17 07:45	06/23/17 19:35	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**3.5**	%	0.10	0.10	1		06/22/17 15:28		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: FIELD BLANK **Lab ID: 40152051022** Collected: 06/16/17 09:30 Received: 06/21/17 10:35 Matrix: Solid

Results reported on a "wet-weight" basis

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								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	630-20-6	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	71-55-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	79-34-5	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	79-00-5	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-34-3	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-35-4	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	563-58-6	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	87-61-6	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	96-18-4	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	06/23/17 07:45	06/23/17 13:11	120-82-1	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	95-63-6	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	06/23/17 07:45	06/23/17 13:11	96-12-8	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	106-93-4	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	95-50-1	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	107-06-2	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	78-87-5	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	108-67-8	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	541-73-1	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	142-28-9	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	106-46-7	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	594-20-7	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	106-43-4	W
Benzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	06/23/17 07:45	06/23/17 13:11	74-83-9	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	06/23/17 07:45	06/23/17 13:11	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	06/23/17 07:45	06/23/17 13:11	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	74-87-3	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	124-48-1	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	74-95-3	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-71-8	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	98-82-8	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	1634-04-4	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-09-2	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	06/23/17 07:45	06/23/17 13:11	91-20-3	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Sample: FIELD BLANK **Lab ID: 40152051022** Collected: 06/16/17 09:30 Received: 06/21/17 10:35 Matrix: Solid

Results reported on a "wet-weight" basis

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								
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	108-88-3	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-69-4	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	75-01-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	156-59-2	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	10061-01-5	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	06/23/17 07:45	06/23/17 13:11	179601-23-1	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	104-51-8	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	103-65-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	95-47-6	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	99-87-6	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	98-06-6	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	156-60-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	06/23/17 07:45	06/23/17 13:11	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	96	%	68-130		1	06/23/17 07:45	06/23/17 13:11	1868-53-7	
Toluene-d8 (S)	93	%	68-149		1	06/23/17 07:45	06/23/17 13:11	2037-26-5	
4-Bromofluorobenzene (S)	89	%	58-141		1	06/23/17 07:45	06/23/17 13:11	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

QC Batch: 259492 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152051001, 40152051002, 40152051003, 40152051004, 40152051005, 40152051006, 40152051007, 40152051008, 40152051009, 40152051010, 40152051011, 40152051012, 40152051013, 40152051014, 40152051015, 40152051016, 40152051017, 40152051018, 40152051019, 40152051020

METHOD BLANK: 1528344 Matrix: Solid
Associated Lab Samples: 40152051001, 40152051002, 40152051003, 40152051004, 40152051005, 40152051006, 40152051007, 40152051008, 40152051009, 40152051010, 40152051011, 40152051012, 40152051013, 40152051014, 40152051015, 40152051016, 40152051017, 40152051018, 40152051019, 40152051020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	06/22/17 09:35	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/22/17 09:35	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/22/17 09:35	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/22/17 09:35	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/22/17 09:35	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/22/17 09:35	
1,1-Dichloropropene	ug/kg	<14.0	50.0	06/22/17 09:35	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	06/22/17 09:35	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	06/22/17 09:35	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	06/22/17 09:35	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	06/22/17 09:35	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	06/22/17 09:35	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	06/22/17 09:35	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	06/22/17 09:35	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/22/17 09:35	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/22/17 09:35	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	06/22/17 09:35	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	06/22/17 09:35	
1,3-Dichloropropane	ug/kg	<12.0	50.0	06/22/17 09:35	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	06/22/17 09:35	
2,2-Dichloropropane	ug/kg	<12.6	50.0	06/22/17 09:35	
2-Chlorotoluene	ug/kg	<15.8	50.0	06/22/17 09:35	
4-Chlorotoluene	ug/kg	<13.0	50.0	06/22/17 09:35	
Benzene	ug/kg	<9.2	20.0	06/22/17 09:35	
Bromobenzene	ug/kg	<20.6	50.0	06/22/17 09:35	
Bromochloromethane	ug/kg	<21.4	50.0	06/22/17 09:35	
Bromodichloromethane	ug/kg	<9.8	50.0	06/22/17 09:35	
Bromoform	ug/kg	<19.8	50.0	06/22/17 09:35	
Bromomethane	ug/kg	<69.9	250	06/22/17 09:35	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/22/17 09:35	
Chlorobenzene	ug/kg	<14.8	50.0	06/22/17 09:35	
Chloroethane	ug/kg	<67.0	250	06/22/17 09:35	
Chloroform	ug/kg	<46.4	250	06/22/17 09:35	
Chloromethane	ug/kg	<20.4	50.0	06/22/17 09:35	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/22/17 09:35	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/22/17 09:35	
Dibromochloromethane	ug/kg	<17.9	50.0	06/22/17 09:35	
Dibromomethane	ug/kg	<19.3	50.0	06/22/17 09:35	

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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: 60508055 MANKOWSKI
Pace Project No.: 40152051

METHOD BLANK: 1528344 Matrix: Solid

Associated Lab Samples: 40152051001, 40152051002, 40152051003, 40152051004, 40152051005, 40152051006, 40152051007, 40152051008, 40152051009, 40152051010, 40152051011, 40152051012, 40152051013, 40152051014, 40152051015, 40152051016, 40152051017, 40152051018, 40152051019, 40152051020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/kg	<12.3	50.0	06/22/17 09:35	
Diisopropyl ether	ug/kg	<17.7	50.0	06/22/17 09:35	
Ethylbenzene	ug/kg	<12.4	50.0	06/22/17 09:35	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	06/22/17 09:35	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	06/22/17 09:35	
m&p-Xylene	ug/kg	<34.4	100	06/22/17 09:35	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/22/17 09:35	
Methylene Chloride	ug/kg	<16.2	50.0	06/22/17 09:35	
n-Butylbenzene	ug/kg	20.4J	50.0	06/22/17 09:35	
n-Propylbenzene	ug/kg	<11.6	50.0	06/22/17 09:35	
Naphthalene	ug/kg	<40.0	250	06/22/17 09:35	
o-Xylene	ug/kg	<14.0	50.0	06/22/17 09:35	
p-Isopropyltoluene	ug/kg	14.4J	50.0	06/22/17 09:35	
sec-Butylbenzene	ug/kg	<11.9	50.0	06/22/17 09:35	
Styrene	ug/kg	<9.0	50.0	06/22/17 09:35	
tert-Butylbenzene	ug/kg	<9.5	50.0	06/22/17 09:35	
Tetrachloroethene	ug/kg	<12.9	50.0	06/22/17 09:35	
Toluene	ug/kg	<11.2	50.0	06/22/17 09:35	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/22/17 09:35	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/22/17 09:35	
Trichloroethene	ug/kg	<23.6	50.0	06/22/17 09:35	
Trichlorofluoromethane	ug/kg	<24.7	50.0	06/22/17 09:35	
Vinyl chloride	ug/kg	<21.1	50.0	06/22/17 09:35	
4-Bromofluorobenzene (S)	%	93	58-141	06/22/17 09:35	
Dibromofluoromethane (S)	%	94	68-130	06/22/17 09:35	
Toluene-d8 (S)	%	99	68-149	06/22/17 09:35	

