

# **PHASE 2**

## **HAZARDOUS MATERIALS**

### **INVESTIGATION**

### **REPORT**

**STH 116 (2<sup>nd</sup> Street – 2<sup>nd</sup> Avenue)**  
**Village of Winneconne, Winnebago County, WI**  
**WisDOT Project ID: 6190-17-00**

Prepared for:

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January 2014

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## ACRONYMS, ABBREVIATIONS, AND SYMBOLS

ASTM	American Society for Testing and Materials
bgs	Below ground surface
BRRTS	Bureau of Remediation and Redevelopment Tracking System
BTEX	Benzene, toluene, ethylbenzene, xylenes
C/L	Centerline
DRO	Diesel range organics
EPA	Environmental Protection Agency
ES	Enforcement Standard
FDM	Facilities Development Manual
GRO	Gasoline range organics
HMA	Hazardous Materials Assessment
HMI	Hazardous Materials Investigation
LUST	Leaking underground storage tank
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
PAL	Preventive action limit
Pb	Lead
PID	Photoionization detector
ppb	Parts per billion
ppm	Parts per million
QA	Quality assurance
QC	Quality control
R/W	Right-of-way
RCL	Residual contaminant level
RCRA	Resource Conservation and Recovery Act
STA	Station
TCLP	Toxicity Characteristic Leaching Procedure
USCS	United Soil Classification System
USDOT	United States Department of Transportation
UST	Underground storage tank
VOC	Volatile organic compound
WDNR	Wisconsin Department of Natural Resources
WDSPS	Wisconsin Department of Safety and Professional Services
WisDOT	Wisconsin Department of Transportation
µg/kg	Microgram per kilogram
µg/L	Microgram per liter
~	Approximately
>	Greater than
<	Less than

## **1.0 EXECUTIVE SUMMARY**

Himalayan Consultants, LLC (Himalayan) was contracted by Wisconsin Department of Transportation (WisDOT) to perform a Phase 2 Hazardous Materials Investigation (HMI) for the following five properties: Main Street Sweets located at 105 W. Main Street (Site #2); Creative Tile and Marble located at 29 W. Main Street (Site #5); The Other Place located at 19 and 21 W. Main Street (Site #8); A1 Auto Sales, Inc. / Steve's Marine Service located at 105 E. Main Street (Site #11); and Hometown Family Hair Care located at 115 – 119 E. Main Street (Site #12) (hereafter referred to as the sites). The sites are located in the Village of Winneconne, Winnebago County, Wisconsin.

The above properties are currently considered for strip right-of-way (R/W) acquisition or total property acquisition as part of the proposed reconstruction activities for the STH 116 (known locally as Main Street) Wolf River Bridge and approaches, between 2nd Street and 2nd Avenue, planned by the WisDOT (Project ID: 6190-17-00) in Winnebago County. Based on the proposed construction plans, a 15-foot maximum strip R/W acquisition (triangular shaped) is proposed at Site #2, and total takes are proposed for Site #5, Site #8, Site #11, and Site #12.

The purpose of the Phase 2 HMI was to identify the potential presence and nature of contamination within the proposed R/W acquisition and total take areas associated with these properties.

Himalayan's initial assessment of hazardous materials conditions for the STH 116 Wolf River Bridge and approaches, between 2nd Street and 2nd Avenue, identified historical land use activities at these sites that could pose a potential hazardous material concern to the proposed reconstruction activities and R/W acquisition or total property acquisition at these sites.

### **1.1 Summary of Findings**

Results of the Phase 2 HMI conducted at the five sites referenced above are summarized in the following sections.

#### **Site #2**

- Based on the laboratory analytical results of soil samples collected at various depths between 2 to 16 feet bgs, no GRO or VOCs were detected. DRO was identified in B-2-2 2-4' at a concentration well below the NR 720 RCL.
- Lead was detected in each of the four soil samples analyzed, at concentrations below the NR 720 RCL.

- Based on the laboratory analytical results of the groundwater sample collected from temporary well MW-2-1, no VOCs or lead were detected.

Site #5

- No GRO was detected in any of the samples analyzed. DRO was detected in five of eight samples, below NR 720 RCL.
- Several VOCs were detected in sample B-5-1 2-4' including 1,2,4-trimethylbenzene, naphthalene, toluene, and xylenes, at concentrations below the respective NR 720 RCLs, if standards exist. Toluene was detected in sample B-5-3 2-4', below the NR 720 RCL.
- Six RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the eight samples analyzed. Chromium was detected in each of the soil samples. Concentrations in five samples (B-5-2 2-4', B-5-2 12-14', B-5-3 10-12', B-5-4 2-4', and B-5-4 8-10') were identified above the NR 720 RCL for the hexavalent chromium.
- Lead was detected in each of the eight soil samples analyzed, and concentrations in B-5-1 2-4' and B-5-3 2-4' exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-5-3 2-4' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L. Cadmium was detected in each of the samples analyzed, below the NR 720 RCL.
- Eighteen PAHs were detected in several of the soil samples analyzed. Five of the PAHs were detected in several soil samples at concentrations above the respective Interim RCLs.
- Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-5-1 and MW-5-3, no VOCs or RCRA metals were detected at concentrations exceeding the respective NR 140 ES. Arsenic was identified in MW-5-3 and chromium was identified in MW-5-1, at concentrations above the respective NR 140 PAL. Barium was detected below the NR 140 PAL in both samples. One VOC, p-Isopropyltoluene, was detected in temporary well MW-5-1; however, no standard exists for this compound.
- Based on the age of the building (at least 1929), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

### Site #8

- No GRO was detected in any of the samples collected. The DRO concentration in B-8-1 8-10' was the only soil sample exceeding the generic NR 720 RCL.
- Several VOCs were detected in sample B-8-1 8-10' and B-8-2 2-4' including 1,2,4-trimethylbenzene, naphthalene, toluene, trichloroethene, and total xylenes are all below their respective NR 720 RCLs or no standard has been established.
- Seven of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 generic soil RCL in all six samples. Chromium was detected in each of the soil samples. Chromium concentrations in four samples (B-8-1 2-4', B-8-1 8-10', B-8-3 2-4', and B-8-3 10-12') were detected above the NR 720 RCL, for the hexavalent chromium only. Cadmium was detected below the NR 720 RCL in each of the samples.
- Lead was detected in each of the soil samples. Concentrations in two samples (B-8-1 8-10' and B-8-3 10-12') exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-8-1 8-10' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L.
- Concentrations of seven PAHs were detected in five samples above their respective Interim RCLs.
- No VOCs were detected were detected in the two groundwater samples analyzed.
- Arsenic in MW-8-3, chromium in MW-8-1, and lead in MW-8-2 were detected above their respective NR 140 PAL criteria. Barium was also detected in all of the groundwater samples, at concentrations below the NR 140 PAL.
- Based on the interview with the owner during the Phase 1 investigation, it appears that the building was constructed prior to 1980; therefore, potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

### Site #11

- No GRO was detected in any of the samples collected. DRO was detected in B-11-1 2-4' below the NR 720 RCL.

- Two VOCs were detected in two of the soil samples. Tetrachloroethene and trichloroethene were both detected in B-11-1 8-10' and B-11-2 10-12'. No NR 720 RCL has been established for either of these VOCs.
- Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the six samples. Chromium was detected in each of the soil samples. Concentrations in five samples were detected above the NR 720 RCL for the hexavalent chromium only. Lead was detected in each of the soil samples at concentrations below the NR 720 RCL.
- No petroleum constituents were detected in any of the water samples.
- Trichloroethene was detected above the NR 140 ES in each of the three samples. Tetrachloroethene was detected above the NR 140 ES in MW-11-1 and MW-11-2 and above the NR 140 PAL but below the NR 140 ES in MW-11-3. Vinyl chloride was detected above the NR 140 ES in MW-11-1 and MW-11-2. Cis-1,2-dichloroethene was detected in MW-11-1 and MW-11-2 above the NR 140 PAL but below the NR 140 ES. Trans-1,2-dichloroethene and 2-butanone (MEK) were also detected in MW-11-1, but are below their respective NR 140 PALs.
- Arsenic was identified in MW-11-2, chromium was identified in MW-11-3, and lead was identified in MW-11-1, and are all above their respective NR 140 PALs but below the NR 140 ES criteria. Barium was detected below the NR 140 PAL in all samples.
- Based on the age of the building (at least 1893), potential ACMs and LBP may be present in the building on site.

#### Site #12

- A strong solvent odor was noted in borehole samples collected from B-12-2, at depths greater than 14 feet bgs.
- GRO was detected in B-12-2 16-18' above the generic NR 720 RCL. DRO was detected in B-12-2 16-18' below the NR 720 RCL.
- Trichloroethene (70.1 J to 1,410,000 µg/kg) was detected in B-12-1 2-4', B-12-2 2-4' and B-12-2 16-18'. No NR 720 RCL has been established for this VOC.
- Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of

the four samples. Chromium was detected in each of the soil samples and the concentrations in all four samples were detected above the NR 720 RCL for the hexavalent chromium only. No other metals were detected above their respective NR 720 RCLs.

- Eleven PAHs were detected in the soil samples. Benzo(a)pyrene was detected in B-12-2 2-4' above its Interim RCL. No other PAHs were detected above their respective Interim RCLs.
- Four VOCs were detected in the groundwater sample (MW-12-1). Trichloroethene was detected above the NR 140 ES. Cis-1,2-dichloroethene, trans-1,2-dichloroethene, and methyl-tert butyl ether were detected below the respective NR 140 PALs in the sample.
- Barium was the only RCRA metal detected in the groundwater sample, and is below its NR 140 PAL.
- Based on the age of the building (at least 1893), potential ACMs and LBP may be present in the building on site.

## 1.2 Conclusions and Recommendations

Based on the results of Himalayan's Phase 2 HMI, no significant petroleum or RCRA metal impacts were identified in the soil or groundwater associated with the former gasoline station at Site #2. However, due to the low level of DRO encountered in B-2, Himalayan recommends that any excavated soils in the area be field screened for potential presence of petroleum contamination. If indicators of obvious contamination (visual, olfactory or elevated PID readings) are observed, the excavated soils from this site should be managed as per the requirements of NR 718.

- Evidence of a hazardous substance release was identified at Sites #5, #8, #11, and #12. Therefore, Himalayan recommends that a Phase 3 hazardous materials investigation (FDM Procedure: 21-35-15) be considered for the sites to fully characterize and define the lateral and vertical extent of soil and groundwater contamination and assist in determining the value of the parcel for acquisition purposes, prior to the total take of the sites.
- The impacts discovered at Sites #5, #8, #11, and #12 should be reported to the WDNR in order to satisfy the notification requirements per hazardous substance spills law, Section 292.11(2).
- Pre-demolition asbestos and lead surveys should be performed at Sites #5, #8, #11, and #12 to evaluate whether ACMs or LBP are present in the structures. All demolition activities should be performed in accordance with local, state, and federal regulations.

## **2.0 INTRODUCTION**

Himalayan Consultants, LLC (Himalayan) completed a Phase 2 Hazardous Materials Investigation (HMI) for five properties, Main Street Sweets at 105 W. Main Street (Site #2), Creative Tile and Marble at 29 W. Main Street (Site #5), The Other Place at 19 and 21 W. Main Street (Site #8), A1 Auto Sales, Inc. / Steve's Marine Service at 105 E. Main Street (Site #11), and Hometown Family Hair Care at 115 – 119 E. Main Street (Site #12) located in the Village of Winneconne, Winnebago County, Wisconsin.

Himalayan, under contract with WisDOT, initially performed an assessment of the hazardous materials conditions for the STH 116 (known locally as Main Street) Wolf River Bridge and approaches, between 2nd Street and 2nd Avenue, and identified the above properties as potential hazardous material concerns to the proposed reconstruction activities in this area. An examination of the historical land use maps revealed that the properties were utilized for coal storage, automobile / boat repair, a paint shop, a tin shop, a blacksmith, and a gasoline station in the past.

## **3.0 PROJECT DESCRIPTION**

The proposed improvements include reconstruction of the STH 116 Wolf River Bridge and approaches, between 2nd Street and 2nd Avenue. Based on the proposed construction plans, a 15-foot maximum strip R/W acquisition (triangular shaped) is proposed at Site #2, and total takes are proposed for Site #5, Site #8, Site #11, and Site #12. Under the proposed improvements, excavation exceeding 2 feet below ground surface (bgs) is anticipated within the proposed acquisition areas associated with these properties for various highway construction related activities.

## **4.0 PURPOSE AND SCOPE**

The purpose of the Phase 2 HMI was to identify the potential presence and nature of contamination within the proposed acquisition areas associated with the above five properties.

The HMI was performed in general accordance with FDM Procedure 21-35-10 (revised, December 2011) [Ref. 1], and the current Wisconsin Department of Natural Resources (WDNR) rules and regulations.

## **5.0 SUBSURFACE INVESTIGATION**

### **5.1 Soil Sampling and Screening Procedures**

#### Discrete Samples

On July 30 and 31, 2013, Horizon Construction and Exploration (Horizon), under a contract with Himalayan, advanced four soil borings (B-5-1 to B-5-4) on the Creative Tile and Marble property, three soil borings (B-8-1 to B-8-3) on The Other Place property, three soil borings (B-11-1 to B-11-3) on the A1 Auto Sales, Inc. / Steve's Marine Service property, and two soil borings (B-12-1 and B-12-2) on the Hometown Family Hair Care property. On September 27, 2013, Horizon, under contract with Himalayan, advanced two soil borings (B-2-1 and B-2-2) on the Main Street Sweets property. The borings were advanced using a Geoprobe®.

The following table presents a summary of the borings and temporary wells installed at each site:

**TABLE 1**  
**PHASE 2 HAZARDOUS MATERIALS INVESTIGATION**  
FDM Procedure: 21-35-10  
STH 116 (2<sup>nd</sup> Street – 2<sup>nd</sup> Avenue)  
Village of Winneconne, Winnebago County, WI  
Project ID: 6190-17-00

SITE NAME AND ADDRESS	GEOPROBE		
	Total Borings	Boring ID	Total Wells
<b>Site #2</b> – Main Street Sweets 105 W. Main Street	2	B-2-1 through B-2-2	1
<b>Site #5</b> – Creative Tile and Marble 29 W. Main Street	4	B-5-1 through B-5-4	3
<b>Site #8</b> – The Other Place 19 and 21 W. Main Street	3	B-8-1 through B-8-3	3
<b>Site #11</b> – A1 Auto Sales, Inc. / Steve's Marine Service 105 E. Main Street	3	B-11-1 through B-11-3	3
<b>Site #12</b> – Hometown Family Hair Care 115 – 119 E. Main Street	2	B-12-1 through B-12-2	2

The Geoprobe® utilizes a hydraulic ram device that forces a 5-foot long, 2.38-inch inside diameter (ID), stainless steel rod into the ground. Each rod was fitted with a removable 1.70-inch ID clear acetate tube liner. Following extraction from the ground, the liners were removed from the stainless steel rod and the interior soil column was separated into approximately 2.5-foot intervals and inspected.

Continuous soil samples were obtained from each boring. Refer to individual reports for the sites in Appendices B through F for the number of borings, boring depths, and locations.

Himalayan examined the soil samples collected from each boring to determine the soil type, color, odor, texture, moisture, and other soil characteristics using visual-manual procedures, including identification of any non-native soils (fill material). These observations were used to prepare descriptive geologic logs for each boring, and visually classify the soils according to Unified Soil Classification System (USCS) in general accordance with American Society for Testing and Materials (ASTM) International Procedure D-2488. A field log of each boring was prepared, including observations for saturated soil conditions denoting depth(s) of groundwater if encountered.

Soil samples were screened in the field for volatile organic compounds (VOCs) using a Photoionization Detector (PID) equipped with a 10.6 eV lamp (MiniRAE 2000). The PID was calibrated on-site using a standard of 100 ppm of isobutylene gas and manufacturer-recommended calibration procedures. Field-screening results of the collected soil samples are presented in Table 1 of each site report.

Based on field observations and screening results, two discrete soil samples from each boring were selected and submitted for laboratory analysis. One shallow sample and one deep sample were collected based upon elevated PID readings, noticeable odors, fill materials, and/or the potential soil/groundwater interface zone.

Each soil sample selected for laboratory analysis was prepared in the field, including placement in a laboratory supplied container, storage in a cooler (on-ice), and submittal with a chain-of-custody to Pace Analytical Services (PAS), WDNR Certified Laboratory #405132750, for laboratory analyses. The soil samples collected were analyzed for diesel range organics (DRO), gasoline range organics (GRO), volatile organic compounds (VOCs), one or more Resource Conservation and Recovery Act (RCRA) metal (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury), and/or polycyclic aromatic hydrocarbons (PAHs).

The laboratory analytical results of the collected soil samples are presented in Table 2 of the individual site reports.

### Waste Characterization Samples

Soil samples collected from Site #2 were analyzed for flashpoint and free liquids. These parameters, along with GRO, DRO and VOCs analyses, are considered sufficient to provide waste characterization for the disposal and/or treatment of contaminated soils at a landfill.

One composite soil sample was collected from each of the other sites (Site #5, Site #8, Site #11, and Site #12) and analyzed for landfill acceptance criteria (Protocol B), in order to provide waste characterization for potential off-site disposal and/or treatment of contaminated soils. Based on soil analytical results from the individual borings at each site, toxicity characteristic leaching procedure (TCLP) analysis for lead was performed on one sample collected from boring B-5-3 and one sample collected from boring B-8-1. TCLP analysis for VOCs was conducted on one sample collected from boring B-12-2.

The laboratory analytical results of the collected soil samples are presented in Table 4 of the individual site reports.

### **5.2 Groundwater Sampling Procedures**

Temporary wells were installed in borings B-2-1 (MW-2-1), B-5-1 (MW-5-1), B-5-2 (MW-5-2), B-5-3 (MW-5-3), B-8-1 (MW-8-1), B-8-2 (MW-8-2), B-8-3 (MW-8-3), B-11-1 (MW-11-1), B-11-2 (MW-11-2), B-11-3 (MW-11-3), B-12-1 (MW-12-1), and B-12-2 (MW-12-2). Himalayan performed groundwater sampling at Site #2, Site #5, Site #8, and Site #12 on the same day that the Geoprobe borings were advanced. The temporary wells located at Site #11 were sampled approximately 24 hours after they had been installed.

Groundwater extraction was performed using a peristaltic pump. The peristaltic pump was connected to dedicated tubing (polyethylene and medical grade silicone) that was inserted inside the well casing. Groundwater samples were prepared in the field, including placement in a laboratory supplied container, storage in a cooler (on-ice), and submittal with a chain-of-custody to PAS for laboratory analyses.

Temporary wells MW-5-2 and MW-12-2 did not produce adequate groundwater to prepare and submit samples for laboratory analysis. Adequate groundwater was collected from each of the remaining temporary wells to prepare and submit samples for laboratory analysis of VOCs and one or more RCRA metal (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury).

### **5.3 Quality Assurance / Quality Control Samples**

A laboratory supplied methanol trip blank for soils, and laboratory supplied deionized water trip blank for groundwater, were stored and transported with the soil and groundwater samples from all sites, and laboratory analyzed for VOCs to provide quality assurance / quality control (QA/QC) data.

### **5.4 Decontamination Procedures**

All down-hole soil sampling equipment was decontaminated using an Alconox and potable water solution, and triple rinsed with potable water before each sampling event. Disposable polyacetate liners were used to retrieve soil samples from each sample location. Groundwater sampling equipment in direct contact with the water table was disposable and dedicated to individual sample locations.

### **5.5 Investigative Derived Waste**

Excess soil cuttings generated during drilling and sampling activities were collected in 5-gallon pails. The investigative derived waste (IDW) pails were temporarily stored at a secure location at Site #11 with permission from the property owner. The IDW pails were labeled using a WisDOT Non-Regulated Waste sticker (DT1208) per FDM 21-35-30 [Ref. 2].

A Non-Hazardous Waste Container Inventory Record (DT1229) was completed for the pails and submitted electronically to Sharlene Te Beest (Hazardous Materials Specialist, WisDOT Bureau of Technical Services-Environmental Services Section), Kathie VanPrice (Northeast Regional Environmental Coordinator), and Veolia Environmental Services (Veolia), for management of the IDW pails at a later date. Refer to Appendix G for a copy of the completed DT1229 forms and pail location information.

## **6.0 INVESTIGATION RESULTS**

### **Site #2**

- Based on the laboratory analytical results of soil samples collected at various depths between 2 to 16 feet bgs, no GRO or VOCs were detected. DRO was identified in B-2-2 2-4' at a concentration well below the NR 720 RCL.
- Lead was detected in each of the four soil samples analyzed, at concentrations below the NR 720 RCL.

- Based on the laboratory analytical results of the groundwater sample collected from temporary well MW-2-1, no VOCs or lead were detected.

Site #5

- No GRO was detected in any of the samples analyzed. DRO was detected in five of eight samples, below NR 720 RCL.
- Several VOCs were detected in sample B-5-1 2-4' including 1,2,4-trimethylbenzene, naphthalene, toluene, and xylenes, at concentrations below the respective NR 720 RCLs, if standards exist. Toluene was detected in sample B-5-3 2-4', below the NR 720 RCL.
- Six RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the eight samples analyzed. Chromium was detected in each of the soil samples. Concentrations in five samples (B-5-2 2-4', B-5-2 12-14', B-5-3 10-12', B-5-4 2-4', and B-5-4 8-10') were identified above the NR 720 RCL for the hexavalent chromium.
- Lead was detected in each of the eight soil samples analyzed, and concentrations in B-5-1 2-4' and B-5-3 2-4' exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-5-3 2-4' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L. Cadmium was detected in each of the samples analyzed, below the NR 720 RCL.
- Eighteen PAHs were detected in several of the soil samples analyzed. Five of the PAHs were detected in several soil samples at concentrations above the respective Interim RCLs.
- Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-5-1 and MW-5-3, no VOCs or RCRA metals were detected at concentrations exceeding the respective NR 140 ES. Arsenic was identified in MW-5-3 and chromium was identified in MW-5-1, at concentrations above the respective NR 140 PAL. Barium was detected below the NR 140 PAL in both samples. One VOC, p-Isopropyltoluene, was detected in temporary well MW-5-1; however, no standard exists for this compound.
- Based on the age of the building (at least 1929), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

### Site #8

- No GRO was detected in any of the samples collected. The DRO concentration in B-8-1 8-10' was the only soil sample exceeding the generic NR 720 RCL.
- Several VOCs were detected in sample B-8-1 8-10' and B-8-2 2-4' including 1,2,4-trimethylbenzene, naphthalene, toluene, trichloroethene, and total xylenes are all below their respective NR 720 RCLs or no standard has been established.
- Seven of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 generic soil RCL in all six samples. Chromium was detected in each of the soil samples. Chromium concentrations in four samples (B-8-1 2-4', B-8-1 8-10', B-8-3 2-4', and B-8-3 10-12') were detected above the NR 720 RCL, for the hexavalent chromium only. Cadmium was detected in each of the samples below the NR 720 RCL.
- Lead was detected in each of the soil samples. Concentrations in two samples (B-8-1 8-10' and B-8-3 10-12') exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-8-1 8-10' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L.
- Concentrations of seven PAHs were detected in five samples above their respective Interim RCLs.
- No VOCs were detected were detected in the two groundwater samples analyzed.
- Arsenic in MW-8-3, chromium in MW-8-1, and lead in MW-8-2 were detected above their respective NR 140 PAL criteria. Barium was also detected in all of the groundwater samples, at concentrations below the NR 140 PAL.
- Based on the interview with the owner during the Phase 1 investigation, it appears that the building was constructed prior to 1980; therefore, potential ACMs and LBP may be present in the building on site.

### Site #11

- No GRO was detected in any of the samples collected. DRO was detected in B-11-1 2-4' below the NR 720 RCL.

- Two VOCs were detected in two of the soil samples. Tetrachloroethene and trichloroethene were both detected in B-11-1 8-10' and B-11-2 10-12'. No NR 720 RCL has been established for either of these VOCs.
- Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the six samples. Chromium was detected in each of the soil samples. Concentrations in five samples were detected above the NR 720 RCL for the hexavalent chromium only. Lead was detected in each of the soil samples at concentrations below the NR 720 RCL.
- No petroleum constituents were detected in any of the water samples.
- Trichloroethene was detected above the NR 140 ES in each of the three samples. Tetrachloroethene was detected above the NR 140 ES in MW-11-1 and MW-11-2 and above the NR 140 PAL but below the NR 140 ES in MW-11-3. Vinyl chloride was detected above the NR 140 ES in MW-11-1 and MW-11-2. Cis-1,2-dichloroethene was detected in MW-11-1 and MW-11-2 above the NR 140 PAL but below the NR 140 ES. Trans-1,2-dichloroethene and 2-butanone (MEK) were also detected in MW-11-1, but are below their respective NR 140 PALs.
- Arsenic was identified in MW-11-2, chromium was identified in MW-11-3, and lead was identified in MW-11-1, and are all above their respective NR 140 PALs but below the NR 140 ES criteria. Barium was detected below the NR 140 PAL in all samples.
- Based on the age of the building (at least 1893), potential ACMs and LBP may be present in the building on site.

#### Site #12

- A strong solvent odor was noted in borehole samples collected from B-12-2, at depths greater than 14 feet bgs.
- GRO was detected in B-12-2 16-18' above the generic NR 720 RCL. DRO was detected in B-12-2 16-18' below the NR 720 RCL.
- Trichloroethene (70.1 J to 1,410,000 µg/kg) was detected in B-12-1 2-4', B-12-2 2-4' and B-12-2 16-18'. No NR 720 RCL has been established for this VOC.

- Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the four samples. Chromium was detected in each of the soil samples and the concentrations in all four samples were detected above the NR 720 RCL for the hexavalent chromium only. No other metals were detected above their respective NR 720 RCLs.
- Eleven PAHs were detected in the soil samples. Benzo(a)pyrene was detected in B-12-2 2-4' above its Interim RCL. No other PAHs were detected above their respective Interim RCLs.
- Four VOCs were detected in the groundwater sample (MW-12-1). Trichloroethene was detected above the NR 140 ES. Cis-1,2-dichloroethene, trans-1,2-dichloroethene, and methyl-tert butyl ether were detected below the respective NR 140 PALs in the sample.
- Barium was the only RCRA metal detected in the groundwater sample, and is below its NR 140 PAL.
- Based on the age of the building (at least 1893), potential ACMs and LBP may be present in the building on site.

## **7.0 CONCLUSIONS AND RECCOMENDATIONS**

- Based on the results of Himalayan's Phase 2 HMI, no significant petroleum or RCRA metal impacts were identified in the soil or groundwater associated with the former gasoline station at Site #2. Therefore, no further hazardous materials investigation is considered necessary for the site. However, due to the low level of DRO encountered in B-2, Himalayan recommends that any excavated soils in the area be field screened for potential presence of petroleum contamination. If indicators of obvious contamination (visual, olfactory or elevated PID readings) are observed, the excavated soils from this site should be managed as per the requirements of NR 718.
- Evidence of a hazardous substance release was identified at Sites #5, #8, #11, and #12. Therefore, Himalayan recommends that a Phase 3 hazardous materials investigation (FDM Procedure: 21-35-15) be considered for the sites to fully characterize and define the lateral and vertical extent of soil and groundwater contamination and assist in determining the value of the parcel for acquisition purposes, prior to the total take of the sites.
- The impacts discovered at Sites #5, #8, #11, and #12 should be reported to the WDNR in order to satisfy the notification requirements per hazardous substance spills law, Section 292.11(2).
- Pre-demolition asbestos and lead surveys should be performed at Sites #5, #8, #11, and #12 to evaluate whether ACMs or LBP are present in the structures. All demolition activities should be performed in accordance with local, state, and federal regulations.

## **8.0 LIMITATIONS**

Himalayan prepared this report for WisDOT's use as part of the environmental evaluation of the above five parcels. It was prepared in accordance with the currently accepted environmental and engineering practices. Because the evaluation is based upon subsurface physical and chemical data obtained from soil borings only at specific locations and times and only to the depths sampled, additional unidentified environmental impacts may be present adjacent to the site that could not be identified within the scope of the investigation or that were not apparent at the time of report preparation.

The conclusions and recommendations contained in this report represent our professional opinions based on the project construction information available at the time of this report. This report is based, in part, on unverified information supplied to Himalayan from several sources during the project research; therefore, Himalayan does not guarantee its completeness or accuracy. No warranty or guarantee is expressed or implied regarding the findings of this investigation.

This report has been prepared for the exclusive use of WisDOT for specific application to the project as described in the report. No warranty, expressed or implied, is made. There are no beneficiaries of this report other than WisDOT, and no other person or entity is entitled to rely upon this report without the written consent of Himalayan and a written agreement limiting Himalayan's liability.

Himalayan is not responsible for any claims, damages, or liabilities associated with the interpretation of these findings or reuse of the analysis, associated site data, or recommendations without the express written authorization of Himalayan.

Limitations of this assessment may not be altered or waived without written consent of Himalayan. This is a technical report and is not a legal representation or interpretation of environmental laws, rules, regulations, or policies of local, state, or federal governmental agencies.

No investigation is thorough enough to exclude the presence of hazardous substances at a given site. If hazardous substances or hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such substances or conditions, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

## **9.0 REFERENCES**

1. Wisconsin Department of Transportation. (December 2011). Facilities Development Manual, Procedure 21-35-10.
2. Wisconsin Department of Transportation. (December 2011). Facilities Development Manual, Procedure 21-35-30.

## **APPENDICES**

Appendix A. Site Location Map

Appendix B. Site #2 – Main Street Sweets, 105 W. Main Street

Appendix C. Site #5 – Creative Tile and Marble, 29 W. Main Street

Appendix D. Site #8 – The Other Place, 19 and 21 W. Main Street

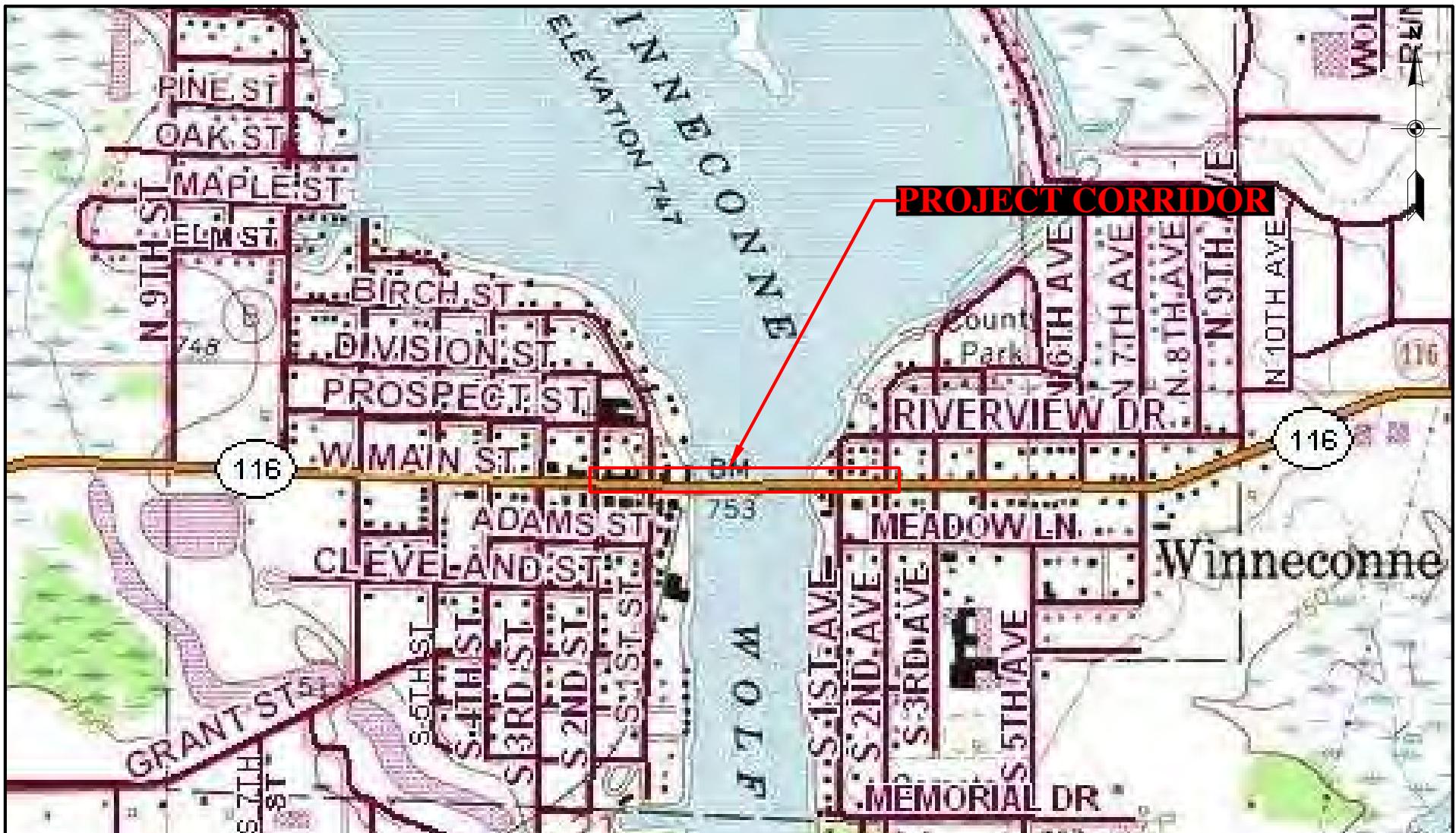
Appendix E. Site #11 – A1 Auto Sales, Inc. / Steve's Marine Service, 105 E. Main Street

Appendix F. Site #12 – Hometown Family Hair Care, 115 – 119 E. Main Street

Appendix G. Investigative Derived Waste Information

**APPENDIX A**

**MAPS AND FIGURES**



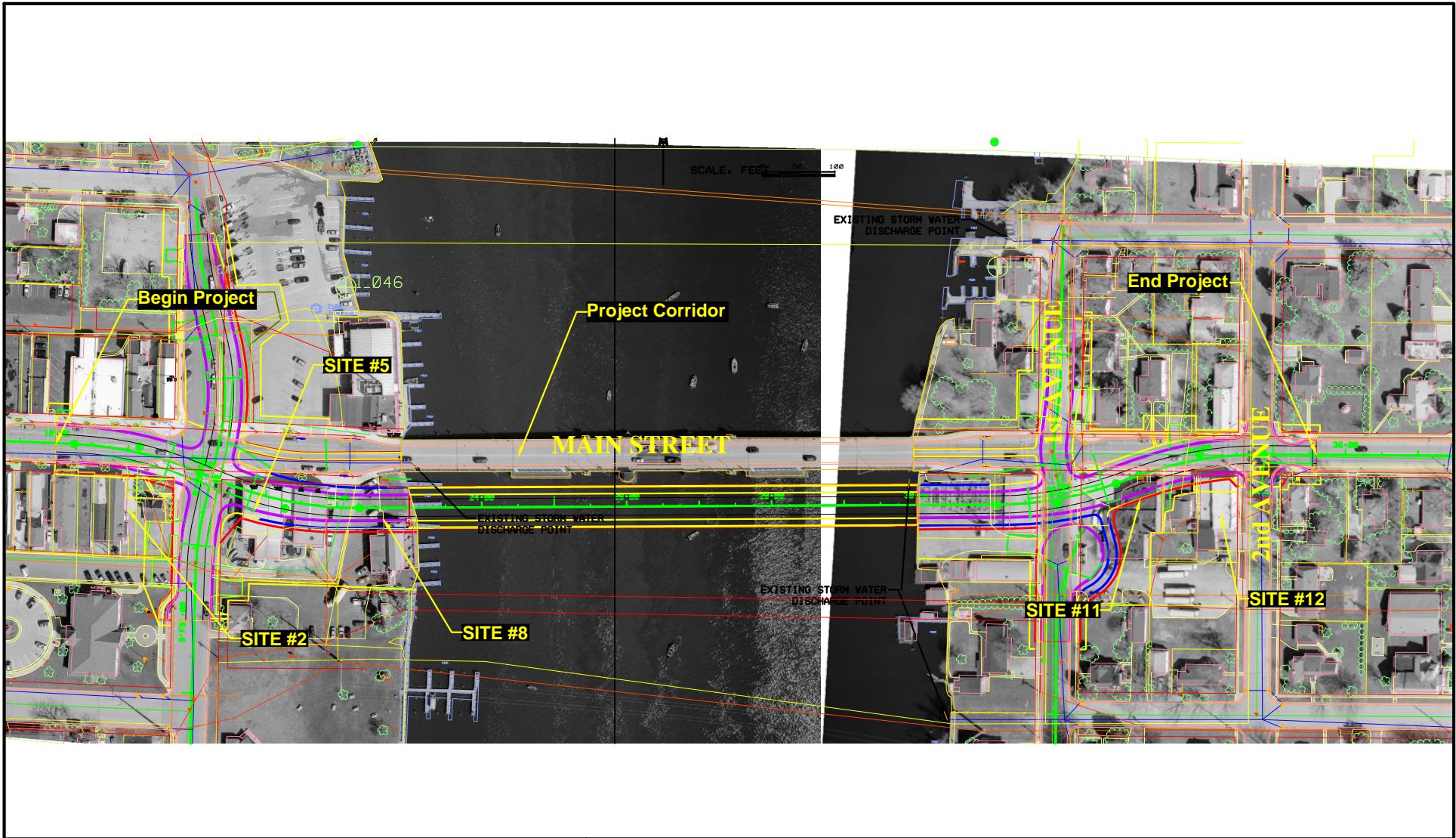
**FIGURE 1.1: PROJECT LOCATION MAP**



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Project ID: 6190-17-00

STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin



Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

0 100 200 400  
Scale:



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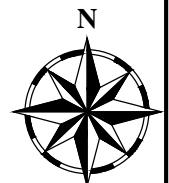
**FIGURE 2.1: SITES OVERVIEW MAP**

Project ID: 6190-17-00

STH 116

2nd Street - 2nd Avenue

Winneconne, Winnebago County, Wisconsin



## **APPENDIX B**

### **MAIN STREET SWEETS [SITE #2]**

## **1.0 SITE DESCRIPTION**

Main Street Sweets (105 W. Main Street) is located near the southwest quadrant of the intersection of W. Main Street (STH 116) and 1<sup>st</sup> Street, hereafter referred to as the site (see Figure 3.1, Attachment A). The site is part of the northeast ¼ of the northwest ¼ of Section 21, Township 19 North, Range 15 East, in the Village of Winneconne, Winnebago County, Wisconsin. According to the Winnebago County GIS Parcel Profiler, the site is currently owned by Mary S. Holtz Living Trust [Ref. 1].

Based on Himalayan's inspection of the site on July 30, 2013, the site is utilized as a candy store / gift shop named "Main Street Sweets" (see Photographs, Attachment E). The predominant land surface at the site is an asphalt covered parking lot on the south side of the property, with a small grass covered / landscaped area on the north and east sides of the building.

The land use surrounding the site is generally commercial properties.

## **2.0 SITE HISTORY**

In August 2012, Himalayan performed a Phase 1 Hazardous Materials Assessment (HMA) of the project corridor and identified the site at 105 W. Main Street as one of the sites with hazardous material concerns [Ref. 2]. Based on the information obtained from the Phase 1 HMA, the site was utilized as a saloon in 1893, 1904, and 1913, and as a gasoline station in 1929. The 1929 Sanborn Map also depicted two gasoline tanks on the northern portion of the site, located approximately 10 feet south of the Main Street roadway. Himalayan's inspection of historical aerial photographs from the 1960's and 1970's also indicate the presence of a pump island in this same area. According to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) storage tank database, no tanks are registered to the site [Ref. 3].

## **3.0 PURPOSE AND PROPOSED ACQUISITION / CONSTRUCTION**

The purpose of this Phase 2 HMI was to identify the potential presence and nature of contamination at the site. The Phase 2 HMI was performed in general accordance with FDM Procedure 21-35-10 (revised December 2011) [Ref. 4], and the current Wisconsin Department of Natural Resources (WDNR) rules and regulations.

Based on the proposed design plans, the maximum depths of excavation adjacent to the site are anticipated to be about 2 feet bgs for roadway construction, 8 feet bgs for water / sewer, and 5 feet bgs for lighting / signal bases. Up to 15 feet of R/W (strip) acquisition and a TLE of 30 feet are also anticipated at this site.

## **4.0 SOILS AND GROUNDWATER CHARACTERIZATION**

On September 27, 2013, Horizon Construction and Exploration (Horizon), under a contract with Himalayan, advanced two soil borings (B-2-1 and B-2-2) at the site (see Figure 3.2, Attachment A). The general boring locations were in the areas considered to have the highest potential for encountering contamination based on the information obtained during the Phase 1 HMA, and/or proposed improvements at the site. Borings were advanced to a depth of 20 feet bgs. Both borings are located within the proposed R/W adjacent to the UST location provided on the Sanborn maps.

One of the borings (B-2-1) was converted to a temporary groundwater monitoring well (MW-2-1) to facilitate groundwater sampling. The well was constructed in general compliance with WDNR guidelines for temporary monitoring wells [Ref. 5]. The well consisted of a 10-foot section of slotted 1-inch polyvinyl chloride (PVC) pipe attached to an unslotted PVC riser pipe extending to the surface. Refer to the Well Construction Form in Attachment C for additional details on temporary well construction.

After completion of sampling, all boreholes/wells were abandoned by filling with granular bentonite, in accordance with Wis. Adm. Code NR 141. The Borehole Abandonment Forms for each borehole/well are presented in Attachment B.