LABORATORY CONTROL SAMPLE: 1528345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	2500	2360	94	70-130	
1,1,1-Trichloroethane	ug/kg	2500	2390	96	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2370	95	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2450	98	70-130	
1,1-Dichloroethane	ug/kg	2500	2440	98	63-124	
1,1-Dichloroethene	ug/kg	2500	2320	93	53-117	
1,1-Dichloropropene	ug/kg	2500	2300	92	70-130	
1,2,3-Trichlorobenzene	ug/kg	2500	2090	83	70-130	
1,2,3-Trichloropropane	ug/kg	2500	2400	96	74-130	
1,2,4-Trichlorobenzene	ug/kg	2500	2260	90	78-130	
1,2,4-Trimethylbenzene	ug/kg	2500	2260	90	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1910	76	49-140	

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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: 60508055 MANKOWSKI
Pace Project No.: 40152051

LABORATORY CONTROL SAMPLE: 1528345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	2500	2270	91	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2430	97	70-130	
1,2-Dichloroethane	ug/kg	2500	2610	104	56-135	
1,2-Dichloropropane	ug/kg	2500	2360	95	77-122	
1,3,5-Trimethylbenzene	ug/kg	2500	2330	93	70-130	
1,3-Dichlorobenzene	ug/kg	2500	2430	97	70-130	
1,3-Dichloropropane	ug/kg	2500	2380	95	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2450	98	70-130	
2,2-Dichloropropane	ug/kg	2500	2250	90	70-118	
2-Chlorotoluene	ug/kg	2500	2350	94	70-130	
4-Chlorotoluene	ug/kg	2500	2530	101	70-130	
Benzene	ug/kg	2500	2520	101	66-130	
Bromobenzene	ug/kg	2500	2360	94	70-130	
Bromochloromethane	ug/kg	2500	2310	92	70-130	
Bromodichloromethane	ug/kg	2500	2270	91	62-135	
Bromoform	ug/kg	2500	1900	76	68-130	
Bromomethane	ug/kg	2500	2290	92	29-137	
Carbon tetrachloride	ug/kg	2500	2350	94	57-130	
Chlorobenzene	ug/kg	2500	2490	99	70-130	
Chloroethane	ug/kg	2500	2530	101	36-144	
Chloroform	ug/kg	2500	2480	99	69-115	
Chloromethane	ug/kg	2500	2320	93	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2610	104	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2240	90	70-130	
Dibromochloromethane	ug/kg	2500	2130	85	70-130	
Dibromomethane	ug/kg	2500	2530	101	70-130	
Dichlorodifluoromethane	ug/kg	2500	1740	70	10-99	
Diisopropyl ether	ug/kg	2500	2360	94	70-130	
Ethylbenzene	ug/kg	2500	2380	95	82-122	
Hexachloro-1,3-butadiene	ug/kg	2500	1990	80	70-130	
Isopropylbenzene (Cumene)	ug/kg	2500	2400	96	70-130	
m&p-Xylene	ug/kg	5000	4730	95	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2560	102	63-134	
Methylene Chloride	ug/kg	2500	2290	92	56-123	
n-Butylbenzene	ug/kg	2500	2330	93	70-130	
n-Propylbenzene	ug/kg	2500	2380	95	70-130	
Naphthalene	ug/kg	2500	2180	87	70-130	
o-Xylene	ug/kg	2500	2310	93	70-130	
p-Isopropyltoluene	ug/kg	2500	2300	92	70-130	
sec-Butylbenzene	ug/kg	2500	2270	91	70-130	
Styrene	ug/kg	2500	2370	95	70-130	
tert-Butylbenzene	ug/kg	2500	2280	91	70-130	
Tetrachloroethene	ug/kg	2500	2330	93	70-131	
Toluene	ug/kg	2500	2460	98	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2370	95	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2350	94	68-130	
Trichloroethene	ug/kg	2500	2550	102	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: 60508055 MANKOWSKI
Pace Project No.: 40152051

LABORATORY CONTROL SAMPLE: 1528345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichlorofluoromethane	ug/kg	2500	2580	103	37-149	
Vinyl chloride	ug/kg	2500	2210	88	43-128	
4-Bromofluorobenzene (S)	%			89	58-141	
Dibromofluoromethane (S)	%			94	68-130	
Toluene-d8 (S)	%			93	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1528346 1528347

Parameter	Units	40152051006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/kg	<28.7	1600	1600	1700	1630	107	102	70-130	4	20	
1,1,1-Trichloroethane	ug/kg	<28.7	1600	1600	1530	1380	96	86	57-123	11	20	
1,1,2,2-Tetrachloroethane	ug/kg	<28.7	1600	1600	1670	1420	105	89	73-135	16	20	
1,1,2-Trichloroethane	ug/kg	<28.7	1600	1600	1810	1630	113	102	70-130	10	20	
1,1-Dichloroethane	ug/kg	<28.7	1600	1600	1690	1560	106	98	63-124	8	20	
1,1-Dichloroethene	ug/kg	<28.7	1600	1600	1440	1230	90	77	48-117	16	23	
1,1-Dichloropropene	ug/kg	<28.7	1600	1600	1380	1400	86	88	59-130	2	20	
1,2,3-Trichlorobenzene	ug/kg	<28.7	1600	1600	1660	1620	104	102	70-130	2	20	
1,2,3-Trichloropropane	ug/kg	<28.7	1600	1600	1530	1570	96	99	74-135	3	20	
1,2,4-Trichlorobenzene	ug/kg	<54.7	1600	1600	1610	1560	101	98	78-145	3	20	
1,2,4-Trimethylbenzene	ug/kg	<28.7	1600	1600	1460	1400	91	88	70-130	4	20	
1,2-Dibromo-3-chloropropane	ug/kg	<105	1600	1600	1450	1370	91	86	38-168	6	22	
1,2-Dibromoethane (EDB)	ug/kg	<28.7	1600	1600	1620	1470	102	92	70-130	10	20	
1,2-Dichlorobenzene	ug/kg	<28.7	1600	1600	1670	1610	105	101	70-130	4	20	
1,2-Dichloroethane	ug/kg	<28.7	1600	1600	1740	1700	109	107	56-145	2	20	
1,2-Dichloropropane	ug/kg	<28.7	1600	1600	1540	1480	97	93	77-123	4	20	
1,3,5-Trimethylbenzene	ug/kg	<28.7	1600	1600	1540	1510	97	95	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	<28.7	1600	1600	1650	1710	104	107	70-130	3	20	
1,3-Dichloropropane	ug/kg	<28.7	1600	1600	1680	1670	106	105	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	<28.7	1600	1600	1730	1630	108	102	70-130	6	20	
2,2-Dichloropropane	ug/kg	<28.7	1600	1600	1530	1270	96	80	43-118	18	20	
2-Chlorotoluene	ug/kg	<28.7	1600	1600	1620	1640	102	103	70-130	1	20	
4-Chlorotoluene	ug/kg	<28.7	1600	1600	1600	1610	100	101	70-130	0	20	
Benzene	ug/kg	<28.7	1600	1600	1710	1590	107	100	65-130	7	20	
Bromobenzene	ug/kg	<28.7	1600	1600	1510	1570	95	98	70-130	4	20	
Bromochloromethane	ug/kg	<28.7	1600	1600	1620	1600	101	100	70-130	1	20	
Bromodichloromethane	ug/kg	<28.7	1600	1600	1450	1460	91	92	59-141	0	20	
Bromoform	ug/kg	<28.7	1600	1600	1310	1470	82	92	59-141	11	20	
Bromomethane	ug/kg	<80.4	1600	1600	1780	1420	112	89	28-139	22	20	R1
Carbon tetrachloride	ug/kg	<28.7	1600	1600	1500	1370	94	86	50-130	9	20	
Chlorobenzene	ug/kg	<28.7	1600	1600	1730	1760	109	111	70-130	2	20	
Chloroethane	ug/kg	<77.0	1600	1600	1710	1710	107	107	36-144	0	20	
Chloroform	ug/kg	<53.4	1600	1600	1780	1610	112	101	68-122	10	20	
Chloromethane	ug/kg	<28.7	1600	1600	1520	1450	95	91	30-126	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: 60508055 MANKOWSKI
Pace Project No.: 40152051

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1528346 1528347

Parameter	Units	40152051006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,2-Dichloroethene	ug/kg	7580	1600	1600	9850	9140	142	98	63-130	7	20	M1
cis-1,3-Dichloropropene	ug/kg	<28.7	1600	1600	1430	1410	90	89	70-130	2	20	
Dibromochloromethane	ug/kg	<28.7	1600	1600	1520	1460	95	91	66-136	4	20	
Dibromomethane	ug/kg	<28.7	1600	1600	1580	1520	99	95	70-130	4	20	
Dichlorodifluoromethane	ug/kg	<28.7	1600	1600	1300	1010	81	63	10-99	25	33	
Diisopropyl ether	ug/kg	<28.7	1600	1600	1630	1510	102	95	66-140	7	20	
Ethylbenzene	ug/kg	<28.7	1600	1600	1610	1670	101	104	80-122	4	20	
Hexachloro-1,3-butadiene	ug/kg	74.0J	1600	1600	1750	1530	105	92	56-138	13	20	
Isopropylbenzene (Cumene)	ug/kg	<28.7	1600	1600	1570	1550	99	97	70-130	2	20	
m&p-Xylene	ug/kg	<57.5	3180	3180	3170	3150	99	99	70-130	1	20	
Methyl-tert-butyl ether	ug/kg	<28.7	1600	1600	1880	1740	118	109	63-134	8	20	
Methylene Chloride	ug/kg	<28.7	1600	1600	1680	1520	105	95	56-127	10	20	
n-Butylbenzene	ug/kg	<28.7	1600	1600	1560	1490	97	92	63-130	4	20	
n-Propylbenzene	ug/kg	<28.7	1600	1600	1550	1460	97	91	69-130	6	20	
Naphthalene	ug/kg	<46.0	1600	1600	1670	1550	105	98	70-130	7	20	
o-Xylene	ug/kg	<28.7	1600	1600	1610	1590	101	100	70-130	1	20	
p-Isopropyltoluene	ug/kg	<28.7	1600	1600	1420	1370	89	86	70-130	3	20	
sec-Butylbenzene	ug/kg	<28.7	1600	1600	1450	1370	91	86	61-130	5	20	
Styrene	ug/kg	<28.7	1600	1600	1660	1630	104	102	70-130	2	20	
tert-Butylbenzene	ug/kg	<28.7	1600	1600	1420	1430	89	89	69-130	0	20	
Tetrachloroethene	ug/kg	<28.7	1600	1600	1530	1550	96	97	70-131	1	20	
Toluene	ug/kg	<28.7	1600	1600	1630	1570	103	99	80-120	4	20	
trans-1,2-Dichloroethene	ug/kg	567	1600	1600	2150	2140	99	98	60-130	0	20	
trans-1,3-Dichloropropene	ug/kg	<28.7	1600	1600	1500	1560	94	98	68-130	3	20	
Trichloroethene	ug/kg	132	1600	1600	1710	1600	99	92	70-130	7	20	
Trichlorofluoromethane	ug/kg	<28.7	1600	1600	1500	1340	94	84	37-149	11	24	
Vinyl chloride	ug/kg	125	1600	1600	1630	1310	94	74	39-128	22	20	R1
4-Bromofluorobenzene (S)	%						103	105	58-141			
Dibromofluoromethane (S)	%						116	104	68-130			
Toluene-d8 (S)	%						115	110	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: 60508055 MANKOWSKI
Pace Project No.: 40152051

QC Batch: 259610 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40152051021, 40152051022

METHOD BLANK: 1529076 Matrix: Solid
Associated Lab Samples: 40152051021, 40152051022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	06/23/17 10:53	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/23/17 10:53	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/23/17 10:53	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/23/17 10:53	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/23/17 10:53	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/23/17 10:53	
1,1-Dichloropropene	ug/kg	<14.0	50.0	06/23/17 10:53	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	06/23/17 10:53	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	06/23/17 10:53	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	06/23/17 10:53	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	06/23/17 10:53	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	06/23/17 10:53	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	06/23/17 10:53	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	06/23/17 10:53	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/23/17 10:53	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/23/17 10:53	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	06/23/17 10:53	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	06/23/17 10:53	
1,3-Dichloropropane	ug/kg	<12.0	50.0	06/23/17 10:53	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	06/23/17 10:53	
2,2-Dichloropropane	ug/kg	<12.6	50.0	06/23/17 10:53	
2-Chlorotoluene	ug/kg	<15.8	50.0	06/23/17 10:53	
4-Chlorotoluene	ug/kg	<13.0	50.0	06/23/17 10:53	
Benzene	ug/kg	<9.2	20.0	06/23/17 10:53	
Bromobenzene	ug/kg	<20.6	50.0	06/23/17 10:53	
Bromochloromethane	ug/kg	<21.4	50.0	06/23/17 10:53	
Bromodichloromethane	ug/kg	<9.8	50.0	06/23/17 10:53	
Bromoform	ug/kg	<19.8	50.0	06/23/17 10:53	
Bromomethane	ug/kg	<69.9	250	06/23/17 10:53	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/23/17 10:53	
Chlorobenzene	ug/kg	<14.8	50.0	06/23/17 10:53	
Chloroethane	ug/kg	<67.0	250	06/23/17 10:53	
Chloroform	ug/kg	<46.4	250	06/23/17 10:53	
Chloromethane	ug/kg	<20.4	50.0	06/23/17 10:53	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/23/17 10:53	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/23/17 10:53	
Dibromochloromethane	ug/kg	<17.9	50.0	06/23/17 10:53	
Dibromomethane	ug/kg	<19.3	50.0	06/23/17 10:53	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	06/23/17 10:53	
Diisopropyl ether	ug/kg	<17.7	50.0	06/23/17 10:53	
Ethylbenzene	ug/kg	<12.4	50.0	06/23/17 10:53	