### **4.1 Soil Sampling**

Based on field observations, two soil samples from each boring were collected and submitted for laboratory analysis.

The soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), and one Resource Conservation and Recovery Act (RCRA) metal (lead).

### **4.2 Groundwater Sampling**

Himalayan performed groundwater sampling at the site on the same day as the boring activities. A groundwater sample was collected from temporary monitoring well MW-2-1, and analyzed for VOCs and lead.

## **5.0 SUBSURFACE CONDITIONS**

### **5.1 Soil Conditions**

Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to approximately 4 feet bgs. The fill materials consisted mainly of dark brown to black topsoil, and gravel with reddish silty sand.

Native red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal boring depths of 20 feet bgs.

Refer to the soil boring logs in Attachment B for more detailed descriptions of the soils encountered at each boring location.

Continuous soil samples were obtained from the borings and field-screened for the presence of volatile organic vapors using a photoionization detector (PID). The field screening results for the collected soil samples are summarized in Table 1. No staining or odors were noted in the boring logs (see Attachment B).

<b>TABLE 1</b> <b>FIELD SCREENING RESULTS</b> <b>Phase 2 Hazardous Materials Investigation</b> <b>Main Street Sweets (105 W. Main Street)</b> <b>Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>		
Boring ID	B-2-1	B-2-2
Date	9/27/13	9/27/13
Depth (feet)	0-2	0.0
	2-4	0.0
	4-6	0.0
	6-8	0.0
	8-10	0.0
	10-12	0.0
	12-14	0.0
	14-16	0.0
	16-18	0.0
	18-20	0.0

Notes:  
Results provided in instrument units (IU).

## 5.2 Groundwater Conditions

Saturated soil conditions were not observed in boring B-2-1. Approximately 8 inches of saturated soils (silty sands) were observed in boring B-2-2 at a depth of approximately 16 feet bgs. Groundwater was encountered in temporary monitoring well MW-2-1 at 10 feet bgs. Groundwater was not encountered in boring B-2-2 during or upon completion of drilling activities. It should be noted that groundwater depths can vary throughout the year, depending on several factors including seasonal variations in precipitation, infiltration, and surface water runoff.

Refer to the soil boring logs in Attachment B for additional information regarding groundwater conditions encountered at each boring location.

## 6.0 ANALYTICAL RESULTS

### 6.1 Soil Samples

Laboratory analyses were performed on two soil samples selected from each borehole, at various depths ranging from 2 to 16 feet bgs. No GRO or VOCs were detected in any of the soil samples analyzed. DRO (4.5 mg/kg) was detected in B-2-2 2-4', at a concentration below the NR 720 RCL [Ref. 6]. Lead (4.8 mg/kg to 47.9 mg/kg) was detected in each of the four soil samples analyzed, at concentrations below the NR 720 RCL.

Table 2 presents a summary of soil quality results. Refer to Figure 3.2, Attachment A for sample locations and analytical results.

TABLE 2 SOIL QUALITY RESULTS Phase 2 Hazardous Materials Investigation Main Street Sweets (105 W. Main Street), Winneconne, Winnebago County Project ID: 6190-17-00						
Sample I.D.	B-2-1		B-2-2		NR 720 RCL	
Depth (feet)	2-4	10-12	2-4	14-16		
Collection Date	9/27/2013		9/27/2013			
<b>GRO (mg/kg)</b>	<3.0	<2.9	<2.9	<2.9		
<b>DRO (mg/kg)</b>	<0.79	<0.74	4.5	<0.81		
<b>VOCs (µg/kg)</b>	ND	ND	ND	ND		
<b>RCRA Metals (mg/kg)</b>						
Lead	8.0	4.8	8.2	47.9	50	
<u>Notes:</u> Analytes detected above the method detection limit in at least one sample are included in the table GRO = gasoline range organics; DRO = diesel range organics; VOCs = volatile organic compounds RCRA = Resource Conservation and Recovery Act <b>Bold</b> results indicate concentration exceeds NR 720 RCL mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit RCL= Residual Contaminant Level; * = RCLs (mg/kg) based on permeability of soils per NR 720						

Refer to Attachment D for the complete laboratory report for each soil sample.

## 6.2 Groundwater Samples

Based on the laboratory analytical results for the groundwater sample collected from temporary well MW-2-1, no VOCs or lead were detected.

Refer to Figure 3.3 in Attachment B for the well locations and Attachment D for the complete laboratory report.

TABLE 3 GROUNDWATER RESULTS Phase 2 Hazardous Materials Investigation <b>Main Street Sweets (105 W. Main Street), Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>			
Sample I.D.	MW-2-1	NR 140 ES ( $\mu\text{g}/\text{L}$ )	NR 140 PAL ( $\mu\text{g}/\text{L}$ )
Collection Date	9/27/13		
VOCs ( $\mu\text{g}/\text{L}$ )	ND	---	---
RCRA Metals ( $\mu\text{g}/\text{L}$ )			
Lead	<2.7	15	1.5
Notes: Analytes detected above the method detection limit in at least one sample are included in the table VOCs = volatile organic compounds RCRA = Resource Conservation and Recovery Act $\mu\text{g}/\text{L}$ = micrograms per liter <i>Italicized</i> results indicate concentration exceeds NR 140 Preventative Action Limit (PAL) <b>Bold</b> results indicate concentration exceeds NR 140 Enforcement Standard (ES)			

## 6.3 Waste Characterization Sample

Soil samples collected from the site were analyzed for flashpoint and free liquids, in order to provide landfill acceptance criteria. Based on the historical land use of the site, these parameters, along with the GRO, DRO and VOCs analyses, are considered sufficient to provide waste characterization for the disposal and/or treatment of contaminated soils at a landfill.

Table 4 presents a summary of soil quality results for flashpoint and free liquids. See Attachment D for the complete laboratory report.

**TABLE 4**  
**LABORATORY ANALYTICAL RESULTS**  
**Phase 2 Hazardous Materials Investigation**  
**Main Street Sweets (105 W. Main Street)**  
**Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D.	B-2-1		B-2-2	
Depth (feet)	2-4	10-12	2-4	14-16
Collection Date	9/27/2013		9/27/2013	
Flashpoint (deg F)	>210	>210	>210	>210
Free liquids	Pass	Pass	Pass	Pass

## 7.0 FINDINGS

- Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to approximately 4 feet bgs. The fill materials consisted of mainly dark brown to black topsoil, and gravel with reddish silty sand. Native red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal boring depths of 20 feet bgs. Groundwater was encountered in temporary well MW-2-1 at 10 feet bgs.
- Based on the laboratory analytical results of soil samples collected at various depths between 2 to 16 feet bgs, no GRO or VOCs were detected. DRO (4.5 mg/kg) was identified in B-2-2 2-4' at a concentration well below the NR 720 RCL for clay soil sites.
- Lead (4.8 mg/kg to 47.9 mg/kg) was detected in each of the four soil samples analyzed, at concentrations below the NR 720 RCL.
- Based on the laboratory analytical results of the groundwater sample collected from temporary well MW-2-1, no VOCs or lead were detected.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

- Based on the results of Himalayan's Phase 2 HMI, no significant petroleum or RCRA metal impacts were identified in the soil or groundwater associated with the former gasoline station at Site #2. Therefore, no further hazardous materials investigation is considered necessary for the site. However, due to the low level of DRO encountered in B-2, Himalayan recommends that any excavated soils in the area be field screened for potential presence of petroleum contamination. If indicators of obvious contamination (visual, olfactory or elevated PID readings) are observed, the excavated soils from this site should be managed as per the requirements of NR 718.

## **9.0 REFERENCES**

1. Winnebago County GIS Website. WINGS Property Profiler.  
[http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis\\_menu.cgi](http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis_menu.cgi)
2. Himalayan Consultants, LLC. (August 2012). Phase I Hazardous Material Assessment, WisDOT Project ID 1030-20-00, STH 116 Corridor Study (2nd Street - 2nd Avenue), Winneconne, Winnebago County, Wisconsin.
3. Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP). Storage Tank Database. [http://apps.commerce.state.wi.us/ER\\_Tanks/ER-EN-TankSearch.htm](http://apps.commerce.state.wi.us/ER_Tanks/ER-EN-TankSearch.htm)
4. Wisconsin Department of Transportation (December 2011). Facilities Development Manual, Procedures 21-35-10 and 21-35-30.
5. Wisconsin Department Natural Resources (March 2011). Wisconsin Administrative Code NR 141, Groundwater Monitoring Well Requirements.
6. Wisconsin Department Natural Resources (September 2007). Wisconsin Administrative Code NR 720, Soil Cleanup Standards.
7. Wisconsin Department Natural Resources (January 2012). Wisconsin Administrative Code NR 140, Groundwater Quality.

## **ATTACHMENTS**

Attachment A. Figures

- Figure 3.1 Site Overview Map
- Figure 3.2 Soil Quality Map
- Figure 3.3 Groundwater Quality Map

Attachment B. Soil Boring Logs and Borehole Abandonment Forms

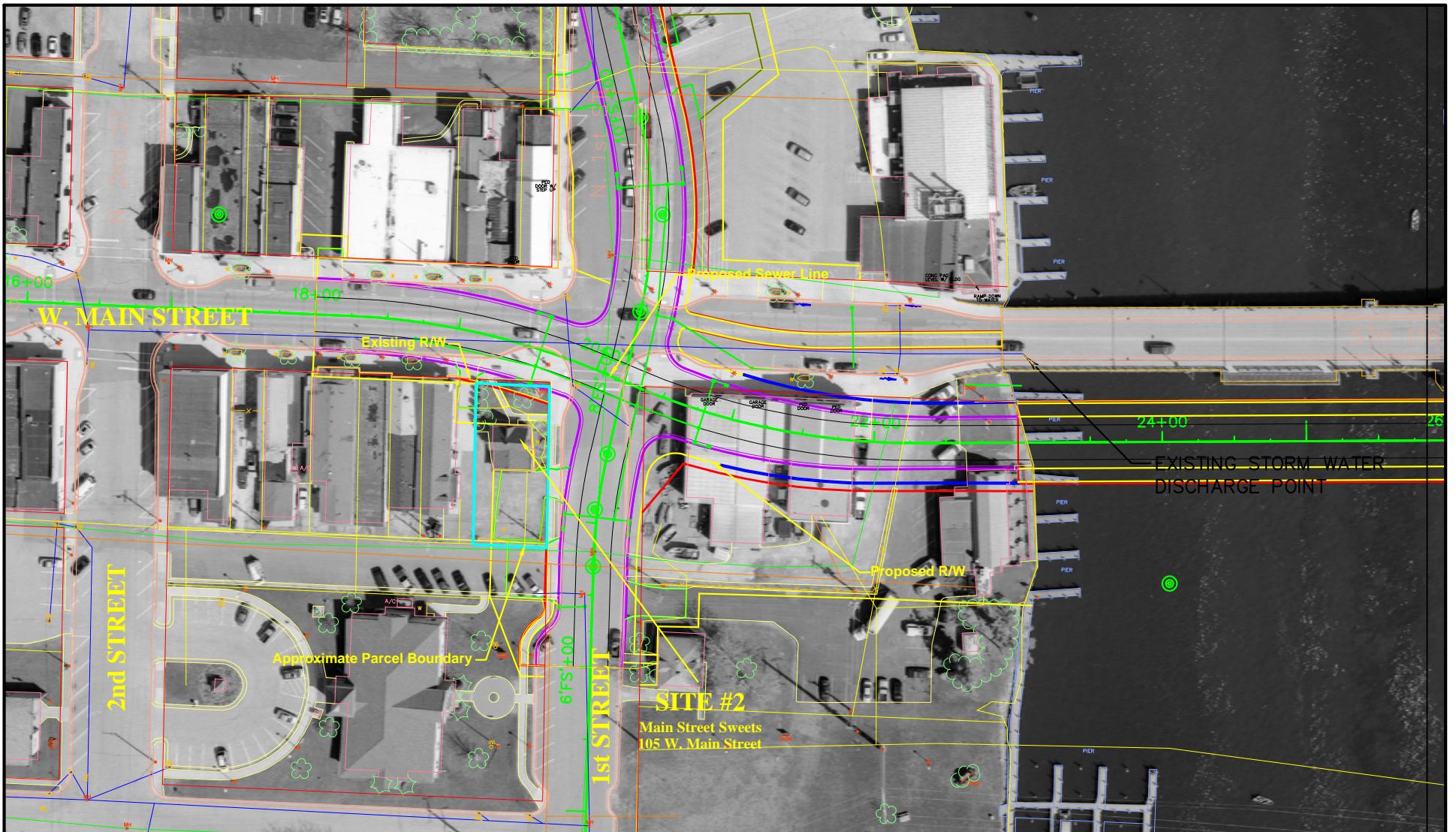
Attachment C. Well Construction Forms

Attachment D. Laboratory Analytical Reports – Soil, Groundwater, and Waste Characterization

Attachment E. Site Photographs

## **ATTACHMENT A**

### **FIGURES**



Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

Scale: 0 50 100 200

**FIGURE 3.1: SITE OVERVIEW MAP**



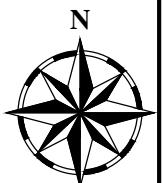
**HIMALAYAN CONSULTANTS, LLC**  
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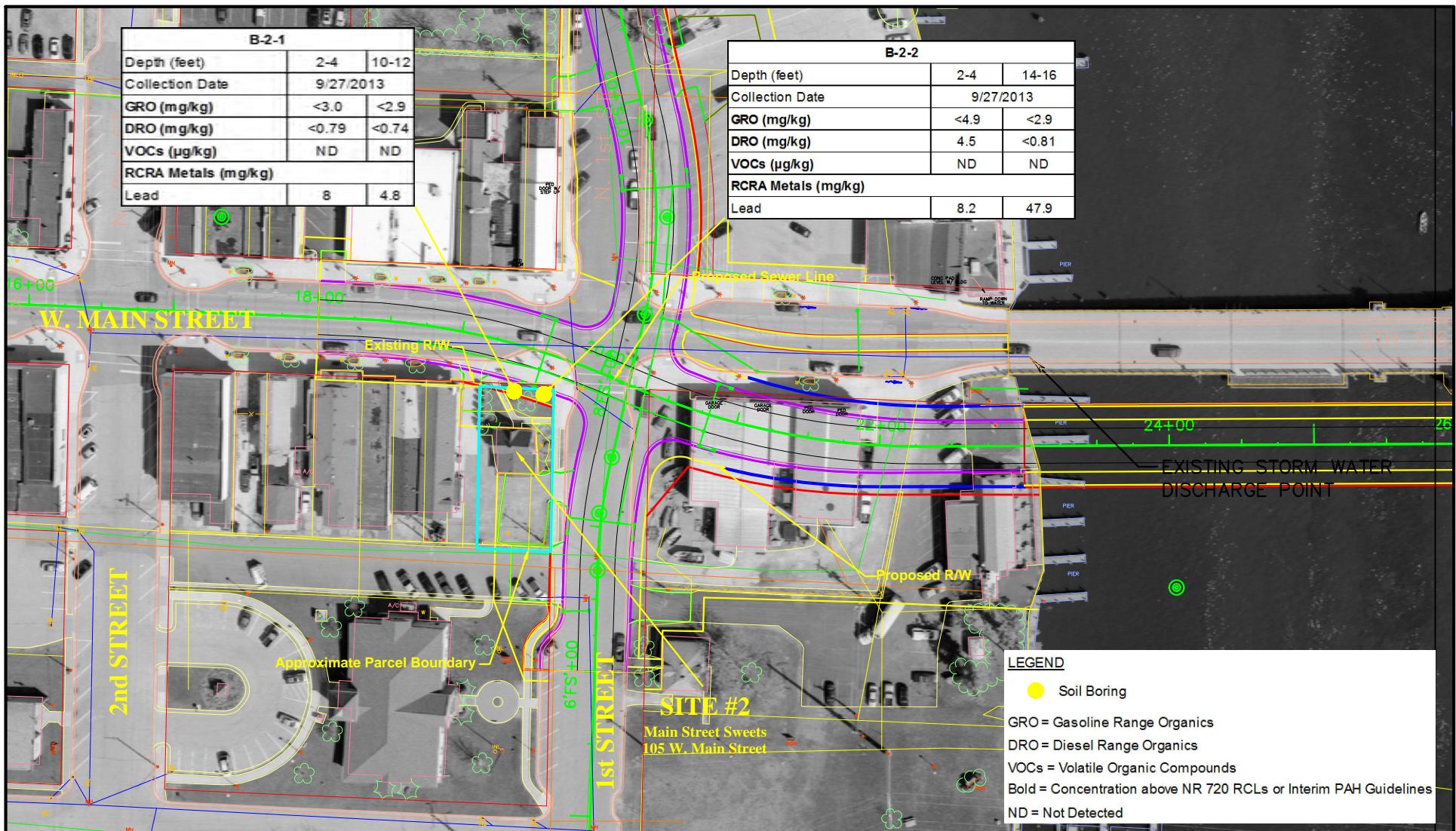
Project ID: 6190-17-00

STH 116

2nd Street - 2nd Avenue

Winneconne, Winnebago County, Wisconsin





Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

0 50 100 200  
Scale:

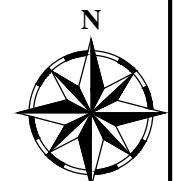
**FIGURE 3.2: SOIL QUALITY MAP**

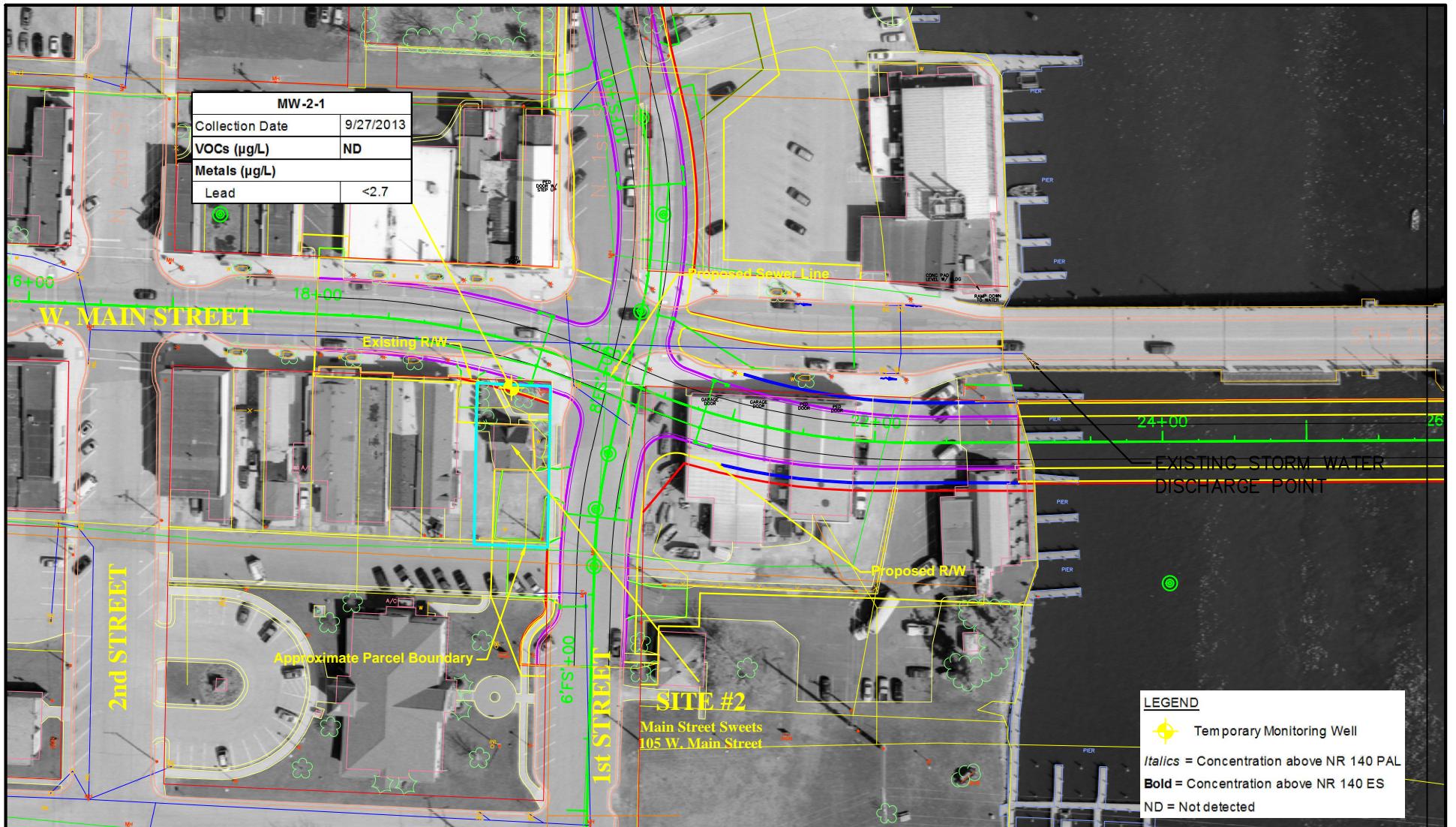


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Project ID: 6190-17-00

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Winneconne, Winnebago County, Wisconsin



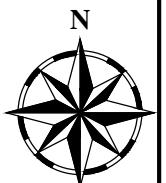


**FIGURE 3.3: GROUNDWATER QUALITY MAP**



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**STH 116**  
**2nd Street - 2nd Avenue**  
**Winneconne, Winnebago County, Wisconsin**



## **ATTACHMENT B**

### **SOIL BORING LOGS AND BOREHOLE ABANDONMENT FORMS**



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2

Winnebago County, WI

Location Site #2

Boring No. B-2-1

Surface Elevation \_\_\_\_\_

Job No. \_\_\_\_\_

Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm									
No.	Type	Recov.	Moist.	N-Value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf															
1	GP 42"		M		0	Dark brown to black topsoil (fill).										0									
					1	Gravel / cobbles (fill).																			
					2	Red, stiff sandy clay with trace gravel.																			
					3	Lab Sample (2' - 4')																			
					4	Red, stiff, medium plasticity clay with trace gravel.																			
					5	Red, stiff, medium plasticity clay with trace gravel.																			
2	GP 60"		M		6	Red, stiff, medium plasticity clay with trace gravel.										0									
					7	Red, stiff, medium plasticity clay with trace gravel.																			
			M		8	Red, stiff, medium plasticity clay with trace gravel.										0									
					9	Red, stiff, medium plasticity clay with trace gravel.																			
			M		10	Red, stiff, plastic clay with trace gravel. Wet at 10.0'.										0									
					11	Lab Sample (10' - 12')																			
WATER LEVEL OBSERVATIONS											GENERAL NOTES														
While Drilling _____											Start 9/27/13 Complete 9/27/13														
Upon Completion of Drilling 10.0 feet											Crew Chief DF Rig DT-66														
Time After Drilling _____											Drilling Method: Geoprobe														
Depth to Water _____																									
Depth to Cave-in _____																									

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2

Winnebago County, WI

Location Site #2

Boring No. B-2-1

Surface Elevation \_\_\_\_\_

Job No. \_\_\_\_\_

Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-Value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60 "		M		12							0
4	GP 60 "		M		14							0
					16							0
					18							0
					20							0
						Red, stiff, plastic clay with trace gravel.						
						End of Boring = 20.0 Feet						
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

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Reason For Abandonment <b>Temporary well</b>		(3) WELL/DRILLHOLE/BOREHOLE INFORMATION																																																																																																																											
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<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td><input checked="" type="checkbox"/> Other (Specify) <u>Direct Push</u></td> <td>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Formation Type:</td> <td>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock</td> <td>Required Method of Placing Sealing Material</td> </tr> <tr> <td>Total Well Depth (ft.) <u>20.0</u> (From ground surface)</td> <td><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped</td> </tr> <tr> <td>Casing Diameter (in.) _____</td> <td><input type="checkbox"/> Screened &amp; Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <u>Gravity</u></td> </tr> <tr> <td>Casing Depth (ft.) _____</td> <td>Sealing Materials</td> <td colspan="3">For monitoring wells and monitoring well boreholes or</td> </tr> <tr> <td>Lower Drillhole Diameter (in.) _____</td> <td><input type="checkbox"/> Neat Cement Grout</td> <td colspan="3"><input type="checkbox"/> Bentonite Pellets</td> </tr> <tr> <td>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</td> <td><input type="checkbox"/> Sand-Cement (Concrete) Grout</td> <td colspan="3"><input type="checkbox"/> Granular Bentonite</td> </tr> <tr> <td>If Yes, To What Depth? _____ Feet</td> <td><input type="checkbox"/> Concrete</td> <td colspan="3"><input type="checkbox"/> Bentonite-Cement Grou</td> </tr> <tr> <td>Depth to Water (Feet) <u>10.0</u> Feet</td> <td><input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)</td> <td colspan="3"><input type="checkbox"/> Bentonite - Sand Slurry</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Bentonite-Sand Slurry " "</td> <td colspan="3"></td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> Bentonite Chips</td> <td colspan="3"></td> </tr> <tr> <td>(5) Material Used To Fill Well/Drillhole</td> <td>From (Ft.)</td> <td>To (Ft.)</td> <td>No. Yards, Sacks Sealant or Volume</td> <td>Mix Ratio or Mud Weight</td> </tr> <tr> <td><b>3/8" Chipped Bentonite</b></td> <td><b>Surface</b></td> <td><b>20</b></td> <td><b>25 lbs</b></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">(6) Comments _____</td> </tr> <tr> <td colspan="2">(7) Name of Person or Firm Doing Sealing Work <b>Horizon</b></td> <td colspan="3">Date of Abandonment <b>9/27/13</b></td> </tr> <tr> <td colspan="2">Signature of Person Doing Work</td> <td colspan="3">Date Signed</td> </tr> <tr> <td colspan="2">Street or Route <b>1402 7th Avenue</b></td> <td colspan="3">Telephone Number <b>262-377-9060</b></td> </tr> <tr> <td colspan="5">City, State, Zip Code <b>Grafton, WI 53024</b></td> </tr> <tr> <td colspan="5"> <table border="1"> <tr> <td colspan="2"><b>FOR DNR OR COUNTY USE ONLY</b></td> </tr> <tr> <td>Date Received</td> <td>Noted By</td> </tr> <tr> <td colspan="2">Comments</td> </tr> <tr> <td colspan="2"></td> </tr> </table> </td> </tr> </table>				Original Construction Date <u>9/27/13</u>	Pump & Piping Removed? 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Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2

Winnebago County, WI

Location Site #2

Boring No. B-2-2

Surface Elevation \_\_\_\_\_

Job No. \_\_\_\_\_

Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-Value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
1	GP 38"	M	M	M	0	Dark brown to black topsoil (fill).										0
			M	D	2	Gravel / cobbles (fill).										0
			M	M	4	Reddish brown, stiff silty sand. Lab Sample (2' - 4')										0
			M	M	6	Red, stiff, medium plasticity clay with trace gravel.										0
2	GP 60"	M	M	M	8	Red, stiff, medium plasticity clay with trace gravel.										0
			M	M	10	Red, stiff, medium plasticity clay with trace gravel.										0
WATER LEVEL OBSERVATIONS												GENERAL NOTES				
While Drilling _____												Start 9/27/13 Complete 9/27/13				
Upon Completion of Drilling Dry												Crew Chief DF Rig DT-66				
Time After Drilling _____												Drilling Method: Geoprobe				
Depth to Water _____																
Depth to Cave-in _____																

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

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Project STH 116 - Winneconne Bridge P2

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Sheet 2 of 2

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No.	Type	Recov.	Moist.	N-Value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60"		M		12							0
					14							0
					16							0
					18							0
					20							0
4	GP 60"		W		12	Lab Sample (14' - 16')						
					14	Red, stiff, medium plasticity clay with trace gravel.						
					16	Red, stiff silty sand with trace gravel.						
			M		18	Greyish brown, stiff, plastic clay with trace gravel.						
					20	End of Boring = 20.0 Feet						
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>		
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #2</b>		
Common Well Name <b>B-2-2</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.	
Grid Location ____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W. <b>NE</b> 1/4 of <b>NW</b> 1/4 of Sec. <b>21</b> ; T. <b>19</b> N; R. <b>15</b> <input checked="" type="checkbox"/> E			Street Address of Well <b>105 W. Main Street</b>		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>		
Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> S <input type="checkbox"/> C <input type="checkbox"/> N Zone			Present Well Owner   Original Owner		
Reason For Abandonment <b>No longer needed</b>			Street Address or Route of Owner		
			City, State, Zip Code		
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>					
Original Construction Date <b>9/27/13</b>			<b>(4) PUMP, LINER, SCREEN, CASING &amp; SEALING MATERIAL</b>		
<input type="checkbox"/> Monitoring Well	If a Well Construction Report is available, please attach.		Pump & Piping Removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Water Well			Liner(s) Removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input checked="" type="checkbox"/> Borehole / Drillhole			Screen Removed?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Construction Type:			Casing Left in Place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Drilled	<input type="checkbox"/> Driven (Sandpoint)	<input type="checkbox"/> Dug	Was casing Cut Off Below Surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>			Did Sealing Material Rise to Surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Formation Type:			Did Material Settle After 24 Hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Unconsolidated Formation			If Yes, Was Hole Retopped?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Total Well Depth (ft.) _____ (From groundsurface)			Required Method of Placing Sealing Material		
Casing Diameter (in.) _____			<input type="checkbox"/> Conductor Pipe-Gravity	<input type="checkbox"/> Conductor Pipe-Pumped	
Casing Depth (ft.) _____			<input type="checkbox"/> Screened & Poured (Bentonite Chips)	<input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>	
Lower Drillhole Diameter (in.) _____			Sealing Materials		For monitoring wells and monitoring well boreholes or
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			<input type="checkbox"/> Neat Cement Grout		
If Yes, To What Depth? _____ Feet			<input type="checkbox"/> Sand-Cement (Concrete) Grout		
Depth to Water (Feet) <b>Dry</b> Feet			<input type="checkbox"/> Concrete		
			<input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)		
			<input type="checkbox"/> Bentonite-Sand Slurry " "		
			<input checked="" type="checkbox"/> Bentonite Chips		
(5) Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume
<b>3/8" Chipped Bentonite</b>			<b>Surface</b>	<b>20</b>	<b>25 lbs</b>

(6) Comments \_\_\_\_\_

(7) Name of Person or Firm Doing Sealing Work		Date of Abandonment
<b>Horizon</b>		<b>9/27/13</b>
Signature of Person Doing Work		Date Signed
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>
City, State, Zip Code <b>Grafton, WI 53024</b>		

<b>FOR DNR OR COUNTY USE ONLY</b>	
Date Received	Noted By
Comments	

**ATTACHMENT C**

**WELL CONSTRUCTION FORMS**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-2-1</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>9/27/13</b>	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	_____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	_____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	<b>O</b> ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 <b>N/A</b> Other <input type="checkbox"/> --	
D. Surface seal, bottom	_____ ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____ _____			
E. Bentonite seal, top	_____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
F. Fine sand, top	_____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --	
G. Filter pack, top	_____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above	
H. Screen joint, top	_____ ft. MSL or <b>10</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8	
I. Well bottom	_____ ft. MSL or <b>20</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
J. Filter pack, bottom	_____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
K. Borehole bottom	_____ ft. MSL or <b>20</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
L. Borehole diameter	<b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
M. O.D. well casing	<b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
N. I.D. well casing	<b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
11. Backfill material (below filter pack): None <input type="checkbox"/> 1 4 Other <input type="checkbox"/> --			

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

Signature

Firm **Himalayan Consultants, LLC**

W156 N11357 Pilgrim Road, Germantown, WI 53022

Tel. (262) 502-0066, Fax (262) 502-0077

## **ATTACHMENT D**

### **LABORATORY ANALYTICAL REPORTS - SOIL, GROUNDWATER, AND WASTE CHARACTERIZATION**

## **SOIL ANALYTICAL**

October 14, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085755

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on October 01, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085755

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

PRELIMINARY

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4085755001	B-2-1 (2-4)	Solid	09/27/13 10:45	10/01/13 09:30
4085755002	B-2-1 (10-12)	Solid	09/27/13 11:10	10/01/13 09:30
4085755003	B-2-2 (2-4)	Solid	09/27/13 09:45	10/01/13 09:30
4085755004	B-2-2 (14-16)	Solid	09/27/13 10:15	10/01/13 09:30
4085755005	TRIP BLANK	Solid	09/27/13 00:00	10/01/13 09:30

PRELIMINARY

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085755

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4085755001	B-2-1 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
4085755002	B-2-1 (10-12)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
4085755003	B-2-2 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
4085755004	B-2-2 (14-16)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	AH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		EPA 9095	DEY	1	PASI-G
		EPA 8260	SMT	64	PASI-G
4085755005	TRIP BLANK				

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085755

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
<b>4085755001</b>	<b>B-2-1 (2-4)</b>						
EPA 6010	Lead	8.0 mg/kg		1.1	10/03/13 18:31		
ASTM D2974-87	Percent Moisture	15.5 %		0.10	10/13/13 15:00		
EPA 1010	Flashpoint	>210 deg F			10/08/13 10:53		
EPA 9095	Free Liquids	Pass no units			10/03/13 17:25		
<b>4085755002</b>	<b>B-2-1 (10-12)</b>						
EPA 6010	Lead	4.8 mg/kg		1.0	10/03/13 18:33		
ASTM D2974-87	Percent Moisture	12.6 %		0.10	10/13/13 15:00		
EPA 1010	Flashpoint	>210 deg F			10/08/13 11:27		
EPA 9095	Free Liquids	Pass no units			10/03/13 17:28		
<b>4085755003</b>	<b>B-2-2 (2-4)</b>						
WI MOD DRO	Diesel Range Organics	4.5 mg/kg		1.9	10/09/13 15:58		
EPA 6010	Lead	8.2 mg/kg		1.0	10/03/13 18:35		
ASTM D2974-87	Percent Moisture	10.1 %		0.10	10/13/13 15:00		
EPA 1010	Flashpoint	>210 deg F			10/08/13 11:34		
EPA 9095	Free Liquids	Pass no units			10/03/13 17:30		
<b>4085755004</b>	<b>B-2-2 (14-16)</b>						
EPA 6010	Lead	47.9 mg/kg		1.1	10/03/13 18:38		
ASTM D2974-87	Percent Moisture	13.5 %		0.10	10/13/13 15:00		
EPA 1010	Flashpoint	>210 deg F			10/08/13 12:29		
EPA 9095	Free Liquids	Pass no units			10/03/13 17:32		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-1 (2-4) Lab ID: 4085755001 Collected: 09/27/13 10:45 Received: 10/01/13 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.79 mg/kg		2.0	0.79	1	10/04/13 19:29	10/10/13 09:18		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.0 mg/kg		3.0	3.0	1	10/02/13 07:14	10/02/13 19:19		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	8.0 mg/kg		1.1	0.33	1	10/03/13 11:05	10/03/13 18:31	7439-92-1	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	630-20-6	W
1,1,1-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	79-34-5	W
1,1,2-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	79-00-5	W
1,1-Dichloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-34-3	W
1,1-Dichloroethene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-35-4	W
1,1-Dichloropropene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	563-58-6	W
1,2,3-Trichlorobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	87-61-6	W
1,2,3-Trichloropropane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	96-18-4	W
1,2,4-Trichlorobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	120-82-1	W
1,2,4-Trimethylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	95-63-6	W
1,2-Dibromo-3-chloropropane	<51.4 ug/kg		258	51.4	1	10/03/13 10:29	10/05/13 04:54	96-12-8	W
1,2-Dibromoethane (EDB)	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	106-93-4	W
1,2-Dichlorobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	95-50-1	W
1,2-Dichloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	107-06-2	W
1,2-Dichloropropane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	78-87-5	W
1,3,5-Trimethylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	108-67-8	W
1,3-Dichlorobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	541-73-1	W
1,3-Dichloropropane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	142-28-9	W
1,4-Dichlorobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	106-46-7	W
2,2-Dichloropropane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	594-20-7	W
2-Chlorotoluene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	95-49-8	W
4-Chlorotoluene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	106-43-4	W
Benzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	71-43-2	W
Bromobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	108-86-1	W
Bromochloromethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	74-97-5	W
Bromodichloromethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-27-4	W
Bromoform	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-25-2	W
Bromomethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	74-83-9	W
Carbon tetrachloride	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	56-23-5	W
Chlorobenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	108-90-7	W
Chloroethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-00-3	W
Chloroform	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	67-66-3	W
Chloromethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	74-87-3	W
Dibromochloromethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	124-48-1	W
Dibromomethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	74-95-3	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-1 (2-4) Lab ID: 4085755001 Collected: 09/27/13 10:45 Received: 10/01/13 09:30 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Dichlorodifluoromethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-71-8	W
Diisopropyl ether	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	108-20-3	W
Ethylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	100-41-4	W
Hexachloro-1,3-butadiene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	87-68-3	W
Isopropylbenzene (Cumene)	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	98-82-8	W
Methyl-tert-butyl ether	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	1634-04-4	W
Methylene Chloride	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-09-2	W
Naphthalene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	91-20-3	W
Styrene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	100-42-5	W
Tetrachloroethene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	127-18-4	W
Toluene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	108-88-3	W
Trichloroethene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	79-01-6	W
Trichlorofluoromethane	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-69-4	W
Vinyl chloride	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	75-01-4	W
cis-1,2-Dichloroethene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	156-59-2	W
cis-1,3-Dichloropropene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	10061-01-5	W
m&p-Xylene	<51.5 ug/kg		124	51.5	1	10/03/13 10:29	10/05/13 04:54	179601-23-1	W
n-Butylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	104-51-8	W
n-Propylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	103-65-1	W
o-Xylene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	95-47-6	W
p-Isopropyltoluene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	99-87-6	W
sec-Butylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	135-98-8	W
tert-Butylbenzene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	98-06-6	W
trans-1,2-Dichloroethene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	156-60-5	W
trans-1,3-Dichloropropene	<25.8 ug/kg		61.9	25.8	1	10/03/13 10:29	10/05/13 04:54	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	97 %		57-130		1	10/03/13 10:29	10/05/13 04:54	1868-53-7	
Toluene-d8 (S)	111 %		54-133		1	10/03/13 10:29	10/05/13 04:54	2037-26-5	
4-Bromofluorobenzene (S)	96 %		49-130		1	10/03/13 10:29	10/05/13 04:54	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	15.5 %		0.10	0.10	1			10/13/13 15:00	
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F				1			10/08/13 10:53	
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	Pass no units				1			10/03/13 17:25	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-1 (10-12) Lab ID: 4085755002 Collected: 09/27/13 11:10 Received: 10/01/13 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.74 mg/kg		1.8	0.74	1	10/04/13 19:29	10/09/13 15:53		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.9 mg/kg		2.9	2.9	1	10/02/13 07:14	10/02/13 19:47		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	4.8 mg/kg		1.0	0.31	1	10/03/13 11:05	10/03/13 18:33	7439-92-1	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	630-20-6	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	79-34-5	W
1,1,2-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	79-00-5	W
1,1-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-34-3	W
1,1-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-35-4	W
1,1-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	563-58-6	W
1,2,3-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	87-61-6	W
1,2,3-Trichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	96-18-4	W
1,2,4-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	120-82-1	W
1,2,4-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	95-63-6	W
1,2-Dibromo-3-chloropropane	<49.8 ug/kg		250	49.8	1	10/07/13 16:12	10/08/13 06:34	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	106-93-4	W
1,2-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	95-50-1	W
1,2-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	107-06-2	W
1,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	78-87-5	W
1,3,5-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	108-67-8	W
1,3-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	541-73-1	W
1,3-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	142-28-9	W
1,4-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	106-46-7	W
2,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	594-20-7	W
2-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	95-49-8	W
4-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	106-43-4	W
Benzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	71-43-2	W
Bromobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	108-86-1	W
Bromochloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	74-97-5	W
Bromodichloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-27-4	W
Bromoform	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-25-2	W
Bromomethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	74-83-9	W
Carbon tetrachloride	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	56-23-5	W
Chlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	108-90-7	W
Chloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-00-3	W
Chloroform	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	67-66-3	W
Chloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	74-87-3	W
Dibromochloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	124-48-1	W
Dibromomethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	74-95-3	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-1 (10-12) Lab ID: 4085755002 Collected: 09/27/13 11:10 Received: 10/01/13 09:30 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Dichlorodifluoromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-71-8	W
Diisopropyl ether	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	108-20-3	W
Ethylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	100-41-4	W
Hexachloro-1,3-butadiene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	87-68-3	W
Isopropylbenzene (Cumene)	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	98-82-8	W
Methyl-tert-butyl ether	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	1634-04-4	W
Methylene Chloride	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-09-2	W
Naphthalene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	91-20-3	W
Styrene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	100-42-5	W
Tetrachloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	127-18-4	W
Toluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	108-88-3	W
Trichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	79-01-6	W
Trichlorofluoromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-69-4	W
Vinyl chloride	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	75-01-4	W
cis-1,2-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	156-59-2	W
cis-1,3-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	10061-01-5	W
m,p-Xylene	<50.0 ug/kg		120	50.0	1	10/07/13 16:12	10/08/13 06:34	179601-23-1	W
n-Butylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	104-51-8	W
n-Propylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	103-65-1	W
o-Xylene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	95-47-6	W
p-Isopropyltoluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	99-87-6	W
sec-Butylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	135-98-8	W
tert-Butylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	98-06-6	W
trans-1,2-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	156-60-5	W
trans-1,3-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:34	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	92 %		57-130		1	10/07/13 16:12	10/08/13 06:34	1868-53-7	
Toluene-d8 (S)	104 %		54-133		1	10/07/13 16:12	10/08/13 06:34	2037-26-5	
4-Bromofluorobenzene (S)	89 %		49-130		1	10/07/13 16:12	10/08/13 06:34	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	12.6 %		0.10	0.10	1			10/13/13 15:00	
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F				1			10/08/13 11:27	
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	Pass no units				1			10/03/13 17:28	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-2 (2-4) Lab ID: 4085755003 Collected: 09/27/13 09:45 Received: 10/01/13 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	4.5 mg/kg		1.9	0.76	1	10/04/13 19:29	10/09/13 15:58		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.9 mg/kg		2.9	2.9	1	10/02/13 07:14	10/02/13 20:16		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	8.2 mg/kg		1.0	0.30	1	10/03/13 11:05	10/03/13 18:35	7439-92-1	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	630-20-6	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	79-34-5	W
1,1,2-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	79-00-5	W
1,1-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-34-3	W
1,1-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-35-4	W
1,1-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	563-58-6	W
1,2,3-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	87-61-6	W
1,2,3-Trichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	96-18-4	W
1,2,4-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	120-82-1	W
1,2,4-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	95-63-6	W
1,2-Dibromo-3-chloropropane	<49.8 ug/kg		250	49.8	1	10/07/13 16:12	10/08/13 06:11	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	106-93-4	W
1,2-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	95-50-1	W
1,2-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	107-06-2	W
1,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	78-87-5	W
1,3,5-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	108-67-8	W
1,3-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	541-73-1	W
1,3-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	142-28-9	W
1,4-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	106-46-7	W
2,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	594-20-7	W
2-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	95-49-8	W
4-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	106-43-4	W
Benzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	71-43-2	W
Bromobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	108-86-1	W
Bromochloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	74-97-5	W
Bromodichloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-27-4	W
Bromoform	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-25-2	W
Bromomethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	74-83-9	W
Carbon tetrachloride	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	56-23-5	W
Chlorobenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	108-90-7	W
Chloroethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-00-3	W
Chloroform	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	67-66-3	W
Chloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	74-87-3	W
Dibromochloromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	124-48-1	W
Dibromomethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	74-95-3	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-2 (2-4) Lab ID: 4085755003 Collected: 09/27/13 09:45 Received: 10/01/13 09:30 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Dichlorodifluoromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-71-8	W
Diisopropyl ether	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	108-20-3	W
Ethylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	100-41-4	W
Hexachloro-1,3-butadiene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	87-68-3	W
Isopropylbenzene (Cumene)	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	98-82-8	W
Methyl-tert-butyl ether	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	1634-04-4	W
Methylene Chloride	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-09-2	W
Naphthalene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	91-20-3	W
Styrene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	100-42-5	W
Tetrachloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	127-18-4	W
Toluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	108-88-3	W
Trichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	79-01-6	W
Trichlorofluoromethane	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-69-4	W
Vinyl chloride	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	75-01-4	W
cis-1,2-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	156-59-2	W
cis-1,3-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	10061-01-5	W
m,p-Xylene	<50.0 ug/kg		120	50.0	1	10/07/13 16:12	10/08/13 06:11	179601-23-1	W
n-Butylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	104-51-8	W
n-Propylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	103-65-1	W
o-Xylene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	95-47-6	W
p-Isopropyltoluene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	99-87-6	W
sec-Butylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	135-98-8	W
tert-Butylbenzene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	98-06-6	W
trans-1,2-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	156-60-5	W
trans-1,3-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	10/07/13 16:12	10/08/13 06:11	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	91 %		57-130		1	10/07/13 16:12	10/08/13 06:11	1868-53-7	
Toluene-d8 (S)	101 %		54-133		1	10/07/13 16:12	10/08/13 06:11	2037-26-5	
4-Bromofluorobenzene (S)	87 %		49-130		1	10/07/13 16:12	10/08/13 06:11	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	10.1 %		0.10	0.10	1			10/13/13 15:00	
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F				1			10/08/13 11:34	
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	Pass no units				1			10/03/13 17:30	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-2 (14-16) Lab ID: 4085755004 Collected: 09/27/13 10:15 Received: 10/01/13 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.81 mg/kg		2.0	0.81	1	10/04/13 19:29	10/09/13 16:04		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.9 mg/kg		2.9	2.9	1	10/02/13 07:14	10/02/13 20:45		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	47.9 mg/kg		1.1	0.33	1	10/03/13 11:05	10/03/13 18:38	7439-92-1	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	630-20-6	W
1,1,1-Trichloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	79-34-5	W
1,1,2-Trichloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	79-00-5	W
1,1-Dichloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-34-3	W
1,1-Dichloroethene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-35-4	W
1,1-Dichloropropene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	563-58-6	W
1,2,3-Trichlorobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	87-61-6	W
1,2,3-Trichloropropane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	96-18-4	W
1,2,4-Trichlorobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	120-82-1	W
1,2,4-Trimethylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	95-63-6	W
1,2-Dibromo-3-chloropropane	<51.9 ug/kg		260	51.9	1	10/07/13 16:12	10/08/13 05:48	96-12-8	W
1,2-Dibromoethane (EDB)	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	106-93-4	W
1,2-Dichlorobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	95-50-1	W
1,2-Dichloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	107-06-2	W
1,2-Dichloropropane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	78-87-5	W
1,3,5-Trimethylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	108-67-8	W
1,3-Dichlorobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	541-73-1	W
1,3-Dichloropropane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	142-28-9	W
1,4-Dichlorobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	106-46-7	W
2,2-Dichloropropane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	594-20-7	W
2-Chlorotoluene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	95-49-8	W
4-Chlorotoluene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	106-43-4	W
Benzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	71-43-2	W
Bromobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	108-86-1	W
Bromochloromethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	74-97-5	W
Bromodichloromethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-27-4	W
Bromoform	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-25-2	W
Bromomethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	74-83-9	W
Carbon tetrachloride	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	56-23-5	W
Chlorobenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	108-90-7	W
Chloroethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-00-3	W
Chloroform	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	67-66-3	W
Chloromethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	74-87-3	W
Dibromochloromethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	124-48-1	W
Dibromomethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	74-95-3	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: B-2-2 (14-16) Lab ID: 4085755004 Collected: 09/27/13 10:15 Received: 10/01/13 09:30 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Dichlorodifluoromethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-71-8	W
Diisopropyl ether	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	108-20-3	W
Ethylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	100-41-4	W
Hexachloro-1,3-butadiene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	87-68-3	W
Isopropylbenzene (Cumene)	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	98-82-8	W
Methyl-tert-butyl ether	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	1634-04-4	W
Methylene Chloride	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-09-2	W
Naphthalene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	91-20-3	W
Styrene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	100-42-5	W
Tetrachloroethene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	127-18-4	W
Toluene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	108-88-3	W
Trichloroethene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	79-01-6	W
Trichlorofluoromethane	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-69-4	W
Vinyl chloride	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	75-01-4	W
cis-1,2-Dichloroethene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	156-59-2	W
cis-1,3-Dichloropropene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	10061-01-5	W
m,p-Xylene	<52.1 ug/kg		125	52.1	1	10/07/13 16:12	10/08/13 05:48	179601-23-1	W
n-Butylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	104-51-8	W
n-Propylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	103-65-1	W
o-Xylene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	95-47-6	W
p-Isopropyltoluene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	99-87-6	W
sec-Butylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	135-98-8	W
tert-Butylbenzene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	98-06-6	W
trans-1,2-Dichloroethene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	156-60-5	W
trans-1,3-Dichloropropene	<26.0 ug/kg		62.5	26.0	1	10/07/13 16:12	10/08/13 05:48	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	100 %		57-130		1	10/07/13 16:12	10/08/13 05:48	1868-53-7	
Toluene-d8 (S)	111 %		54-133		1	10/07/13 16:12	10/08/13 05:48	2037-26-5	
4-Bromofluorobenzene (S)	96 %		49-130		1	10/07/13 16:12	10/08/13 05:48	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	13.5 %		0.10	0.10	1			10/13/13 15:00	
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F				1			10/08/13 12:29	
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	Pass no units				1			10/03/13 17:32	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