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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: 60508055 MANKOWSKI
Pace Project No.: 40152051

METHOD BLANK: 1529076 Matrix: Solid
Associated Lab Samples: 40152051021, 40152051022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	45.4J	50.0	06/23/17 10:53	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	06/23/17 10:53	
m&p-Xylene	ug/kg	<34.4	100	06/23/17 10:53	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/23/17 10:53	
Methylene Chloride	ug/kg	<16.2	50.0	06/23/17 10:53	
n-Butylbenzene	ug/kg	11.9J	50.0	06/23/17 10:53	
n-Propylbenzene	ug/kg	<11.6	50.0	06/23/17 10:53	
Naphthalene	ug/kg	<40.0	250	06/23/17 10:53	
o-Xylene	ug/kg	<14.0	50.0	06/23/17 10:53	
p-Isopropyltoluene	ug/kg	<12.0	50.0	06/23/17 10:53	
sec-Butylbenzene	ug/kg	<11.9	50.0	06/23/17 10:53	
Styrene	ug/kg	<9.0	50.0	06/23/17 10:53	
tert-Butylbenzene	ug/kg	<9.5	50.0	06/23/17 10:53	
Tetrachloroethene	ug/kg	<12.9	50.0	06/23/17 10:53	
Toluene	ug/kg	<11.2	50.0	06/23/17 10:53	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/23/17 10:53	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/23/17 10:53	
Trichloroethene	ug/kg	<23.6	50.0	06/23/17 10:53	
Trichlorofluoromethane	ug/kg	<24.7	50.0	06/23/17 10:53	
Vinyl chloride	ug/kg	<21.1	50.0	06/23/17 10:53	
4-Bromofluorobenzene (S)	%	91	58-141	06/23/17 10:53	
Dibromofluoromethane (S)	%	99	68-130	06/23/17 10:53	
Toluene-d8 (S)	%	102	68-149	06/23/17 10:53	

LABORATORY CONTROL SAMPLE: 1529077

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2320	93	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2520	101	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2430	97	70-130	
1,1-Dichloroethane	ug/kg	2500	2180	87	63-124	
1,1-Dichloroethene	ug/kg	2500	2260	90	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2370	95	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2430	97	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2510	100	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2540	102	70-130	
1,2-Dichloroethane	ug/kg	2500	2610	104	56-135	
1,2-Dichloropropane	ug/kg	2500	2290	92	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2530	101	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2410	97	70-130	
Benzene	ug/kg	2500	2270	91	66-130	
Bromodichloromethane	ug/kg	2500	2260	91	62-135	
Bromoform	ug/kg	2500	2190	88	68-130	
Bromomethane	ug/kg	2500	2100	84	29-137	

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: 60508055 MANKOWSKI
Pace Project No.: 40152051

LABORATORY CONTROL SAMPLE: 1529077

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2310	92	57-130	
Chlorobenzene	ug/kg	2500	2450	98	70-130	
Chloroethane	ug/kg	2500	2350	94	36-144	
Chloroform	ug/kg	2500	2320	93	69-115	
Chloromethane	ug/kg	2500	1790	72	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2150	86	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2280	91	70-130	
Dibromochloromethane	ug/kg	2500	2190	87	70-130	
Dichlorodifluoromethane	ug/kg	2500	1640	66	10-99	
Ethylbenzene	ug/kg	2500	2430	97	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2370	95	70-130	
m&p-Xylene	ug/kg	5000	4670	93	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2340	93	63-134	
Methylene Chloride	ug/kg	2500	2420	97	56-123	
o-Xylene	ug/kg	2500	2350	94	70-130	
Styrene	ug/kg	2500	2430	97	70-130	
Tetrachloroethene	ug/kg	2500	2470	99	70-131	
Toluene	ug/kg	2500	2430	97	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2220	89	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2350	94	68-130	
Trichloroethene	ug/kg	2500	2420	97	70-130	
Trichlorofluoromethane	ug/kg	2500	2680	107	37-149	
Vinyl chloride	ug/kg	2500	2030	81	43-128	
4-Bromofluorobenzene (S)	%			95	58-141	
Dibromofluoromethane (S)	%			98	68-130	
Toluene-d8 (S)	%			101	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: 60508055 MANKOWSKI
Pace Project No.: 40152051

QC Batch: 259515 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40152051019, 40152051020, 40152051021

SAMPLE DUPLICATE: 1528654

Parameter	Units	40152051021 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.5	3.5	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

QUALITY CONTROL DATA

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

QC Batch: 259643 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40152051001, 40152051002, 40152051003, 40152051004, 40152051005, 40152051006, 40152051007, 40152051008, 40152051009, 40152051010

SAMPLE DUPLICATE: 1529804

Parameter	Units	40152050008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.9	23.2	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
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(920)469-2436

QUALITY CONTROL DATA

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

QC Batch: 259644 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40152051011, 40152051012, 40152051013, 40152051014, 40152051015, 40152051016, 40152051017, 40152051018

SAMPLE DUPLICATE: 1529806

Parameter	Units	40152051016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.4	3.3	2	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: 60508055 MANKOWSKI
Pace Project No.: 40152051

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

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
W	Non-detect results are reported on a wet weight basis.

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60508055 MANKOWSKI
Pace Project No.: 40152051

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40152051001	**M3-1**	EPA 5035/5030B	259492	EPA 8260	259494
40152051002	**M3-2**	EPA 5035/5030B	259492	EPA 8260	259494
40152051003	**M3-3**	EPA 5035/5030B	259492	EPA 8260	259494
40152051004	**M3-4**	EPA 5035/5030B	259492	EPA 8260	259494
40152051005	**M3-5**	EPA 5035/5030B	259492	EPA 8260	259494
40152051006	**M3-6**	EPA 5035/5030B	259492	EPA 8260	259494
40152051007	**M3-7**	EPA 5035/5030B	259492	EPA 8260	259494
40152051008	**M3-8**	EPA 5035/5030B	259492	EPA 8260	259494
40152051009	**M2-1**	EPA 5035/5030B	259492	EPA 8260	259494
40152051010	**M2-2**	EPA 5035/5030B	259492	EPA 8260	259494
40152051011	**M2-3**	EPA 5035/5030B	259492	EPA 8260	259494
40152051012	**M2-4**	EPA 5035/5030B	259492	EPA 8260	259494
40152051013	**M2-5**	EPA 5035/5030B	259492	EPA 8260	259494
40152051014	**M1-1**	EPA 5035/5030B	259492	EPA 8260	259494
40152051015	**M1-2**	EPA 5035/5030B	259492	EPA 8260	259494
40152051016	**M1-3**	EPA 5035/5030B	259492	EPA 8260	259494
40152051017	**M1-4**	EPA 5035/5030B	259492	EPA 8260	259494
40152051018	**M1-5**	EPA 5035/5030B	259492	EPA 8260	259494
40152051019	**M1-6**	EPA 5035/5030B	259492	EPA 8260	259494
40152051020	**M1-7**	EPA 5035/5030B	259492	EPA 8260	259494
40152051021	**M1-8**	EPA 5035/5030B	259610	EPA 8260	259614
40152051022	**FIELD BLANK**	EPA 5035/5030B	259610	EPA 8260	259614
40152051001	**M3-1**	ASTM D2974-87	259643		
40152051002	**M3-2**	ASTM D2974-87	259643		
40152051003	**M3-3**	ASTM D2974-87	259643		
40152051004	**M3-4**	ASTM D2974-87	259643		
40152051005	**M3-5**	ASTM D2974-87	259643		
40152051006	**M3-6**	ASTM D2974-87	259643		
40152051007	**M3-7**	ASTM D2974-87	259643		
40152051008	**M3-8**	ASTM D2974-87	259643		
40152051009	**M2-1**	ASTM D2974-87	259643		
40152051010	**M2-2**	ASTM D2974-87	259643		
40152051011	**M2-3**	ASTM D2974-87	259644		
40152051012	**M2-4**	ASTM D2974-87	259644		
40152051013	**M2-5**	ASTM D2974-87	259644		
40152051014	**M1-1**	ASTM D2974-87	259644		
40152051015	**M1-2**	ASTM D2974-87	259644		
40152051016	**M1-3**	ASTM D2974-87	259644		
40152051017	**M1-4**	ASTM D2974-87	259644		
40152051018	**M1-5**	ASTM D2974-87	259644		
40152051019	**M1-6**	ASTM D2974-87	259515		
40152051020	**M1-7**	ASTM D2974-87	259515		
40152051021	**M1-8**	ASTM D2974-87	259515		

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

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

4015205

Page: 1 of 2

Section A — **Required** Client Information:

Company: AECOM - Milw	
Address: 1555 N. River Center Dr., Suite 214	
Milwaukee, WI 53212	
Email To: Lanette.Altenbach@aecom.com	
Phone: 414-577-1363 Fax:	
Requested Due Date/TAT: Standard	

Section B — **Required** Project Information:

Report To: Lanette Altenbach	
Copy To: Susan Petrofske	
Purchase Order No.:	
Project Name: Mankowski	
Project Number: 60508055	

Section C — Invoice Information:

Attention: ~~Accounts Payable/Finance Department~~	
Company Name: ~~City of Kenosha~~	contact Lanette Altenbach for invoice info.
Address: ~~652-52nd St., Kenosha, WI 53140~~	
Pace Quote Reference:	
Pace Project Manager: Chris Hyska	
Pace Profile #: (2430) Kenosha work	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ ☑ WI ☐ OTHER___

Section D — **Required** Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID		MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: VOCs (8260) MD (STARS)	Residual Chlorine (Y/N)	Pace Project Number / Lab I.D.
1	M3-1	001	SL	G			6/19/17	0800		3	1						2		N	X X		1-40zp A, 2-40zv F
2	M3-2	002	SL	G				0803		3	1						2			X X		
3	M3-3	003	SL	G				0805		3	1						2			X X		
4	M3-4	004	SL	G				0810		3	1						2			X X		
5	M3-5	005	SL	G				0812		3	1						2			X X		
6	M3-6	006	SL	G				0815		3	1						2			X X		
7	M3-7	007	SL	G				0820		3	1						2			X X		
8	M3-8	008	SL	G				0825		3	1						2			X X		
9	M2-1	009	SL	G				0945		3	1						2			X X		
10	M2-2	010	SL	G				0938		3	1						2			X X		
11	M2-3	011	SL	G				0935		3	1						2			X X		
12	M2-4	012	SL	G				0943		3	1						2			X X		

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Stacie Albert/AECOM	6/20/17	1235	Mary Jammie	6/20/17	1235
Mary Jammie	6/20/17	1615			
CS Logistics	6/21/17	1035		6/21/17	1035

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
RGE	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Stacie Albert

SIGNATURE of SAMPLER: Stacie Albert DATE Signed (MM / DD / YY): 06/20/17

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CHAIN-OF-CUSTODY / Analytical Request Document

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

401520 51

Page: 2 of 2

Section A — **Required** Client Information:

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Purchase Order No.:
Project Name: Mankowski
Project Number: 60508055

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Attention: ~~Accounts Payable/Finance Department~~
Company Name: ~~City of Kenosha~~
Address: ~~652 52nd St., Kenosha, WI 53140~~
Pace Quote Reference:
Pace Project Manager: Chris Hyska
Pace Profile #: (2430) Kenosha work

contact Lanette Altenbach for invoice info.

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ ☑ WI ☐ OTHER_____

Section D — **Required** Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	Section D SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis: VOCs (8260) NM STUVE	Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
1	M2-5 013	SL	G			6/19/17	0940		3	1						2		X	X	1-40zp[1], 2-40mlv[F]
2	M1-1 014	SL	G				1445		3	1						2		X	X	
3	M1-2 015	SL	G				1442		3	1						2		X	X	
4	M1-3 016	SL	G				1440		3	1						2		X	X	
5	M1-4 017	SL	G				1438		3	1						2		X	X	
6	M1-5 018	SL	G				1435		3	1						2		X	X	
7	M1-6 019	SL	G				1433		3	1						2		X	X	
8	M1-7 020	SL	G				1430		3	1						2		X	X	
9	M1-8 021	SL	G				1448		3	1						2		X	X	
10	~~M1-9~~	~~SL~~	~~G~~						3	1						2				SA
11	Field Blank 022	—	G			6/16/17	0930		1 [2]							1		X		1-40mlv[F]
12																				

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Stacie Albert/AECOM	6/21/17	1235	Mary Jannini	6/20/17	1235
Mary Jannini	6/21/17	1605			
CSLogistics	6/21/17	1035	Pace	6/21/17	1039

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Stacie Albert

SIGNATURE of SAMPLER: Stacie Albert DATE Signed (MM / DD / YY): 06/20/17

Sample Condition Upon Receipt

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

Pace Analytical™

Client Name: AECOM - Milw

Project # **WO# : 40152051**

40152051

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

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: 6/21/17
Initials: SSM

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: 6/21/17

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

July 26, 2017

Lanette Altenbach
AECOM, Inc.
1555 N River Center Drive
Suite 214
Milwaukee, WI 53212

RE: Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Dear Lanette Altenbach:
Enclosed are the analytical results for sample(s) received by the laboratory on July 20, 2017. 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,

Christopher Hyska

Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Susan Petrofske, AECOM, Inc.