Sample: TRIP BLANK Lab ID: 4085755005 Collected: 09/27/13 00:00 Received: 10/01/13 09:30 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	630-20-6	W	
1,1,1-Trichloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	71-55-6	W	
1,1,2,2-Tetrachloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	79-34-5	W	
1,1,2-Trichloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	79-00-5	W	
1,1-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-34-3	W	
1,1-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-35-4	W	
1,1-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	563-58-6	W	
1,2,3-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	87-61-6	W	
1,2,3-Trichloropropane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	96-18-4	W	
1,2,4-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	120-82-1	W	
1,2,4-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	95-63-6	W	
1,2-Dibromo-3-chloropropane	<49.8 ug/kg	250	49.8	1	10/07/13 16:12	10/08/13 00:48	96-12-8	W	
1,2-Dibromoethane (EDB)	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	106-93-4	W	
1,2-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	95-50-1	W	
1,2-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	107-06-2	W	
1,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	78-87-5	W	
1,3,5-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	108-67-8	W	
1,3-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	541-73-1	W	
1,3-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	142-28-9	W	
1,4-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	106-46-7	W	
2,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	594-20-7	W	
2-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	95-49-8	W	
4-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	106-43-4	W	
Benzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	71-43-2	W	
Bromobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	108-86-1	W	
Bromochloromethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	74-97-5	W	
Bromodichloromethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-27-4	W	
Bromoform	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-25-2	W	
Bromomethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	74-83-9	W	
Carbon tetrachloride	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	56-23-5	W	
Chlorobenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	108-90-7	W	
Chloroethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-00-3	W	
Chloroform	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	67-66-3	W	
Chloromethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	74-87-3	W	
Dibromochloromethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	124-48-1	W	
Dibromomethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	74-95-3	W	
Dichlorodifluoromethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-71-8	W	
Diisopropyl ether	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	108-20-3	W	
Ethylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	100-41-4	W	
Hexachloro-1,3-butadiene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	87-68-3	W	
Isopropylbenzene (Cumene)	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	98-82-8	W	
Methyl-tert-butyl ether	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	1634-04-4	W	
Methylene Chloride	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-09-2	W	
Naphthalene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	91-20-3	W	
Styrene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	100-42-5	W	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

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**Sample: TRIP BLANK**      Lab ID: **4085755005**      Collected: 09/27/13 00:00      Received: 10/01/13 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Tetrachloroethene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	127-18-4	W	
Toluene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	108-88-3	W	
Trichloroethene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	79-01-6	W	
Trichlorofluoromethane	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-69-4	W	
Vinyl chloride	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	75-01-4	W	
cis-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	156-59-2	W	
cis-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	10061-01-5	W	
m&p-Xylene	<50.0 ug/kg	120	50.0	1	10/07/13 16:12	10/08/13 00:48	179601-23-1	W	
n-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	104-51-8	W	
n-Propylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	103-65-1	W	
o-Xylene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	95-47-6	W	
p-Isopropyltoluene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	99-87-6	W	
sec-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	135-98-8	W	
tert-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	98-06-6	W	
trans-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	156-60-5	W	
trans-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	10/07/13 16:12	10/08/13 00:48	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	85 %	57-130		1	10/07/13 16:12	10/08/13 00:48	1868-53-7		
Toluene-d8 (S)	92 %	54-133		1	10/07/13 16:12	10/08/13 00:48	2037-26-5		
4-Bromofluorobenzene (S)	88 %	49-130		1	10/07/13 16:12	10/08/13 00:48	460-00-4		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch:	GCV/11087	Analysis Method:	WI MOD GRO
QC Batch Method:	TPH GRO/PVOC WI ext.	Analysis Description:	WIGRO Solid GCV
Associated Lab Samples:	4085755001, 4085755002, 4085755003, 4085755004		

METHOD BLANK:	866586	Matrix:	Solid
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Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Gasoline Range Organics	mg/kg	<2.5	2.5	10/02/13 08:48	
a,a,a-Trifluorotoluene (S)	%	102	80-120	10/02/13 08:48	

LABORATORY CONTROL SAMPLE & LCSD:	866587	866588
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Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits			
Gasoline Range Organics	mg/kg	10	10.2	9.6	102	96	80-120	6	20	
a,a,a-Trifluorotoluene (S)	%				101	102	80-120			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch:	MPRP/9244	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004			

METHOD BLANK: 867757	Matrix: Solid
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Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.29	1.0	10/04/13 12:23	

LABORATORY CONTROL SAMPLE: 867758	
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Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	43.2	86	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 867759	867760
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Parameter	Units	4085491001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Lead	mg/kg	7.9	60.1	59.9	57.8	64.4	83	94	75-125	11	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch:	MSV/21614	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
Associated Lab Samples:	4085755001		

METHOD BLANK: 868799	Matrix: Solid
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Associated Lab Samples: 4085755001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,1-Dichloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,1-Dichloroethene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,1-Dichloropropene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	10/04/13 20:27	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2-Dichloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,2-Dichloropropane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
1,3-Dichloropropane	ug/kg	<25.0	60.0	10/04/13 20:27	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
2,2-Dichloropropane	ug/kg	<25.0	60.0	10/04/13 20:27	
2-Chlorotoluene	ug/kg	<25.0	60.0	10/04/13 20:27	
4-Chlorotoluene	ug/kg	<25.0	60.0	10/04/13 20:27	
Benzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Bromobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Bromochloromethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Bromodichloromethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Bromoform	ug/kg	<25.0	60.0	10/04/13 20:27	
Bromomethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Carbon tetrachloride	ug/kg	<25.0	60.0	10/04/13 20:27	
Chlorobenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Chloroethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Chloroform	ug/kg	<25.0	60.0	10/04/13 20:27	
Chloromethane	ug/kg	<25.0	60.0	10/04/13 20:27	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	10/04/13 20:27	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	10/04/13 20:27	
Dibromochloromethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Dibromomethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Diisopropyl ether	ug/kg	<25.0	60.0	10/04/13 20:27	
Ethylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	10/04/13 20:27	
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	10/04/13 20:27	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

METHOD BLANK: 868799

Matrix: Solid

Associated Lab Samples: 4085755001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/kg	<50.0	120	10/04/13 20:27	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	10/04/13 20:27	
Methylene Chloride	ug/kg	<25.0	60.0	10/04/13 20:27	
n-Butylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
n-Propylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Naphthalene	ug/kg	<25.0	60.0	10/04/13 20:27	
o-Xylene	ug/kg	<25.0	60.0	10/04/13 20:27	
p-Isopropyltoluene	ug/kg	<25.0	60.0	10/04/13 20:27	
sec-Butylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Styrene	ug/kg	<25.0	60.0	10/04/13 20:27	
tert-Butylbenzene	ug/kg	<25.0	60.0	10/04/13 20:27	
Tetrachloroethene	ug/kg	<25.0	60.0	10/04/13 20:27	
Toluene	ug/kg	<25.0	60.0	10/04/13 20:27	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	10/04/13 20:27	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	10/04/13 20:27	
Trichloroethene	ug/kg	<25.0	60.0	10/04/13 20:27	
Trichlorofluoromethane	ug/kg	<25.0	60.0	10/04/13 20:27	
Vinyl chloride	ug/kg	<25.0	60.0	10/04/13 20:27	
4-Bromofluorobenzene (S)	%	101	49-130	10/04/13 20:27	
Dibromofluoromethane (S)	%	102	57-130	10/04/13 20:27	
Toluene-d8 (S)	%	114	54-133	10/04/13 20:27	

LABORATORY CONTROL SAMPLE &amp; LCSD: 868800

868801

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2590	2650	104	106	70-130	2	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2690	2630	108	105	70-130	2	20	
1,1,2-Trichloroethane	ug/kg	2500	2760	2730	110	109	70-130	1	20	
1,1-Dichloroethane	ug/kg	2500	2670	2620	107	105	70-130	2	20	
1,1-Dichloroethene	ug/kg	2500	2590	2640	103	106	64-130	2	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2710	2700	108	108	68-130	0	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1930	1930	77	77	50-150	0	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2610	2540	104	102	70-130	3	20	
1,2-Dichlorobenzene	ug/kg	2500	2790	2710	112	108	70-130	3	20	
1,2-Dichloroethane	ug/kg	2500	2670	2610	107	105	70-130	2	20	
1,2-Dichloropropane	ug/kg	2500	2850	2820	114	113	70-130	1	20	
1,3-Dichlorobenzene	ug/kg	2500	2750	2640	110	105	70-130	4	20	
1,4-Dichlorobenzene	ug/kg	2500	2730	2630	109	105	70-130	4	20	
Benzene	ug/kg	2500	2640	2580	106	103	70-130	2	20	
Bromodichloromethane	ug/kg	2500	2290	2270	91	91	70-130	1	20	
Bromoform	ug/kg	2500	1960	1970	79	79	63-130	0	20	
Bromomethane	ug/kg	2500	2490	2450	100	98	41-142	2	20	
Carbon tetrachloride	ug/kg	2500	2330	2390	93	95	70-130	2	20	
Chlorobenzene	ug/kg	2500	2760	2710	111	108	70-130	2	20	
Chloroethane	ug/kg	2500	2590	2580	103	103	57-130	0	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

LABORATORY CONTROL SAMPLE & LCSD:		868801								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroform	ug/kg	2500	2620	2590	105	104	70-130	1	20	
Chloromethane	ug/kg	2500	2300	2250	92	90	57-130	2	20	
cis-1,2-Dichloroethene	ug/kg	2500	2760	2720	110	109	70-130	1	20	
cis-1,3-Dichloropropene	ug/kg	2500	2300	2290	92	92	70-130	0	20	
Dibromochloromethane	ug/kg	2500	2260	2280	91	91	70-130	1	20	
Dichlorodifluoromethane	ug/kg	2500	2030	2010	81	80	31-150	1	20	
Ethylbenzene	ug/kg	2500	2760	2750	110	110	65-137	0	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2820	2800	113	112	70-130	0	20	
m&p-Xylene	ug/kg	5000	5590	5550	112	111	64-139	1	20	
Methyl-tert-butyl ether	ug/kg	2500	2540	2500	101	100	69-130	1	20	
Methylene Chloride	ug/kg	2500	2580	2540	103	102	70-130	1	20	
o-Xylene	ug/kg	2500	2860	2790	115	112	63-135	2	20	
Styrene	ug/kg	2500	2670	2620	107	105	69-130	2	20	
Tetrachloroethene	ug/kg	2500	2670	2700	107	108	70-130	1	20	
Toluene	ug/kg	2500	2760	2740	110	110	70-130	1	20	
trans-1,2-Dichloroethene	ug/kg	2500	2630	2630	105	105	70-130	0	20	
trans-1,3-Dichloropropene	ug/kg	2500	2240	2240	90	90	70-130	0	20	
Trichloroethene	ug/kg	2500	2740	2750	110	110	70-130	0	20	
Trichlorofluoromethane	ug/kg	2500	2370	2410	95	96	50-150	2	20	
Vinyl chloride	ug/kg	2500	2310	2320	92	93	57-130	1	20	
4-Bromofluorobenzene (S)	%				107	105	49-130			
Dibromofluoromethane (S)	%				114	112	57-130			
Toluene-d8 (S)	%				114	114	54-133			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch:	MSV/21650	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
Associated Lab Samples:	4085755002, 4085755003, 4085755004, 4085755005		

METHOD BLANK:	870563	Matrix:	Solid
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Associated Lab Samples: 4085755002, 4085755003, 4085755004, 4085755005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,1-Dichloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,1-Dichloroethene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,1-Dichloropropene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	10/07/13 20:35	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2-Dichloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,2-Dichloropropane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
1,3-Dichloropropane	ug/kg	<25.0	60.0	10/07/13 20:35	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
2,2-Dichloropropane	ug/kg	<25.0	60.0	10/07/13 20:35	
2-Chlorotoluene	ug/kg	<25.0	60.0	10/07/13 20:35	
4-Chlorotoluene	ug/kg	<25.0	60.0	10/07/13 20:35	
Benzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Bromobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Bromochloromethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Bromodichloromethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Bromoform	ug/kg	<25.0	60.0	10/07/13 20:35	
Bromomethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Carbon tetrachloride	ug/kg	<25.0	60.0	10/07/13 20:35	
Chlorobenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Chloroethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Chloroform	ug/kg	<25.0	60.0	10/07/13 20:35	
Chloromethane	ug/kg	<25.0	60.0	10/07/13 20:35	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	10/07/13 20:35	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	10/07/13 20:35	
Dibromochloromethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Dibromomethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Diisopropyl ether	ug/kg	<25.0	60.0	10/07/13 20:35	
Ethylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	10/07/13 20:35	
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	10/07/13 20:35	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

METHOD BLANK: 870563

Matrix: Solid

Associated Lab Samples: 4085755002, 4085755003, 4085755004, 4085755005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/kg	<50.0	120	10/07/13 20:35	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	10/07/13 20:35	
Methylene Chloride	ug/kg	<25.0	60.0	10/07/13 20:35	
n-Butylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
n-Propylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Naphthalene	ug/kg	<25.0	60.0	10/07/13 20:35	
o-Xylene	ug/kg	<25.0	60.0	10/07/13 20:35	
p-Isopropyltoluene	ug/kg	<25.0	60.0	10/07/13 20:35	
sec-Butylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Styrene	ug/kg	<25.0	60.0	10/07/13 20:35	
tert-Butylbenzene	ug/kg	<25.0	60.0	10/07/13 20:35	
Tetrachloroethene	ug/kg	<25.0	60.0	10/07/13 20:35	
Toluene	ug/kg	<25.0	60.0	10/07/13 20:35	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	10/07/13 20:35	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	10/07/13 20:35	
Trichloroethene	ug/kg	<25.0	60.0	10/07/13 20:35	
Trichlorofluoromethane	ug/kg	<25.0	60.0	10/07/13 20:35	
Vinyl chloride	ug/kg	<25.0	60.0	10/07/13 20:35	
4-Bromofluorobenzene (S)	%	98	49-130	10/07/13 20:35	
Dibromofluoromethane (S)	%	103	57-130	10/07/13 20:35	
Toluene-d8 (S)	%	114	54-133	10/07/13 20:35	

LABORATORY CONTROL SAMPLE &amp; LCSD: 870564

870565

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2580	2650	103	106	70-130	3	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2700	2840	108	114	70-130	5	20	
1,1,2-Trichloroethane	ug/kg	2500	2730	2780	109	111	70-130	2	20	
1,1-Dichloroethane	ug/kg	2500	2540	2570	102	103	70-130	1	20	
1,1-Dichloroethene	ug/kg	2500	2460	2460	99	99	64-130	0	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2700	2750	108	110	68-130	2	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2100	2200	84	88	50-150	5	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2620	2680	105	107	70-130	3	20	
1,2-Dichlorobenzene	ug/kg	2500	2700	2760	108	110	70-130	2	20	
1,2-Dichloroethane	ug/kg	2500	2640	2670	106	107	70-130	1	20	
1,2-Dichloropropane	ug/kg	2500	2780	2800	111	112	70-130	1	20	
1,3-Dichlorobenzene	ug/kg	2500	2610	2680	104	107	70-130	3	20	
1,4-Dichlorobenzene	ug/kg	2500	2590	2660	104	106	70-130	3	20	
Benzene	ug/kg	2500	2510	2510	101	101	70-130	0	20	
Bromodichloromethane	ug/kg	2500	2260	2300	90	92	70-130	2	20	
Bromoform	ug/kg	2500	2000	2130	80	85	63-130	6	20	
Bromomethane	ug/kg	2500	2140	2130	86	85	41-142	1	20	
Carbon tetrachloride	ug/kg	2500	2310	2360	93	94	70-130	2	20	
Chlorobenzene	ug/kg	2500	2680	2700	107	108	70-130	1	20	
Chloroethane	ug/kg	2500	2180	2260	87	90	57-130	4	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

LABORATORY CONTROL SAMPLE & LCSD:		870565								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroform	ug/kg	2500	2540	2590	102	104	70-130	2	20	
Chloromethane	ug/kg	2500	1760	1780	70	71	57-130	1	20	
cis-1,2-Dichloroethene	ug/kg	2500	2660	2680	106	107	70-130	1	20	
cis-1,3-Dichloropropene	ug/kg	2500	2340	2360	94	94	70-130	1	20	
Dibromochloromethane	ug/kg	2500	2280	2380	91	95	70-130	4	20	
Dichlorodifluoromethane	ug/kg	2500	1340	1310	54	52	31-150	2	20	
Ethylbenzene	ug/kg	2500	2650	2690	106	107	65-137	1	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2660	2700	106	108	70-130	1	20	
m&p-Xylene	ug/kg	5000	5370	5400	107	108	64-139	0	20	
Methyl-tert-butyl ether	ug/kg	2500	2570	2630	103	105	69-130	2	20	
Methylene Chloride	ug/kg	2500	2460	2460	98	98	70-130	0	20	
o-Xylene	ug/kg	2500	2730	2750	109	110	63-135	1	20	
Styrene	ug/kg	2500	2550	2610	102	104	69-130	2	20	
Tetrachloroethene	ug/kg	2500	2570	2600	103	104	70-130	1	20	
Toluene	ug/kg	2500	2650	2700	106	108	70-130	2	20	
trans-1,2-Dichloroethene	ug/kg	2500	2540	2530	102	101	70-130	0	20	
trans-1,3-Dichloropropene	ug/kg	2500	2300	2380	92	95	70-130	3	20	
Trichloroethene	ug/kg	2500	2710	2690	108	108	70-130	1	20	
Trichlorofluoromethane	ug/kg	2500	2140	2270	86	91	50-150	6	20	
Vinyl chloride	ug/kg	2500	1930	1970	77	79	57-130	2	20	
4-Bromofluorobenzene (S)	%				103	105	49-130			
Dibromofluoromethane (S)	%				111	113	57-130			
Toluene-d8 (S)	%				110	111	54-133			

## REPORT OF LABORATORY ANALYSIS

## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch: OEXT/20115 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004

METHOD BLANK: 869447 Matrix: Solid

Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	10/09/13 14:16	

LABORATORY CONTROL SAMPLE &amp; LCSD: 869448 869449

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	30.4	33.6	76	84	70-120	10	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch: PMST/8987 Analysis Method: ASTM D2974-87

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

Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004

SAMPLE DUPLICATE: 874717

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4085745002	17.0	16.0	6	10

PRELIMINARY

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch:	WET/16535	Analysis Method:	EPA 1010
QC Batch Method:	EPA 1010	Analysis Description:	1010 Flash Point, Closed Cup
Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004			

LABORATORY CONTROL SAMPLE: 870813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		80.1			

LABORATORY CONTROL SAMPLE: 870814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		80.8			

SAMPLE DUPLICATE: 870897

Parameter	Units	10243828001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	148	146			

SAMPLE DUPLICATE: 871372

Parameter	Units	4086061005 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	156	164			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

QC Batch: WET/16497

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 4085755001, 4085755002, 4085755003, 4085755004

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SAMPLE DUPLICATE: 868390

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	4085491001	Pass	Pass		

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085755

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### BATCH QUALIFIERS

Batch: MSV/21616

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

Batch: MSV/21653

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

### ANALYTE QUALIFIERS

W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4085755001	B-2-1 (2-4)	WI MOD DRO	OEXT/20115	WI MOD DRO	GCSV/10308
4085755002	B-2-1 (10-12)	WI MOD DRO	OEXT/20115	WI MOD DRO	GCSV/10308
4085755003	B-2-2 (2-4)	WI MOD DRO	OEXT/20115	WI MOD DRO	GCSV/10308
4085755004	B-2-2 (14-16)	WI MOD DRO	OEXT/20115	WI MOD DRO	GCSV/10308
4085755001	B-2-1 (2-4)	TPH GRO/PVOC WI ext.	GCV/11087	WI MOD GRO	GCV/11088
4085755002	B-2-1 (10-12)	TPH GRO/PVOC WI ext.	GCV/11087	WI MOD GRO	GCV/11088
4085755003	B-2-2 (2-4)	TPH GRO/PVOC WI ext.	GCV/11087	WI MOD GRO	GCV/11088
4085755004	B-2-2 (14-16)	TPH GRO/PVOC WI ext.	GCV/11087	WI MOD GRO	GCV/11088
4085755001	B-2-1 (2-4)	EPA 3050	MPRP/9244	EPA 6010	ICP/8147
4085755002	B-2-1 (10-12)	EPA 3050	MPRP/9244	EPA 6010	ICP/8147
4085755003	B-2-2 (2-4)	EPA 3050	MPRP/9244	EPA 6010	ICP/8147
4085755004	B-2-2 (14-16)	EPA 3050	MPRP/9244	EPA 6010	ICP/8147
4085755001	B-2-1 (2-4)	EPA 5035/5030B	MSV/21614	EPA 8260	MSV/21616
4085755002	B-2-1 (10-12)	EPA 5035/5030B	MSV/21650	EPA 8260	MSV/21653
4085755003	B-2-2 (2-4)	EPA 5035/5030B	MSV/21650	EPA 8260	MSV/21653
4085755004	B-2-2 (14-16)	EPA 5035/5030B	MSV/21650	EPA 8260	MSV/21653
4085755005	TRIP BLANK	EPA 5035/5030B	MSV/21650	EPA 8260	MSV/21653
4085755001	B-2-1 (2-4)	ASTM D2974-87	PMST/8987		
4085755002	B-2-1 (10-12)	ASTM D2974-87	PMST/8987		
4085755003	B-2-2 (2-4)	ASTM D2974-87	PMST/8987		
4085755004	B-2-2 (14-16)	ASTM D2974-87	PMST/8987		
4085755001	B-2-1 (2-4)	EPA 1010	WET/16535		
4085755002	B-2-1 (10-12)	EPA 1010	WET/16535		
4085755003	B-2-2 (2-4)	EPA 1010	WET/16535		
4085755004	B-2-2 (14-16)	EPA 1010	WET/16535		
4085755001	B-2-1 (2-4)	EPA 9095	WET/16497		
4085755002	B-2-1 (10-12)	EPA 9095	WET/16497		
4085755003	B-2-2 (2-4)	EPA 9095	WET/16497		
4085755004	B-2-2 (14-16)	EPA 9095	WET/16497		

**REPORT OF LABORATORY ANALYSIS**

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## **GROUNDWATER ANALYTICAL**

October 15, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on October 01, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4085754001	MW-2-1	Water	09/27/13 11:30	10/01/13 09:30
4085754002	TRIP BLANK	Water	09/27/13 00:00	10/01/13 09:30

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4085754001	MW-2-1	EPA 6010	DLB	1	PASI-G
		EPA 8260	LAP	64	PASI-G
4085754002	TRIP BLANK	EPA 8260	LAP	64	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

Sample: MW-2-1	Lab ID: 4085754001	Collected: 09/27/13 11:30	Received: 10/01/13 09:30	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	10/07/13 10:50	10/08/13 13:04	7439-92-1	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		10/05/13 14:28	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		10/05/13 14:28	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		10/05/13 14:28	75-27-4	
Bromoform	<0.33 ug/L		1.0	0.33	1		10/05/13 14:28	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		10/05/13 14:28	74-83-9	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		10/05/13 14:28	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		10/05/13 14:28	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		10/05/13 14:28	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		10/05/13 14:28	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		10/05/13 14:28	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		10/05/13 14:28	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		10/05/13 14:28	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		10/05/13 14:28	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		10/05/13 14:28	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		10/05/13 14:28	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		10/05/13 14:28	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		10/05/13 14:28	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		10/05/13 14:28	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		10/05/13 14:28	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		10/05/13 14:28	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		10/05/13 14:28	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		10/05/13 14:28	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		10/05/13 14:28	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		10/05/13 14:28	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		10/05/13 14:28	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		10/05/13 14:28	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		10/05/13 14:28	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		10/05/13 14:28	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		10/05/13 14:28	142-28-9	
2,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		10/05/13 14:28	563-58-6	
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		10/05/13 14:28	10061-01-5	
trans-1,3-Dichloropropene	<0.30 ug/L		1.0	0.30	1		10/05/13 14:28	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		10/05/13 14:28	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		10/05/13 14:28	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		10/05/13 14:28	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		10/05/13 14:28	75-09-2	L2
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		10/05/13 14:28	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		10/05/13 14:28	91-20-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

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**Sample: MW-2-1**      **Lab ID: 4085754001**      Collected: 09/27/13 11:30      Received: 10/01/13 09:30      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		10/05/13 14:28	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		10/05/13 14:28	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		10/05/13 14:28	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		10/05/13 14:28	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		10/05/13 14:28	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		10/05/13 14:28	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		10/05/13 14:28	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		10/05/13 14:28	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		10/05/13 14:28	79-00-5	
Trichloroethene	<0.36 ug/L		1.0	0.36	1		10/05/13 14:28	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		10/05/13 14:28	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		10/05/13 14:28	96-18-4	
1,2,4-Trimethylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	95-63-6	
1,3,5-Trimethylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		10/05/13 14:28	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		10/05/13 14:28	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:28	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90 %		43-137		1		10/05/13 14:28	460-00-4	
Dibromofluoromethane (S)	95 %		70-130		1		10/05/13 14:28	1868-53-7	
Toluene-d8 (S)	93 %		55-137		1		10/05/13 14:28	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

Sample: TRIP BLANK	Lab ID: 4085754002	Collected: 09/27/13 00:00	Received: 10/01/13 09:30	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		10/05/13 14:51	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		10/05/13 14:51	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		10/05/13 14:51	75-27-4	
Bromoform	<0.33 ug/L		1.0	0.33	1		10/05/13 14:51	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		10/05/13 14:51	74-83-9	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		10/05/13 14:51	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		10/05/13 14:51	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		10/05/13 14:51	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		10/05/13 14:51	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		10/05/13 14:51	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		10/05/13 14:51	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		10/05/13 14:51	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		10/05/13 14:51	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		10/05/13 14:51	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		10/05/13 14:51	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		10/05/13 14:51	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		10/05/13 14:51	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		10/05/13 14:51	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		10/05/13 14:51	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		10/05/13 14:51	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		10/05/13 14:51	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		10/05/13 14:51	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		10/05/13 14:51	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		10/05/13 14:51	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		10/05/13 14:51	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		10/05/13 14:51	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		10/05/13 14:51	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		10/05/13 14:51	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		10/05/13 14:51	142-28-9	
2,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		10/05/13 14:51	563-58-6	
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		10/05/13 14:51	10061-01-5	
trans-1,3-Dichloropropene	<0.30 ug/L		1.0	0.30	1		10/05/13 14:51	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		10/05/13 14:51	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		10/05/13 14:51	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		10/05/13 14:51	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		10/05/13 14:51	75-09-2	L2
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		10/05/13 14:51	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		10/05/13 14:51	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		10/05/13 14:51	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		10/05/13 14:51	630-20-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

Sample: TRIP BLANK	Lab ID: 4085754002	Collected: 09/27/13 00:00	Received: 10/01/13 09:30	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		10/05/13 14:51	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		10/05/13 14:51	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		10/05/13 14:51	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		10/05/13 14:51	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		10/05/13 14:51	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		10/05/13 14:51	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		10/05/13 14:51	79-00-5	
Trichloroethene	<0.36 ug/L		1.0	0.36	1		10/05/13 14:51	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		10/05/13 14:51	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		10/05/13 14:51	96-18-4	
1,2,4-Trimethylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	95-63-6	
1,3,5-Trimethylbenzene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		10/05/13 14:51	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		10/05/13 14:51	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		10/05/13 14:51	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	91 %		43-137		1		10/05/13 14:51	460-00-4	
Dibromofluoromethane (S)	97 %		70-130		1		10/05/13 14:51	1868-53-7	
Toluene-d8 (S)	97 %		55-137		1		10/05/13 14:51	2037-26-5	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

QC Batch:	MPRP/9265	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET Dissolved
Associated Lab Samples:	4085754001		

METHOD BLANK: 870343 Matrix: Water

Associated Lab Samples: 4085754001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	<2.7	7.5	10/08/13 12:40	

LABORATORY CONTROL SAMPLE: 870344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	436	87	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 870345 870346

Parameter	Units	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Lead, Dissolved	ug/L	<2.7	500	500	434	431	87	86	75-125	1	20	

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**Pace Analytical Services, Inc.**  
1241 Bellevue Street - Suite 9  
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(920)469-2436

## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

QC Batch: MSV/21583

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV

Associated Lab Samples: 4085754001, 4085754002

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METHOD BLANK: 866918

## Matrix: Water

Associated Lab Samples: 4085754001, 4085754002

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	10/05/13 10:40	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	10/05/13 10:40	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	10/05/13 10:40	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	10/05/13 10:40	
1,1-Dichloroethane	ug/L	<0.28	1.0	10/05/13 10:40	
1,1-Dichloroethene	ug/L	<0.43	1.0	10/05/13 10:40	
1,1-Dichloropropene	ug/L	<0.51	1.0	10/05/13 10:40	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	10/05/13 10:40	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	10/05/13 10:40	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	10/05/13 10:40	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	10/05/13 10:40	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	10/05/13 10:40	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	10/05/13 10:40	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	10/05/13 10:40	
1,2-Dichloroethane	ug/L	<0.48	1.0	10/05/13 10:40	
1,2-Dichloropropane	ug/L	<0.50	1.0	10/05/13 10:40	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	10/05/13 10:40	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	10/05/13 10:40	
1,3-Dichloropropane	ug/L	<0.46	1.0	10/05/13 10:40	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	10/05/13 10:40	
2,2-Dichloropropane	ug/L	<0.50	1.0	10/05/13 10:40	
2-Chlorotoluene	ug/L	<0.48	1.0	10/05/13 10:40	
4-Chlorotoluene	ug/L	<0.48	1.0	10/05/13 10:40	
Benzene	ug/L	<0.50	1.0	10/05/13 10:40	
Bromobenzene	ug/L	<0.48	1.0	10/05/13 10:40	
Bromochloromethane	ug/L	<0.49	1.0	10/05/13 10:40	
Bromodichloromethane	ug/L	<0.45	1.0	10/05/13 10:40	
Bromoform	ug/L	<0.33	1.0	10/05/13 10:40	
Bromomethane	ug/L	<0.43	5.0	10/05/13 10:40	
Carbon tetrachloride	ug/L	<0.37	1.0	10/05/13 10:40	
Chlorobenzene	ug/L	<0.36	1.0	10/05/13 10:40	
Chloroethane	ug/L	<0.44	1.0	10/05/13 10:40	
Chloroform	ug/L	<0.69	5.0	10/05/13 10:40	
Chloromethane	ug/L	<0.39	1.0	10/05/13 10:40	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	10/05/13 10:40	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	10/05/13 10:40	
Dibromochloromethane	ug/L	<1.9	5.0	10/05/13 10:40	
Dibromomethane	ug/L	<0.48	1.0	10/05/13 10:40	
Dichlorodifluoromethane	ug/L	<0.40	1.0	10/05/13 10:40	
Diisopropyl ether	ug/L	<0.50	1.0	10/05/13 10:40	
Ethylbenzene	ug/L	<0.50	1.0	10/05/13 10:40	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	10/05/13 10:40	
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	10/05/13 10:40	

## **REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

METHOD BLANK: 866918

Matrix: Water

Associated Lab Samples: 4085754001, 4085754002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<0.82	2.0	10/05/13 10:40	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	10/05/13 10:40	
Methylene Chloride	ug/L	<0.36	1.0	10/05/13 10:40	
n-Butylbenzene	ug/L	<0.40	1.0	10/05/13 10:40	
n-Propylbenzene	ug/L	<0.50	1.0	10/05/13 10:40	
Naphthalene	ug/L	<2.5	5.0	10/05/13 10:40	
o-Xylene	ug/L	<0.50	1.0	10/05/13 10:40	
p-Isopropyltoluene	ug/L	<0.40	1.0	10/05/13 10:40	
sec-Butylbenzene	ug/L	<0.60	5.0	10/05/13 10:40	
Styrene	ug/L	<0.35	1.0	10/05/13 10:40	
tert-Butylbenzene	ug/L	<0.42	1.0	10/05/13 10:40	
Tetrachloroethene	ug/L	<0.47	1.0	10/05/13 10:40	
Toluene	ug/L	<0.44	1.0	10/05/13 10:40	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	10/05/13 10:40	
trans-1,3-Dichloropropene	ug/L	<0.30	1.0	10/05/13 10:40	
Trichloroethene	ug/L	<0.36	1.0	10/05/13 10:40	
Trichlorofluoromethane	ug/L	<0.48	1.0	10/05/13 10:40	
Vinyl chloride	ug/L	<0.18	1.0	10/05/13 10:40	
4-Bromofluorobenzene (S)	%	91	43-137	10/05/13 10:40	
Dibromofluoromethane (S)	%	94	70-130	10/05/13 10:40	
Toluene-d8 (S)	%	101	55-137	10/05/13 10:40	