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

CERTIFICATIONS

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

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: 60508055 MANKOWSKI
Pace Project No.: 40153578

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40153578001	**M1-9**	Solid	07/18/17 13:00	07/20/17 10:05
40153578002	**TRIP BLANK**	Solid	07/18/17 07:00	07/20/17 10:05

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SAMPLE ANALYTE COUNT

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40153578001	**M1-9**	EPA 8260	SMT	63	PASI-G
		ASTM D2974-87	RMV	1	PASI-G
40153578002	**TRIP BLANK**	EPA 8260	SMT	63	PASI-G

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SUMMARY OF DETECTION

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40153578001	**M1-9**					
EPA 8260	cis-1,2-Dichloroethene	7610	ug/kg	280	07/25/17 03:04	
EPA 8260	trans-1,2-Dichloroethene	525	ug/kg	280	07/25/17 03:04	
EPA 8260	Methylene Chloride	122J	ug/kg	280	07/25/17 03:04	
EPA 8260	Trichloroethene	35500	ug/kg	280	07/25/17 03:04	
EPA 8260	Vinyl chloride	174J	ug/kg	280	07/25/17 03:04	
ASTM D2974-87	Percent Moisture	14.4	%	0.10	07/24/17 10:42	

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Sample: M1-9 **Lab ID: 40153578001** Collected: 07/18/17 13:00 Received: 07/20/17 10:05 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								
Benzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	71-43-2	W
Bromobenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	108-86-1	W
Bromochloromethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	74-97-5	W
Bromodichloromethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	75-27-4	W
Bromoform	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	75-25-2	W
Bromomethane	**<280**	ug/kg	1000	280	4	07/24/17 11:00	07/25/17 03:04	74-83-9	W
n-Butylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	104-51-8	W
sec-Butylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	135-98-8	W
tert-Butylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	98-06-6	W
Carbon tetrachloride	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	56-23-5	W
Chlorobenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	108-90-7	W
Chloroethane	**<268**	ug/kg	1000	268	4	07/24/17 11:00	07/25/17 03:04	75-00-3	W
Chloroform	**<186**	ug/kg	1000	186	4	07/24/17 11:00	07/25/17 03:04	67-66-3	W
Chloromethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	74-87-3	W
2-Chlorotoluene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	95-49-8	W
4-Chlorotoluene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	106-43-4	W
1,2-Dibromo-3-chloropropane	**<365**	ug/kg	1000	365	4	07/24/17 11:00	07/25/17 03:04	96-12-8	W
Dibromochloromethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	124-48-1	W
1,2-Dibromoethane (EDB)	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	106-93-4	W
Dibromomethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	74-95-3	W
1,2-Dichlorobenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	95-50-1	W
1,3-Dichlorobenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	541-73-1	W
1,4-Dichlorobenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	106-46-7	W
Dichlorodifluoromethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	75-71-8	W
1,1-Dichloroethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	75-34-3	W
1,2-Dichloroethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	107-06-2	W
1,1-Dichloroethene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	75-35-4	W
cis-1,2-Dichloroethene	**7610**	ug/kg	280	117	4	07/24/17 11:00	07/25/17 03:04	156-59-2	
trans-1,2-Dichloroethene	**525**	ug/kg	280	117	4	07/24/17 11:00	07/25/17 03:04	156-60-5	
1,2-Dichloropropane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	78-87-5	W
1,3-Dichloropropane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	142-28-9	W
2,2-Dichloropropane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	594-20-7	W
1,1-Dichloropropene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	563-58-6	W
cis-1,3-Dichloropropene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	10061-01-5	W
trans-1,3-Dichloropropene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	10061-02-6	W
Diisopropyl ether	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	108-20-3	W
Ethylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	100-41-4	W
Hexachloro-1,3-butadiene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	87-68-3	W
Isopropylbenzene (Cumene)	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	98-82-8	W
p-Isopropyltoluene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	99-87-6	W
Methylene Chloride	**122J**	ug/kg	280	117	4	07/24/17 11:00	07/25/17 03:04	75-09-2	
Methyl-tert-butyl ether	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	1634-04-4	W
Naphthalene	**<160**	ug/kg	1000	160	4	07/24/17 11:00	07/25/17 03:04	91-20-3	W
n-Propylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	103-65-1	W
Styrene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Sample: M1-9 **Lab ID: 40153578001** Collected: 07/18/17 13:00 Received: 07/20/17 10:05 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								
1,1,1,2-Tetrachloroethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	630-20-6	W
1,1,2,2-Tetrachloroethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	79-34-5	W
Tetrachloroethene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	127-18-4	W
Toluene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	108-88-3	W
1,2,3-Trichlorobenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	87-61-6	W
1,2,4-Trichlorobenzene	**<190**	ug/kg	1000	190	4	07/24/17 11:00	07/25/17 03:04	120-82-1	W
1,1,1-Trichloroethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	71-55-6	W
1,1,2-Trichloroethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	79-00-5	W
Trichloroethene	**35500**	ug/kg	280	117	4	07/24/17 11:00	07/25/17 03:04	79-01-6	
Trichlorofluoromethane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	75-69-4	W
1,2,3-Trichloropropane	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	96-18-4	W
1,2,4-Trimethylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	95-63-6	W
1,3,5-Trimethylbenzene	**<100**	ug/kg	240	100	4	07/24/17 11:00	07/25/17 03:04	108-67-8	W
Vinyl chloride	**174J**	ug/kg	280	117	4	07/24/17 11:00	07/25/17 03:04	75-01-4	
Xylene (Total)	**<300**	ug/kg	720	300	4	07/24/17 11:00	07/25/17 03:04	1330-20-7	W
Surrogates									
Dibromofluoromethane (S)	99	%	68-130		4	07/24/17 11:00	07/25/17 03:04	1868-53-7	
Toluene-d8 (S)	92	%	68-149		4	07/24/17 11:00	07/25/17 03:04	2037-26-5	
4-Bromofluorobenzene (S)	91	%	58-141		4	07/24/17 11:00	07/25/17 03:04	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.4**	%	0.10	0.10	1		07/24/17 10:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Sample: TRIP BLANK **Lab ID: 40153578002** Collected: 07/18/17 07:00 Received: 07/20/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

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								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	07/24/17 11:00	07/26/17 09:35	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	07/24/17 11:00	07/26/17 09:35	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	07/24/17 11:00	07/26/17 09:35	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	07/24/17 11:00	07/26/17 09:35	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	07/24/17 11:00	07/26/17 09:35	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	100-42-5	W

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

Sample: TRIP BLANK **Lab ID: 40153578002** Collected: 07/18/17 07:00 Received: 07/20/17 10:05 Matrix: Solid

Results reported on a "wet-weight" basis

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								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	07/24/17 11:00	07/26/17 09:35	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	07/24/17 11:00	07/26/17 09:35	75-01-4	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	07/24/17 11:00	07/26/17 09:35	1330-20-7	W
Surrogates									
Dibromofluoromethane (S)	107	%	68-130		1	07/24/17 11:00	07/26/17 09:35	1868-53-7	
Toluene-d8 (S)	106	%	68-149		1	07/24/17 11:00	07/26/17 09:35	2037-26-5	
4-Bromofluorobenzene (S)	99	%	58-141		1	07/24/17 11:00	07/26/17 09:35	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

QC Batch: 262356 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40153578001, 40153578002