LABORATORY CONTROL SAMPLE &amp; LCSD: 866919

866920

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	43.5	46.0	87	92	70-136	5	20	
1,1,2,2-Tetrachloroethane	ug/L	50	42.1	43.5	84	87	70-130	3	20	
1,1,2-Trichloroethane	ug/L	50	46.7	49.3	93	99	70-130	5	20	
1,1-Dichloroethane	ug/L	50	45.5	47.4	91	95	70-146	4	20	
1,1-Dichloroethene	ug/L	50	50.4	53.2	101	106	70-130	5	20	
1,2,4-Trichlorobenzene	ug/L	50	47.4	49.6	95	99	70-130	5	20	
1,2-Dibromo-3-chloropropane	ug/L	50	34.4	35.9	69	72	46-150	4	20	
1,2-Dibromoethane (EDB)	ug/L	50	47.5	49.5	95	99	70-130	4	20	
1,2-Dichlorobenzene	ug/L	50	48.8	50.7	98	101	70-130	4	20	
1,2-Dichloroethane	ug/L	50	47.9	50.6	96	101	70-144	5	20	
1,2-Dichloropropane	ug/L	50	49.7	51.7	99	103	70-136	4	20	
1,3-Dichlorobenzene	ug/L	50	47.5	50.1	95	100	70-130	5	20	
1,4-Dichlorobenzene	ug/L	50	49.1	50.7	98	101	70-130	3	20	
Benzene	ug/L	50	42.6	44.6	85	89	70-137	5	20	
Bromodichloromethane	ug/L	50	44.1	46.7	88	93	70-133	6	20	
Bromoform	ug/L	50	42.2	44.5	84	89	59-130	5	20	
Bromomethane	ug/L	50	46.2	48.6	92	97	41-148	5	20	
Carbon tetrachloride	ug/L	50	48.5	51.8	97	104	70-154	7	20	
Chlorobenzene	ug/L	50	53.7	56.2	107	112	70-130	5	20	
Chloroethane	ug/L	50	54.2	56.2	108	112	70-139	4	20	

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**QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

LABORATORY CONTROL SAMPLE & LCSD:		866919									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroform	ug/L	50	44.2	46.0	88	92	70-130	4	20		
Chloromethane	ug/L	50	54.4	56.6	109	113	45-154	4	20		
cis-1,2-Dichloroethene	ug/L	50	42.8	44.6	86	89	70-130	4	20		
cis-1,3-Dichloropropene	ug/L	50	43.0	45.0	86	90	70-136	5	20		
Dibromochloromethane	ug/L	50	46.7	48.4	93	97	70-130	4	20		
Dichlorodifluoromethane	ug/L	50	50.3	50.9	101	102	20-157	1	20		
Ethylbenzene	ug/L	50	50.7	52.9	101	106	70-130	4	20		
Isopropylbenzene (Cumene)	ug/L	50	52.4	54.8	105	110	70-130	4	20		
m&p-Xylene	ug/L	100	105	111	105	111	70-130	6	20		
Methyl-tert-butyl ether	ug/L	50	37.3	38.7	75	77	59-141	4	20		
Methylene Chloride	ug/L	50	34.3	36.3	69	73	70-130	6	20	L0	
o-Xylene	ug/L	50	51.4	53.4	103	107	70-130	4	20		
Styrene	ug/L	50	49.0	52.1	98	104	70-130	6	20		
Tetrachloroethene	ug/L	50	56.2	58.5	112	117	70-130	4	20		
Toluene	ug/L	50	49.5	51.9	99	104	70-130	5	20		
trans-1,2-Dichloroethene	ug/L	50	44.7	46.3	89	93	70-130	4	20		
trans-1,3-Dichloropropene	ug/L	50	43.8	46.0	88	92	55-135	5	20		
Trichloroethene	ug/L	50	49.4	51.1	99	102	70-130	3	20		
Trichlorofluoromethane	ug/L	50	49.2	52.4	98	105	50-150	6	20		
Vinyl chloride	ug/L	50	54.0	56.5	108	113	61-143	5	20		
4-Bromofluorobenzene (S)	%				95	96	43-137				
Dibromofluoromethane (S)	%				95	96	70-130				
Toluene-d8 (S)	%				101	102	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		867162										
Parameter	Units	4085719006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.44	50	50	45.9	46.5	92	93	70-136	1	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	44.0	43.6	88	87	70-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.39	50	50	49.0	47.9	98	96	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.28	50	50	47.8	47.7	96	95	70-146	0	20	
1,1-Dichloroethene	ug/L	<0.43	50	50	51.9	53.0	104	106	70-130	2	20	
1,2,4-Trichlorobenzene	ug/L	<2.5	50	50	49.6	49.1	99	98	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	50	50	36.2	35.9	72	72	46-150	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.38	50	50	49.9	49.2	100	98	70-130	1	20	
1,2-Dichlorobenzene	ug/L	<0.44	50	50	50.8	50.5	102	101	70-130	0	20	
1,2-Dichloroethane	ug/L	<0.48	50	50	49.7	50.5	99	101	70-146	2	20	
1,2-Dichloropropane	ug/L	<0.50	50	50	52.1	51.8	104	104	70-136	0	20	
1,3-Dichlorobenzene	ug/L	<0.45	50	50	49.7	49.8	99	100	70-130	0	20	
1,4-Dichlorobenzene	ug/L	<0.43	50	50	50.9	50.6	102	101	70-130	1	20	
Benzene	ug/L	<0.50	50	50	45.1	45.5	89	90	70-137	1	20	
Bromodichloromethane	ug/L	<0.45	50	50	47.2	46.2	94	92	70-133	2	20	
Bromoform	ug/L	<0.33	50	50	44.8	43.8	90	88	57-130	2	20	
Bromomethane	ug/L	<0.43	50	50	49.3	49.0	99	98	41-148	1	20	
Carbon tetrachloride	ug/L	<0.37	50	50	51.8	52.6	104	105	70-154	1	20	
Chlorobenzene	ug/L	<0.36	50	50	55.8	55.7	112	111	70-130	0	20	

**REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

Parameter	Units	4085719006		MS Spike		MSD Spike		MS Result		MSD Result		MS % Rec		MSD % Rec		% Rec		Max	
				Conc.		Conc.		Result		MSD		MS		MSD		RPD	RPD	Qual	
																Limits			
Chloroethane	ug/L	<0.44	50	50	55.1	54.8	110	110	70-140	110	110	110	110	110	1	20			
Chloroform	ug/L	<0.69	50	50	45.9	46.5	92	93	70-130	92	93	93	93	93	1	20			
Chloromethane	ug/L	<0.39	50	50	56.9	56.7	114	113	45-154	114	113	113	113	113	0	20			
cis-1,2-Dichloroethene	ug/L	<0.42	50	50	44.9	45.4	90	91	70-130	90	91	91	91	91	1	20			
cis-1,3-Dichloropropene	ug/L	<0.29	50	50	45.9	44.6	92	89	70-136	92	89	89	89	89	3	20			
Dibromochloromethane	ug/L	<1.9	50	50	48.7	47.7	97	95	70-130	97	95	95	95	95	2	20			
Dichlorodifluoromethane	ug/L	<0.40	50	50	50.3	50.8	101	102	10-157	101	102	102	102	102	1	20			
Ethylbenzene	ug/L	<0.50	50	50	52.3	51.9	105	104	70-130	105	104	104	104	104	1	20			
Isopropylbenzene (Cumene)	ug/L	<0.34	50	50	53.9	53.8	108	108	70-130	108	108	108	108	108	0	20			
m&p-Xylene	ug/L	<0.82	100	100	106	105	106	105	70-130	106	105	105	105	105	1	20			
Methyl-tert-butyl ether	ug/L	<0.49	50	50	38.5	39.2	77	78	59-141	77	78	78	78	78	2	20			
Methylene Chloride	ug/L	<0.36	50	50	36.6	38.6	73	77	70-130	73	77	77	77	77	5	20			
o-Xylene	ug/L	<0.50	50	50	51.1	51.2	102	102	70-130	102	102	102	102	102	0	20			
Styrene	ug/L	<0.35	50	50	36.9	37.6	74	75	35-164	74	75	75	75	75	2	20			
Tetrachloroethene	ug/L	<0.47	50	50	57.6	57.9	115	116	70-130	115	116	116	116	116	0	20			
Toluene	ug/L	<0.44	50	50	51.3	51.0	102	102	70-130	102	102	102	102	102	1	20			
trans-1,2-Dichloroethene	ug/L	<0.37	50	50	46.3	46.3	93	93	70-130	93	93	93	93	93	0	20			
trans-1,3-Dichloropropene	ug/L	<0.30	50	50	45.4	45.4	91	91	55-137	91	91	91	91	91	0	20			
Trichloroethene	ug/L	<0.36	50	50	51.4	50.8	103	102	70-130	103	102	102	102	102	1	20			
Trichlorofluoromethane	ug/L	<0.48	50	50	51.9	51.8	104	104	50-150	104	104	104	104	104	0	20			
Vinyl chloride	ug/L	<0.18	50	50	55.9	56.2	112	112	59-144	112	112	112	112	112	1	20			
4-Bromofluorobenzene (S)	%																		
Dibromofluoromethane (S)	%																		
Toluene-d8 (S)	%																		

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4085754

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

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

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4085754

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4085754001	MW-2-1	EPA 3010	MPRP/9265	EPA 6010	ICP/8166
4085754001	MW-2-1	EPA 8260	MSV/21583		
4085754002	TRIP BLANK	EPA 8260	MSV/21583		

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PaceAnalytical™

Sample Condition Upon Receipt

Client Name: Himalayan Consultants Project # 4085754

Courier:  FedEx  UPS  USPS Client  Commercial  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 Ziploc

Thermometer Used N/A Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: POI /Corr: Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 10/1/13

Initials: MH

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5. Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests <u>MH 10/1/13</u>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>W</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12) exceptions: VOA Coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics. OTHER: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed <u>MH</u> Lab Std #ID of preservative Date/ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>313</u>		

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

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

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

Comments/ Resolution: X received in shipment, added to coc by lab. MH 10/1/13

Project Manager Review: CHR DM

Date: 10/1/13

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**ATTACHMENT E**

**SITE PHOTOGRAPHS**



Site #2: Location of boring B-2-2.



Site #2: Location of boring B-2-1.

## **APPENDIX C**

### **CREATIVE TILE AND MARBLE [SITE #5]**

## **1.0 SITE DESCRIPTION**

Creative Tile and Marble (29 W. Main Street) is located near the southeast quadrant of the intersection of W. Main Street (STH 116) and 1<sup>st</sup> Street, hereafter referred to as the site (see Figure 3.1, Attachment A). The site is part of the northeast ¼ of the northwest ¼ of Section 21, Township 19 North, Range 15 East, in the Village of Winneconne, Winnebago County, Wisconsin. According to the Winnebago County GIS Parcel Profiler, the site is currently owned by Dennis Biggar and Debra Ryf [Ref. 1].

Based on Himalayan's inspection of the site on July 30, 2013, the building on site is occupied by Creative Tile and Marble (tile and flooring company), The Rustic Fence (gift shop), and Jechort's Wood Boat Works (wood boat building and restoration) (see Photographs, Attachment E).

The surface areas around the building are generally gravel covered to the east and south. A grass covered area is located to the west of the building.

The land use surrounding the site is generally commercial properties.

## **2.0 SITE HISTORY**

In August 2012, Himalayan performed a Phase 1 Hazardous Materials Assessment (HMA) of the project corridor and identified the site at 29 W. Main Street as one of the sites with hazardous material concerns [Ref. 2]. Based on the information obtained from the Phase 1 HMA, The Rustic Fence portion of the site was utilized as Caribbean Gems, a retail store, during the initial site visit in November 2010.

According to Sanborn maps reviewed as part of the Phase 1 HMA, the site was utilized as a tin shop, warehouses, and a bank in 1893; as a tailor, agricultural implements facility, vacant bank, and coal storage (south portion of site) in 1898; as a tin shop, agricultural implements facility, carpenter, tailor, warehouses, and coal storage (south portion of site) in 1904; as a tin shop, hardware store, warehouse, hall, agricultural implements facility, shoe store, office, and tailor in 1913; and as a store, tin shop, hardware store, and the White House Milk Company (with a 30,000 gallon water tank) in 1929. The building currently appears similar to the building depicted as the milk company in the 1929 Sanborn map.

According to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) storage tank database, no tanks are registered to the site [Ref. 3].

Based on the age of the building (at least 1929), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

### **3.0 PURPOSE AND PROPOSED ACQUISITION / CONSTRUCTION**

The purpose of this Phase 2 HMI was to identify the potential presence and nature of contamination at the site. The Phase 2 HMI was performed in general accordance with FDM Procedure 21-35-10 (revised, December 2011), and the Wisconsin Department of Natural Resources (WDNR) rules and regulations [Ref. 4].

Based on the proposed design plans, the maximum depths of excavation adjacent to the site are anticipated to be about 4 feet bgs for roadway construction / retaining walls, 8 feet bgs for water / sewer, and 5 feet bgs for lighting / signal bases. Under the proposed improvements, a total R/W acquisition and TLE of 140 feet are also considered for this site.

### **4.0 SOILS AND GROUNDWATER CHARACTERIZATION**

On July 30, 2013, Horizon Construction and Exploration (Horizon), under a contract with Himalayan, advanced four soil borings (B-5-1 to B-5-4) at the site (see Figure 3.2, Attachment A). The general boring locations were in the areas considered to have the highest potential for encountering contamination based on the information obtained during the Phase 1 HMA, and/or proposed improvements at the site. Borings were advanced to terminal depths ranging from 15 to 20 feet bgs. Borings B-5-1 and B-5-3 were located in the area of the former railroad spur and coal storage areas. Borings B-5-2 and B-5-4 were located in the area of former tin storage.

Three of the borings (B-5-1, B-5-2, and B-5-3) were converted to temporary groundwater monitoring wells (MW-5-1, MW-5-2, and MW-5-3) to facilitate groundwater sampling. The wells were constructed in general compliance with WDNR guidelines for temporary monitoring wells [Ref. 5]. The wells consisted of a 10-foot section of slotted 1-inch polyvinyl chloride (PVC) pipe attached to an unslotted PVC riser pipe extending to the surface. Refer to the Well Construction Forms in Attachment C for additional details on temporary well construction.

After completion of sampling, all boreholes/wells were abandoned by filling them with granular bentonite, in accordance with Wis. Adm. Code NR 141. The Borehole Abandonment Forms for each borehole/well are presented in Attachment B.

#### **4.1 Soil Sampling**

Based on field observations, two soil samples from each boring were collected and submitted for laboratory analysis.

The soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and eight

Resource Conservation and Recovery Act (RCRA) metals (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury).

## **4.2 Groundwater Sampling**

Himalayan performed groundwater sampling at the site on the same day as the boring activities. Samples were obtained from temporary monitoring wells MW-5-1 and MW-5-3 for VOCs and RCRA metals analysis. Temporary monitoring well MW-5-2 did not produce adequate groundwater recharge for sample collection.

## **5.0 SUBSURFACE CONDITIONS**

### **5.1 Soil Conditions**

Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to depths of approximately 2 to 10 feet bgs. The fill materials consisted mainly of dark brown to black sand, partially decomposed wood fragments, medium to fine sand with gravel, cinders, and black peat.

Native brown to red clays with trace amounts of fine gravel were encountered below the fill materials to the terminal boring depths ranging from 15 to 20 feet bgs.

Refer to soil boring logs in Attachment B for more detailed descriptions of the soils encountered at each boring location.

Continuous soil samples were obtained from the borings and field-screened for the presence of volatile organic vapors using a photoionization detector (PID). The field screening results for the collected soil samples are summarized in Table 1. The field screening results for the collected 34 soil samples were all zero and are summarized in Table 1. No staining or odors were noted in the boring logs (see Attachment B). Note that asphalt was being overlain on STH 116 at the time of Himalayan's field work; therefore, it is possible that background calibration may have been elevated on the PID.

<b>TABLE 1</b> <b>FIELD SCREENING RESULTS</b> <b>Phase 2 Hazardous Materials Investigation</b> <b>Creative Tile and Marble (29 W. Main Street)</b> <b>Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>				
Boring ID	B-5-1	B-5-2	B-5-3	B-5-4
Date	7/30/13	7/30/13	7/30/13	7/30/13
Depth (feet)	0-2	0.0	0.0	0.0
	2-4	0.0	0.0	0.0
	4-6	0.0	0.0	0.0
	6-8	0.0	0.0	0.0
	8-10	0.0	0.0	0.0
	10-12	0.0	0.0	0.0
	12-14	0.0	0.0	0.0
	14-16	0.0*	0.0	0.0*
	16-18		0.0	
	18-20		0.0	
Notes: Results provided in instrument units (IU). * = sample depth equals 14 – 15 feet				

## 5.2 Groundwater Conditions

Saturated soil conditions were observed in borings B-5-1 and B-5-3 at depths ranging from 5 to 7 feet bgs. Groundwater in temporary wells MW-5-1 and MW-5-3 was encountered between 4.5 and 4.9 feet bgs. Temporary monitoring well MW-5-2 had insufficient groundwater recharge for sample collection. It should be noted that groundwater depths can vary throughout the year, depending on several factors including seasonal variations in precipitation, infiltration, and surface water runoff.

Refer to the soil boring logs in Attachment B for additional information regarding groundwater conditions encountered at each boring location.

## 6.0 ANALYTICAL RESULTS

### 6.1 Soil Samples

Laboratory analyses were performed on two soil samples selected from each borehole, at various depths ranging from 2 to 14 feet bgs.

No GRO was detected in any of the soil samples analyzed. DRO (1.3 J to 42.7 mg/kg) was detected in five of the eight samples analyzed, at concentrations below the NR 720 RCL [Ref. 6]. A "J" denotes a concentration flagged by the laboratory as an estimated concentration.

Several VOCs were detected in sample B-5-1 2-4' including 1,2,4-trimethylbenzene (51.3 J  $\mu\text{g}/\text{kg}$ ), naphthalene (142  $\mu\text{g}/\text{kg}$ ), toluene (85.8  $\mu\text{g}/\text{kg}$ ), and xylenes (151.9 J  $\mu\text{g}/\text{kg}$ ), at concentrations below the respective NR 720 RCL, if applicable. Toluene (54.0 J  $\mu\text{g}/\text{kg}$ ) was detected in sample B-5-3 2-4', below the NR 720 RCL.

Six RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples analyzed. Arsenic (2.3 to 12.3 mg/kg) was detected at concentrations above the NR 720 RCL in each of the eight soil samples analyzed. Barium (16.4 to 275 mg/kg), cadmium (0.18 J to 0.64 mg/kg), and mercury (0.0061 J to 1.7 mg/kg) were identified in each of the eight soil samples analyzed, below the respective NR 720 RCL, if applicable. Chromium (4.7 mg/kg to 54.2 mg/kg) was detected in each of the eight soil samples, and concentrations in five samples (B-5-2 2-4', B-5-2 12-14', B-5-3 10-12', B-5-4 2-4', and B-5-4 8-10') were identified above the NR 720 RCL.

Lead (4.3 mg/kg to 103 mg/kg) was detected in each of the eight soil samples analyzed, and concentrations in B-5-1 2-4' (56.4 mg/kg) and B-5-3 2-4' (103 mg/kg) exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-5-3 2-4' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L.

Eighteen PAHs were detected in several of the soil samples analyzed. Benzo(a)pyrene (400  $\mu\text{g}/\text{kg}$  in B-5-1 2-4' and 90.9  $\mu\text{g}/\text{kg}$  in B-5-3 2-4'), benzo(b)fluoranthene (352  $\mu\text{g}/\text{kg}$  in B-5-1 2-4' and 100  $\mu\text{g}/\text{kg}$  in B-5-3 2-4'), dibenzo(a,h)anthracene (85.0  $\mu\text{g}/\text{kg}$  in B-5-1 2-4' and 20.6  $\mu\text{g}/\text{kg}$  in B-5-3 2-4'), benzo(a)anthracene (304  $\mu\text{g}/\text{kg}$  in B-5-3 2-4') and indeno(1,2,3-c,d)pyrene (241  $\mu\text{g}/\text{kg}$  in B-5-3 2-4') were identified at concentrations above the respective Interim RCL for PAHs.

Table 2 presents a summary of soil quality results. Refer to Figure 3.2, Attachment A for sample locations and analytical results.

**TABLE 2**  
**SOIL QUALITY RESULTS**  
**Phase 2 Hazardous Materials Investigation**  
**Creative Tile and Marble (29 W. Main Street), Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D.	B-5-1		B-5-2		B-5-3		B-5-4		NR 720 RCL / Interim RCL
Depth (feet)	2-4	8-10	2-4	12-14	2-4	10-12	2-4	8-10	
Collection Date	7/30/2013		7/30/2013		7/30/2013		7/30/2013		
<b>GRO (mg/kg)</b>	<2.8	<3.5	<3.5	<2.9	<3.2	<3.7	<3.9	<2.9	100/250*
<b>DRO (mg/kg)</b>	25.3	4.4	<0.94	<0.77	42.7	2.2	<0.93	1.3 J	100/250*
<b>PAHs (µg/kg)</b>									
Acenaphthene	9.3 J	<10.6	<11.3	<9.8	<9.8	<10.9	<11.6	<9.6	38,000
Acenaphthylene	15.7 J	<10.6	<11.3	<9.8	<9.8	<10.9	<11.6	<9.6	700
Anthracene	58.8	<10.6	<11.3	<9.8	34.7	<10.9	<11.6	<9.6	3,000,000
Benzo(a)anthracene	<b>304</b>	<10.6	<11.3	<9.8	85.0	<10.9	<11.6	<9.6	88
Benzo(a)pyrene	<b>400</b>	<3.8	<4.0	<3.5	<b>90.9</b>	<3.9	5.1 J	<3.4	8.8
Benzo(b)fluoranthene	<b>352</b>	<10.6	<11.3	<9.8	<b>100</b>	<10.9	19.7 J	<9.6	88
Benzo(g,h,i)perylene	276	<10.6	<11.3	<9.8	60.3	<10.9	<11.6	<9.6	1800
Benzo(k)fluoranthene	358	<3.7	<4.0	<3.5	82.5	<3.8	6.4 J	<3.4	880
Chrysene	362	<10.6	<11.3	<9.8	119	<10.9	<11.6	<9.6	8800
Dienz(a,h)anthracene	<b>85.0</b>	<10.6	<11.3	<9.8	<b>20.6</b>	<10.9	<11.6	<9.6	8.8
Fluoranthene	455	<10.6	<11.3	<9.8	182	<10.9	15.6 J	<9.6	500,000
Fluorene	10.5 J	<10.6	<11.3	<9.8	<9.8	<10.9	<11.6	<9.6	100,000
Indeno(1,2,3-cd)pyrene	<b>241</b>	<10.6	<11.3	<9.8	51.8	<10.9	<11.6	<9.6	88
1-Methylnaphthalene	33.6	<3.7	<4.0	<3.5	105	<3.8	<4.1	<3.4	23,000
2-Methylnaphthalene	40.2	<10.6	<11.3	<9.8	131	<10.9	<11.6	<9.6	20,000
Naphthalene	37.4	<10.6	<11.3	<9.8	105	<10.9	<11.6	<9.6	400
Phenanthrene	120	<10.6	<11.3	<9.8	160	<10.9	<11.6	<9.6	1800
Pyrene	467	<10.6	<11.3	<9.8	170	<10.9	15.0 J	<9.6	500,000
<b>VOCs (µg/kg)</b>									
1,2,4-Trimethylbenzene	51.3 J	<25.0	<26.0	<25.0	<27.2	<25.8	<25.8	<25.5	NSE
Naphthalene	142	<25.0	<26.0	<25.0	<27.2	<25.8	<11.6	<25.5	NSE
Toluene	85.8	<25.0	<26.0	<25.0	54.0 J	<25.8	<11.6	<25.5	1,500
m&p-Xylene	85.1 J	<50.0	<52.1	<50.0	<54.3	<51.5	<11.6	<51.0	4,100
o-Xylene	66.8 J	<25.0	<26.0	<25.0	<27.2	<25.8	<11.6	<25.5	
<b>TCLP (mg/L)</b>									
Lead	NA	NA	NA	NA	<0.015	NA	NA	NA	
<b>RCRA Metals (mg/kg)</b>									
Arsenic	<b>6.6 J</b>	<b>2.3</b>	<b>5.7</b>	<b>4.7</b>	<b>8.4</b>	<b>12.3</b>	<b>6.0</b>	<b>4.4</b>	0.039
Barium	16.4	50.9	275	75.0	69.3	81.9	272	80.0	NSE
Cadmium	0.56	0.18 J	0.35 J	0.27 J	0.64	0.29 J	0.44 J	0.31 J	8
Chromium	4.7	13.3	<b>51.9</b>	<b>20.3</b>	13.3	<b>22.8</b>	<b>54.2</b>	<b>23.3</b>	14
Lead	<b>56.4</b>	4.3	15.1	5.9	<b>103</b>	6.2	14.9	6.6	50
Mercury	0.018	0.062	0.053	0.0069	1.7	0.0061 J	0.035	0.0093	NSE

Notes :

Analytes detected above the method detection limit in at least one sample are included in the table

GRO = gasoline range organics; DRO = diesel range organics; VOC = volatile organic compounds; TCLP = toxicity characteristic leaching procedure

RCRA = Resource Conservation and Recovery Act; **Bold** result indicates concentration exceeds NR 720 or Interim RCLs (Source: WDNR Publication RR-519-97)

mg/kg = milligrams per kilogram ; mg/L milligrams per liter; µg/kg = micrograms per kilogram

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

NSE = no standard established; RCL= residual contaminant level; NA = not analyzed

\* = RCLs (mg/kg) based on permeability of soils per NR 720 for groundwater protection

Refer to Attachment D for a complete laboratory report for each sample.

## 6.2 Groundwater Samples

Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-5-1 and MW-5-3, no VOCs or RCRA metals were detected at concentrations exceeding the respective NR 140 ES. Arsenic (6.5 J µg/L) was identified in MW-5-3 and chromium (2.0 J µg/L) was identified in MW-5-1, at concentrations above the respective NR 140 PAL. Barium (153 µg/L in MW-5-1 and 177 µg/L in MW-5-3) was detected below the NR 140 PAL in both samples. One VOC, p-Isopropyltoluene (0.43 J µg/L), was detected in temporary well MW-5-1; no standard exists for this compound.

Refer to Figure 3.3 in Attachment B for the well locations and Attachment D for the laboratory results.

TABLE 3 GROUNDWATER RESULTS Phase 2 Hazardous Materials Investigation Creative Tile and Marble (29 W. Main Street), Winneconne, Winnebago County Project ID: 6190-17-00				
Sample I.D.	MW-5-1	MW-5-3	NR 140 ES (µg/L)	NR 140 PAL (µg/L)
Collection Date	7/30/13	7/30/13		
<b>VOCs (µg/L)</b>				
p-Isopropyltoluene	0.43 J	<0.40	NSE	NSE
<b>RCRA Metals (µg/L)</b>				
Arsenic	<4.2	6.5 J	10	1
Barium	153	177	2,000	400
Cadmium	<0.48	<0.48	100	10
Chromium	2.0 J	<1.4	5	0.5
Lead	<2.7	<2.7	15	1.5
Mercury	<0.10	<0.10	2	0.2
Selenium	<5.2	<5.2	50	10
Silver	<1.7	<1.7	50	10
Notes: Analytes detected above the method detection limit in at least one sample are included in the table VOCs = volatile organic compounds RCRA = Resource Conservation and Recovery Act µg/L = micrograms per liter NSE = no standard established J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit <i>Italicized</i> results indicate concentration exceeds NR 140 Preventative Action Limit (PAL) <b>Bold</b> results indicate concentration exceeds NR 140 Enforcement Standard (ES)				

### **6.3 Waste Characterization Sample**

A composite soil sample (Proto B-5) was collected from the site and analyzed for landfill acceptance criteria (Protocol B), in order to provide waste characterization for potential off-site disposal and/or treatment of contaminated soils at a landfill.

Based on the laboratory analytical results, no cyanide, PCBs, TCLP VOCs, or TCLP semi-volatiles were detected in the sample. TCLP metal detected consisted of mercury (0.00064 mg/L). The general chemistry results for the sample included: flashpoint >210 deg. F; pH 8.8; specific gravity 1.4; sulfide 0.0 J mg/kg. No free liquids were encountered in the sample.

Table 4 presents a summary of soil quality results for the composite sample. See Attachment D for the complete laboratory report.

<b>TABLE 4</b> <b>LABORATORY ANALYTICAL RESULTS - Protocol B</b> <b>Phase 2 Hazardous Materials Investigation</b> <b>Creative Tile and Marble (29 W. Main Street), Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>		
<b>Sample I.D. Proto B-5</b>	<b>Sample Results</b>	<b>Units</b>
<b>General Chemistry</b>		
% of Solids	76.4	%
Cyanide (total)	0.0 J	mg/kg
Flashpoint	>210	°F
pH	8.8	pH Units
Specific Gravity	1.4	N/A
Free liquids	Pass	N/A
Sulfide	0.0 J	mg/kg
<b>TCLP Metals</b>		
Arsenic	<0.12	mg/L
Barium	<1.2	mg/L
Cadmium	<0.0025	mg/L
Chromium	<0.12	mg/L
Copper	<0.12	mg/L
Lead	<0.015	mg/L
Mercury	0.00064	mg/L
Nickel	<0.12	mg/L
Selenium	<0.12	mg/L
Silver	<0.12	mg/L
Zinc	<0.12	mg/L
<b>PCBs</b>		
PCB-1016	<0.0327	mg/kg
PCB-1221	<0.0327	mg/kg

**TABLE 4**  
**LABORATORY ANALYTICAL RESULTS - Protocol B**  
**Phase 2 Hazardous Materials Investigation**  
**Creative Tile and Marble (29 W. Main Street), Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D. Proto B-5	Sample Results	Units
<b>PCBs</b>		
PCB-1232	<0.0327	mg/kg
PCB-1242	<0.0327	mg/kg
PCB-1248	<0.0327	mg/kg
PCB-1254	<0.0327	mg/kg
PCB-1260	<0.0327	mg/kg
<b>TCLP VOCs</b>		
Benzene	<0.005	mg/L
Methyl Ethyl Ketone	<0.027	mg/L
Carbon Tetrachloride	<0.0037	mg/L
Chlorobenzene	<0.0036	mg/L
Chloroform	<0.0069	mg/L
1,2-Dichloroethane	<0.0048	mg/L
1,1-Dichloroethene	<0.0043	mg/L
Tetrachloroethene	<0.0047	mg/L
Trichloroethene	<0.0043	mg/L
Vinyl Chloride	<0.0018	mg/L
<b>TCLP Semi-VOCs</b>		
1,4-Dichlorobenzene	<0.0086	mg/L
2,4-Dinitrotoluene	<0.0080	mg/L
Hexachloro-1,3-butadiene	<0.0066	mg/L
Hexachlorobenzene	<0.0111	mg/L
Hexachloroethane	<0.0058	mg/L
2-Methylphenol (o-Cresol)	<0.0097	mg/L
3&4-Methylphenol (m&p Cresol)	<0.0077	mg/L
Nitrobenzene	<0.0137	mg/L
Pentachlorophenol	<0.0108	mg/L
Pyridine	<0.0143	mg/L
2,4,5-Trichlorophenol	<0.010	mg/L
2,4,6-Trichlorophenol	<0.0107	mg/L
Notes: VOCs = volatile organic compounds mg/kg = milligrams per kilogram mg/L = milligrams per liter TCLP = toxicity characteristic leaching procedure J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit		

## **7.0 FINDINGS**

- Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to depths of approximately 2 to 10 feet bgs. The fill materials consisted mainly of dark brown to black sand, partially decomposed wood fragments, medium to fine sand with gravel, cinders, and black peat. Native brown to red clays with trace amounts of fine gravel were encountered below the fill materials to the terminal depths ranging from approximately 15 to 20 feet bgs.
- No GRO was detected in any of the samples analyzed. DRO was detected in five of eight samples, below NR 720 standards.
- Several VOCs were detected in sample B-5-1 2-4' including 1,2,4-trimethylbenzene, naphthalene, toluene, and xylenes, at concentrations below the respective NR 720 RCL, if standards exist. Toluene was detected in sample B-5-3 2-4', below the NR 720 RCL.
- Six RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the eight samples analyzed. Chromium was detected in each of the soil samples. Concentrations in five samples (B-5-2 2-4', B-5-2 12-14', B-5-3 10-12', B-5-4 2-4', and B-5-4 8-10') were identified above the NR 720 RCL for hexavalent chromium.
- Lead was detected in each of the eight soil samples analyzed, and concentrations in B-5-1 2-4' and B-5-3 2-4' exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-5-3 2-4' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L.
- Cadmium was detected in each of the samples analyzed at concentrations which are below the NR 720 RCL. No standards exist for barium and mercury detected in the samples.
- Eighteen PAHs were detected in several of the soil samples analyzed. Benzo(a)pyrene in B-5-1 2-4' and B-5-3 2-4', benzo(b)fluoranthene in B-5-1 2-4' and B-5-3 2-4'), dibenzo(a,h)anthracene in B-5-1 2-4' and B-5-3 2-4'), benzo(a)anthracene in B-5-3 2-4' and indeno(1,2,3-c,d)pyrene in B-5-3 2-4' were identified at concentrations above the respective Interim RCL for PAHs.
- Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-5-1 and MW-5-3, no VOCs or RCRA metals were detected at concentrations exceeding the respective NR 140 ES. Arsenic was identified in MW-5-3 and chromium was identified in MW-5-1, at concentrations above the respective NR 140 PAL. Barium was

detected below the NR 140 PAL in both samples. One VOC, p-Isopropyltoluene, was detected in temporary well MW-5-1; no standard exists for this compound.

- Based on the laboratory analytical results of the waste characterization sample, no cyanide, PCBs, TCLP VOCs, or TCLP semi-volatiles were detected in the sample. TCLP metal detected consisted of mercury (0.00064 mg/L). The general chemistry results for the sample included: flashpoint >210 deg. F; pH 8.8; specific gravity 1.4; sulfide 0.0 J mg/kg. No free liquids were encountered in the sample.
- Based on the age of the building (at least 1929), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

- Based on the results of Himalayan's Phase 2 HMI, evidence of a hazardous substance release (petroleum and RCRA metals impacts) was documented at the site. Petroleum and RCRA metals impacts detected in the soil borings appear to be associated with the former/current use of the site as boat repair, milk factory, tin shop, for coal storage, etc. Therefore, Himalayan recommends that a Phase 3 hazardous materials investigation (FDM Procedure: 21-35-15) be considered for the site to fully characterize and define the lateral and vertical extent of soil and groundwater contamination and assist in determining the value of the parcel for acquisition purposes, prior to the total take of the site.
- The petroleum and RCRA metals impacts discovered at the site should be reported to the WDNR in order to satisfy the notification requirements per hazardous substance spills law, Section 292.11(2).
- Pre-demolition asbestos and lead surveys should be performed to evaluate whether ACMs or LBP are present in the structure. All demolition activities should be performed in accordance with local, state, and federal regulations.

## **9.0 REFERENCES**

1. Winnebago County GIS Website. WINGS Property Profiler.  
[http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis\\_menu.cgi](http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis_menu.cgi)
2. Himalayan Consultants, LLC, (August 2012). Phase I Hazardous Material Assessment, WisDOT Project ID 1030-20-00, STH 116 Corridor Study (2nd Street - 2nd Avenue), Winneconne, Winnebago County, Wisconsin.
3. Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP). Storage Tank Database. [http://apps.commerce.state.wi.us/ER\\_Tanks/ER-EN-TankSearch.htm](http://apps.commerce.state.wi.us/ER_Tanks/ER-EN-TankSearch.htm)

4. Wisconsin Department of Transportation (December 2011). Facilities Development Manual, Procedures 21-35-10 and 21-35-30.
5. Wisconsin Department Natural Resources (March 2011). Wisconsin Administrative Code NR 141, Groundwater Monitoring Well Requirements.
6. Wisconsin Department Natural Resources (September 2007). Wisconsin Administrative Code NR 720, Soil Cleanup Standards.
7. Wisconsin Department Natural Resources (April 1997). Interim Guidance on Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons.
8. Wisconsin Department Natural Resources (January 2012). Wisconsin Administrative Code NR 140, Groundwater Quality.

## **ATTACHMENTS**

Attachment A. Figures

- Figure 3.1 Site Overview Map
- Figure 3.2 Soil Quality Map
- Figure 3.3 Groundwater Quality Map

Attachment B. Soil Boring Logs and Borehole Abandonment Forms

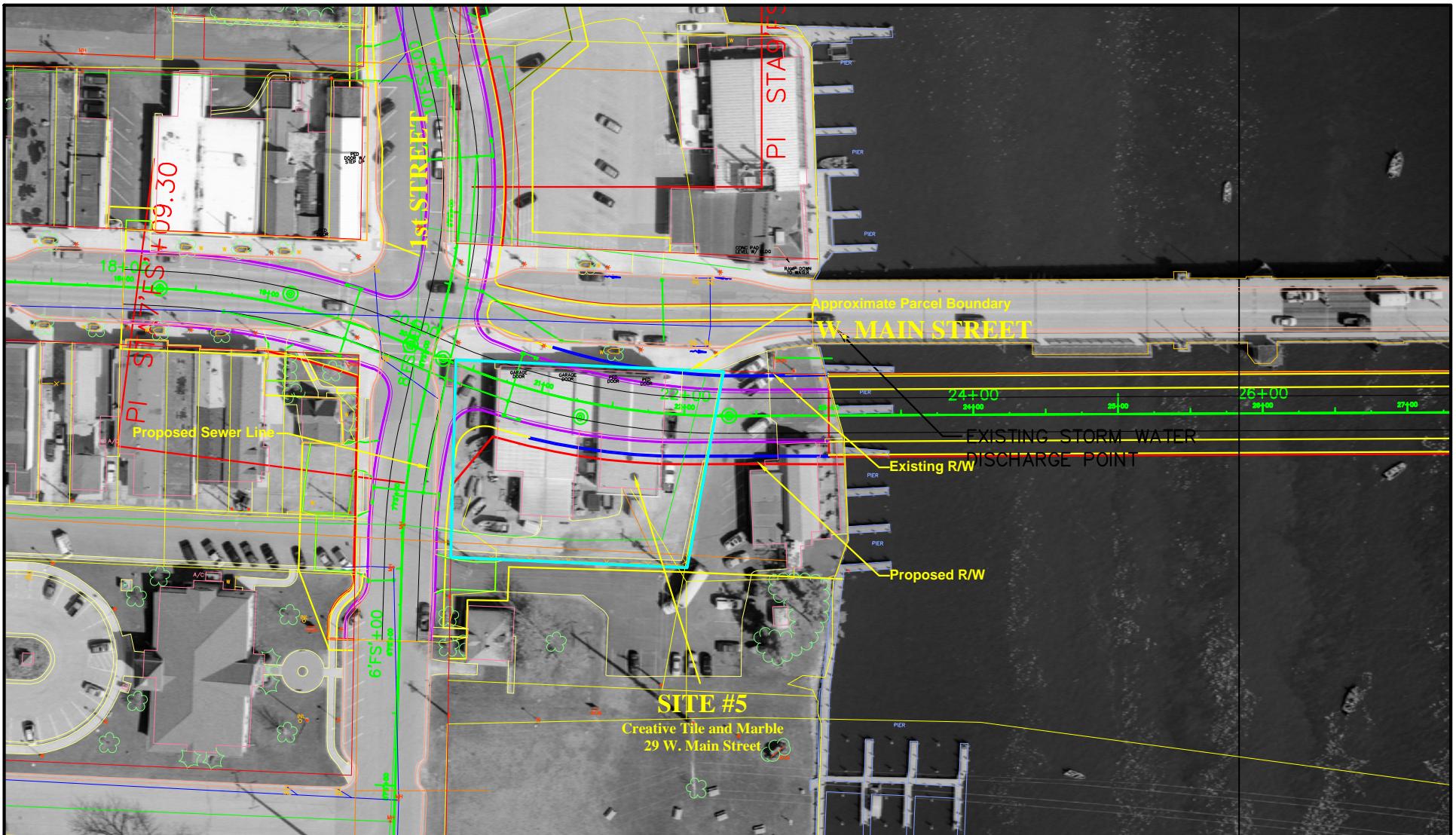
Attachment C. Well Construction Forms

Attachment D. Laboratory Analytical Reports – Soil, Groundwater, and Waste Characterization

Attachment E. Site Photographs

## **ATTACHMENT A**

### **FIGURES**

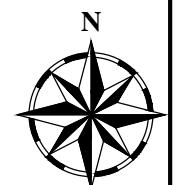


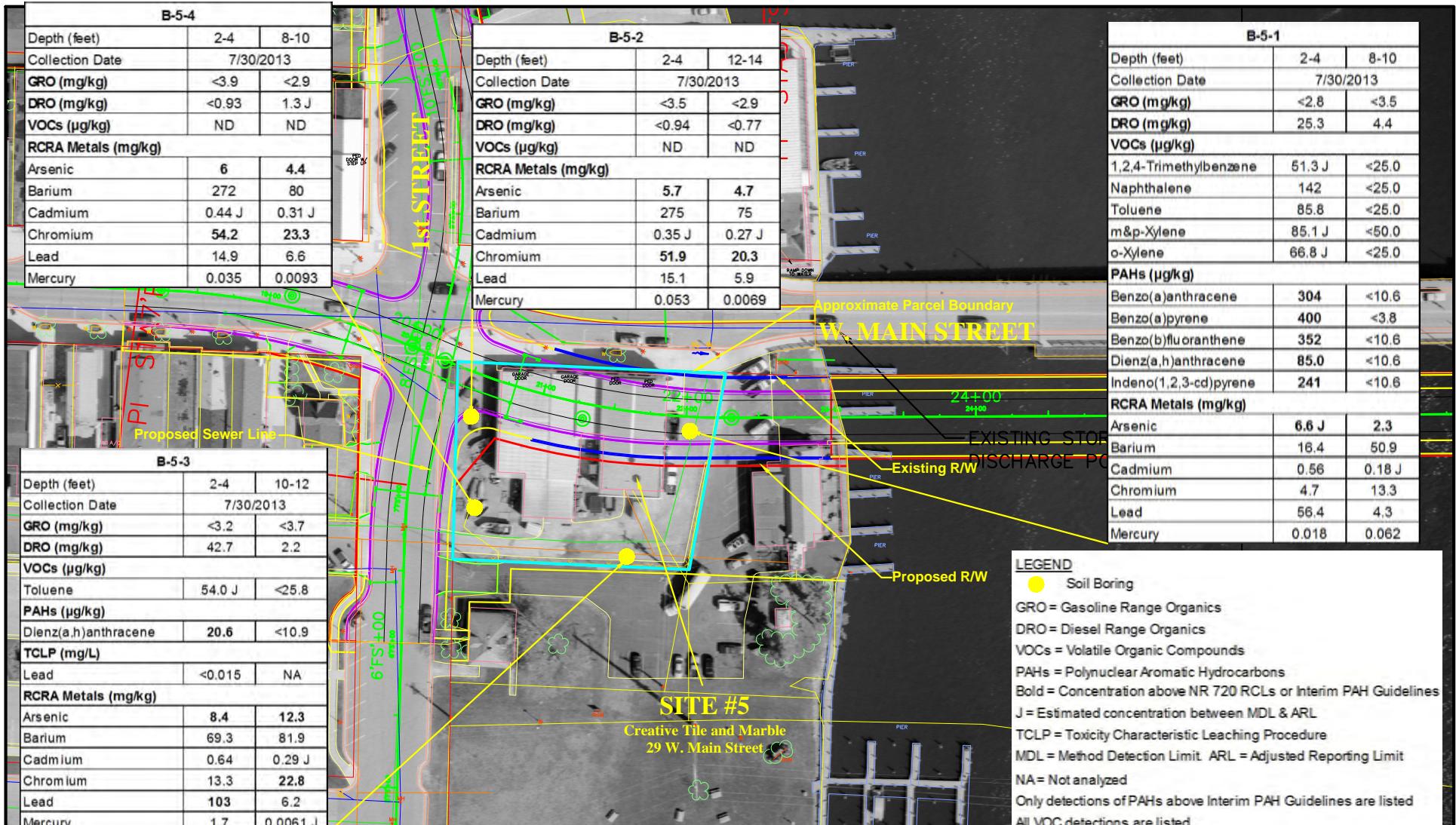
**FIGURE 3.1: SITE OVERVIEW MAP**



**HIMALAYAN CONSULTANTS, LLC**  
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Fax: (262) 502-0077

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin





Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

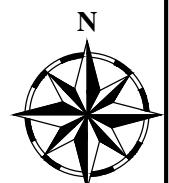
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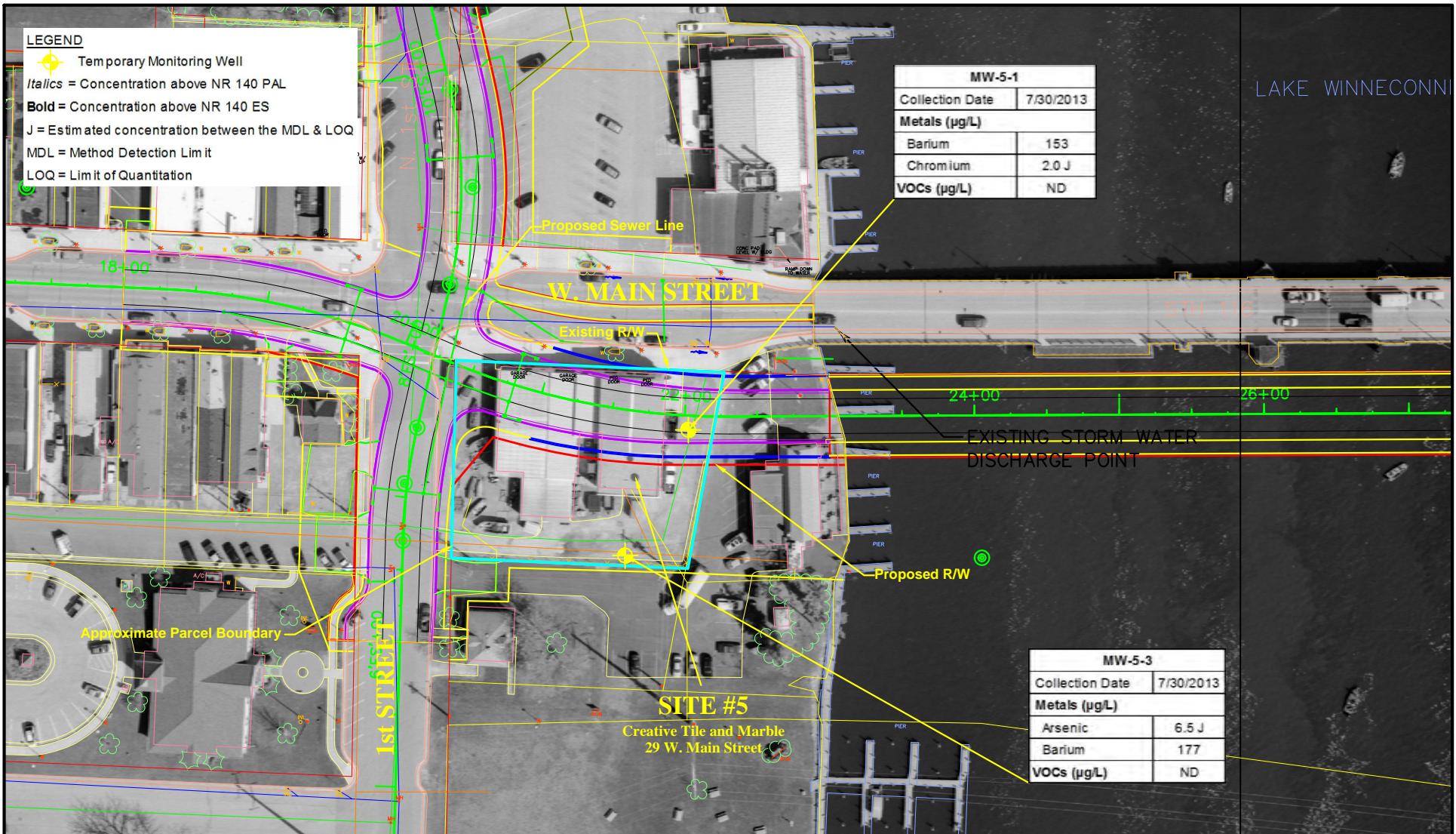


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**FIGURE 3.2: SOIL QUALITY MAP**

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin



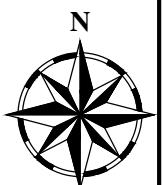


**FIGURE 3.3: GROUNDWATER QUALITY MAP**



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Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin



## **ATTACHMENT B**

### **SOIL BORING LOGS AND BOREHOLE ABANDONMENT FORMS**



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #5

Boring No. B-5-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm											
	Type	Recov.	Moist.	N-Value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf												
1	GP 38"	D	D	0	0	Gravel pavement with little light brown, fine sand (fill)						0											
					2	Light brown, medium sand with little gravel (fill)																	
		M	M	4	2	Dark brown to black sand, with some gravel and possible coal fragments (fill)																	
					4	Lab Sample (2' - 4')																	
					4	Small and large gravel, with few brown sand (fill)																	
	GP 54"	M	M	4	4	Dark brown to black sand, with some gravel and trace silt (fill)																	
					6	Gray sand with some gravel and trace wood fragments (fill)																	
		W	W	6	6	Wet at 5.0'																	
					6	Partially decomposed wood fragments (fill)																	
					8	Black peat (fill)																	
2	GP 54"	M	M	8	8	Lab Sample (8' - 10')																	
					10	Grayish brown high plasticity clay																	
WATER LEVEL OBSERVATIONS							GENERAL NOTES																
While Drilling _____							Start <u>7/30/13</u>	Complete <u>7/30/13</u>															
Upon Completion of Drilling <u>4.9 feet</u>							Crew Chief <u>AS</u>	Rig <u>B-57</u>															
Time After Drilling _____							Drilling Method:	<u>Geoprobe</u>															
Depth to Water _____																							
Depth to Cave-in _____																							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



## **LOG OF TEST BORING**

Himalayan Consultants, LLC

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

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Boring No. B-5-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

*W156 N11357 Pilgrim Rd., Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077*

**NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.**

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>									
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #5</b>									
Common Well Name <u>B-5-1</u> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.								
NE 1/4 of NW 1/4 of Sec. <u>21</u> ; T. <u>19</u> N; R. <u>15</u> <input checked="" type="checkbox"/> E Grid Location _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>29-31 W. Main Street</b>									
			City, Village or Town <b>Winneconne</b>									
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			Present Well Owner	Original Owner								
Lat. _____ Long. _____ or			Street Address or Route of Owner									
St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone			City, State, Zip Code									
Reason For Abandonment <b>Temporary well</b>		(3) WELL/DRILLHOLE/BOREHOLE INFORMATION										
		<b>(4) PUMP, LINER, SCREEN, CASING &amp; SEALING MATERIAL</b> Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No  Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No  Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>  Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips  For monitoring wells and monitoring well boreholes or <input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grou <input type="checkbox"/> Bentonite - Sand Slurry										
Original Construction Date <u>7/30/13</u>  <input type="checkbox"/> Monitoring Well      If a Well Construction Report <input type="checkbox"/> Water Well      is available, please attach. <input checked="" type="checkbox"/> Borehole / Drillhole												
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>												
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock												
Total Well Depth (ft.) <u>15.0</u> Casing Diameter (in.) _____ (From groundsurface)												
Casing Depth (ft.) _____  Lower Drillhole Diameter (in.) _____												
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet												
Depth to Water (Feet) <u>4.9</u> Feet												
(5) Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight						
<b>3/8" Chipped Bentonite</b>			<b>Surface</b>	<b>15</b>	<b>20 lbs</b>							
(6) Comments												
(7) Name of Person or Firm Doing Sealing Work <b>Horizon</b>			Date of Abandonment <u>7/30/13</u>									
Signature of Person Doing Work			Date Signed									
Street or Route <b>1402 7th Avenue</b>			Telephone Number <b>262-377-9060</b>									
City, State, Zip Code												
<b>FOR DNR OR COUNTY USE ONLY</b> <table border="1"> <tr> <td>Date Received</td> <td>Noted By</td> </tr> <tr> <td colspan="2">Comments</td> </tr> <tr> <td colspan="2"></td> </tr> </table>							Date Received	Noted By	Comments			
Date Received	Noted By											
Comments												



## **LOG OF TEST BORING**

Himalayan Consultants, LLC

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

---

Boring No. B-5-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

*W156 N11357 Pilgrim Rd., Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077*

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-Value	Depth (ft)					q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf		
1	GP 50"	D	D	D	0		Gravel pavement with some medium grain brown sand (fill)									0
					2		Red medium plasticity clay, with trace small gravel(fill)									0
					4		Dark brown to black medium grain sand, with trace charred wood fragments (fill)									0
					6		Red medium plasticity clay, with trace large gravel									0
					8		Lab Sample (2' - 4')									0
2	GP 60"	M			10		Red medium plasticity clay, with trace large and small gravel									0
					12		No Recovery (10' - 12')									0
WATER LEVEL OBSERVATIONS										GENERAL NOTES						
While Drilling _____										Start	7/30/13	Complete	7/30/13			
Upon Completion of Drilling Dry _____										Crew Chief	AS	Rig	B-57			
Time After Drilling _____										Drilling Method:	Geoprobe					
Depth to Water _____																
Depth to Cave-in _____																

**NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.**



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #5

Boring No. B-5-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 36"		M		12	Red medium plasticity clay, with little large and small gravel						0
					14	Lab Sample (12' - 14')						0
			M		16	Red medium plasticity clay, with trace small gravel						0
			D		18	Light brown medium to coarse grain sand, with some small and large gravel						0
					20	Brown medium plasticity clay, with trace large gravel						0
4	GP 60"	M			20	End of Boring = 20.0 Feet						0
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>										
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #5</b>										
Common Well Name <b>B-5-2</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.									
Grid Location NE 1/4 of NW 1/4 of Sec. 21 ; T. 19 N; R. 15 <input checked="" type="checkbox"/> E ft. <input type="checkbox"/> N. <input type="checkbox"/> S., ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>29-31 W. Main Street</b>										
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>										
Lat. _____ Long. _____ or St. Plane _____ ft. N. ft. E. <input type="checkbox"/> S. <input type="checkbox"/> C. <input type="checkbox"/> N. Zone			Present Well Owner   Original Owner										
Reason For Abandonment <b>Temporary well</b>			Street Address or Route of Owner										
			City, State, Zip Code										
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>													
Original Construction Date <b>7/30/13</b>			Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No										
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole			If a Well Construction Report is available, please attach.										
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>			Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No										
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>										
Total Well Depth (ft.) <b>20.0</b> Casing Diameter (in.) _____ (From groundsurface) Casing Depth (ft.) _____			Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips										
Lower Drillhole Diameter (in.) _____ Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			For monitoring wells and monitoring well boreholes only <input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grout <input type="checkbox"/> Bentonite - Sand Slurry										
Depth to Water (Feet) <b>Dry</b> Feet													
<b>(5)</b> Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume								
<b>3/8" Chipped Bentonite</b>			<b>Surface</b>	<b>20</b>	<b>25 lbs</b>								
<b>(6) Comments</b> _____													
<b>(7) Name of Person or Firm Doing Sealing Work</b>			<b>Date of Abandonment</b>										
<b>Horizon</b>			<b>7/30/13</b>										
Signature of Person Doing Work		Date Signed											
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>											
Comments													
<table border="1"> <tr> <td colspan="2"><b>FOR DNR OR COUNTY USE ONLY</b></td> </tr> <tr> <td>Date Received</td> <td>Noted By</td> </tr> <tr> <td colspan="2">Comments</td> </tr> <tr> <td colspan="2"></td> </tr> </table>						<b>FOR DNR OR COUNTY USE ONLY</b>		Date Received	Noted By	Comments			
<b>FOR DNR OR COUNTY USE ONLY</b>													
Date Received	Noted By												
Comments													



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #5

Boring No. B-5-3  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 38"	D	M	M	0	Gravel pavement with some medium grain light brown sand (fill)						0
					2	Dark brown to black clayey sand, with little sand and trace gravel(fill)						
					4	Lab Sample (2' - 4')						
					6	Wood fragments (fill)						
					8	Wood fragments with little cinders (fill)						
		W	M	W	10	Brown medium plasticity clay, with little small and large gravel Wet at 7.0'						
					12	Red medium plasticity clay, with little small and large gravel						
					14	Red medium plasticity clay, with little small and large gravel						
					16	Lab Sample (10' - 12')						
					18							
WATER LEVEL OBSERVATIONS							GENERAL NOTES					
While Drilling							Start	7/30/13	Complete	7/30/13		
Upon Completion of Drilling	4.5 feet						Crew Chief	AS	Rig	B-57		
Time After Drilling							Drilling Method:	Geoprobe				
Depth to Water												
Depth to Cave-in												

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

Location Site #5

Boring No. B-5-3  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 42"		M			 End of Boring = 15.0 Feet						0
						12						0
						14						
						16						
						18						
						20						
						22						
						24						

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>				
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #5</b>				
Common Well Name <u>B-5-3</u> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.			
Grid Location <u>NE</u> 1/4 of <u>NW</u> 1/4 of Sec. <u>21</u> ; T. <u>19</u> N; R. <u>15</u> <input checked="" type="checkbox"/> E ft. <input type="checkbox"/> N. <input type="checkbox"/> S., <input type="checkbox"/> ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>29-31 W. Main Street</b>				
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>				
Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> N Zone			Present Well Owner Original Owner				
Reason For Abandonment <b>Temporary well</b> of Replacement Well			Street Address or Route of Owner				
			City, State, Zip Code				
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>							
Original Construction Date <u>7/30/13</u>			<b>(4) PUMP, LINER, SCREEN, CASING &amp; SEALING MATERIAL</b>				
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole		If a Well Construction Report is available, please attach.		Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable			
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <u>Direct Push</u>			Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable		Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable		
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Total Well Depth (ft.) <u>15.0</u> Casing Diameter (in.) _____ (From groundsurface)			Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Casing Depth (ft.) _____			If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Lower Drillhole Diameter (in.) _____			Required Method of Placing Sealing Material				
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped		<input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>		
Depth to Water (Feet) <u>4.5</u> Feet			Sealing Materials			For monitoring wells and monitoring well boreholes or	
(5) Material Used To Fill Well/Drillhole			<input type="checkbox"/> Neat Cement Grout	<input type="checkbox"/> Bentonite Pellets			
<b>3/8" Chipped Bentonite</b>			<input type="checkbox"/> Sand-Cement (Concrete) Grout	<input type="checkbox"/> Granular Bentonite			
			<input type="checkbox"/> Concrete	<input type="checkbox"/> Bentonite-Cement Grou			
			<input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)	<input type="checkbox"/> Bentonite - Sand Slurry			
			<input type="checkbox"/> Bentonite-Sand Slurry " "				
			<input checked="" type="checkbox"/> Bentonite Chips				
(6) Comments _____							
(7) Name of Person or Firm Doing Sealing Work <b>Horizon</b>			Date of Abandonment <u>7/30/13</u>	<b>FOR DNR OR COUNTY USE ONLY</b>			
Signature of Person Doing Work		Date Signed	Date Received	Noted By			
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>	Comments				
City, State, Zip Code <b>Grafton, WI 53024</b>							



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #5

Boring No. B-5-4  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	Type	Recov.	Moist.	N-V Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
							q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 50"		D		0	Fine gray sand with some small and large gravel (fill)						0
			M		2	Brown to black and red fine sand, silt, and clay, with few small and large gravel, and few cinders (fill)						0
			M		4	Red medium plastic clay with trace small and large gravel Lab Sample (2' - 4')						0
			M		6	Red medium plastic clay with trace small and large gravel						0
			M		8	Lab Sample (8' - 10')						0
2	GP 60"		M		10	Red medium plastic clay with trace small and large gravel						0
WATER LEVEL OBSERVATIONS							GENERAL NOTES					
While Drilling _____							Start <u>7/30/13</u>	Complete <u>7/30/13</u>				
Upon Completion of Drilling <u>Dry</u>							Crew Chief <u>AS</u>	Rig <u>B-57</u>				
Time After Drilling _____							Drilling Method: <u>Geoprobe</u>					
Depth to Water _____												
Depth to Cave-in _____												

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

Location Site #5

Boring No. B-5-4  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60"		M			 End of Boring = 15.0 Feet						0
						12						0
						14						
						16						
						18						
						20						
						22						
						24						

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

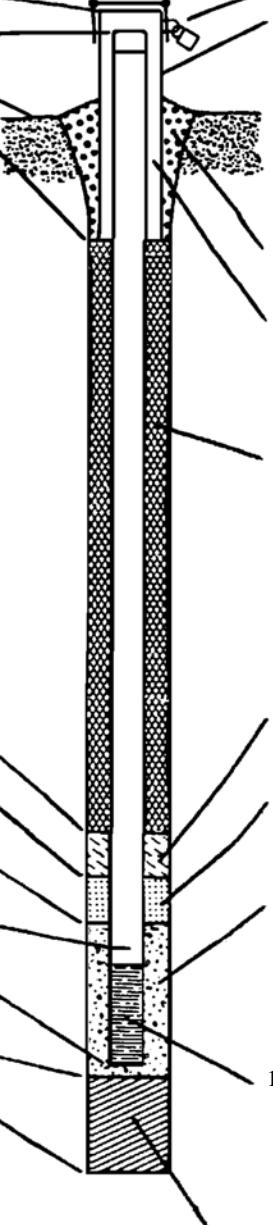
**ATTACHMENT C**

**WELL CONSTRUCTION FORMS**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-5-1</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	
Facility ID		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Type of Well Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	_____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	_____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	_____ ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom	_____ ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top	_____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
F. Fine sand, top	_____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --	
G. Filter pack, top	_____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above	
H. Screen joint, top	_____ ft. MSL or <b>5</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8	
I. Well bottom	_____ ft. MSL or <b>15</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
J. Filter pack, bottom	_____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
K. Borehole bottom	_____ ft. MSL or <b>15</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
L. Borehole diameter	<b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
M. O.D. well casing	<b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
N. I.D. well casing	<b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/> --			



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

Signature

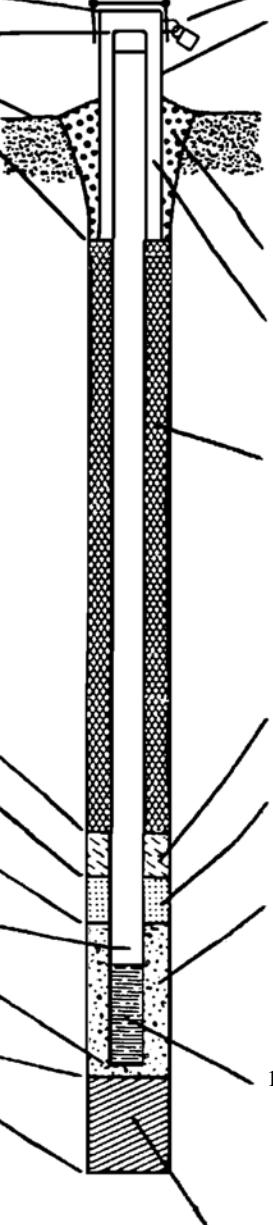
Firm **Himalayan Consultants, LLC**

**W156 N11357 Pilgrim Road, Germantown, WI 53022**  
**Tel. (262) 502-0066, Fax (262) 502-0077**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-5-2</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/30/13</b>	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom	ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top	ft. MSL or _____ ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
F. Fine sand, top	ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup> --	
G. Filter pack, top	ft. MSL or _____ ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup> --	
H. Screen joint, top	ft. MSL or <b>10</b> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
I. Well bottom	ft. MSL or <b>20</b> ft.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
J. Filter pack, bottom	ft. MSL or _____ ft.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
K. Borehole bottom	ft. MSL or <b>20</b> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/> --	
L. Borehole diameter	in.		
M. O.D. well casing	in.		
N. I.D. well casing	in.		



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

Signature

Firm **Himalayan Consultants, LLC**

W156 N11357 Pilgrim Road, Germantown, WI 53022  
Tel. (262) 502-0066, Fax (262) 502-0077

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-5-3</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/30/13</b>	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	_____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	_____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	<b>O</b> ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 <b>N/A</b> Other <input type="checkbox"/> --	
D. Surface seal, bottom	_____ ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top	_____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
F. Fine sand, top	_____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --	
G. Filter pack, top	_____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above	
H. Screen joint, top	_____ ft. MSL or <b>5</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8	
I. Well bottom	_____ ft. MSL or <b>15</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
J. Filter pack, bottom	_____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
K. Borehole bottom	_____ ft. MSL or <b>15</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
L. Borehole diameter	<b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
M. O.D. well casing	<b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
N. I.D. well casing	<b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
11. Backfill material (below filter pack): None <input type="checkbox"/> 1 4 Other <input type="checkbox"/> --			

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

Signature

Firm **Himalayan Consultants, LLC**

**W156 N11357 Pilgrim Road, Germantown, WI 53022**

**Tel. (262) 502-0066, Fax (262) 502-0077**

## **ATTACHMENT D**

### **LABORATORY ANALYTICAL REPORTS - SOIL, GROUNDWATER, AND WASTE CHARACTERIZATION**

## **SOIL ANALYTICAL**

August 26, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REVISED REPORT: TCLP lead has been added to 4082157005.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082157001	B-5-1 (2-4)	Solid	07/30/13 12:00	08/02/13 09:45
4082157002	B-5-1 (8-10)	Solid	07/30/13 12:05	08/02/13 09:45
4082157003	B-5-2 (2-4)	Solid	07/30/13 12:20	08/02/13 09:45
4082157004	B-5-2 (12-14)	Solid	07/30/13 13:05	08/02/13 09:45
4082157005	B-5-3 (2-4)	Solid	07/30/13 14:00	08/02/13 09:45
4082157006	B-5-3 (10-12)	Solid	07/30/13 14:05	08/02/13 09:45
4082157007	B-5-4 (2-4)	Solid	07/30/13 13:30	08/02/13 09:45
4082157008	B-5-4 (8-10)	Solid	07/30/13 13:35	08/02/13 09:45
4082157009	TRIP BLANK	Water	07/30/13 00:00	08/02/13 09:45

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082157001	B-5-1 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082157002	B-5-1 (8-10)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082157003	B-5-2 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082157004	B-5-2 (12-14)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082157005	B-5-3 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
4082157006	B-5-3 (10-12)	ASTM D2974-87	SKW	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082157

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082157007	<b>B-5-4 (2-4)</b>	WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
4082157008	<b>B-5-4 (8-10)</b>	EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
4082157009	<b>TRIP BLANK</b>	EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 8260	HNW	64	PASI-G

## REPORT OF LABORATORY ANALYSIS

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**HITS ONLY**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Lab Sample ID	Client Sample ID	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>4082157001</b>	<b>B-5-1 (2-4)</b>						
WI MOD DRO	Diesel Range Organics		25.3	mg/kg	1.9	08/06/13 11:47	T4
EPA 6010	Arsenic		6.6J	mg/kg	9.4	08/06/13 19:19	D3
EPA 6010	Barium		16.4	mg/kg	0.47	08/06/13 15:42	
EPA 6010	Cadmium		0.56	mg/kg	0.47	08/06/13 15:42	
EPA 6010	Chromium		4.7	mg/kg	0.47	08/06/13 15:42	
EPA 6010	Lead		56.4	mg/kg	0.94	08/06/13 15:42	
EPA 7471	Mercury		0.018	mg/kg	0.0074	08/15/13 11:19	
EPA 8270 by SIM	Acenaphthene		9.3J	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Acenaphthylene		15.7J	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Anthracene		58.8	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Benzo(a)anthracene		304	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Benzo(a)pyrene		400	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Benzo(b)fluoranthene		352	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Benzo(g,h,i)perylene		276	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Benzo(k)fluoranthene		358	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Chrysene		362	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Dibenz(a,h)anthracene		85.0	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Fluoranthene		455	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Fluorene		10.5J	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene		241	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	1-Methylnaphthalene		33.6	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	2-Methylnaphthalene		40.2	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Naphthalene		37.4	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Phenanthrene		120	ug/kg	18.4	08/06/13 11:54	
EPA 8270 by SIM	Pyrene		467	ug/kg	18.4	08/06/13 11:54	
EPA 8260	1,2,4-Trimethylbenzene		51.3J	ug/kg	69.9	08/05/13 21:02	
EPA 8260	Naphthalene		142	ug/kg	69.9	08/05/13 21:02	
EPA 8260	Toluene		85.8	ug/kg	69.9	08/05/13 21:02	
EPA 8260	m&p-Xylene		85.1J	ug/kg	140	08/05/13 21:02	
EPA 8260	o-Xylene		66.8J	ug/kg	69.9	08/05/13 21:02	
ASTM D2974-87	Percent Moisture		9.6	%	0.10	08/05/13 11:19	
<b>4082157002</b>	<b>B-5-1 (8-10)</b>						
WI MOD DRO	Diesel Range Organics		4.4	mg/kg	1.9	08/06/13 11:53	
EPA 6010	Arsenic		2.3	mg/kg	2.2	08/06/13 15:49	
EPA 6010	Barium		50.9	mg/kg	0.55	08/06/13 15:49	
EPA 6010	Cadmium		0.18J	mg/kg	0.55	08/06/13 15:49	
EPA 6010	Chromium		13.3	mg/kg	0.55	08/06/13 15:49	
EPA 6010	Lead		4.3	mg/kg	1.1	08/06/13 15:49	
EPA 7471	Mercury		0.062	mg/kg	0.0074	08/15/13 11:31	
ASTM D2974-87	Percent Moisture		21.4	%	0.10	08/13/13 13:23	
<b>4082157003</b>	<b>B-5-2 (2-4)</b>						
EPA 6010	Arsenic		5.7	mg/kg	4.7	08/07/13 12:06	
EPA 6010	Barium		275	mg/kg	1.2	08/07/13 12:06	
EPA 6010	Cadmium		0.35J	mg/kg	1.2	08/07/13 12:06	D3
EPA 6010	Chromium		51.9	mg/kg	1.2	08/07/13 12:06	
EPA 6010	Lead		15.1	mg/kg	2.3	08/07/13 12:06	

**REPORT OF LABORATORY ANALYSIS**

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Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>4082157003</b>	<b>B-5-2 (2-4)</b>					
EPA 7471	Mercury	0.053 mg/kg		0.0089	08/15/13 11:34	
ASTM D2974-87	Percent Moisture	26.2 %		0.10	08/13/13 13:23	
<b>4082157004</b>	<b>B-5-2 (12-14)</b>					
EPA 6010	Arsenic	4.7 mg/kg		2.3	08/06/13 15:35	
EPA 6010	Barium	75.0 mg/kg		0.59	08/06/13 15:35	
EPA 6010	Cadmium	0.27J mg/kg		0.59	08/06/13 15:35	
EPA 6010	Chromium	20.3 mg/kg		0.59	08/06/13 15:35	
EPA 6010	Lead	5.9 mg/kg		1.2	08/06/13 15:35	
EPA 7471	Mercury	0.0069 mg/kg		0.0068	08/15/13 11:40	
ASTM D2974-87	Percent Moisture	15.1 %		0.10	08/13/13 13:23	
<b>4082157005</b>	<b>B-5-3 (2-4)</b>					
WI MOD DRO	Diesel Range Organics	42.7 mg/kg		2.0	08/09/13 09:56	T4
EPA 6010	Arsenic	8.4 mg/kg		2.1	08/06/13 15:53	
EPA 6010	Barium	69.3 mg/kg		0.51	08/06/13 15:53	
EPA 6010	Cadmium	0.64 mg/kg		0.51	08/06/13 15:53	
EPA 6010	Chromium	13.3 mg/kg		0.51	08/06/13 15:53	
EPA 6010	Lead	103 mg/kg		1.0	08/06/13 15:53	
EPA 7471	Mercury	1.7 mg/kg		0.15	08/15/13 12:19	
EPA 8270 by SIM	Anthracene	34.7 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Benzo(a)anthracene	85.0 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Benzo(a)pyrene	90.9 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Benzo(b)fluoranthene	100 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Benzo(g,h,i)perylene	60.3 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Benzo(k)fluoranthene	82.5 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Chrysene	119 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Dibenz(a,h)anthracene	20.6 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Fluoranthene	182 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	51.8 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	1-Methylnaphthalene	105 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	2-Methylnaphthalene	131 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Naphthalene	105 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Phenanthrene	160 ug/kg		19.7	08/06/13 11:36	
EPA 8270 by SIM	Pyrene	170 ug/kg		19.7	08/06/13 11:36	
EPA 8260	Toluene	54.0J ug/kg		77.0	08/06/13 14:47	
ASTM D2974-87	Percent Moisture	15.3 %		0.10	08/13/13 13:24	
<b>4082157006</b>	<b>B-5-3 (10-12)</b>					
WI MOD DRO	Diesel Range Organics	2.2 mg/kg		2.1	08/09/13 10:02	
EPA 6010	Arsenic	12.3 mg/kg		2.3	08/06/13 15:56	
EPA 6010	Barium	81.9 mg/kg		0.56	08/06/13 15:56	
EPA 6010	Cadmium	0.29J mg/kg		0.56	08/06/13 15:56	
EPA 6010	Chromium	22.8 mg/kg		0.56	08/06/13 15:56	
EPA 6010	Lead	6.2 mg/kg		1.1	08/06/13 15:56	
EPA 7471	Mercury	0.0061J mg/kg		0.0080	08/15/13 11:44	
ASTM D2974-87	Percent Moisture	23.4 %		0.10	08/13/13 13:24	

**REPORT OF LABORATORY ANALYSIS**

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**HITS ONLY**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>4082157007</b>	<b>B-5-4 (2-4)</b>					
EPA 6010	Arsenic	6.0	mg/kg	4.9	08/07/13 12:08	
EPA 6010	Barium	272	mg/kg	1.2	08/07/13 12:08	
EPA 6010	Cadmium	0.44J	mg/kg	1.2	08/07/13 12:08	D3
EPA 6010	Chromium	54.2	mg/kg	1.2	08/07/13 12:08	
EPA 6010	Lead	14.9	mg/kg	2.4	08/07/13 12:08	
EPA 7471	Mercury	0.035	mg/kg	0.0092	08/15/13 11:46	
EPA 8270 by SIM	Benzo(a)pyrene	5.1J	ug/kg	23.2	08/13/13 16:57	
EPA 8270 by SIM	Benzo(b)fluoranthene	19.7J	ug/kg	23.2	08/13/13 16:57	
EPA 8270 by SIM	Benzo(k)fluoranthene	6.4J	ug/kg	23.2	08/13/13 16:57	
EPA 8270 by SIM	Fluoranthene	15.6J	ug/kg	23.2	08/13/13 16:57	
EPA 8270 by SIM	Pyrene	15.0J	ug/kg	23.2	08/13/13 16:57	
ASTM D2974-87	Percent Moisture	28.1	%	0.10	08/13/13 13:24	
<b>4082157008</b>	<b>B-5-4 (8-10)</b>					
WI MOD DRO	Diesel Range Organics	1.3J	mg/kg	2.0	08/09/13 10:14	
EPA 6010	Arsenic	4.4	mg/kg	2.1	08/06/13 16:01	
EPA 6010	Barium	80.0	mg/kg	0.53	08/06/13 16:01	
EPA 6010	Cadmium	0.31J	mg/kg	0.53	08/06/13 16:01	
EPA 6010	Chromium	23.3	mg/kg	0.53	08/06/13 16:01	
EPA 6010	Lead	6.6	mg/kg	1.1	08/06/13 16:01	
EPA 7471	Mercury	0.0093	mg/kg	0.0059	08/15/13 11:48	
ASTM D2974-87	Percent Moisture	12.8	%	0.10	08/13/13 13:24	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-1 (2-4) Lab ID: 4082157001 Collected: 07/30/13 12:00 Received: 08/02/13 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	25.3 mg/kg		1.9	0.76	1	08/05/13 09:23	08/06/13 11:47		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.8 mg/kg		2.8	2.8	1	08/05/13 08:14	08/05/13 17:41		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	6.6J mg/kg		9.4	2.6	5	08/05/13 15:10	08/06/13 19:19	7440-38-2	D3
Barium	16.4 mg/kg		0.47	0.082	1	08/05/13 15:10	08/06/13 15:42	7440-39-3	
Cadmium	0.56 mg/kg		0.47	0.048	1	08/05/13 15:10	08/06/13 15:42	7440-43-9	
Chromium	4.7 mg/kg		0.47	0.12	1	08/05/13 15:10	08/06/13 15:42	7440-47-3	
Lead	56.4 mg/kg		0.94	0.28	1	08/05/13 15:10	08/06/13 15:42	7439-92-1	
Selenium	<0.56 mg/kg		1.9	0.56	1	08/05/13 15:10	08/06/13 15:42	7782-49-2	
Silver	<0.20 mg/kg		0.94	0.20	1	08/05/13 15:10	08/06/13 15:42	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.018 mg/kg		0.0074	0.0037	1	08/14/13 15:27	08/15/13 11:19	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	9.3J ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	83-32-9	
Acenaphthylene	15.7J ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	208-96-8	
Anthracene	58.8 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	120-12-7	
Benzo(a)anthracene	304 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	56-55-3	
Benzo(a)pyrene	400 ug/kg		18.4	3.3	1	08/05/13 10:49	08/06/13 11:54	50-32-8	
Benzo(b)fluoranthene	352 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	205-99-2	
Benzo(g,h,i)perylene	276 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	191-24-2	
Benzo(k)fluoranthene	358 ug/kg		18.4	3.3	1	08/05/13 10:49	08/06/13 11:54	207-08-9	
Chrysene	362 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	218-01-9	
Dibenz(a,h)anthracene	85.0 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	53-70-3	
Fluoranthene	455 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	206-44-0	
Fluorene	10.5J ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	86-73-7	
Indeno(1,2,3-cd)pyrene	241 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	193-39-5	
1-Methylnaphthalene	33.6 ug/kg		18.4	3.3	1	08/05/13 10:49	08/06/13 11:54	90-12-0	
2-Methylnaphthalene	40.2 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	91-57-6	
Naphthalene	37.4 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	91-20-3	
Phenanthrene	120 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	85-01-8	
Pyrene	467 ug/kg		18.4	9.2	1	08/05/13 10:49	08/06/13 11:54	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	81 %		40-130		1	08/05/13 10:49	08/06/13 11:54	321-60-8	
Terphenyl-d14 (S)	83 %		40-130		1	08/05/13 10:49	08/06/13 11:54	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	630-20-6	W
1,1,1-Trichloroethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-1 (2-4) Lab ID: 4082157001 Collected: 07/30/13 12:00 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	79-00-5		W
1,1-Dichloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-34-3		W
1,1-Dichloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-35-4		W
1,1-Dichloropropene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	563-58-6		W
1,2,3-Trichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	87-61-6		W
1,2,3-Trichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	96-18-4		W
1,2,4-Trichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	120-82-1		W
1,2,4-Trimethylbenzene	51.3J ug/kg	69.9	29.1	1	08/05/13 15:33	08/05/13 21:02	95-63-6		
1,2-Dibromo-3-chloropropane	<25.5 ug/kg	263	52.5	1	08/05/13 15:33	08/05/13 21:02	96-12-8		W
1,2-Dibromoethane (EDB)	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	106-93-4		W
1,2-Dichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	95-50-1		W
1,2-Dichloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	107-06-2		W
1,2-Dichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	78-87-5		W
1,3,5-Trimethylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	108-67-8		W
1,3-Dichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	541-73-1		W
1,3-Dichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	142-28-9		W
1,4-Dichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	106-46-7		W
2,2-Dichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	594-20-7		W
2-Butanone (MEK)	<124 ug/kg	263	124	1	08/05/13 15:33	08/05/13 21:02	78-93-3		W
2-Chlorotoluene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	95-49-8		W
4-Chlorotoluene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	106-43-4		W
Benzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	71-43-2		W
Bromobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	108-86-1		W
Bromochloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	74-97-5		W
Bromodichloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-27-4		W
Bromoform	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-25-2		W
Bromomethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	74-83-9		W
Carbon tetrachloride	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	56-23-5		W
Chlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	108-90-7		W
Chloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-00-3		W
Chloroform	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	67-66-3		W
Chloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	74-87-3		W
Dibromochloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	124-48-1		W
Dibromomethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	74-95-3		W
Dichlorodifluoromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-71-8		W
Diisopropyl ether	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	108-20-3		W
Ethylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	100-41-4		W
Hexachloro-1,3-butadiene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	87-68-3		W
Isopropylbenzene (Cumene)	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	98-82-8		W
Methyl-tert-butyl ether	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	1634-04-4		W
Methylene Chloride	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-09-2		W
Naphthalene	142 ug/kg	69.9	29.1	1	08/05/13 15:33	08/05/13 21:02	91-20-3		
Styrene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	100-42-5		W
Tetrachloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	127-18-4		W
Toluene	85.8 ug/kg	69.9	29.1	1	08/05/13 15:33	08/05/13 21:02	108-88-3		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-1 (2-4)**      Lab ID: **4082157001**      Collected: 07/30/13 12:00      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	79-01-6	W	
Trichlorofluoromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-69-4	W	
Vinyl chloride	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	75-01-4	W	
cis-1,2-Dichloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	156-59-2	W	
cis-1,3-Dichloropropene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	10061-01-5	W	
m&p-Xylene	85.1J ug/kg	140	58.2	1	08/05/13 15:33	08/05/13 21:02	179601-23-1		
n-Butylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	104-51-8	W	
n-Propylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	103-65-1	W	
o-Xylene	66.8J ug/kg	69.9	29.1	1	08/05/13 15:33	08/05/13 21:02	95-47-6		
p-Isopropyltoluene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	99-87-6	W	
sec-Butylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	135-98-8	W	
tert-Butylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	98-06-6	W	
trans-1,2-Dichloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	156-60-5	W	
trans-1,3-Dichloropropene	<26.3 ug/kg	63.2	26.3	1	08/05/13 15:33	08/05/13 21:02	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	102 %	57-130		1	08/05/13 15:33	08/05/13 21:02	1868-53-7		
Toluene-d8 (S)	105 %	54-133		1	08/05/13 15:33	08/05/13 21:02	2037-26-5		
4-Bromofluorobenzene (S)	96 %	49-130		1	08/05/13 15:33	08/05/13 21:02	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	9.6 %		0.10	0.10	1		08/05/13 11:19		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-1 (8-10)** Lab ID: **4082157002** Collected: 07/30/13 12:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	4.4 mg/kg		1.9	0.78	1	08/05/13 09:23	08/06/13 11:53		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.5 mg/kg		3.5	3.5	1	08/05/13 08:14	08/05/13 17:12		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.3 mg/kg		2.2	0.59	1	08/05/13 15:10	08/06/13 15:49	7440-38-2	
Barium	50.9 mg/kg		0.55	0.095	1	08/05/13 15:10	08/06/13 15:49	7440-39-3	
Cadmium	0.18J mg/kg		0.55	0.055	1	08/05/13 15:10	08/06/13 15:49	7440-43-9	
Chromium	13.3 mg/kg		0.55	0.14	1	08/05/13 15:10	08/06/13 15:49	7440-47-3	
Lead	4.3 mg/kg		1.1	0.32	1	08/05/13 15:10	08/06/13 15:49	7439-92-1	
Selenium	<0.65 mg/kg		2.2	0.65	1	08/05/13 15:10	08/06/13 15:49	7782-49-2	
Silver	<0.23 mg/kg		1.1	0.23	1	08/05/13 15:10	08/06/13 15:49	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.062 mg/kg		0.0074	0.0037	1	08/14/13 15:27	08/15/13 11:31	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	83-32-9	
Acenaphthylene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	208-96-8	
Anthracene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	120-12-7	
Benzo(a)anthracene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	56-55-3	
Benzo(a)pyrene	<3.8 ug/kg		21.2	3.8	1	08/05/13 10:49	08/05/13 19:11	50-32-8	
Benzo(b)fluoranthene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	205-99-2	
Benzo(g,h,i)perylene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	191-24-2	
Benzo(k)fluoranthene	<3.7 ug/kg		21.2	3.7	1	08/05/13 10:49	08/05/13 19:11	207-08-9	
Chrysene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	218-01-9	
Dibenz(a,h)anthracene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	53-70-3	
Fluoranthene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	206-44-0	
Fluorene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	86-73-7	
Indeno(1,2,3-cd)pyrene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	193-39-5	
1-Methylnaphthalene	<3.7 ug/kg		21.2	3.7	1	08/05/13 10:49	08/05/13 19:11	90-12-0	
2-Methylnaphthalene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	91-57-6	
Naphthalene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	91-20-3	
Phenanthrene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	85-01-8	
Pyrene	<10.6 ug/kg		21.2	10.6	1	08/05/13 10:49	08/05/13 19:11	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	67 %	40-130		1	08/05/13 10:49	08/05/13 19:11	321-60-8		
Terphenyl-d14 (S)	62 %	40-130		1	08/05/13 10:49	08/05/13 19:11	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	630-20-6	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-1 (8-10) Lab ID: 4082157002 Collected: 07/30/13 12:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	79-00-5		W
1,1-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-34-3		W
1,1-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-35-4		W
1,1-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	563-58-6		W
1,2,3-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	87-61-6		W
1,2,3-Trichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	96-18-4		W
1,2,4-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	120-82-1		W
1,2,4-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	95-63-6		W
1,2-Dibromo-3-chloropropane	<49.8 ug/kg	250	49.8	1	08/05/13 15:33	08/05/13 21:25	96-12-8		W
1,2-Dibromoethane (EDB)	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	106-93-4		W
1,2-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	95-50-1		W
1,2-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	107-06-2		W
1,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	78-87-5		W
1,3,5-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	108-67-8		W
1,3-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	541-73-1		W
1,3-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	142-28-9		W
1,4-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	106-46-7		W
2,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	594-20-7		W
2-Butanone (MEK)	<118 ug/kg	250	118	1	08/05/13 15:33	08/05/13 21:25	78-93-3		W
2-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	95-49-8		W
4-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	106-43-4		W
Benzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	71-43-2		W
Bromobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	108-86-1		W
Bromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	74-97-5		W
Bromodichloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-27-4		W
Bromoform	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-25-2		W
Bromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	74-83-9		W
Carbon tetrachloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	56-23-5		W
Chlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	108-90-7		W
Chloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-00-3		W
Chloroform	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	67-66-3		W
Chloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	74-87-3		W
Dibromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	124-48-1		W
Dibromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	74-95-3		W
Dichlorodifluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-71-8		W
Diisopropyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	108-20-3		W
Ethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	100-41-4		W
Hexachloro-1,3-butadiene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	87-68-3		W
Isopropylbenzene (Cumene)	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	98-82-8		W
Methyl-tert-butyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	1634-04-4		W
Methylene Chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-09-2		W
Naphthalene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	91-20-3		W
Styrene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	100-42-5		W
Tetrachloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	127-18-4		W
Toluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	108-88-3		W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-1 (8-10) Lab ID: 4082157002 Collected: 07/30/13 12:05 Received: 08/02/13 09:45 Matrix: Solid**