METHOD BLANK: 1544617 Matrix: Solid
Associated Lab Samples: 40153578001, 40153578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	07/24/17 18:35	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	07/24/17 18:35	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	07/24/17 18:35	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	07/24/17 18:35	
1,1-Dichloroethane	ug/kg	<17.6	50.0	07/24/17 18:35	
1,1-Dichloroethene	ug/kg	<17.6	50.0	07/24/17 18:35	
1,1-Dichloropropene	ug/kg	<14.0	50.0	07/24/17 18:35	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	07/24/17 18:35	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	07/24/17 18:35	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	07/24/17 18:35	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	07/24/17 18:35	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	07/24/17 18:35	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	07/24/17 18:35	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	07/24/17 18:35	
1,2-Dichloroethane	ug/kg	<15.0	50.0	07/24/17 18:35	
1,2-Dichloropropane	ug/kg	<16.8	50.0	07/24/17 18:35	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	07/24/17 18:35	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	07/24/17 18:35	
1,3-Dichloropropane	ug/kg	<12.0	50.0	07/24/17 18:35	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	07/24/17 18:35	
2,2-Dichloropropane	ug/kg	<12.6	50.0	07/24/17 18:35	
2-Chlorotoluene	ug/kg	<15.8	50.0	07/24/17 18:35	
4-Chlorotoluene	ug/kg	<13.0	50.0	07/24/17 18:35	
Benzene	ug/kg	<9.2	20.0	07/24/17 18:35	
Bromobenzene	ug/kg	<20.6	50.0	07/24/17 18:35	
Bromochloromethane	ug/kg	<21.4	50.0	07/24/17 18:35	
Bromodichloromethane	ug/kg	<9.8	50.0	07/24/17 18:35	
Bromoform	ug/kg	<19.8	50.0	07/24/17 18:35	
Bromomethane	ug/kg	<69.9	250	07/24/17 18:35	
Carbon tetrachloride	ug/kg	<12.1	50.0	07/24/17 18:35	
Chlorobenzene	ug/kg	<14.8	50.0	07/24/17 18:35	
Chloroethane	ug/kg	<67.0	250	07/24/17 18:35	
Chloroform	ug/kg	<46.4	250	07/24/17 18:35	
Chloromethane	ug/kg	<20.4	50.0	07/24/17 18:35	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	07/24/17 18:35	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	07/24/17 18:35	
Dibromochloromethane	ug/kg	<17.9	50.0	07/24/17 18:35	
Dibromomethane	ug/kg	<19.3	50.0	07/24/17 18:35	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	07/24/17 18:35	
Diisopropyl ether	ug/kg	<17.7	50.0	07/24/17 18:35	
Ethylbenzene	ug/kg	<12.4	50.0	07/24/17 18:35	

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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: 60508055 MANKOWSKI
Pace Project No.: 40153578

METHOD BLANK: 1544617 Matrix: Solid
Associated Lab Samples: 40153578001, 40153578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	07/24/17 18:35	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	07/24/17 18:35	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	07/24/17 18:35	
Methylene Chloride	ug/kg	27.2J	50.0	07/24/17 18:35	
n-Butylbenzene	ug/kg	<10.5	50.0	07/24/17 18:35	
n-Propylbenzene	ug/kg	<11.6	50.0	07/24/17 18:35	
Naphthalene	ug/kg	<40.0	250	07/24/17 18:35	
p-Isopropyltoluene	ug/kg	<12.0	50.0	07/24/17 18:35	
sec-Butylbenzene	ug/kg	<11.9	50.0	07/24/17 18:35	
Styrene	ug/kg	<9.0	50.0	07/24/17 18:35	
tert-Butylbenzene	ug/kg	<9.5	50.0	07/24/17 18:35	
Tetrachloroethene	ug/kg	<12.9	50.0	07/24/17 18:35	
Toluene	ug/kg	<11.2	50.0	07/24/17 18:35	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	07/24/17 18:35	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	07/24/17 18:35	
Trichloroethene	ug/kg	<23.6	50.0	07/24/17 18:35	
Trichlorofluoromethane	ug/kg	<24.7	50.0	07/24/17 18:35	
Vinyl chloride	ug/kg	<21.1	50.0	07/24/17 18:35	
Xylene (Total)	ug/kg	<48.4	150	07/24/17 18:35	
4-Bromofluorobenzene (S)	%	98	58-141	07/24/17 18:35	
Dibromofluoromethane (S)	%	110	68-130	07/24/17 18:35	
Toluene-d8 (S)	%	110	68-149	07/24/17 18:35	

LABORATORY CONTROL SAMPLE: 1544618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2540	102	61-122	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2400	96	73-130	
1,1,2-Trichloroethane	ug/kg	2500	2650	106	70-130	
1,1-Dichloroethane	ug/kg	2500	2820	113	63-124	
1,1-Dichloroethene	ug/kg	2500	2600	104	53-117	
1,2,4-Trichlorobenzene	ug/kg	2500	2470	99	78-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2240	89	49-140	
1,2-Dibromoethane (EDB)	ug/kg	2500	2620	105	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2550	102	70-130	
1,2-Dichloroethane	ug/kg	2500	2450	98	56-135	
1,2-Dichloropropane	ug/kg	2500	2950	118	77-122	
1,3-Dichlorobenzene	ug/kg	2500	2540	102	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2510	100	70-130	
Benzene	ug/kg	2500	2390	96	66-130	
Bromodichloromethane	ug/kg	2500	2840	113	62-135	
Bromoform	ug/kg	2500	2400	96	68-130	
Bromomethane	ug/kg	2500	2790	112	29-137	
Carbon tetrachloride	ug/kg	2500	2700	108	57-130	

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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: 60508055 MANKOWSKI
Pace Project No.: 40153578

LABORATORY CONTROL SAMPLE: 1544618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	ug/kg	2500	2690	107	70-130	
Chloroethane	ug/kg	2500	2960	118	36-144	
Chloroform	ug/kg	2500	2680	107	69-115	
Chloromethane	ug/kg	2500	2240	90	32-126	
cis-1,2-Dichloroethene	ug/kg	2500	2530	101	65-130	
cis-1,3-Dichloropropene	ug/kg	2500	2810	112	70-130	
Dibromochloromethane	ug/kg	2500	2670	107	70-130	
Dichlorodifluoromethane	ug/kg	2500	1990	79	10-99	
Ethylbenzene	ug/kg	2500	2650	106	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2630	105	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2730	109	63-134	
Methylene Chloride	ug/kg	2500	2670	107	56-123	
Styrene	ug/kg	2500	2680	107	70-130	
Tetrachloroethene	ug/kg	2500	2650	106	70-131	
Toluene	ug/kg	2500	2680	107	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2640	106	66-130	
trans-1,3-Dichloropropene	ug/kg	2500	2600	104	68-130	
Trichloroethene	ug/kg	2500	2660	107	70-130	
Trichlorofluoromethane	ug/kg	2500	3350	134	37-149	
Vinyl chloride	ug/kg	2500	2520	101	43-128	
Xylene (Total)	ug/kg	7500	8140	109	70-130	
4-Bromofluorobenzene (S)	%			94	58-141	
Dibromofluoromethane (S)	%			106	68-130	
Toluene-d8 (S)	%			103	68-149	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1544668 1544669