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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	79-01-6	W	
Trichlorofluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-69-4	W	
Vinyl chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	75-01-4	W	
cis-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	156-59-2	W	
cis-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	10061-01-5	W	
m&p-Xylene	<50.0 ug/kg	120	50.0	1	08/05/13 15:33	08/05/13 21:25	179601-23-1	W	
n-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	104-51-8	W	
n-Propylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	103-65-1	W	
o-Xylene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	95-47-6	W	
p-Isopropyltoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	99-87-6	W	
sec-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	135-98-8	W	
tert-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	98-06-6	W	
trans-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	156-60-5	W	
trans-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 15:33	08/05/13 21:25	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	106 %	57-130		1	08/05/13 15:33	08/05/13 21:25	1868-53-7		
Toluene-d8 (S)	110 %	54-133		1	08/05/13 15:33	08/05/13 21:25	2037-26-5		
4-Bromofluorobenzene (S)	97 %	49-130		1	08/05/13 15:33	08/05/13 21:25	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	<b>21.4 %</b>		0.10	0.10	1		08/13/13 13:23		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-2 (2-4) Lab ID: 4082157003 Collected: 07/30/13 12:20 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.94 mg/kg		2.3	0.94	1	08/05/13 09:46	08/09/13 09:44		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.5 mg/kg		3.5	3.5	1	08/05/13 08:14	08/05/13 18:09		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.7 mg/kg		4.7	1.3	2	08/05/13 15:10	08/07/13 12:06	7440-38-2	
Barium	275 mg/kg		1.2	0.20	2	08/05/13 15:10	08/07/13 12:06	7440-39-3	
Cadmium	0.35J mg/kg		1.2	0.12	2	08/05/13 15:10	08/07/13 12:06	7440-43-9	D3
Chromium	51.9 mg/kg		1.2	0.29	2	08/05/13 15:10	08/07/13 12:06	7440-47-3	
Lead	15.1 mg/kg		2.3	0.68	2	08/05/13 15:10	08/07/13 12:06	7439-92-1	
Selenium	<1.4 mg/kg		4.7	1.4	2	08/05/13 15:10	08/07/13 12:06	7782-49-2	D3
Silver	<0.50 mg/kg		2.3	0.50	2	08/05/13 15:10	08/07/13 12:06	7440-22-4	D3
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.053 mg/kg		0.0089	0.0045	1	08/14/13 15:27	08/15/13 11:34	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	83-32-9	
Acenaphthylene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	208-96-8	
Anthracene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	120-12-7	
Benzo(a)anthracene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	56-55-3	
Benzo(a)pyrene	<4.0 ug/kg		22.6	4.0	1	08/05/13 10:49	08/05/13 19:28	50-32-8	
Benzo(b)fluoranthene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	205-99-2	
Benzo(g,h,i)perylene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	191-24-2	
Benzo(k)fluoranthene	<4.0 ug/kg		22.6	4.0	1	08/05/13 10:49	08/05/13 19:28	207-08-9	
Chrysene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	218-01-9	
Dibenz(a,h)anthracene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	53-70-3	
Fluoranthene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	206-44-0	
Fluorene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	86-73-7	
Indeno(1,2,3-cd)pyrene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	193-39-5	
1-Methylnaphthalene	<4.0 ug/kg		22.6	4.0	1	08/05/13 10:49	08/05/13 19:28	90-12-0	
2-Methylnaphthalene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	91-57-6	
Naphthalene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	91-20-3	
Phenanthrene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	85-01-8	
Pyrene	<11.3 ug/kg		22.6	11.3	1	08/05/13 10:49	08/05/13 19:28	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	67 %	40-130		1	08/05/13 10:49	08/05/13 19:28	321-60-8		
Terphenyl-d14 (S)	69 %	40-130		1	08/05/13 10:49	08/05/13 19:28	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.0 ug/kg		62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	630-20-6	W
1,1,1-Trichloroethane	<26.0 ug/kg		62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.0 ug/kg		62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-2 (2-4) Lab ID: 4082157003 Collected: 07/30/13 12:20 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	79-00-5	W	
1,1-Dichloroethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-34-3	W	
1,1-Dichloroethene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-35-4	W	
1,1-Dichloropropene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	563-58-6	W	
1,2,3-Trichlorobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	87-61-6	W	
1,2,3-Trichloropropane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	96-18-4	W	
1,2,4-Trichlorobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	120-82-1	W	
1,2,4-Trimethylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	95-63-6	W	
1,2-Dibromo-3-chloropropane	<51.9 ug/kg	260	51.9	1	08/05/13 15:33	08/05/13 21:48	96-12-8	W	
1,2-Dibromoethane (EDB)	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	106-93-4	W	
1,2-Dichlorobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	95-50-1	W	
1,2-Dichloroethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	107-06-2	W	
1,2-Dichloropropane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	78-87-5	W	
1,3,5-Trimethylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	108-67-8	W	
1,3-Dichlorobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	541-73-1	W	
1,3-Dichloropropane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	142-28-9	W	
1,4-Dichlorobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	106-46-7	W	
2,2-Dichloropropane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	594-20-7	W	
2-Butanone (MEK)	<123 ug/kg	260	123	1	08/05/13 15:33	08/05/13 21:48	78-93-3	W	
2-Chlorotoluene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	95-49-8	W	
4-Chlorotoluene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	106-43-4	W	
Benzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	71-43-2	W	
Bromobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	108-86-1	W	
Bromochloromethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	74-97-5	W	
Bromodichloromethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-27-4	W	
Bromoform	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-25-2	W	
Bromomethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	74-83-9	W	
Carbon tetrachloride	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	56-23-5	W	
Chlorobenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	108-90-7	W	
Chloroethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-00-3	W	
Chloroform	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	67-66-3	W	
Chloromethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	74-87-3	W	
Dibromochloromethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	124-48-1	W	
Dibromomethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	74-95-3	W	
Dichlorodifluoromethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-71-8	W	
Diisopropyl ether	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	108-20-3	W	
Ethylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	100-41-4	W	
Hexachloro-1,3-butadiene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	87-68-3	W	
Isopropylbenzene (Cumene)	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	98-82-8	W	
Methyl-tert-butyl ether	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	1634-04-4	W	
Methylene Chloride	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-09-2	W	
Naphthalene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	91-20-3	W	
Styrene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	100-42-5	W	
Tetrachloroethene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	127-18-4	W	
Toluene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	108-88-3	W	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-2 (2-4)**      Lab ID: **4082157003**      Collected: 07/30/13 12:20      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	79-01-6	W	
Trichlorofluoromethane	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-69-4	W	
Vinyl chloride	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	75-01-4	W	
cis-1,2-Dichloroethene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	156-59-2	W	
cis-1,3-Dichloropropene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	10061-01-5	W	
m&p-Xylene	<52.1 ug/kg	125	52.1	1	08/05/13 15:33	08/05/13 21:48	179601-23-1	W	
n-Butylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	104-51-8	W	
n-Propylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	103-65-1	W	
o-Xylene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	95-47-6	W	
p-Isopropyltoluene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	99-87-6	W	
sec-Butylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	135-98-8	W	
tert-Butylbenzene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	98-06-6	W	
trans-1,2-Dichloroethene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	156-60-5	W	
trans-1,3-Dichloropropene	<26.0 ug/kg	62.5	26.0	1	08/05/13 15:33	08/05/13 21:48	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	93 %	57-130		1	08/05/13 15:33	08/05/13 21:48	1868-53-7		
Toluene-d8 (S)	92 %	54-133		1	08/05/13 15:33	08/05/13 21:48	2037-26-5		
4-Bromofluorobenzene (S)	82 %	49-130		1	08/05/13 15:33	08/05/13 21:48	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	<b>26.2 %</b>		0.10	0.10	1		08/13/13 13:23		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-2 (12-14) Lab ID: 4082157004 Collected: 07/30/13 13:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.77 mg/kg		1.9	0.77	1	08/05/13 09:46	08/09/13 09:50		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.9 mg/kg		2.9	2.9	1	08/05/13 08:14	08/05/13 19:06		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.7 mg/kg		2.3	0.63	1	08/05/13 15:10	08/06/13 15:35	7440-38-2	
Barium	75.0 mg/kg		0.59	0.10	1	08/05/13 15:10	08/06/13 15:35	7440-39-3	
Cadmium	0.27J mg/kg		0.59	0.059	1	08/05/13 15:10	08/06/13 15:35	7440-43-9	
Chromium	20.3 mg/kg		0.59	0.15	1	08/05/13 15:10	08/06/13 15:35	7440-47-3	
Lead	5.9 mg/kg		1.2	0.34	1	08/05/13 15:10	08/06/13 15:35	7439-92-1	
Selenium	<0.69 mg/kg		2.3	0.69	1	08/05/13 15:10	08/06/13 15:35	7782-49-2	
Silver	<0.25 mg/kg		1.2	0.25	1	08/05/13 15:10	08/06/13 15:35	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.0069 mg/kg		0.0068	0.0034	1	08/14/13 15:27	08/15/13 11:40	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	83-32-9	
Acenaphthylene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	208-96-8	
Anthracene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	120-12-7	
Benzo(a)anthracene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	56-55-3	
Benzo(a)pyrene	<3.5 ug/kg		19.6	3.5	1	08/05/13 10:49	08/05/13 19:46	50-32-8	
Benzo(b)fluoranthene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	205-99-2	
Benzo(g,h,i)perylene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	191-24-2	
Benzo(k)fluoranthene	<3.5 ug/kg		19.6	3.5	1	08/05/13 10:49	08/05/13 19:46	207-08-9	
Chrysene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	218-01-9	
Dibenz(a,h)anthracene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	53-70-3	
Fluoranthene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	206-44-0	
Fluorene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	86-73-7	
Indeno(1,2,3-cd)pyrene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	193-39-5	
1-Methylnaphthalene	<3.5 ug/kg		19.6	3.5	1	08/05/13 10:49	08/05/13 19:46	90-12-0	
2-Methylnaphthalene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	91-57-6	
Naphthalene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	91-20-3	
Phenanthrene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	85-01-8	
Pyrene	<9.8 ug/kg		19.6	9.8	1	08/05/13 10:49	08/05/13 19:46	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	60 %	40-130		1	08/05/13 10:49	08/05/13 19:46	321-60-8		
Terphenyl-d14 (S)	64 %	40-130		1	08/05/13 10:49	08/05/13 19:46	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	630-20-6	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-2 (12-14) Lab ID: 4082157004 Collected: 07/30/13 13:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	79-00-5		W
1,1-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-34-3		W
1,1-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-35-4		W
1,1-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	563-58-6		W
1,2,3-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	87-61-6		W
1,2,3-Trichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	96-18-4		W
1,2,4-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	120-82-1		W
1,2,4-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	95-63-6		W
1,2-Dibromo-3-chloropropane	<49.8 ug/kg	250	49.8	1	08/05/13 11:05	08/06/13 14:24	96-12-8		W
1,2-Dibromoethane (EDB)	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	106-93-4		W
1,2-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	95-50-1		W
1,2-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	107-06-2		W
1,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	78-87-5		W
1,3,5-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	108-67-8		W
1,3-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	541-73-1		W
1,3-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	142-28-9		W
1,4-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	106-46-7		W
2,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	594-20-7		W
2-Butanone (MEK)	<118 ug/kg	250	118	1	08/05/13 11:05	08/06/13 14:24	78-93-3		W
2-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	95-49-8		W
4-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	106-43-4		W
Benzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	71-43-2		W
Bromobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	108-86-1		W
Bromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	74-97-5		W
Bromodichloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-27-4		W
Bromoform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-25-2		W
Bromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	74-83-9		W
Carbon tetrachloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	56-23-5		W
Chlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	108-90-7		W
Chloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-00-3		W
Chloroform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	67-66-3		W
Chloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	74-87-3		W
Dibromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	124-48-1		W
Dibromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	74-95-3		W
Dichlorodifluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-71-8		W
Diisopropyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	108-20-3		W
Ethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	100-41-4		W
Hexachloro-1,3-butadiene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	87-68-3		W
Isopropylbenzene (Cumene)	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	98-82-8		W
Methyl-tert-butyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	1634-04-4		W
Methylene Chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-09-2		W
Naphthalene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	91-20-3		W
Styrene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	100-42-5		W
Tetrachloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	127-18-4		W
Toluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-2 (12-14) Lab ID: 4082157004 Collected: 07/30/13 13:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	79-01-6	W	
Trichlorofluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-69-4	W	
Vinyl chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	75-01-4	W	
cis-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	156-59-2	W	
cis-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	10061-01-5	W	
m&p-Xylene	<50.0 ug/kg	120	50.0	1	08/05/13 11:05	08/06/13 14:24	179601-23-1	W	
n-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	104-51-8	W	
n-Propylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	103-65-1	W	
o-Xylene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	95-47-6	W	
p-Isopropyltoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	99-87-6	W	
sec-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	135-98-8	W	
tert-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	98-06-6	W	
trans-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	156-60-5	W	
trans-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 14:24	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	92 %	57-130		1	08/05/13 11:05	08/06/13 14:24	1868-53-7		
Toluene-d8 (S)	98 %	54-133		1	08/05/13 11:05	08/06/13 14:24	2037-26-5		
4-Bromofluorobenzene (S)	92 %	49-130		1	08/05/13 11:05	08/06/13 14:24	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	15.1 %		0.10	0.10	1		08/13/13 13:23		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-3 (2-4) Lab ID: 4082157005 Collected: 07/30/13 14:00 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	42.7 mg/kg		2.0	0.79	1	08/05/13 09:46	08/09/13 09:56		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.2 mg/kg		3.2	3.2	1	08/05/13 08:14	08/05/13 18:38		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	8.4 mg/kg		2.1	0.55	1	08/05/13 15:10	08/06/13 15:53	7440-38-2	
Barium	69.3 mg/kg		0.51	0.089	1	08/05/13 15:10	08/06/13 15:53	7440-39-3	
Cadmium	0.64 mg/kg		0.51	0.052	1	08/05/13 15:10	08/06/13 15:53	7440-43-9	
Chromium	13.3 mg/kg		0.51	0.13	1	08/05/13 15:10	08/06/13 15:53	7440-47-3	
Lead	103 mg/kg		1.0	0.30	1	08/05/13 15:10	08/06/13 15:53	7439-92-1	
Selenium	<0.61 mg/kg		2.1	0.61	1	08/05/13 15:10	08/06/13 15:53	7782-49-2	
Silver	<0.22 mg/kg		1.0	0.22	1	08/05/13 15:10	08/06/13 15:53	7440-22-4	
<b>6010 MET ICP, TCLP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	Leachate Method/Date: EPA 1311; 08/22/13 00:00								
Lead	<0.015 mg/L		0.038	0.015	1	08/23/13 10:00	08/23/13 16:05	7439-92-1	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	1.7 mg/kg		0.15	0.074	20	08/14/13 15:27	08/15/13 12:19	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.8 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	83-32-9	
Acenaphthylene	<9.8 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	208-96-8	
Anthracene	34.7 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	120-12-7	
Benzo(a)anthracene	85.0 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	56-55-3	
Benzo(a)pyrene	90.9 ug/kg		19.7	3.5	1	08/05/13 10:49	08/06/13 11:36	50-32-8	
Benzo(b)fluoranthene	100 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	205-99-2	
Benzo(g,h,i)perylene	60.3 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	191-24-2	
Benzo(k)fluoranthene	82.5 ug/kg		19.7	3.5	1	08/05/13 10:49	08/06/13 11:36	207-08-9	
Chrysene	119 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	218-01-9	
Dibenz(a,h)anthracene	20.6 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	53-70-3	
Fluoranthene	182 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	206-44-0	
Fluorene	<9.8 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	86-73-7	
Indeno(1,2,3-cd)pyrene	51.8 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	193-39-5	
1-Methylnaphthalene	105 ug/kg		19.7	3.5	1	08/05/13 10:49	08/06/13 11:36	90-12-0	
2-Methylnaphthalene	131 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	91-57-6	
Naphthalene	105 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	91-20-3	
Phenanthrene	160 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	85-01-8	
Pyrene	170 ug/kg		19.7	9.8	1	08/05/13 10:49	08/06/13 11:36	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	43 %	40-130			1	08/05/13 10:49	08/06/13 11:36	321-60-8	
Terphenyl-d14 (S)	44 %	40-130			1	08/05/13 10:49	08/06/13 11:36	1718-51-0	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-3 (2-4) Lab ID: 4082157005 Collected: 07/30/13 14:00 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	630-20-6	W	
1,1,1-Trichloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	71-55-6	W	
1,1,2,2-Tetrachloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	79-34-5	W	
1,1,2-Trichloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	79-00-5	W	
1,1-Dichloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-34-3	W	
1,1-Dichloroethene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-35-4	W	
1,1-Dichloropropene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	563-58-6	W	
1,2,3-Trichlorobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	87-61-6	W	
1,2,3-Trichloropropane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	96-18-4	W	
1,2,4-Trichlorobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	120-82-1	W	
1,2,4-Trimethylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	95-63-6	W	
1,2-Dibromo-3-chloropropane	<54.2 ug/kg	272	54.2	1	08/05/13 11:05	08/06/13 14:47	96-12-8	W	
1,2-Dibromoethane (EDB)	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	106-93-4	W	
1,2-Dichlorobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	95-50-1	W	
1,2-Dichloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	107-06-2	W	
1,2-Dichloropropane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	78-87-5	W	
1,3,5-Trimethylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	108-67-8	W	
1,3-Dichlorobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	541-73-1	W	
1,3-Dichloropropane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	142-28-9	W	
1,4-Dichlorobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	106-46-7	W	
2,2-Dichloropropane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	594-20-7	W	
2-Butanone (MEK)	<128 ug/kg	272	128	1	08/05/13 11:05	08/06/13 14:47	78-93-3	W	
2-Chlorotoluene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	95-49-8	W	
4-Chlorotoluene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	106-43-4	W	
Benzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	71-43-2	W	
Bromobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	108-86-1	W	
Bromochloromethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	74-97-5	W	
Bromodichloromethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-27-4	W	
Bromoform	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-25-2	W	
Bromomethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	74-83-9	W	
Carbon tetrachloride	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	56-23-5	W	
Chlorobenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	108-90-7	W	
Chloroethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-00-3	W	
Chloroform	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	67-66-3	W	
Chloromethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	74-87-3	W	
Dibromochloromethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	124-48-1	W	
Dibromomethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	74-95-3	W	
Dichlorodifluoromethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-71-8	W	
Diisopropyl ether	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	108-20-3	W	
Ethylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	100-41-4	W	
Hexachloro-1,3-butadiene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	87-68-3	W	
Isopropylbenzene (Cumene)	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	98-82-8	W	
Methyl-tert-butyl ether	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	1634-04-4	W	
Methylene Chloride	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-09-2	W	
Naphthalene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	91-20-3	W	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-3 (2-4) Lab ID: 4082157005 Collected: 07/30/13 14:00 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Styrene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	100-42-5	W	
Tetrachloroethene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	127-18-4	W	
Toluene	54.0J ug/kg	77.0	32.1	1	08/05/13 11:05	08/06/13 14:47	108-88-3		
Trichloroethene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	79-01-6	W	
Trichlorofluoromethane	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-69-4	W	
Vinyl chloride	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	75-01-4	W	
cis-1,2-Dichloroethene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	156-59-2	W	
cis-1,3-Dichloropropene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	10061-01-5	W	
m&p-Xylene	<54.3 ug/kg	130	54.3	1	08/05/13 11:05	08/06/13 14:47	179601-23-1	W	
n-Butylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	104-51-8	W	
n-Propylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	103-65-1	W	
o-Xylene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	95-47-6	W	
p-Isopropyltoluene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	99-87-6	W	
sec-Butylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	135-98-8	W	
tert-Butylbenzene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	98-06-6	W	
trans-1,2-Dichloroethene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	156-60-5	W	
trans-1,3-Dichloropropene	<27.2 ug/kg	65.2	27.2	1	08/05/13 11:05	08/06/13 14:47	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	91 %	57-130		1	08/05/13 11:05	08/06/13 14:47	1868-53-7		
Toluene-d8 (S)	93 %	54-133		1	08/05/13 11:05	08/06/13 14:47	2037-26-5		
4-Bromofluorobenzene (S)	82 %	49-130		1	08/05/13 11:05	08/06/13 14:47	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	15.3 %	0.10	0.10	1			08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-3 (10-12) Lab ID: 4082157006 Collected: 07/30/13 14:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	2.2 mg/kg		2.1	0.83	1	08/05/13 09:46	08/09/13 10:02		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.7 mg/kg		3.7	3.7	1	08/05/13 08:14	08/05/13 14:20		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	12.3 mg/kg		2.3	0.61	1	08/05/13 15:10	08/06/13 15:56	7440-38-2	
Barium	81.9 mg/kg		0.56	0.098	1	08/05/13 15:10	08/06/13 15:56	7440-39-3	
Cadmium	0.29J mg/kg		0.56	0.057	1	08/05/13 15:10	08/06/13 15:56	7440-43-9	
Chromium	22.8 mg/kg		0.56	0.14	1	08/05/13 15:10	08/06/13 15:56	7440-47-3	
Lead	6.2 mg/kg		1.1	0.33	1	08/05/13 15:10	08/06/13 15:56	7439-92-1	
Selenium	<0.67 mg/kg		2.3	0.67	1	08/05/13 15:10	08/06/13 15:56	7782-49-2	
Silver	<0.24 mg/kg		1.1	0.24	1	08/05/13 15:10	08/06/13 15:56	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.0061J mg/kg		0.0080	0.0040	1	08/14/13 15:27	08/15/13 11:44	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	83-32-9	
Acenaphthylene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	208-96-8	
Anthracene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	120-12-7	
Benzo(a)anthracene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	56-55-3	
Benzo(a)pyrene	<3.9 ug/kg		21.8	3.9	1	08/05/13 10:49	08/05/13 20:03	50-32-8	
Benzo(b)fluoranthene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	205-99-2	
Benzo(g,h,i)perylene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	191-24-2	
Benzo(k)fluoranthene	<3.8 ug/kg		21.8	3.8	1	08/05/13 10:49	08/05/13 20:03	207-08-9	
Chrysene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	218-01-9	
Dibenz(a,h)anthracene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	53-70-3	
Fluoranthene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	206-44-0	
Fluorene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	86-73-7	
Indeno(1,2,3-cd)pyrene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	193-39-5	
1-Methylnaphthalene	<3.8 ug/kg		21.8	3.8	1	08/05/13 10:49	08/05/13 20:03	90-12-0	
2-Methylnaphthalene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	91-57-6	
Naphthalene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	91-20-3	
Phenanthrene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	85-01-8	
Pyrene	<10.9 ug/kg		21.8	10.9	1	08/05/13 10:49	08/05/13 20:03	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	50 %	40-130		1	08/05/13 10:49	08/05/13 20:03	321-60-8		
Terphenyl-d14 (S)	52 %	40-130		1	08/05/13 10:49	08/05/13 20:03	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	630-20-6	W
1,1,1-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-3 (10-12)**      Lab ID: **4082157006**      Collected: 07/30/13 14:05      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	79-00-5		W
1,1-Dichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-34-3		W
1,1-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-35-4		W
1,1-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	563-58-6		W
1,2,3-Trichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	87-61-6		W
1,2,3-Trichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	96-18-4		W
1,2,4-Trichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	120-82-1		W
1,2,4-Trimethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	95-63-6		W
1,2-Dibromo-3-chloropropane	<51.4 ug/kg	258	51.4	1	08/05/13 11:05	08/06/13 15:10	96-12-8		W
1,2-Dibromoethane (EDB)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	106-93-4		W
1,2-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	95-50-1		W
1,2-Dichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	107-06-2		W
1,2-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	78-87-5		W
1,3,5-Trimethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	108-67-8		W
1,3-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	541-73-1		W
1,3-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	142-28-9		W
1,4-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	106-46-7		W
2,2-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	594-20-7		W
2-Butanone (MEK)	<122 ug/kg	258	122	1	08/05/13 11:05	08/06/13 15:10	78-93-3		W
2-Chlorotoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	95-49-8		W
4-Chlorotoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	106-43-4		W
Benzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	71-43-2		W
Bromobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	108-86-1		W
Bromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	74-97-5		W
Bromodichloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-27-4		W
Bromoform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-25-2		W
Bromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	74-83-9		W
Carbon tetrachloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	56-23-5		W
Chlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	108-90-7		W
Chloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-00-3		W
Chloroform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	67-66-3		W
Chloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	74-87-3		W
Dibromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	124-48-1		W
Dibromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	74-95-3		W
Dichlorodifluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-71-8		W
Diisopropyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	108-20-3		W
Ethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	100-41-4		W
Hexachloro-1,3-butadiene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	87-68-3		W
Isopropylbenzene (Cumene)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	98-82-8		W
Methyl-tert-butyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	1634-04-4		W
Methylene Chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-09-2		W
Naphthalene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	91-20-3		W
Styrene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	100-42-5		W
Tetrachloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	127-18-4		W
Toluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	108-88-3		W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-3 (10-12) Lab ID: 4082157006 Collected: 07/30/13 14:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	79-01-6	W	
Trichlorofluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-69-4	W	
Vinyl chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	75-01-4	W	
cis-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	156-59-2	W	
cis-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	10061-01-5	W	
m&p-Xylene	<51.5 ug/kg	124	51.5	1	08/05/13 11:05	08/06/13 15:10	179601-23-1	W	
n-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	104-51-8	W	
n-Propylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	103-65-1	W	
o-Xylene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	95-47-6	W	
p-Isopropyltoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	99-87-6	W	
sec-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	135-98-8	W	
tert-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	98-06-6	W	
trans-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	156-60-5	W	
trans-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:10	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	92 %	57-130		1	08/05/13 11:05	08/06/13 15:10	1868-53-7		
Toluene-d8 (S)	99 %	54-133		1	08/05/13 11:05	08/06/13 15:10	2037-26-5		
4-Bromofluorobenzene (S)	89 %	49-130		1	08/05/13 11:05	08/06/13 15:10	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	<b>23.4 %</b>		0.10	0.10	1		08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-4 (2-4)** Lab ID: **4082157007** Collected: 07/30/13 13:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.93 mg/kg		2.3	0.93	1	08/05/13 09:46	08/09/13 10:08		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.9 mg/kg		3.9	3.9	1	08/05/13 08:14	08/05/13 19:35		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	6.0 mg/kg		4.9	1.3	2	08/05/13 15:10	08/07/13 12:08	7440-38-2	
Barium	272 mg/kg		1.2	0.21	2	08/05/13 15:10	08/07/13 12:08	7440-39-3	
Cadmium	0.44J mg/kg		1.2	0.12	2	08/05/13 15:10	08/07/13 12:08	7440-43-9	D3
Chromium	54.2 mg/kg		1.2	0.31	2	08/05/13 15:10	08/07/13 12:08	7440-47-3	
Lead	14.9 mg/kg		2.4	0.71	2	08/05/13 15:10	08/07/13 12:08	7439-92-1	
Selenium	<1.4 mg/kg		4.9	1.4	2	08/05/13 15:10	08/07/13 12:08	7782-49-2	D3
Silver	<0.52 mg/kg		2.4	0.52	2	08/05/13 15:10	08/07/13 12:08	7440-22-4	D3
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.035 mg/kg		0.0092	0.0046	1	08/14/13 15:27	08/15/13 11:46	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	83-32-9	
Acenaphthylene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	208-96-8	
Anthracene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	120-12-7	
Benzo(a)anthracene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	56-55-3	
Benzo(a)pyrene	5.1J ug/kg		23.2	4.1	1	08/12/13 12:00	08/13/13 16:57	50-32-8	
Benzo(b)fluoranthene	19.7J ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	205-99-2	
Benzo(g,h,i)perylene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	191-24-2	
Benzo(k)fluoranthene	6.4J ug/kg		23.2	4.1	1	08/12/13 12:00	08/13/13 16:57	207-08-9	
Chrysene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	218-01-9	
Dibenz(a,h)anthracene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	53-70-3	
Fluoranthene	15.6J ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	206-44-0	
Fluorene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	86-73-7	
Indeno(1,2,3-cd)pyrene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	193-39-5	
1-Methylnaphthalene	<4.1 ug/kg		23.2	4.1	1	08/12/13 12:00	08/13/13 16:57	90-12-0	
2-Methylnaphthalene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	91-57-6	
Naphthalene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	91-20-3	
Phenanthrene	<11.6 ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	85-01-8	
Pyrene	15.0J ug/kg		23.2	11.6	1	08/12/13 12:00	08/13/13 16:57	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	55 %		40-130		1	08/12/13 12:00	08/13/13 16:57	321-60-8	
Terphenyl-d14 (S)	71 %		40-130		1	08/12/13 12:00	08/13/13 16:57	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	630-20-6	W
1,1,1-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-4 (2-4)**      Lab ID: **4082157007**      Collected: 07/30/13 13:30      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	79-00-5		W
1,1-Dichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-34-3		W
1,1-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-35-4		W
1,1-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	563-58-6		W
1,2,3-Trichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	87-61-6		W
1,2,3-Trichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	96-18-4		W
1,2,4-Trichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	120-82-1		W
1,2,4-Trimethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	95-63-6		W
1,2-Dibromo-3-chloropropane	<51.4 ug/kg	258	51.4	1	08/05/13 11:05	08/06/13 15:33	96-12-8		W
1,2-Dibromoethane (EDB)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	106-93-4		W
1,2-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	95-50-1		W
1,2-Dichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	107-06-2		W
1,2-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	78-87-5		W
1,3,5-Trimethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	108-67-8		W
1,3-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	541-73-1		W
1,3-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	142-28-9		W
1,4-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	106-46-7		W
2,2-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	594-20-7		W
2-Butanone (MEK)	<122 ug/kg	258	122	1	08/05/13 11:05	08/06/13 15:33	78-93-3		W
2-Chlorotoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	95-49-8		W
4-Chlorotoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	106-43-4		W
Benzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	71-43-2		W
Bromobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	108-86-1		W
Bromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	74-97-5		W
Bromodichloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-27-4		W
Bromoform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-25-2		W
Bromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	74-83-9		W
Carbon tetrachloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	56-23-5		W
Chlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	108-90-7		W
Chloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-00-3		W
Chloroform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	67-66-3		W
Chloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	74-87-3		W
Dibromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	124-48-1		W
Dibromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	74-95-3		W
Dichlorodifluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-71-8		W
Diisopropyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	108-20-3		W
Ethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	100-41-4		W
Hexachloro-1,3-butadiene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	87-68-3		W
Isopropylbenzene (Cumene)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	98-82-8		W
Methyl-tert-butyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	1634-04-4		W
Methylene Chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-09-2		W
Naphthalene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	91-20-3		W
Styrene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	100-42-5		W
Tetrachloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	127-18-4		W
Toluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	108-88-3		W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-4 (2-4) Lab ID: 4082157007 Collected: 07/30/13 13:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	79-01-6	W	
Trichlorofluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-69-4	W	
Vinyl chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	75-01-4	W	
cis-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	156-59-2	W	
cis-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	10061-01-5	W	
m&p-Xylene	<51.5 ug/kg	124	51.5	1	08/05/13 11:05	08/06/13 15:33	179601-23-1	W	
n-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	104-51-8	W	
n-Propylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	103-65-1	W	
o-Xylene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	95-47-6	W	
p-Isopropyltoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	99-87-6	W	
sec-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	135-98-8	W	
tert-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	98-06-6	W	
trans-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	156-60-5	W	
trans-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 15:33	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	95 %	57-130		1	08/05/13 11:05	08/06/13 15:33	1868-53-7		
Toluene-d8 (S)	106 %	54-133		1	08/05/13 11:05	08/06/13 15:33	2037-26-5		
4-Bromofluorobenzene (S)	94 %	49-130		1	08/05/13 11:05	08/06/13 15:33	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	<b>28.1 %</b>	0.10	0.10	1			08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-4 (8-10)**      Lab ID: **4082157008**      Collected: 07/30/13 13:35      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	1.3J	mg/kg	2.0	0.81	1	08/05/13 09:46	08/09/13 10:14		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.9	mg/kg	2.9	2.9	1	08/05/13 08:14	08/05/13 12:54		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.4	mg/kg	2.1	0.57	1	08/05/13 15:10	08/06/13 16:01	7440-38-2	
Barium	80.0	mg/kg	0.53	0.091	1	08/05/13 15:10	08/06/13 16:01	7440-39-3	
Cadmium	0.31J	mg/kg	0.53	0.053	1	08/05/13 15:10	08/06/13 16:01	7440-43-9	
Chromium	23.3	mg/kg	0.53	0.13	1	08/05/13 15:10	08/06/13 16:01	7440-47-3	
Lead	6.6	mg/kg	1.1	0.31	1	08/05/13 15:10	08/06/13 16:01	7439-92-1	
Selenium	<0.62	mg/kg	2.1	0.62	1	08/05/13 15:10	08/06/13 16:01	7782-49-2	
Silver	<0.22	mg/kg	1.1	0.22	1	08/05/13 15:10	08/06/13 16:01	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.0093	mg/kg	0.0059	0.0029	1	08/14/13 15:27	08/15/13 11:48	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	83-32-9	
Acenaphthylene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	208-96-8	
Anthracene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	120-12-7	
Benzo(a)anthracene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	56-55-3	
Benzo(a)pyrene	<3.4	ug/kg	19.1	3.4	1	08/05/13 10:49	08/05/13 15:58	50-32-8	
Benzo(b)fluoranthene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	205-99-2	
Benzo(g,h,i)perylene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	191-24-2	
Benzo(k)fluoranthene	<3.4	ug/kg	19.1	3.4	1	08/05/13 10:49	08/05/13 15:58	207-08-9	
Chrysene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	218-01-9	
Dibenz(a,h)anthracene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	53-70-3	
Fluoranthene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	206-44-0	
Fluorene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	86-73-7	
Indeno(1,2,3-cd)pyrene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	193-39-5	
1-Methylnaphthalene	<3.4	ug/kg	19.1	3.4	1	08/05/13 10:49	08/05/13 15:58	90-12-0	
2-Methylnaphthalene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	91-57-6	
Naphthalene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	91-20-3	
Phenanthrene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	85-01-8	
Pyrene	<9.6	ug/kg	19.1	9.6	1	08/05/13 10:49	08/05/13 15:58	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	71 %		40-130		1	08/05/13 10:49	08/05/13 15:58	321-60-8	
Terphenyl-d14 (S)	74 %		40-130		1	08/05/13 10:49	08/05/13 15:58	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.5	ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	630-20-6	W
1,1,1-Trichloroethane	<25.5	ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.5	ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: B-5-4 (8-10) Lab ID: 4082157008 Collected: 07/30/13 13:35 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	79-00-5		W
1,1-Dichloroethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-34-3		W
1,1-Dichloroethene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-35-4		W
1,1-Dichloropropene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	563-58-6		W
1,2,3-Trichlorobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	87-61-6		W
1,2,3-Trichloropropane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	96-18-4		W
1,2,4-Trichlorobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	120-82-1		W
1,2,4-Trimethylbenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	95-63-6		W
1,2-Dibromo-3-chloropropane	<50.9 ug/kg	255	50.9	1	08/05/13 11:05	08/06/13 15:56	96-12-8		W
1,2-Dibromoethane (EDB)	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	106-93-4		W
1,2-Dichlorobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	95-50-1		W
1,2-Dichloroethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	107-06-2		W
1,2-Dichloropropane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	78-87-5		W
1,3,5-Trimethylbenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	108-67-8		W
1,3-Dichlorobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	541-73-1		W
1,3-Dichloropropane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	142-28-9		W
1,4-Dichlorobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	106-46-7		W
2,2-Dichloropropane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	594-20-7		W
2-Butanone (MEK)	<121 ug/kg	255	121	1	08/05/13 11:05	08/06/13 15:56	78-93-3		W
2-Chlorotoluene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	95-49-8		W
4-Chlorotoluene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	106-43-4		W
Benzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	71-43-2		W
Bromobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	108-86-1		W
Bromochloromethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	74-97-5		W
Bromodichloromethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-27-4		W
Bromoform	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-25-2		W
Bromomethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	74-83-9		W
Carbon tetrachloride	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	56-23-5		W
Chlorobenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	108-90-7		W
Chloroethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-00-3		W
Chloroform	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	67-66-3		W
Chloromethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	74-87-3		W
Dibromochloromethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	124-48-1		W
Dibromomethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	74-95-3		W
Dichlorodifluoromethane	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-71-8		W
Diisopropyl ether	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	108-20-3		W
Ethylbenzene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	100-41-4		W
Hexachloro-1,3-butadiene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	87-68-3		W
Isopropylbenzene (Cumene)	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	98-82-8		W
Methyl-tert-butyl ether	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	1634-04-4		W
Methylene Chloride	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-09-2		W
Naphthalene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	91-20-3		W
Styrene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	100-42-5		W
Tetrachloroethene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	127-18-4		W
Toluene	<25.5 ug/kg	61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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**Sample: B-5-4 (8-10)**      Lab ID: **4082157008**      Collected: 07/30/13 13:35      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	79-01-6	W
Trichlorofluoromethane	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-69-4	W
Vinyl chloride	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	75-01-4	W
cis-1,2-Dichloroethene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	156-59-2	W
cis-1,3-Dichloropropene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	10061-01-5	W
m&p-Xylene	<51.0 ug/kg		122	51.0	1	08/05/13 11:05	08/06/13 15:56	179601-23-1	W
n-Butylbenzene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	104-51-8	W
n-Propylbenzene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	103-65-1	W
o-Xylene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	95-47-6	W
p-Isopropyltoluene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	99-87-6	W
sec-Butylbenzene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	135-98-8	W
tert-Butylbenzene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	98-06-6	W
trans-1,2-Dichloroethene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	156-60-5	W
trans-1,3-Dichloropropene	<25.5 ug/kg		61.2	25.5	1	08/05/13 11:05	08/06/13 15:56	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	97 %		57-130		1	08/05/13 11:05	08/06/13 15:56	1868-53-7	
Toluene-d8 (S)	99 %		54-133		1	08/05/13 11:05	08/06/13 15:56	2037-26-5	
4-Bromofluorobenzene (S)	90 %		49-130		1	08/05/13 11:05	08/06/13 15:56	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	<b>12.8 %</b>		0.10	0.10	1			08/13/13 13:24	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: TRIP BLANK	Lab ID: 4082157009	Collected: 07/30/13 00:00	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/07/13 09:29	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/07/13 09:29	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/07/13 09:29	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/07/13 09:29	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/07/13 09:29	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/07/13 09:29	74-83-9	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/07/13 09:29	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/07/13 09:29	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/07/13 09:29	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/07/13 09:29	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/07/13 09:29	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 09:29	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/07/13 09:29	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/07/13 09:29	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 09:29	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 09:29	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/07/13 09:29	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/07/13 09:29	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/07/13 09:29	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/07/13 09:29	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/07/13 09:29	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/07/13 09:29	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/07/13 09:29	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/07/13 09:29	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/07/13 09:29	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/07/13 09:29	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 09:29	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/07/13 09:29	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/07/13 09:29	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/07/13 09:29	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/07/13 09:29	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/07/13 09:29	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/07/13 09:29	563-58-6	
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/07/13 09:29	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/07/13 09:29	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/07/13 09:29	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 09:29	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/07/13 09:29	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/07/13 09:29	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/07/13 09:29	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/07/13 09:29	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/07/13 09:29	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/07/13 09:29	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 09:29	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/07/13 09:29	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/07/13 09:29	630-20-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Sample: TRIP BLANK	Lab ID: 4082157009	Collected: 07/30/13 00:00	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/07/13 09:29	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/07/13 09:29	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/07/13 09:29	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/07/13 09:29	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 09:29	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 09:29	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/07/13 09:29	79-00-5	
Trichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 09:29	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/07/13 09:29	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/07/13 09:29	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/07/13 09:29	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 09:29	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/07/13 09:29	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/07/13 09:29	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/07/13 09:29	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94 %		43-137		1		08/07/13 09:29	460-00-4	
Dibromofluoromethane (S)	93 %		70-130		1		08/07/13 09:29	1868-53-7	HS
Toluene-d8 (S)	99 %		55-137		1		08/07/13 09:29	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: GCV/10696 Analysis Method: WI MOD GRO

QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV

Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

METHOD BLANK: 833281 Matrix: Solid

Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<2.5	2.5	08/05/13 09:04	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833282 833283

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	10	9.8	10.2	98	102	80-120	4	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: MERP/3805 Analysis Method: EPA 7471

QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury

Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

METHOD BLANK: 839231 Matrix: Solid

Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Mercury	mg/kg	<0.0033	0.0067	08/15/13 11:15	

LABORATORY CONTROL SAMPLE: 839232

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Mercury	mg/kg	.17	0.17	100	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 839233 839234

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		4082157001	Spike	Conc.	Result	Result	% Rec	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	mg/kg	0.018	.18	.18	0.20	0.19	98	95	85-115	2	20		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch:	MPRP/8909	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008			

METHOD BLANK:	833516	Matrix:	Solid
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Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.54	2.0	08/06/13 15:31	
Barium	mg/kg	<0.087	0.50	08/06/13 15:31	
Cadmium	mg/kg	<0.051	0.50	08/06/13 15:31	
Chromium	mg/kg	<0.13	0.50	08/06/13 15:31	
Lead	mg/kg	<0.29	1.0	08/06/13 15:31	
Selenium	mg/kg	<0.59	2.0	08/06/13 15:31	
Silver	mg/kg	<0.21	1.0	08/06/13 15:31	

LABORATORY CONTROL SAMPLE: 833517

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.4	99	80-120	
Barium	mg/kg	50	49.4	99	80-120	
Cadmium	mg/kg	50	49.6	99	80-120	
Chromium	mg/kg	50	50.6	101	80-120	
Lead	mg/kg	50	52.0	104	80-120	
Selenium	mg/kg	50	51.6	103	80-120	
Silver	mg/kg	25	25.8	103	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 833518 833519

Parameter	Units	MS		MSD		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		4082157004	Spike Conc.	Spike Conc.	MS Result								
Arsenic	mg/kg	4.7	58.9	58.8	54.3	54.7	84	85	85	75-125	1	20	
Barium	mg/kg	75.0	58.9	58.8	122	131	80	95	95	75-125	7	20	
Cadmium	mg/kg	0.27J	58.9	58.8	52.4	52.5	88	89	89	75-125	0	20	
Chromium	mg/kg	20.3	58.9	58.8	71.3	70.4	87	85	85	75-125	1	20	
Lead	mg/kg	5.9	58.9	58.8	54.8	55.2	83	84	84	75-125	1	20	
Selenium	mg/kg	<0.69	58.9	58.8	52.0	52.8	88	90	90	75-125	2	20	
Silver	mg/kg	<0.25	29.4	29.4	27.9	27.8	95	95	95	75-125	0	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch:	MPRP/9009	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	4082157005		

METHOD BLANK: 843847	Matrix: Water
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Associated Lab Samples: 4082157005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0030	0.0075	08/23/13 15:50	

LABORATORY CONTROL SAMPLE: 843848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.50	100	80-120	

MATRIX SPIKE SAMPLE: 843849

Parameter	Units	4082773001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	0.021J	2.5	2.4	95	75-125	

MATRIX SPIKE SAMPLE: 843850

Parameter	Units	4082971001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.4	95	75-125	

MATRIX SPIKE SAMPLE: 843851

Parameter	Units	4082971003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.4	97	75-125	

MATRIX SPIKE SAMPLE: 843853

Parameter	Units	4083031001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.4	97	75-125	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch:	MSV/20731	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
Associated Lab Samples:	4082157001, 4082157002, 4082157003		

METHOD BLANK: 833567	Matrix: Solid
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Associated Lab Samples: 4082157001, 4082157002, 4082157003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,1-Dichloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,1-Dichloroethene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,1-Dichloropropene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	08/05/13 13:03	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2-Dichloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,2-Dichloropropane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
1,3-Dichloropropane	ug/kg	<25.0	60.0	08/05/13 13:03	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
2,2-Dichloropropane	ug/kg	<25.0	60.0	08/05/13 13:03	
2-Butanone (MEK)	ug/kg	<118	250	08/05/13 13:03	
2-Chlorotoluene	ug/kg	<25.0	60.0	08/05/13 13:03	
4-Chlorotoluene	ug/kg	<25.0	60.0	08/05/13 13:03	
Benzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Bromobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Bromochloromethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Bromodichloromethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Bromoform	ug/kg	<25.0	60.0	08/05/13 13:03	
Bromomethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Carbon tetrachloride	ug/kg	<25.0	60.0	08/05/13 13:03	
Chlorobenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Chloroethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Chloroform	ug/kg	<25.0	60.0	08/05/13 13:03	
Chloromethane	ug/kg	<25.0	60.0	08/05/13 13:03	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/05/13 13:03	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/05/13 13:03	
Dibromochloromethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Dibromomethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Diisopropyl ether	ug/kg	<25.0	60.0	08/05/13 13:03	
Ethylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	08/05/13 13:03	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

METHOD BLANK: 833567

Matrix: Solid

Associated Lab Samples: 4082157001, 4082157002, 4082157003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	08/05/13 13:03	
m&p-Xylene	ug/kg	<50.0	120	08/05/13 13:03	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	08/05/13 13:03	
Methylene Chloride	ug/kg	<25.0	60.0	08/05/13 13:03	
n-Butylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
n-Propylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Naphthalene	ug/kg	<25.0	60.0	08/05/13 13:03	
o-Xylene	ug/kg	<25.0	60.0	08/05/13 13:03	
p-Isopropyltoluene	ug/kg	<25.0	60.0	08/05/13 13:03	
sec-Butylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Styrene	ug/kg	<25.0	60.0	08/05/13 13:03	
tert-Butylbenzene	ug/kg	<25.0	60.0	08/05/13 13:03	
Tetrachloroethene	ug/kg	<25.0	60.0	08/05/13 13:03	
Toluene	ug/kg	<25.0	60.0	08/05/13 13:03	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/05/13 13:03	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/05/13 13:03	
Trichloroethene	ug/kg	<25.0	60.0	08/05/13 13:03	
Trichlorofluoromethane	ug/kg	<25.0	60.0	08/05/13 13:03	
Vinyl chloride	ug/kg	<25.0	60.0	08/05/13 13:03	
4-Bromofluorobenzene (S)	%	94	49-130	08/05/13 13:03	
Dibromofluoromethane (S)	%	100	57-130	08/05/13 13:03	
Toluene-d8 (S)	%	101	54-133	08/05/13 13:03	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833568

833569

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2690	2610	107	105	70-130	3	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2500	2630	100	105	70-130	5	20	
1,1,2-Trichloroethane	ug/kg	2500	2470	2500	99	100	70-130	1	20	
1,1-Dichloroethane	ug/kg	2500	2600	2420	104	97	70-130	7	20	
1,1-Dichloroethene	ug/kg	2500	2590	2500	103	100	64-130	3	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2490	2540	100	102	68-130	2	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2260	2490	91	100	50-150	10	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2470	2490	99	99	70-130	1	20	
1,2-Dichlorobenzene	ug/kg	2500	2480	2460	99	99	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2620	2540	105	102	70-130	3	20	
1,2-Dichloropropane	ug/kg	2500	2660	2640	106	106	70-130	1	20	
1,3-Dichlorobenzene	ug/kg	2500	2530	2540	101	102	70-130	0	20	
1,4-Dichlorobenzene	ug/kg	2500	2470	2510	99	101	70-130	2	20	
Benzene	ug/kg	2500	2590	2490	104	100	70-130	4	20	
Bromodichloromethane	ug/kg	2500	2590	2650	104	106	70-130	2	20	
Bromoform	ug/kg	2500	2750	2880	110	115	63-130	5	20	
Bromomethane	ug/kg	2500	2230	2200	89	88	41-142	1	20	
Carbon tetrachloride	ug/kg	2500	2650	2730	106	109	70-130	3	20	
Chlorobenzene	ug/kg	2500	2490	2510	99	100	70-130	1	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

LABORATORY CONTROL SAMPLE & LCSD:		833569								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroethane	ug/kg	2500	2350	2280	94	91	57-130	3	20	
Chloroform	ug/kg	2500	2560	2510	102	101	70-130	2	20	
Chloromethane	ug/kg	2500	2160	2150	86	86	57-130	0	20	
cis-1,2-Dichloroethene	ug/kg	2500	2410	2340	97	94	70-130	3	20	
cis-1,3-Dichloropropene	ug/kg	2500	2680	2730	107	109	70-130	2	20	
Dibromochloromethane	ug/kg	2500	2450	2510	98	100	70-130	2	20	
Dichlorodifluoromethane	ug/kg	2500	1520	1510	61	60	31-150	1	20	
Ethylbenzene	ug/kg	2500	2520	2600	101	104	65-137	3	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2510	2580	100	103	70-130	3	20	
m&p-Xylene	ug/kg	5000	5030	5090	101	102	64-139	1	20	
Methyl-tert-butyl ether	ug/kg	2500	2470	2440	99	98	69-130	1	20	
Methylene Chloride	ug/kg	2500	2590	2450	103	98	70-130	5	20	
o-Xylene	ug/kg	2500	2550	2610	102	105	63-135	2	20	
Styrene	ug/kg	2500	2570	2560	103	103	69-130	0	20	
Tetrachloroethene	ug/kg	2500	2530	2560	101	102	70-130	1	20	
Toluene	ug/kg	2500	2450	2490	98	100	70-130	2	20	
trans-1,2-Dichloroethene	ug/kg	2500	2640	2530	105	101	70-130	4	20	
trans-1,3-Dichloropropene	ug/kg	2500	2660	2680	106	107	70-130	1	20	
Trichloroethene	ug/kg	2500	2560	2570	103	103	70-130	0	20	
Trichlorofluoromethane	ug/kg	2500	2580	2490	103	100	50-150	4	20	
Vinyl chloride	ug/kg	2500	2260	2270	91	91	57-130	0	20	
4-Bromofluorobenzene (S)	%				103	98	49-130			
Dibromofluoromethane (S)	%				108	98	57-130			
Toluene-d8 (S)	%				100	96	54-133			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: MSV/20741 Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List

Associated Lab Samples: 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

METHOD BLANK: 833920 Matrix: Solid

Associated Lab Samples: 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	08/06/13 12:28	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
2,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
2-Butanone (MEK)	ug/kg	<118	250	08/06/13 12:28	
2-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
Benzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromodichloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromoform	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Carbon tetrachloride	ug/kg	<25.0	60.0	08/06/13 12:28	
Chlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroform	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Diisopropyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Ethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	08/06/13 12:28	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

METHOD BLANK: 833920

Matrix: Solid

Associated Lab Samples: 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	08/06/13 12:28	
m&p-Xylene	ug/kg	<50.0	120	08/06/13 12:28	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Methylene Chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Propylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Naphthalene	ug/kg	<25.0	60.0	08/06/13 12:28	
o-Xylene	ug/kg	<25.0	60.0	08/06/13 12:28	
p-Isopropyltoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
sec-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Styrene	ug/kg	<25.0	60.0	08/06/13 12:28	
tert-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Tetrachloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Toluene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichlorofluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Vinyl chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Bromofluorobenzene (S)	%	95	49-130	08/06/13 12:28	
Dibromofluoromethane (S)	%	100	57-130	08/06/13 12:28	
Toluene-d8 (S)	%	104	54-133	08/06/13 12:28	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833921

833922

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2440	2470	98	99	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2680	2930	107	117	70-130	9	20	
1,1,2-Trichloroethane	ug/kg	2500	2780	2860	111	114	70-130	3	20	
1,1-Dichloroethane	ug/kg	2500	2630	2640	105	106	70-130	0	20	
1,1-Dichloroethene	ug/kg	2500	2460	2460	98	98	64-130	0	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2400	2700	96	108	68-130	12	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2170	2540	87	102	50-150	16	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2580	2710	103	108	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	2500	2610	2630	104	105	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2320	2400	93	96	70-130	4	20	
1,2-Dichloropropane	ug/kg	2500	2870	2940	115	117	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	2500	2660	2640	106	106	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	2500	2520	2580	101	103	70-130	2	20	
Benzene	ug/kg	2500	2750	2890	110	115	70-130	5	20	
Bromodichloromethane	ug/kg	2500	2600	2590	104	103	70-130	1	20	
Bromoform	ug/kg	2500	2390	2490	95	100	63-130	4	20	
Bromomethane	ug/kg	2500	1970	2040	79	82	41-142	4	20	
Carbon tetrachloride	ug/kg	2500	2480	2550	99	102	70-130	3	20	
Chlorobenzene	ug/kg	2500	2600	2620	104	105	70-130	1	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

LABORATORY CONTROL SAMPLE & LCSD:		833922								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroethane	ug/kg	2500	1670	1750	67	70	57-130	5	20	
Chloroform	ug/kg	2500	2540	2650	102	106	70-130	4	20	
Chloromethane	ug/kg	2500	1790	1840	71	73	57-130	3	20	
cis-1,2-Dichloroethene	ug/kg	2500	2760	2870	110	115	70-130	4	20	
cis-1,3-Dichloropropene	ug/kg	2500	2570	2640	103	105	70-130	2	20	
Dibromochloromethane	ug/kg	2500	2470	2510	99	100	70-130	2	20	
Dichlorodifluoromethane	ug/kg	2500	1000	1060	40	42	31-150	5	20	
Ethylbenzene	ug/kg	2500	2550	2590	102	104	65-137	2	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2580	2620	103	105	70-130	1	20	
m&p-Xylene	ug/kg	5000	5310	5480	106	110	64-139	3	20	
Methyl-tert-butyl ether	ug/kg	2500	2540	2720	101	109	69-130	7	20	
Methylene Chloride	ug/kg	2500	2650	2660	106	106	70-130	0	20	
o-Xylene	ug/kg	2500	2500	2590	100	104	63-135	4	20	
Styrene	ug/kg	2500	2650	2730	106	109	69-130	3	20	
Tetrachloroethene	ug/kg	2500	2580	2680	103	107	70-130	4	20	
Toluene	ug/kg	2500	2730	2720	109	109	70-130	0	20	
trans-1,2-Dichloroethene	ug/kg	2500	2720	2830	109	113	70-130	4	20	
trans-1,3-Dichloropropene	ug/kg	2500	2350	2460	94	98	70-130	4	20	
Trichloroethene	ug/kg	2500	2600	2560	104	103	70-130	2	20	
Trichlorofluoromethane	ug/kg	2500	1980	2100	79	84	50-150	6	20	
Vinyl chloride	ug/kg	2500	2020	2070	81	83	57-130	3	20	
4-Bromofluorobenzene (S)	%				93	93	49-130			
Dibromofluoromethane (S)	%				96	104	57-130			
Toluene-d8 (S)	%				100	102	54-133			

## REPORT OF LABORATORY ANALYSIS

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: MSV/20747

QC Batch Method: EPA 8260

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METHOD BLANKS 22-1004

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Martin Wot

Associated Lab Samples: 4082157009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/07/13 06:03	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/07/13 06:03	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/07/13 06:03	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/07/13 06:03	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/07/13 06:03	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/07/13 06:03	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/07/13 06:03	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/07/13 06:03	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/07/13 06:03	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/07/13 06:03	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/07/13 06:03	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/07/13 06:03	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/07/13 06:03	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/07/13 06:03	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/07/13 06:03	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/07/13 06:03	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/07/13 06:03	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/07/13 06:03	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/07/13 06:03	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/07/13 06:03	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/07/13 06:03	
2-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:03	
4-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:03	
Benzene	ug/L	<0.50	1.0	08/07/13 06:03	
Bromobenzene	ug/L	<0.48	1.0	08/07/13 06:03	
Bromochloromethane	ug/L	<0.49	1.0	08/07/13 06:03	
Bromodichloromethane	ug/L	<0.45	1.0	08/07/13 06:03	
Bromoform	ug/L	<0.23	1.0	08/07/13 06:03	
Bromomethane	ug/L	<0.43	5.0	08/07/13 06:03	
Carbon tetrachloride	ug/L	<0.37	1.0	08/07/13 06:03	
Chlorobenzene	ug/L	<0.36	1.0	08/07/13 06:03	
Chloroethane	ug/L	<0.44	1.0	08/07/13 06:03	
Chloroform	ug/L	<0.69	5.0	08/07/13 06:03	
Chloromethane	ug/L	<0.39	1.0	08/07/13 06:03	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/07/13 06:03	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/07/13 06:03	
Dibromochloromethane	ug/L	<1.9	5.0	08/07/13 06:03	
Dibromomethane	ug/L	<0.48	1.0	08/07/13 06:03	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/07/13 06:03	
Diisopropyl ether	ug/L	<0.50	1.0	08/07/13 06:03	
Ethylbenzene	ug/L	<0.50	1.0	08/07/13 06:03	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/07/13 06:03	
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/07/13 06:03	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

METHOD BLANK: 834394

Matrix: Water

Associated Lab Samples: 4082157009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<0.82	2.0	08/07/13 06:03	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/07/13 06:03	
Methylene Chloride	ug/L	<0.36	1.0	08/07/13 06:03	
n-Butylbenzene	ug/L	<0.40	1.0	08/07/13 06:03	
n-Propylbenzene	ug/L	<0.50	1.0	08/07/13 06:03	
Naphthalene	ug/L	<2.5	5.0	08/07/13 06:03	
o-Xylene	ug/L	<0.50	1.0	08/07/13 06:03	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/07/13 06:03	
sec-Butylbenzene	ug/L	<0.60	5.0	08/07/13 06:03	
Styrene	ug/L	<0.35	1.0	08/07/13 06:03	
tert-Butylbenzene	ug/L	<0.42	1.0	08/07/13 06:03	
Tetrachloroethene	ug/L	<0.47	1.0	08/07/13 06:03	
Toluene	ug/L	<0.44	1.0	08/07/13 06:03	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/07/13 06:03	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/07/13 06:03	
Trichloroethene	ug/L	<0.43	1.0	08/07/13 06:03	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/07/13 06:03	
Vinyl chloride	ug/L	<0.18	1.0	08/07/13 06:03	
4-Bromofluorobenzene (S)	%	92	43-137	08/07/13 06:03	
Dibromofluoromethane (S)	%	93	70-130	08/07/13 06:03	
Toluene-d8 (S)	%	100	55-137	08/07/13 06:03	

LABORATORY CONTROL SAMPLE &amp; LCSD: 834395

834396

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.2	50.1	98	100	70-136	2	20	
1,1,2,2-Tetrachloroethane	ug/L	50	49.6	51.0	99	102	70-130	3	20	
1,1,2-Trichloroethane	ug/L	50	51.1	51.2	102	102	70-130	0	20	
1,1-Dichloroethane	ug/L	50	55.4	54.8	111	110	70-146	1	20	
1,1-Dichloroethene	ug/L	50	56.9	56.1	114	112	70-130	2	20	
1,2,4-Trichlorobenzene	ug/L	50	58.7	57.9	117	116	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	50	40.9	43.4	82	87	46-150	6	20	
1,2-Dibromoethane (EDB)	ug/L	50	52.1	51.6	104	103	70-130	1	20	
1,2-Dichlorobenzene	ug/L	50	54.6	53.4	109	107	70-130	2	20	
1,2-Dichloroethane	ug/L	50	51.0	51.4	102	103	70-144	1	20	
1,2-Dichloropropane	ug/L	50	56.2	56.2	112	112	70-136	0	20	
1,3-Dichlorobenzene	ug/L	50	55.4	55.1	111	110	70-130	1	20	
1,4-Dichlorobenzene	ug/L	50	53.4	53.1	107	106	70-130	1	20	
Benzene	ug/L	50	53.2	52.6	106	105	70-137	1	20	
Bromodichloromethane	ug/L	50	53.2	52.9	106	106	70-133	1	20	
Bromoform	ug/L	50	45.2	46.8	90	94	59-130	3	20	
Bromomethane	ug/L	50	35.6	39.2	71	78	41-148	9	20	
Carbon tetrachloride	ug/L	50	48.4	48.9	97	98	70-154	1	20	
Chlorobenzene	ug/L	50	54.4	54.0	109	108	70-130	1	20	
Chloroethane	ug/L	50	56.9	55.4	114	111	70-139	3	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

LABORATORY CONTROL SAMPLE & LCSD:		834396									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroform	ug/L	50	52.0	51.7	104	103	70-130	0	20		
Chloromethane	ug/L	50	44.3	43.6	89	87	45-154	2	20		
cis-1,2-Dichloroethene	ug/L	50	50.8	51.5	102	103	70-130	1	20		
cis-1,3-Dichloropropene	ug/L	50	45.1	46.4	90	93	70-136	3	20		
Dibromochloromethane	ug/L	50	46.3	48.1	93	96	70-130	4	20		
Dichlorodifluoromethane	ug/L	50	37.9	38.0	76	76	20-157	0	20		
Ethylbenzene	ug/L	50	57.1	57.0	114	114	70-130	0	20		
Isopropylbenzene (Cumene)	ug/L	50	62.5	62.7	125	125	70-130	0	20		
m&p-Xylene	ug/L	100	113	113	113	113	70-130	0	20		
Methyl-tert-butyl ether	ug/L	50	47.7	48.7	95	97	59-141	2	20		
Methylene Chloride	ug/L	50	56.8	55.7	114	111	70-130	2	20		
o-Xylene	ug/L	50	58.1	58.2	116	116	70-130	0	20		
Styrene	ug/L	50	55.9	56.3	112	113	70-130	1	20		
Tetrachloroethene	ug/L	50	53.2	53.1	106	106	70-130	0	20		
Toluene	ug/L	50	53.6	53.7	107	107	70-130	0	20		
trans-1,2-Dichloroethene	ug/L	50	53.7	54.2	107	108	70-130	1	20		
trans-1,3-Dichloropropene	ug/L	50	43.2	45.0	86	90	55-135	4	20		
Trichloroethene	ug/L	50	54.3	54.9	109	110	70-130	1	20		
Trichlorofluoromethane	ug/L	50	58.6	56.7	117	113	50-150	3	20		
Vinyl chloride	ug/L	50	51.0	50.3	102	101	61-143	1	20		
4-Bromofluorobenzene (S)	%				104	104	43-137				
Dibromofluoromethane (S)	%				98	98	70-130				
Toluene-d8 (S)	%				99	99	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		834423 834424										
Parameter	Units	4082351001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.44	50	50	48.9	50.5	98	101	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	49.6	48.9	99	98	70-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.39	50	50	49.2	51.4	98	103	70-130	4	20	
1,1-Dichloroethane	ug/L	<0.28	50	50	54.6	55.3	109	111	70-146	1	20	
1,1-Dichloroethene	ug/L	<0.43	50	50	56.4	57.3	113	115	70-130	2	20	
1,2,4-Trichlorobenzene	ug/L	<2.5	50	50	59.4	60.6	119	121	70-130	2	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	50	50	40.5	42.2	81	84	46-150	4	20	
1,2-Dibromoethane (EDB)	ug/L	<0.38	50	50	50.4	53.5	101	107	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.44	50	50	52.9	54.3	106	109	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.48	50	50	50.5	52.2	101	104	70-146	3	20	
1,2-Dichloropropane	ug/L	<0.50	50	50	53.8	55.9	108	112	70-136	4	20	
1,3-Dichlorobenzene	ug/L	<0.45	50	50	54.0	54.9	108	110	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<0.43	50	50	52.5	54.6	105	109	70-130	4	20	
Benzene	ug/L	<0.50	50	50	52.2	53.5	104	107	70-137	2	20	
Bromodichloromethane	ug/L	<0.45	50	50	51.2	53.8	102	108	70-133	5	20	
Bromoform	ug/L	<0.23	50	50	46.5	46.9	93	94	57-130	1	20	
Bromomethane	ug/L	<0.43	50	50	42.9	45.0	86	90	41-148	5	20	
Carbon tetrachloride	ug/L	<0.37	50	50	49.0	50.2	98	100	70-154	3	20	
Chlorobenzene	ug/L	<0.36	50	50	52.8	55.2	106	110	70-130	4	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

Parameter	Units	4082351001		MS		MSD		MS		MSD		% Rec	Limits	Max	
				Spike Conc.	Spike Conc.	Result	MSD	Result	% Rec	MSD	Result			RPD	RPD
															Qual
Chloroethane	ug/L	<0.44	50	50	57.1	58.3	114	117	70-140	2	20				
Chloroform	ug/L	<0.69	50	50	50.4	52.2	101	104	70-130	3	20				
Chloromethane	ug/L	<0.39	50	50	51.2	51.0	102	102	45-154	0	20				
cis-1,2-Dichloroethene	ug/L	<0.42	50	50	50.3	51.0	101	102	70-130	1	20				
cis-1,3-Dichloropropene	ug/L	<0.29	50	50	47.2	49.2	94	98	70-136	4	20				
Dibromochloromethane	ug/L	<1.9	50	50	45.6	48.3	91	97	70-130	6	20				
Dichlorodifluoromethane	ug/L	<0.40	50	50	55.4	56.1	111	112	10-157	1	20				
Ethylbenzene	ug/L	<0.50	50	50	55.9	57.3	112	115	70-130	3	20				
Isopropylbenzene (Cumene)	ug/L	<0.34	50	50	62.0	63.4	124	127	70-130	2	20				
m&p-Xylene	ug/L	<0.82	100	100	113	116	113	116	70-130	2	20				
Methyl-tert-butyl ether	ug/L	<0.49	50	50	48.0	49.1	96	98	59-141	2	20				
Methylene Chloride	ug/L	<0.36	50	50	54.7	56.2	109	112	70-130	3	20				
o-Xylene	ug/L	<0.50	50	50	57.0	58.7	114	117	70-130	3	20				
Styrene	ug/L	<0.35	50	50	55.1	57.2	110	114	35-164	4	20				
Tetrachloroethene	ug/L	<0.47	50	50	53.1	55.6	106	111	70-130	5	20				
Toluene	ug/L	<0.44	50	50	52.8	54.3	106	109	70-130	3	20				
trans-1,2-Dichloroethene	ug/L	<0.37	50	50	54.1	55.1	108	110	70-130	2	20				
trans-1,3-Dichloropropene	ug/L	<0.26	50	50	45.6	47.3	91	95	55-137	4	20				
Trichloroethene	ug/L	<0.43	50	50	54.3	55.5	109	111	70-130	2	20				
Trichlorofluoromethane	ug/L	<0.48	50	50	57.5	58.9	115	118	50-150	2	20				
Vinyl chloride	ug/L	<0.18	50	50	54.8	56.4	110	113	59-144	3	20				
4-Bromofluorobenzene (S)	%							104	103	43-137					
Dibromofluoromethane (S)	%							100	99	70-130					
Toluene-d8 (S)	%							99	99	55-137					

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: OEXT/19295 Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM

Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157008

METHOD BLANK: 833346 Matrix: Solid

Associated Lab Samples: 4082157001, 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.9	16.7	08/05/13 15:23	
2-Methylnaphthalene	ug/kg	<8.3	16.7	08/05/13 15:23	
Acenaphthene	ug/kg	<8.3	16.7	08/05/13 15:23	
Acenaphthylene	ug/kg	<8.3	16.7	08/05/13 15:23	
Anthracene	ug/kg	<8.3	16.7	08/05/13 15:23	
Benzo(a)anthracene	ug/kg	<8.3	16.7	08/05/13 15:23	
Benzo(a)pyrene	ug/kg	<3.0	16.7	08/05/13 15:23	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	08/05/13 15:23	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	08/05/13 15:23	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	08/05/13 15:23	
Chrysene	ug/kg	<8.3	16.7	08/05/13 15:23	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	08/05/13 15:23	
Fluoranthene	ug/kg	<8.3	16.7	08/05/13 15:23	
Fluorene	ug/kg	<8.3	16.7	08/05/13 15:23	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	08/05/13 15:23	
Naphthalene	ug/kg	<8.3	16.7	08/05/13 15:23	
Phenanthrene	ug/kg	<8.3	16.7	08/05/13 15:23	
Pyrene	ug/kg	<8.3	16.7	08/05/13 15:23	
2-Fluorobiphenyl (S)	%	82	40-130	08/05/13 15:23	
Terphenyl-d14 (S)	%	86	40-130	08/05/13 15:23	

LABORATORY CONTROL SAMPLE: 833347

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	248	74	47-130	
2-Methylnaphthalene	ug/kg	333	240	72	48-130	
Acenaphthene	ug/kg	333	264	79	55-130	
Acenaphthylene	ug/kg	333	261	78	55-130	
Anthracene	ug/kg	333	318	95	66-130	
Benzo(a)anthracene	ug/kg	333	233	70	55-130	
Benzo(a)pyrene	ug/kg	333	248	74	56-130	
Benzo(b)fluoranthene	ug/kg	333	232	70	53-130	
Benzo(g,h,i)perylene	ug/kg	333	194	58	51-130	
Benzo(k)fluoranthene	ug/kg	333	306	92	52-130	
Chrysene	ug/kg	333	276	83	58-130	
Dibenz(a,h)anthracene	ug/kg	333	226	68	55-130	
Fluoranthene	ug/kg	333	251	75	62-130	
Fluorene	ug/kg	333	257	77	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	217	65	54-130	
Naphthalene	ug/kg	333	224	67	41-130	
Phenanthrene	ug/kg	333	244	73	60-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

LABORATORY CONTROL SAMPLE: 833347

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	293	88	51-130	
2-Fluorobiphenyl (S)	%			83	40-130	
Terphenyl-d14 (S)	%			89	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 833348 833349

Parameter	Units	4082157008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<3.4	382	382	272	251	71	66	42-130	8	32	
2-Methylnaphthalene	ug/kg	<9.6	382	382	265	243	69	63	34-130	9	35	
Acenaphthene	ug/kg	<9.6	382	382	296	269	77	71	31-130	9	35	
Acenaphthylene	ug/kg	<9.6	382	382	292	263	76	69	32-130	11	25	
Anthracene	ug/kg	<9.6	382	382	364	308	95	81	39-131	17	38	
Benz(a)anthracene	ug/kg	<9.6	382	382	266	219	70	57	29-130	19	30	
Benz(a)pyrene	ug/kg	<3.4	382	382	272	224	71	59	35-130	19	33	
Benz(b)fluoranthene	ug/kg	<9.6	382	382	255	256	67	67	21-142	0	44	
Benz(g,h,i)perylene	ug/kg	<9.6	382	382	194	152	51	40	12-134	24	33	
Benz(k)fluoranthene	ug/kg	<3.4	382	382	352	268	92	70	35-130	27	37	
Chrysene	ug/kg	<9.6	382	382	314	279	82	73	37-130	12	38	
Dibenz(a,h)anthracene	ug/kg	<9.6	382	382	244	188	64	49	23-130	26	27	
Fluoranthene	ug/kg	<9.6	382	382	283	245	74	64	29-137	15	50	
Fluorene	ug/kg	<9.6	382	382	288	256	75	67	32-130	12	32	
Indeno(1,2,3-cd)pyrene	ug/kg	<9.6	382	382	230	185	60	48	17-134	22	28	
Naphthalene	ug/kg	<9.6	382	382	234	217	61	57	24-130	8	40	
Phenanthrene	ug/kg	<9.6	382	382	275	242	72	63	27-135	12	46	
Pyrene	ug/kg	<9.6	382	382	336	288	88	75	24-130	15	49	
2-Fluorobiphenyl (S)	%						76	69	40-130			
Terphenyl-d14 (S)	%						83	72	40-130			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch:	OEXT/19409	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
Associated Lab Samples:	4082157007		

METHOD BLANK: 838032                                  Matrix: Solid

Associated Lab Samples: 4082157007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.9	16.7	08/13/13 11:18	
2-Methylnaphthalene	ug/kg	<8.3	16.7	08/13/13 11:18	
Acenaphthene	ug/kg	<8.3	16.7	08/13/13 11:18	
Acenaphthylene	ug/kg	<8.3	16.7	08/13/13 11:18	
Anthracene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(a)anthracene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(a)pyrene	ug/kg	<3.0	16.7	08/13/13 11:18	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	08/13/13 11:18	
Chrysene	ug/kg	<8.3	16.7	08/13/13 11:18	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	08/13/13 11:18	
Fluoranthene	ug/kg	<8.3	16.7	08/13/13 11:18	
Fluorene	ug/kg	<8.3	16.7	08/13/13 11:18	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	08/13/13 11:18	
Naphthalene	ug/kg	<8.3	16.7	08/13/13 11:18	
Phenanthrene	ug/kg	<8.3	16.7	08/13/13 11:18	
Pyrene	ug/kg	<8.3	16.7	08/13/13 11:18	
2-Fluorobiphenyl (S)	%	58	40-130	08/13/13 11:18	
Terphenyl-d14 (S)	%	66	40-130	08/13/13 11:18	

LABORATORY CONTROL SAMPLE: 838033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	211	63	47-130	
2-Methylnaphthalene	ug/kg	333	196	59	48-130	
Acenaphthene	ug/kg	333	210	63	55-130	
Acenaphthylene	ug/kg	333	214	64	55-130	
Anthracene	ug/kg	333	233	70	66-130	
Benzo(a)anthracene	ug/kg	333	213	64	55-130	
Benzo(a)pyrene	ug/kg	333	253	76	56-130	
Benzo(b)fluoranthene	ug/kg	333	210	63	53-130	
Benzo(g,h,i)perylene	ug/kg	333	229	69	51-130	
Benzo(k)fluoranthene	ug/kg	333	215	64	52-130	
Chrysene	ug/kg	333	238	71	58-130	
Dibenz(a,h)anthracene	ug/kg	333	216	65	55-130	
Fluoranthene	ug/kg	333	229	69	62-130	
Fluorene	ug/kg	333	217	65	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	215	64	54-130	
Naphthalene	ug/kg	333	173	52	41-130	
Phenanthrene	ug/kg	333	223	67	60-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

LABORATORY CONTROL SAMPLE: 838033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	229	69	51-130	
2-Fluorobiphenyl (S)	%			67	40-130	
Terphenyl-d14 (S)	%			71	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 838034 838035

Parameter	Units	4082556007		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Conc.	Spike Conc.	Result								
1-Methylnaphthalene	ug/kg	<3.2	366	366	111	222	30	61	42-130	66	32	M1,R1	
2-Methylnaphthalene	ug/kg	<9.2	366	366	106	214	29	58	34-130	68	35	M1,R1	
Acenaphthene	ug/kg	<9.2	366	366	111	221	30	60	31-130	66	35	M1,R1	
Acenaphthylene	ug/kg	<9.2	366	366	112	226	31	62	32-130	68	25	M1,R1	
Anthracene	ug/kg	<9.2	366	366	116	234	31	63	39-131	67	38	M1,R1	
Benz(a)anthracene	ug/kg	<9.2	366	366	114	224	30	60	29-130	65	30	R1	
Benz(a)pyrene	ug/kg	4.2J	366	366	131	237	35	63	35-130	58	33	R1	
Benz(b)fluoranthene	ug/kg	15.8J	366	366	129	241	31	62	21-142	61	44	R1	
Benz(g,h,i)perylene	ug/kg	<9.2	366	366	108	212	28	57	12-134	65	33	R1	
Benz(k)fluoranthene	ug/kg	4.4J	366	366	112	213	29	57	35-130	62	37	M1,R1	
Chrysene	ug/kg	<9.2	366	366	118	231	30	61	37-130	64	38	M1,R1	
Dibenz(a,h)anthracene	ug/kg	<9.2	366	366	112	218	30	59	23-130	65	27	R1	
Fluoranthene	ug/kg	10.8J	366	366	121	237	30	62	29-137	65	50	R1	
Fluorene	ug/kg	<9.2	366	366	111	224	30	61	32-130	68	32	M1,R1	
Indeno(1,2,3-cd)pyrene	ug/kg	<9.2	366	366	110	213	29	57	17-134	64	28	R1	
Naphthalene	ug/kg	<9.2	366	366	86.0	193	23	53	24-130	77	40	M1,R1	
Phenanthrene	ug/kg	<9.2	366	366	120	238	31	63	27-135	66	46	R1	
Pyrene	ug/kg	<9.2	366	366	121	234	31	61	24-130	63	49	R1	
2-Fluorobiphenyl (S)	%						29	55	40-130			S0	
Terphenyl-d14 (S)	%						36	66	40-130			S0	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: OEXT/19292 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4082157001, 4082157002

METHOD BLANK: 833319 Matrix: Solid

Associated Lab Samples: 4082157001, 4082157002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	08/06/13 10:19	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833320 833321

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	28.5	31.8	71	79	70-120	11	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: OEXT/19293 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

METHOD BLANK: 833322 Matrix: Solid

Associated Lab Samples: 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	08/09/13 09:38	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833323 833324

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	33.0	35.5	82	89	70-120	7	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: PMST/8730

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 4082157001

---

SAMPLE DUPLICATE: 833450

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.9	5.7	3	10	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

QC Batch: PMST/8758 Analysis Method: ASTM D2974-87

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

Associated Lab Samples: 4082157002, 4082157003, 4082157004, 4082157005, 4082157006, 4082157007, 4082157008

SAMPLE DUPLICATE: 838380

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.6	6.6	0	10	

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082157

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### BATCH QUALIFIERS

Batch: MSSV/5865

[IP] Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

Batch: MSV/20734

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

Batch: MSV/20744

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

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S0 Surrogate recovery outside laboratory control limits.

T4 Result reported for hydrocarbons within the method-specific range that do not match pattern of laboratory standard.