Parameter	Units	40153653002 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	1250	1250	1170	1160	94	93	57-123	1	20	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1250	1250	1380	1280	110	102	73-135	7	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1250	1250	1370	1390	109	111	70-130	2	20	
1,1-Dichloroethane	ug/kg	<25.0	1250	1250	1410	1360	112	109	63-124	3	20	
1,1-Dichloroethene	ug/kg	<25.0	1250	1250	1230	1110	99	89	48-117	11	23	
1,2,4-Trichlorobenzene	ug/kg	<47.6	1250	1250	1440	1370	115	110	78-145	5	20	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1250	1250	1260	1130	101	91	38-168	11	22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1250	1250	1350	1330	108	106	70-130	1	20	
1,2-Dichlorobenzene	ug/kg	<25.0	1250	1250	1440	1390	116	111	70-130	4	20	
1,2-Dichloroethane	ug/kg	<25.0	1250	1250	1240	1210	99	97	56-145	3	20	
1,2-Dichloropropane	ug/kg	<25.0	1250	1250	1560	1450	125	116	77-123	7	20	M1
1,3-Dichlorobenzene	ug/kg	<25.0	1250	1250	1370	1350	110	108	70-130	2	20	
1,4-Dichlorobenzene	ug/kg	<25.0	1250	1250	1380	1350	111	108	70-130	2	20	
Benzene	ug/kg	<25.0	1250	1250	1210	1160	97	93	65-130	4	20	
Bromodichloromethane	ug/kg	<25.0	1250	1250	1470	1380	117	111	59-141	6	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: 60508055 MANKOWSKI
Pace Project No.: 40153578

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1544668 1544669

Parameter	Units	40153653002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromoform	ug/kg	<25.0	1250	1250	1310	1340	105	107	59-141	2	20	
Bromomethane	ug/kg	<69.9	1250	1250	1290	1340	103	107	28-139	4	20	
Carbon tetrachloride	ug/kg	<25.0	1250	1250	1220	1120	98	90	50-130	8	20	
Chlorobenzene	ug/kg	<25.0	1250	1250	1370	1360	110	108	70-130	1	20	
Chloroethane	ug/kg	<67.0	1250	1250	1410	1220	112	98	36-144	14	20	
Chloroform	ug/kg	<46.4	1250	1250	1350	1340	106	106	68-122	1	20	
Chloromethane	ug/kg	<25.0	1250	1250	1040	1050	83	84	30-126	1	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1250	1250	1250	1270	100	101	63-130	1	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1250	1250	1420	1390	114	111	70-130	2	20	
Dibromochloromethane	ug/kg	<25.0	1250	1250	1340	1380	108	110	66-136	3	20	
Dichlorodifluoromethane	ug/kg	<25.0	1250	1250	802	782	64	63	10-99	2	33	
Ethylbenzene	ug/kg	<25.0	1250	1250	1290	1290	103	103	80-122	0	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1250	1250	1290	1280	103	102	70-130	1	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1250	1250	1500	1400	120	112	63-134	7	20	
Methylene Chloride	ug/kg	<25.0	1250	1250	1340	1370	106	108	56-127	2	20	
Styrene	ug/kg	<25.0	1250	1250	1400	1410	112	113	70-130	1	20	
Tetrachloroethene	ug/kg	<25.0	1250	1250	1260	1250	101	100	70-131	0	20	
Toluene	ug/kg	<25.0	1250	1250	1290	1310	103	105	80-120	2	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1250	1250	1310	1200	105	96	60-130	9	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1250	1250	1330	1310	107	105	68-130	2	20	
Trichloroethene	ug/kg	<25.0	1250	1250	1350	1280	108	102	70-130	5	20	
Trichlorofluoromethane	ug/kg	<25.0	1250	1250	1330	1360	106	109	37-149	2	24	
Vinyl chloride	ug/kg	<25.0	1250	1250	1010	1000	81	80	39-128	1	20	
Xylene (Total)	ug/kg	<75.0	3750	3750	4050	4130	108	110	70-130	2	20	
4-Bromofluorobenzene (S)	%						89	93	58-141			
Dibromofluoromethane (S)	%						97	98	68-130			
Toluene-d8 (S)	%						91	97	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: 60508055 MANKOWSKI
Pace Project No.: 40153578

QC Batch: 262302
QC Batch Method: ASTM D2974-87
Associated Lab Samples: 40153578001

Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 1544444

Parameter	Units	40153422025 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.9	23.1	1	10	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 60508055 MANKOWSKI
Pace Project No.: 40153578

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

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
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: 60508055 MANKOWSKI
Pace Project No.: 40153578

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40153578001	**M1-9**	EPA 5035/5030B	262356	EPA 8260	262358
40153578002	**TRIP BLANK**	EPA 5035/5030B	262356	EPA 8260	262358
40153578001	**M1-9**	ASTM D2974-87	262302		

Pace Analytical™
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CHAIN-OF-CUSTODY / Analytical Request Document

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

40153538

Page: 1 of 1

Section A
Required Client Information:

- Company: AECOM - Milw
- Address: 1555 N. River Center Dr., Suite 214
- Milwaukee, WI 53212
- Email To: Lanette.Altenbach@aecom.com
- Phone: 414-577-1363 | Fax:
- **Requested Due Date/TAT: Standard**

Section B
Required Project Information:

- Report To: Lanette Altenbach
- Copy To: Susan Petrofske
- Purchase Order No.:
- Project Name: Mankowski
- Project Number: 60508055

Section C
Invoice Information:

- Attention: Accounts Payable/Finance Department
- Company Name: City of Kenosha
- Address: 652 52nd St., Kenosha, WI 53140
- Pace Quote Reference:
- Pace Project Manager: Chris Hyska
- Pace Profile #: (2430) Kenosha work

Please contact Lanette Altenbach to verify invoice information. Thank you.

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER________

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ ☑ WI ☐ OTHER____

Filtered (Y/N): N N

Requested Analysis: VOCs (8260), Moisture

Section D Required Client Information
SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID		MATRIX CODE	SAMPLE TYPE G+GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	VOCs (8260)	Moisture	Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
1	MI-9	001	SL	G	7/18/17	1300	→	→		3	1						2		X	X		1-4oz P, 2-40mL MF
2	Trip Blank	002	-	G	7/18/17	0700	→	→		1							1		X			1-40mL MF
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Stacie Albert/AECOM	7/19/17	1220	Mary Fannin	7/19/17	1220
Mary Fannin	7/19/17	1430			
CS Logistics	7/20/17	1005	[illegible] Pace	7/20/17	1005

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Stacie Albert
SIGNATURE of SAMPLER: Stacie Albert
DATE Signed (MM / DD / YY): 07/18/17

Sample Condition Upon Receipt

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

Pace Analytical™

Project #: WO#: 40153578

40153578

Client Name: AECOM

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

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: 0.2 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 7/20/17
Initials: SM

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. VG MS/MSD SM 7/20 1320 SM 7/21/17
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): B7Q140113				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 7/21/17