W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082157001	B-5-1 (2-4)	WI MOD DRO	OEXT/19292	WI MOD DRO	GCSV/9981
4082157002	B-5-1 (8-10)	WI MOD DRO	OEXT/19292	WI MOD DRO	GCSV/9981
4082157003	B-5-2 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082157004	B-5-2 (12-14)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082157005	B-5-3 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082157006	B-5-3 (10-12)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082157007	B-5-4 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082157008	B-5-4 (8-10)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082157001	B-5-1 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157002	B-5-1 (8-10)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157003	B-5-2 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157004	B-5-2 (12-14)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157005	B-5-3 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157006	B-5-3 (10-12)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157007	B-5-4 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157008	B-5-4 (8-10)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082157001	B-5-1 (2-4)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157002	B-5-1 (8-10)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157003	B-5-2 (2-4)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157004	B-5-2 (12-14)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157005	B-5-3 (2-4)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157006	B-5-3 (10-12)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157007	B-5-4 (2-4)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157008	B-5-4 (8-10)	EPA 3050	MPRP/8909	EPA 6010	ICP/7889
4082157005	B-5-3 (2-4)	EPA 3010	MPRP/9009	EPA 6010	ICP/7969
4082157001	B-5-1 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157002	B-5-1 (8-10)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157003	B-5-2 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157004	B-5-2 (12-14)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157005	B-5-3 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157006	B-5-3 (10-12)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157007	B-5-4 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157008	B-5-4 (8-10)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082157001	B-5-1 (2-4)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157002	B-5-1 (8-10)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157003	B-5-2 (2-4)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157004	B-5-2 (12-14)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157005	B-5-3 (2-4)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157006	B-5-3 (10-12)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157007	B-5-4 (2-4)	EPA 3546	OEXT/19409	EPA 8270 by SIM	MSSV/5887
4082157008	B-5-4 (8-10)	EPA 3546	OEXT/19295	EPA 8270 by SIM	MSSV/5865
4082157001	B-5-1 (2-4)	EPA 5035/5030B	MSV/20731	EPA 8260	MSV/20734
4082157002	B-5-1 (8-10)	EPA 5035/5030B	MSV/20731	EPA 8260	MSV/20734
4082157003	B-5-2 (2-4)	EPA 5035/5030B	MSV/20731	EPA 8260	MSV/20734

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082157

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082157004	B-5-2 (12-14)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082157005	B-5-3 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082157006	B-5-3 (10-12)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082157007	B-5-4 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082157008	B-5-4 (8-10)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082157009	TRIP BLANK	EPA 8260		MSV/20747	
4082157001	B-5-1 (2-4)	ASTM D2974-87		PMST/8730	
4082157002	B-5-1 (8-10)	ASTM D2974-87		PMST/8758	
4082157003	B-5-2 (2-4)	ASTM D2974-87		PMST/8758	
4082157004	B-5-2 (12-14)	ASTM D2974-87		PMST/8758	
4082157005	B-5-3 (2-4)	ASTM D2974-87		PMST/8758	
4082157006	B-5-3 (10-12)	ASTM D2974-87		PMST/8758	
4082157007	B-5-4 (2-4)	ASTM D2974-87		PMST/8758	
4082157008	B-5-4 (8-10)	ASTM D2974-87		PMST/8758	

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Himalayan Consultants

Branch/Location:

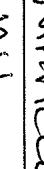
Project Contact: Michelle Reed

Phone: 26255020066

Project Number: 6190-17-00

Project State: WI

Sampled By (Print): Michelle Reed

Sampled By (Sign): 

PO#:

Program:

**Data Package Options**

EPA Level III  
 EPA Level IV

On your sample  
 NOT needed on your sample

(billable)  
 (non-billable)

Air  
 Biota  
 Charcoal  
 Oil  
 Soil  
 Sludge  
 Water

Drinking Water  
 Ground Water  
 Surface Water

Waste Water  
 Wipe

H-Sodium Bisulfate Solution  
 HCL  
 HNO3  
 NaOH  
 Sodium Thiosulfate

None  
 HNO3  
 HCL  
 HSO4  
 NaOH  
 Other

Filtered  
 Not Filtered

Y/N  
 Pick Letter

A  
 E  
 K  
 R

Matrix  
 Collection  
 Time  
 Date

Matrix

Analyses Requested

GRO  
 DRO  
 VOCs  
 PATTc  
 RCRA Metals  
 TCP VOCs  
 TCP metals

hold TCP VOCs & metals

CLIENT COMMENTS

LAB COMMENTS

(Lab Use Only)

Profile #

Invoice To Phone:

Mail To Address:

Invoice To Company:

Mail To Contact:

Project Contact:

Project Name:

Project Number:

Project State:

Project City:

Project Zip:

Project Phone:

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Project Email:

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## Sample Condition Upon Receipt

Client Name: Himalayan

Project # 4082/57

Other CS Logistic

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

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 NA Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20 /Corr:      Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:  
Date: 8/2/13  
Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
- Pace IR Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <i>1-4 oz AgA no depth or sample 8/2/13 MV</i>
- Includes date/time/ID/Analysis Matrix:	<u>S</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≥2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <i>3/3 MV</i>
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>299</u>	

If checked, see attached form for additional comments

### Client Notification/ Resolution:

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

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

Project Manager Review: JL

Date: 8/2/13

## **GROUNDWATER ANALYTICAL**

August 13, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082167

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082167

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082167001	MW-5-1	Water	07/30/13 14:15	08/02/13 09:45
4082167002	MW-5-3	Water	07/30/13 14:45	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082167

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082167001	MW-5-1	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
4082167002	MW-5-3	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082167

Sample: MW-5-1	Lab ID: 4082167001	Collected: 07/30/13 14:15	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	<4.2 ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:10	7440-38-2	
Barium, Dissolved	153 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:10	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:10	7440-43-9	
Chromium, Dissolved	2.0J ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:10	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:10	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:10	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:10	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:24	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:24	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/07/13 11:24	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/07/13 11:24	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/07/13 11:24	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/07/13 11:24	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/07/13 11:24	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/07/13 11:24	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/07/13 11:24	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/07/13 11:24	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/07/13 11:24	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/07/13 11:24	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/07/13 11:24	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 11:24	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/07/13 11:24	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/07/13 11:24	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 11:24	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 11:24	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/07/13 11:24	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/07/13 11:24	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/07/13 11:24	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/07/13 11:24	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/07/13 11:24	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/07/13 11:24	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/07/13 11:24	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/07/13 11:24	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/07/13 11:24	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/07/13 11:24	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 11:24	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/07/13 11:24	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/07/13 11:24	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/07/13 11:24	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/07/13 11:24	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/07/13 11:24	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/07/13 11:24	563-58-6	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

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**Sample: MW-5-1**      **Lab ID: 4082167001**      Collected: 07/30/13 14:15      Received: 08/02/13 09:45      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/07/13 11:24	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/07/13 11:24	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/07/13 11:24	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:24	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/07/13 11:24	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/07/13 11:24	98-82-8	
p-Isopropyltoluene	0.43J ug/L		1.0	0.40	1		08/07/13 11:24	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/07/13 11:24	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/07/13 11:24	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/07/13 11:24	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:24	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/07/13 11:24	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/07/13 11:24	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/07/13 11:24	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/07/13 11:24	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/07/13 11:24	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/07/13 11:24	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 11:24	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 11:24	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/07/13 11:24	79-00-5	
Trichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 11:24	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/07/13 11:24	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/07/13 11:24	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/07/13 11:24	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 11:24	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/07/13 11:24	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/07/13 11:24	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:24	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89 %		43-137		1		08/07/13 11:24	460-00-4	
Dibromofluoromethane (S)	100 %		70-130		1		08/07/13 11:24	1868-53-7	
Toluene-d8 (S)	94 %		55-137		1		08/07/13 11:24	2037-26-5	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082167

Sample: MW-5-3	Lab ID: 4082167002	Collected: 07/30/13 14:45	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	6.5J ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:12	7440-38-2	
Barium, Dissolved	177 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:12	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:12	7440-43-9	
Chromium, Dissolved	<1.4 ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:12	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:12	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:12	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:12	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:26	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:46	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/07/13 11:46	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/07/13 11:46	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/07/13 11:46	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/07/13 11:46	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/07/13 11:46	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/07/13 11:46	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/07/13 11:46	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/07/13 11:46	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/07/13 11:46	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/07/13 11:46	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/07/13 11:46	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 11:46	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/07/13 11:46	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/07/13 11:46	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 11:46	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 11:46	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/07/13 11:46	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/07/13 11:46	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/07/13 11:46	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/07/13 11:46	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/07/13 11:46	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/07/13 11:46	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/07/13 11:46	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/07/13 11:46	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/07/13 11:46	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/07/13 11:46	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 11:46	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/07/13 11:46	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/07/13 11:46	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/07/13 11:46	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/07/13 11:46	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/07/13 11:46	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/07/13 11:46	563-58-6	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082167

Sample: MW-5-3	Lab ID: 4082167002	Collected: 07/30/13 14:45	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/07/13 11:46	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/07/13 11:46	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/07/13 11:46	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:46	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/07/13 11:46	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/07/13 11:46	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/07/13 11:46	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/07/13 11:46	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/07/13 11:46	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/07/13 11:46	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:46	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/07/13 11:46	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/07/13 11:46	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/07/13 11:46	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/07/13 11:46	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/07/13 11:46	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/07/13 11:46	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 11:46	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 11:46	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/07/13 11:46	79-00-5	
Trichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 11:46	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/07/13 11:46	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/07/13 11:46	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/07/13 11:46	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 11:46	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/07/13 11:46	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/07/13 11:46	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/07/13 11:46	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90 %		43-137		1		08/07/13 11:46	460-00-4	
Dibromofluoromethane (S)	101 %		70-130		1		08/07/13 11:46	1868-53-7	
Toluene-d8 (S)	95 %		55-137		1		08/07/13 11:46	2037-26-5	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

QC Batch: MERP/3796 Analysis Method: EPA 7470

QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved

Associated Lab Samples: 4082167001, 4082167002

METHOD BLANK: 836072 Matrix: Water

Associated Lab Samples: 4082167001, 4082167002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.10	0.20	08/09/13 11:59	

LABORATORY CONTROL SAMPLE: 836073

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	104	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 836074 836075

Parameter	Units	4082163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.10	5	5	5.2	5.3	102	106	85-115	3	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

QC Batch:	MPRP/8911	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET Dissolved
Associated Lab Samples:	4082167001, 4082167002		

METHOD BLANK: 833607                                  Matrix: Water

Associated Lab Samples: 4082167001, 4082167002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<4.2	20.0	08/06/13 11:44	
Barium, Dissolved	ug/L	<1.1	5.0	08/06/13 11:44	
Cadmium, Dissolved	ug/L	<0.48	5.0	08/06/13 11:44	
Chromium, Dissolved	ug/L	<1.4	5.0	08/06/13 11:44	
Lead, Dissolved	ug/L	<2.7	7.5	08/06/13 11:44	
Selenium, Dissolved	ug/L	<5.2	20.0	08/06/13 11:44	
Silver, Dissolved	ug/L	<1.7	10.0	08/06/13 11:44	

LABORATORY CONTROL SAMPLE: 833608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	483	97	80-120	
Barium, Dissolved	ug/L	500	490	98	80-120	
Cadmium, Dissolved	ug/L	500	479	96	80-120	
Chromium, Dissolved	ug/L	500	495	99	80-120	
Lead, Dissolved	ug/L	500	490	98	80-120	
Selenium, Dissolved	ug/L	500	492	98	80-120	
Silver, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 833609                                  833610

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max		
		4082163001	Spike Result	Spike Conc.	Conc.				RPD	RPD	Qual
Arsenic, Dissolved	ug/L	<4.2	500	500	498	511	99	101	75-125	2	20
Barium, Dissolved	ug/L	161	500	500	643	654	96	99	75-125	2	20
Cadmium, Dissolved	ug/L	<0.48	500	500	492	501	98	100	75-125	2	20
Chromium, Dissolved	ug/L	<1.4	500	500	495	503	99	100	75-125	1	20
Lead, Dissolved	ug/L	3.2J	500	500	493	497	98	99	75-125	1	20
Selenium, Dissolved	ug/L	<5.2	500	500	513	526	103	105	75-125	3	20
Silver, Dissolved	ug/L	<1.7	250	250	256	260	102	104	75-125	2	20

## REPORT OF LABORATORY ANALYSIS

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

QC Batch: MSV/20720 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 4082167001, 4082167002

METHOD BLANK: 833245 Matrix: Water

Associated Lab Samples: 4082167001, 4082167002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/07/13 06:07	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/07/13 06:07	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/07/13 06:07	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/07/13 06:07	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/07/13 06:07	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/07/13 06:07	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/07/13 06:07	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/07/13 06:07	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/07/13 06:07	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/07/13 06:07	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/07/13 06:07	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/07/13 06:07	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/07/13 06:07	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/07/13 06:07	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/07/13 06:07	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/07/13 06:07	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/07/13 06:07	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/07/13 06:07	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/07/13 06:07	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/07/13 06:07	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/07/13 06:07	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/07/13 06:07	
2-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:07	
4-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:07	
Benzene	ug/L	<0.50	1.0	08/07/13 06:07	
Bromobenzene	ug/L	<0.48	1.0	08/07/13 06:07	
Bromochloromethane	ug/L	<0.49	1.0	08/07/13 06:07	
Bromodichloromethane	ug/L	<0.45	1.0	08/07/13 06:07	
Bromoform	ug/L	<0.23	1.0	08/07/13 06:07	
Bromomethane	ug/L	<0.43	5.0	08/07/13 06:07	
Carbon tetrachloride	ug/L	<0.37	1.0	08/07/13 06:07	
Chlorobenzene	ug/L	<0.36	1.0	08/07/13 06:07	
Chloroethane	ug/L	<0.44	1.0	08/07/13 06:07	
Chloroform	ug/L	<0.69	5.0	08/07/13 06:07	
Chloromethane	ug/L	<0.39	1.0	08/07/13 06:07	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/07/13 06:07	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/07/13 06:07	
Dibromochloromethane	ug/L	<1.9	5.0	08/07/13 06:07	
Dibromomethane	ug/L	<0.48	1.0	08/07/13 06:07	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/07/13 06:07	
Diisopropyl ether	ug/L	<0.50	1.0	08/07/13 06:07	
Ethylbenzene	ug/L	<0.50	1.0	08/07/13 06:07	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/07/13 06:07	

## **REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

METHOD BLANK: 833245

Matrix: Water

Associated Lab Samples: 4082167001, 4082167002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/07/13 06:07	
m&p-Xylene	ug/L	<0.82	2.0	08/07/13 06:07	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/07/13 06:07	
Methylene Chloride	ug/L	<0.36	1.0	08/07/13 06:07	
n-Butylbenzene	ug/L	<0.40	1.0	08/07/13 06:07	
n-Propylbenzene	ug/L	<0.50	1.0	08/07/13 06:07	
Naphthalene	ug/L	<2.5	5.0	08/07/13 06:07	
o-Xylene	ug/L	<0.50	1.0	08/07/13 06:07	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/07/13 06:07	
sec-Butylbenzene	ug/L	<0.60	5.0	08/07/13 06:07	
Styrene	ug/L	<0.35	1.0	08/07/13 06:07	
tert-Butylbenzene	ug/L	<0.42	1.0	08/07/13 06:07	
Tetrachloroethene	ug/L	<0.47	1.0	08/07/13 06:07	
Toluene	ug/L	<0.44	1.0	08/07/13 06:07	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/07/13 06:07	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/07/13 06:07	
Trichloroethene	ug/L	<0.43	1.0	08/07/13 06:07	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/07/13 06:07	
Vinyl chloride	ug/L	<0.18	1.0	08/07/13 06:07	
4-Bromofluorobenzene (S)	%	90	43-137	08/07/13 06:07	
Dibromofluoromethane (S)	%	98	70-130	08/07/13 06:07	
Toluene-d8 (S)	%	94	55-137	08/07/13 06:07	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833246

833247

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.5	48.9	95	98	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	46.9	49.0	94	98	70-130	4	20	
1,1,2-Trichloroethane	ug/L	50	50.3	51.4	101	103	70-130	2	20	
1,1-Dichloroethane	ug/L	50	50.3	52.3	101	105	70-146	4	20	
1,1-Dichloroethene	ug/L	50	49.6	52.2	99	104	70-130	5	20	
1,2,4-Trichlorobenzene	ug/L	50	47.7	50.7	95	101	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	50	40.9	42.9	82	86	46-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	50	49.7	51.5	99	103	70-130	4	20	
1,2-Dichlorobenzene	ug/L	50	49.9	51.7	100	103	70-130	3	20	
1,2-Dichloroethane	ug/L	50	52.3	54.0	105	108	70-144	3	20	
1,2-Dichloropropane	ug/L	50	53.9	54.1	108	108	70-136	0	20	
1,3-Dichlorobenzene	ug/L	50	47.2	48.6	94	97	70-130	3	20	
1,4-Dichlorobenzene	ug/L	50	47.4	48.9	95	98	70-130	3	20	
Benzene	ug/L	50	51.6	53.8	103	108	70-137	4	20	
Bromodichloromethane	ug/L	50	53.0	54.2	106	108	70-133	2	20	
Bromoform	ug/L	50	48.9	49.7	98	99	59-130	1	20	
Bromomethane	ug/L	50	40.0	43.6	80	87	41-148	9	20	
Carbon tetrachloride	ug/L	50	49.0	50.3	98	101	70-154	3	20	
Chlorobenzene	ug/L	50	52.0	52.3	104	105	70-130	1	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

LABORATORY CONTROL SAMPLE & LCSD:		833246									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroethane	ug/L	50	51.2	52.6	102	105	70-139	3	20		
Chloroform	ug/L	50	49.8	50.7	100	101	70-130	2	20		
Chloromethane	ug/L	50	43.1	44.7	86	89	45-154	4	20		
cis-1,2-Dichloroethene	ug/L	50	49.6	50.9	99	102	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	50	44.5	45.5	89	91	70-136	2	20		
Dibromochloromethane	ug/L	50	47.8	49.2	96	98	70-130	3	20		
Dichlorodifluoromethane	ug/L	50	29.7	30.6	59	61	20-157	3	20		
Ethylbenzene	ug/L	50	52.4	54.0	105	108	70-130	3	20		
Isopropylbenzene (Cumene)	ug/L	50	48.5	49.7	97	99	70-130	3	20		
m&p-Xylene	ug/L	100	108	110	108	110	70-130	2	20		
Methyl-tert-butyl ether	ug/L	50	33.4	34.7	67	69	59-141	4	20		
Methylene Chloride	ug/L	50	52.1	53.8	104	108	70-130	3	20		
o-Xylene	ug/L	50	49.5	51.1	99	102	70-130	3	20		
Styrene	ug/L	50	49.4	50.3	99	101	70-130	2	20		
Tetrachloroethene	ug/L	50	47.8	49.7	96	99	70-130	4	20		
Toluene	ug/L	50	51.6	52.5	103	105	70-130	2	20		
trans-1,2-Dichloroethene	ug/L	50	50.6	52.7	101	105	70-130	4	20		
trans-1,3-Dichloropropene	ug/L	50	42.1	44.4	84	89	55-135	5	20		
Trichloroethene	ug/L	50	55.0	55.9	110	112	70-130	2	20		
Trichlorofluoromethane	ug/L	50	47.9	49.6	96	99	50-150	3	20		
Vinyl chloride	ug/L	50	46.7	48.9	93	98	61-143	5	20		
4-Bromofluorobenzene (S)	%				101	101	43-137				
Dibromofluoromethane (S)	%				99	98	70-130				
Toluene-d8 (S)	%				96	94	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		833254										
Parameter	Units	4082224003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<44.3	50	50	46.8	50.3	94	101	70-136	7	20	
1,1,2-Tetrachloroethane	ug/L	<38.4	50	50	47.2	48.6	94	97	70-130	3	20	
1,1,2-Trichloroethane	ug/L	<39.0	50	50	42.7	45.9	85	92	70-130	7	20	
1,1-Dichloroethane	ug/L	<28.5	50	50	48.0	51.1	96	102	70-146	6	20	
1,1-Dichloroethene	ug/L	<42.7	50	50	52.8	54.9	106	110	70-130	4	20	
1,2,4-Trichlorobenzene	ug/L	<250	50	50	50.7	54.2	101	108	70-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	<150	50	50	44.1	47.6	88	95	46-150	8	20	
1,2-Dibromoethane (EDB)	ug/L	<38.1	50	50	44.8	47.1	90	94	70-130	5	20	
1,2-Dichlorobenzene	ug/L	<43.9	50	50	46.5	50.1	93	100	70-130	8	20	
1,2-Dichloroethane	ug/L	<47.6	50	50	48.5	50.2	97	100	70-146	3	20	
1,2-Dichloropropene	ug/L	<49.8	50	50	49.1	52.0	98	104	70-136	6	20	
1,3-Dichlorobenzene	ug/L	<45.1	50	50	47.0	49.5	94	99	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<43.4	50	50	44.6	46.7	89	93	70-130	4	20	
Benzene	ug/L	<50.0	50	50	49.0	50.5	98	101	70-137	3	20	
Bromodichloromethane	ug/L	<45.3	50	50	52.2	54.6	104	109	70-133	5	20	
Bromoform	ug/L	<23.3	50	50	43.2	44.2	86	88	57-130	2	20	
Bromomethane	ug/L	<43.0	50	50	45.2	47.6	90	95	41-148	5	20	
Carbon tetrachloride	ug/L	<36.5	50	50	50.3	51.9	101	104	70-154	3	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

Parameter	Units	4082224003		MS Spike		MSD Spike		MS Result		MSD Result		MS % Rec		MSD % Rec		% Rec		Max	
		Result	Conc.	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	RPD	RPD	Limits	Qual	RPD	RPD	Max
Chlorobenzene	ug/L	<35.8	50	50	46.5	48.3	93	97	70-130	4	20								
Chloroethane	ug/L	<44.4	50	50	52.5	54.6	105	109	70-140	4	20								
Chloroform	ug/L	<68.9	50	50	53.7	55.6	47	51	70-130	3	20 M1								
Chloromethane	ug/L	<38.8	50	50	51.7	56.3	103	113	45-154	9	20								
cis-1,2-Dichloroethene	ug/L	<41.9	50	50	47.4	47.9	95	96	70-130	1	20								
cis-1,3-Dichloropropene	ug/L	<29.0	50	50	46.7	48.8	93	98	70-136	4	20								
Dibromochloromethane	ug/L	<190	50	50	43.3	45.6	87	91	70-130	5	20								
Dichlorodifluoromethane	ug/L	<40.1	50	50	54.0	55.8	108	112	10-157	3	20								
Ethylbenzene	ug/L	<50.0	50	50	48.4	50.4	97	101	70-130	4	20								
Isopropylbenzene (Cumene)	ug/L	<34.1	50	50	44.8	46.7	90	93	70-130	4	20								
m&p-Xylene	ug/L	<81.7	100	100	98.2	103	98	103	70-130	5	20								
Methyl-tert-butyl ether	ug/L	62.8J	50	50	92.5	101	59	75	59-141	8	20								
Methylene Chloride	ug/L	<35.9	50	50	48.9	52.1	98	104	70-130	6	20								
o-Xylene	ug/L	<50.0	50	50	45.4	47.4	91	95	70-130	4	20								
Styrene	ug/L	<35.0	50	50	44.6	46.7	89	93	35-164	5	20								
Tetrachloroethene	ug/L	<47.2	50	50	42.0	44.0	84	88	70-130	5	20								
Toluene	ug/L	<43.9	50	50	43.0	46.0	86	92	70-130	7	20								
trans-1,2-Dichloroethene	ug/L	<37.1	50	50	49.6	51.5	99	103	70-130	4	20								
trans-1,3-Dichloropropene	ug/L	<26.2	50	50	37.8	40.5	76	81	55-137	7	20								
Trichloroethene	ug/L	<42.9	50	50	50.2	52.6	100	105	70-130	5	20								
Trichlorofluoromethane	ug/L	<47.7	50	50	54.7	55.5	109	111	50-150	2	20								
Vinyl chloride	ug/L	<18.5	50	50	54.5	56.6	109	113	59-144	4	20								
4-Bromofluorobenzene (S)	%							96	96	43-137									
Dibromofluoromethane (S)	%							99	98	70-130									
Toluene-d8 (S)	%							84	87	55-137									

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082167

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### 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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082167

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082167001	MW-5-1	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082167002	MW-5-3	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082167001	MW-5-1	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082167002	MW-5-3	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082167001	MW-5-1	EPA 8260	MSV/20720		
4082167002	MW-5-3	EPA 8260	MSV/20720		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: **Thi Malayan Consultants**  
Branch/Location:  
Project Contact: **Michelle Reed**  
Phone: **2625020066**

Project Number: **6190-17-00**

Project Name: **WINNE CONNE**  
Project State: **WI**  
Sampled By (Print): **Michelle Reed**  
Sampled By (Sign): **JUD**

PO#:

Regulatory Program:



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## CHAIN OF CUSTODY

STW

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

4082167

Page 1 of

Quote #:	4082167
Mail To Contact:	
Mail To Company:	Michelle Reed
Invoice To Address:	
Invoice To Contact:	
Invoice To Company:	
Comments:	

Preservation Codes	
A=None	B=HCl
H=Sodium Bisulfate Solution	C=H <sub>2</sub> SO <sub>4</sub>
D=HNO <sub>3</sub>	E=DI Water
I=Sodium Thiosulfate	F=Methanol
J=Other	G=NaOH

FILTERED? (YES/NO)	PICK Letter	PRESERVATION (CODE)*
Y/N	N	Y

Data Package Options (billable)	MS/MSD	Matrix Codes
<input type="checkbox"/> EPA Level III	<input type="checkbox"/> On your sample (billable)	A = Air B = Biota C = Charcoal S = Soil SL = Sludge
<input type="checkbox"/> EPA Level IV	<input type="checkbox"/> NOT needed on your sample	DW = Water GW = Drinking Water SW = Surface Water WW = Waste Water WP = Wipe

Analyses Requested  
VOCs RCRA metals

CLIENT COMMENTS  
(Lab Use Only)

LAB COMMENTS  
(Lab Use Only)

Profile #

001 MN5-1 13/13 215 GW X X

002 MW-5-3 1/30/13 245 GW X X

3-4/10/13 1-250mls D  
↓  
↓

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)	Reinquished By: <b>JUD</b>	Date/Time: 3/11/13 9:07	Received By: <b>Mary Tennis</b>	Date/Time: 8/11/13 9:37	PAGE Project No. 4082167
Date Needed:	Reinquished By: <b>Mary Tennis</b>	Date/Time: 8/1/13 1:530	Received By:	Date/Time:	
Transmit Prelim Rush Results by (complete what you want):	Reinquished By: <b>Mary Tennis</b>	Date/Time: 8/1/13 0945	Received By: <b>Mary Tennis</b>	Date/Time: 8/1/13 0945	Receipt Temp = <b>RO/ °C</b>
Email #1:	WPex16@msn.com				Sample Receipt pH
Email #2:					Off / Adjusted
Telephone:					Cooler Custody Seal
Fax:					Present Not Present
Samples on HOLD are subject to special pricing and release of liability	Reinquished By:	Date/Time:	Received By:	Date/Time:	Intact Not Intact



## Sample Condition Upon Receipt

Client Name: Himalayan Project # 4082167

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other CS Logistic

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: NA Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature: Uncorr: 20 | Corr: \_\_\_\_\_ Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 8/2/13

Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.		
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.		
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.		
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.		
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5. Date/Time: _____		
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.		
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.		
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.		
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.		
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.		
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct		
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≥ 2, NaOH+ZnAct ≥ 9, NaOH ≥ 12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.		
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.		
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Pace Trip Blank Lot # (if purchased):		Initial when completed <u>MV</u>	Lab Std #ID of preservative	Date/ Time:

### Client Notification/ Resolution:

If checked, see attached form for additional comments

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

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

Project Manager Review:

MAT for DM

Date:

8/2/13

## **WASTE CHARACTERIZATION ANALYTICAL**

August 19, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082161

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### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
 A2LA Certification #: 2926.01  
 Alaska Certification #: UST-078  
 Alaska Certification #MN00064  
 Arizona Certification #: AZ-0014  
 Arkansas Certification #: 88-0680  
 California Certification #: 01155CA  
 Colorado Certification #Pace  
 Connecticut Certification #: PH-0256  
 EPA Region 8 Certification #: Pace  
 Florida/NELAP Certification #: E87605  
 Georgia Certification #: 959  
 Hawaii Certification #Pace  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Kansas Certification #: E-10167  
 Louisiana Certification #: 03086  
 Louisiana Certification #: LA080009  
 Maine Certification #: 2007029  
 Maryland Certification #: 322  
 Michigan DEQ Certification #: 9909  
 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
 Montana Certification #: MT CERT0092  
 Nebraska Certification #: Pace  
 Nevada Certification #: MN\_00064  
 New Jersey Certification #: MN-002  
 New York Certification #: 11647  
 North Carolina Certification #: 530  
 North Dakota Certification #: R-036  
 Ohio VAP Certification #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Certification #: MN200001  
 Oregon Certification #: MN300001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification  
 Tennessee Certification #: 02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Virginia/DCLS Certification #: 002521  
 Virginia/VELAP Certification #: 460163  
 Washington Certification #: C754  
 West Virginia Certification #: 382  
 Wisconsin Certification #: 999407970

### **Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302  
 Florida/NELAP Certification #: E87948  
 Illinois Certification #: 200050  
 Kentucky Certification #: 82  
 Louisiana Certification #: 04168  
 Minnesota Certification #: 055-999-334

New York Certification #: 11888  
 North Dakota Certification #: R-150  
 South Carolina Certification #: 83006001  
 US Dept of Agriculture #: S-76505  
 Wisconsin Certification #: 405132750

### **Kansas Certification IDs**

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

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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082161001	PROT B-5	Solid	07/31/13 14:10	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082161

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082161001	PROT B-5	EPA 8082	BLM	10	PASI-G
		EPA 6010	DLB	10	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8270	RJN	16	PASI-G
		EPA 8260	HNW	13	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		SW-846 7.3.4.2	AJM	1	PASI-K
		EPA 9040	KMS	1	PASI-G
		EPA 9095	HKV	1	PASI-G
		SM 2710F	HKV	1	PASI-G
		EPA 420.1	KEO	1	PASI-M
		SW-846 7.3.3.2	AJM	1	PASI-K

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

Sample: PROT B-5 Lab ID: 4082161001 Collected: 07/31/13 14:10 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB</b>	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	12674-11-2	
PCB-1221 (Aroclor 1221)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	11104-28-2	
PCB-1232 (Aroclor 1232)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	11141-16-5	
PCB-1242 (Aroclor 1242)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	53469-21-9	
PCB-1248 (Aroclor 1248)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	12672-29-6	
PCB-1254 (Aroclor 1254)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	11097-69-1	
PCB-1260 (Aroclor 1260)	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	11096-82-5	
PCB, Total	<32.7 ug/kg		65.5	32.7	1	08/05/13 12:00	08/05/13 23:52	1336-36-3	
<b>Surrogates</b>									
Tetrachloro-m-xylene (S)	87 %		40-130		1	08/05/13 12:00	08/05/13 23:52	877-09-8	
Decachlorobiphenyl (S)	90 %		48-130		1	08/05/13 12:00	08/05/13 23:52	2051-24-3	
<b>6010 MET ICP, TCLP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
Arsenic	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7440-38-2	
Barium	<1.2 mg/L		2.5	1.2	1	08/07/13 10:45	08/07/13 16:50	7440-39-3	
Cadmium	<0.0025 mg/L		0.0050	0.0025	1	08/07/13 10:45	08/07/13 16:50	7440-43-9	
Chromium	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7440-47-3	
Copper	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7440-50-8	
Lead	<0.015 mg/L		0.038	0.015	1	08/07/13 10:45	08/07/13 16:50	7439-92-1	
Nickel	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7440-02-0	
Selenium	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7782-49-2	
Silver	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7440-22-4	
Zinc	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:50	7440-66-6	
<b>7470 Mercury, TCLP</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
Mercury	0.64 ug/L		0.20	0.10	1	08/12/13 11:15	08/12/13 15:06	7439-97-6	
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
1,4-Dichlorobenzene	<8.6 ug/L		50.0	8.6	1	08/12/13 12:00	08/16/13 00:11	106-46-7	
2,4-Dinitrotoluene	<8.0 ug/L		50.0	8.0	1	08/12/13 12:00	08/16/13 00:11	121-14-2	
Hexachloro-1,3-butadiene	<6.6 ug/L		100	6.6	1	08/12/13 12:00	08/16/13 00:11	87-68-3	
Hexachlorobenzene	<11.1 ug/L		50.0	11.1	1	08/12/13 12:00	08/16/13 00:11	118-74-1	
Hexachloroethane	<5.8 ug/L		50.0	5.8	1	08/12/13 12:00	08/16/13 00:11	67-72-1	
2-Methylphenol(o-Cresol)	<9.7 ug/L		50.0	9.7	1	08/12/13 12:00	08/16/13 00:11	95-48-7	
3&4-Methylphenol(m&p Cresol)	<7.7 ug/L		50.0	7.7	1	08/12/13 12:00	08/16/13 00:11		
Nitrobenzene	<13.7 ug/L		50.0	13.7	1	08/12/13 12:00	08/16/13 00:11	98-95-3	
Pentachlorophenol	<10.8 ug/L		100	10.8	1	08/12/13 12:00	08/16/13 00:11	87-86-5	
Pyridine	<14.3 ug/L		50.0	14.3	1	08/12/13 12:00	08/16/13 00:11	110-86-1	
2,4,5-Trichlorophenol	<10 ug/L		50.0	10	1	08/12/13 12:00	08/16/13 00:11	95-95-4	
2,4,6-Trichlorophenol	<10.7 ug/L		50.0	10.7	1	08/12/13 12:00	08/16/13 00:11	88-06-2	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

---

**Sample: PROT B-5**      **Lab ID: 4082161001**      Collected: 07/31/13 14:10      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	89 %	59-130		1	08/12/13 12:00	08/16/13 00:11	4165-60-0		
2-Fluorobiphenyl (S)	96 %	60-130		1	08/12/13 12:00	08/16/13 00:11	321-60-8		
Phenol-d6 (S)	33 %	19-130		1	08/12/13 12:00	08/16/13 00:11	13127-88-3		
2,4,6-Tribromophenol (S)	94 %	34-143		1	08/12/13 12:00	08/16/13 00:11	118-79-6		
<b>8260 MSV TCLP</b>	Analytical Method: EPA 8260 Preparation Method: EPA 1311								
Benzene	<5.0 ug/L	10.0	5.0	10	08/06/13 00:00	08/09/13 12:23	71-43-2		
2-Butanone (MEK)	<27.0 ug/L	200	27.0	10	08/06/13 00:00	08/09/13 12:23	78-93-3		
Carbon tetrachloride	<3.7 ug/L	10.0	3.7	10	08/06/13 00:00	08/09/13 12:23	56-23-5		
Chlorobenzene	<3.6 ug/L	10.0	3.6	10	08/06/13 00:00	08/09/13 12:23	108-90-7		
Chloroform	<6.9 ug/L	50.0	6.9	10	08/06/13 00:00	08/09/13 12:23	67-66-3		
1,2-Dichloroethane	<4.8 ug/L	10.0	4.8	10	08/06/13 00:00	08/09/13 12:23	107-06-2		
1,1-Dichloroethene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 12:23	75-35-4		
Tetrachloroethylene	<4.7 ug/L	10.0	4.7	10	08/06/13 00:00	08/09/13 12:23	127-18-4		
Trichloroethylene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 12:23	79-01-6		
Vinyl chloride	<1.8 ug/L	10.0	1.8	10	08/06/13 00:00	08/09/13 12:23	75-01-4		
<b>Surrogates</b>									
Toluene-d8 (S)	99 %	55-137		10	08/06/13 00:00	08/09/13 12:23	2037-26-5		
4-Bromofluorobenzene (S)	97 %	43-137		10	08/06/13 00:00	08/09/13 12:23	460-00-4		
Dibromofluoromethane (S)	93 %	70-130		10	08/06/13 00:00	08/09/13 12:23	1868-53-7		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	23.6 %	0.10	0.10	1			08/13/13 13:24		
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F			1			08/07/13 16:21		
<b>Reactive Sulfide</b>	Analytical Method: SW-846 7.3.4.2								
Sulfide, Reactive	0.0J mg/kg	100		1			08/12/13 09:00		
<b>9040 pH</b>	Analytical Method: EPA 9040								
pH	8.8 Std. Units	0.10	0.010	1			08/14/13 23:00		1q,H6
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	PASS no units			1			08/06/13 10:01		
<b>Specific Gravity</b>	Analytical Method: SM 2710F								
Specific Gravity	1.4 no units			1			08/06/13 10:58		
<b>Phenolics, Total Recoverable</b>	Analytical Method: EPA 420.1								
Phenolics, Total Recoverable	<15.0 ug/L	50.0	15.0	1			08/15/13 15:30		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

---

Sample: PROT B-5      Lab ID: 4082161001      Collected: 07/31/13 14:10      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>733C S Reactive Cyanide</b>	Analytical Method: SW-846 7.3.3.2								
Cyanide, Reactive	<b>0.0J</b> mg/kg	0.025		1			08/12/13 09:07		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	MERP/3798	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury TCLP
Associated Lab Samples:	4082161001		

METHOD BLANK: 837733 Matrix: Water

Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.10	0.20	08/12/13 14:53	

LABORATORY CONTROL SAMPLE: 837734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	85-115	

MATRIX SPIKE SAMPLE: 837735

Parameter	Units	4082092001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.3	106	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 837736 837737

Parameter	Units	4082159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
Mercury	ug/L	0.38	5	5	5.6	5.5	104	103	85-115	1	20	

MATRIX SPIKE SAMPLE: 837738

Parameter	Units	4082217001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.38	5	5.3	98	85-115	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	MPRP/8926	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	4082161001		

METHOD BLANK: 834575                                  Matrix: Water

Associated Lab Samples: 4082161001

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Arsenic	mg/L	<0.025	0.050	08/07/13 16:37	
Barium	mg/L	<0.25	0.50	08/07/13 16:37	
Cadmium	mg/L	<0.00050	0.0010	08/07/13 16:37	
Chromium	mg/L	<0.025	0.050	08/07/13 16:37	
Copper	mg/L	<0.025	0.050	08/07/13 16:37	
Lead	mg/L	<0.0030	0.0075	08/07/13 16:37	
Nickel	mg/L	<0.025	0.050	08/07/13 16:37	
Selenium	mg/L	<0.025	0.050	08/07/13 16:37	
Silver	mg/L	<0.025	0.050	08/07/13 16:37	
Zinc	mg/L	<0.025	0.050	08/07/13 16:37	

LABORATORY CONTROL SAMPLE: 834576

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Arsenic	mg/L	.5	0.50	99	80-120	
Barium	mg/L	.5	0.52	103	80-120	
Cadmium	mg/L	.5	0.50	99	80-120	
Chromium	mg/L	.5	0.51	102	80-120	
Copper	mg/L	.5	0.51	102	80-120	
Lead	mg/L	.5	0.50	100	80-120	
Nickel	mg/L	.5	0.51	103	80-120	
Selenium	mg/L	.5	0.51	101	80-120	
Silver	mg/L	.25	0.25	101	80-120	
Zinc	mg/L	.5	0.51	102	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 834577                          834578

Parameter	Units	MS		MSD		MS		MSD		% Rec	Limits	RPD	RPD	Max
		4082159001	Spike	Spike	Conc.	Result	MSD	Result	% Rec					
Arsenic	mg/L	<0.12	2.5	2.5	2.6	2.6	102	101	75-125	1	20			
Barium	mg/L	<1.2	2.5	2.5	3.1	3.0	101	99	75-125	2	20			
Cadmium	mg/L	<0.0025	2.5	2.5	2.5	2.5	102	101	75-125	1	20			
Chromium	mg/L	<0.12	2.5	2.5	2.6	2.6	102	103	75-125	0	20			
Copper	mg/L	<0.12	2.5	2.5	2.6	2.6	103	102	75-125	1	20			
Lead	mg/L	<0.015	2.5	2.5	2.5	2.5	99	100	75-125	1	20			
Nickel	mg/L	<0.12	2.5	2.5	2.5	2.6	102	102	75-125	1	20			
Selenium	mg/L	<0.12	2.5	2.5	2.6	2.6	103	104	75-125	2	20			
Silver	mg/L	<0.12	1.2	1.2	1.3	1.3	104	103	75-125	0	20			
Zinc	mg/L	<0.12	2.5	2.5	2.7	2.6	103	103	75-125	0	20			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

MATRIX SPIKE SAMPLE:		834579	4082217001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Parameter	Units	Result						
Arsenic	mg/L	<0.12	2.5	2.5	100	75-125		
Barium	mg/L	<1.2	2.5	2.7	102	75-125		
Cadmium	mg/L	<0.0025	2.5	2.5	100	75-125		
Chromium	mg/L	<0.12	2.5	2.6	103	75-125		
Copper	mg/L	<0.12	2.5	2.6	102	75-125		
Lead	mg/L	<0.015	2.5	2.5	101	75-125		
Nickel	mg/L	<0.12	2.5	2.6	103	75-125		
Selenium	mg/L	<0.12	2.5	2.6	103	75-125		
Silver	mg/L	<0.12	1.2	1.3	103	75-125		
Zinc	mg/L	<0.12	2.5	2.7	104	75-125		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	MSV/20755	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV TCLP
Associated Lab Samples:	4082161001		

METHOD BLANK: 834655	Matrix: Water
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Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/09/13 08:11	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/09/13 08:11	
Benzene	ug/L	<0.50	1.0	08/09/13 08:11	
Carbon tetrachloride	ug/L	<0.37	1.0	08/09/13 08:11	
Chlorobenzene	ug/L	<0.36	1.0	08/09/13 08:11	
Chloroform	ug/L	<0.69	5.0	08/09/13 08:11	
Tetrachloroethene	ug/L	<0.47	1.0	08/09/13 08:11	
Trichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
Vinyl chloride	ug/L	<0.18	1.0	08/09/13 08:11	
4-Bromofluorobenzene (S)	%	97	43-137	08/09/13 08:11	
Dibromofluoromethane (S)	%	93	70-130	08/09/13 08:11	
Toluene-d8 (S)	%	100	55-137	08/09/13 08:11	

LABORATORY CONTROL SAMPLE & LCSD: 834656	834657
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Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/L	50	57.8	58.5	116	117	70-130	1	20	
1,2-Dichloroethane	ug/L	50	52.5	53.0	105	106	70-144	1	20	
Benzene	ug/L	50	53.6	53.1	107	106	70-137	1	20	
Carbon tetrachloride	ug/L	50	50.6	50.9	101	102	70-154	0	20	
Chlorobenzene	ug/L	50	54.8	53.3	110	107	70-130	3	20	
Chloroform	ug/L	50	52.8	51.9	106	104	70-130	2	20	
Tetrachloroethene	ug/L	50	54.4	53.6	109	107	70-130	2	20	
Trichloroethene	ug/L	50	57.8	55.0	116	110	70-130	5	20	
Vinyl chloride	ug/L	50	53.1	53.4	106	107	61-143	1	20	
4-Bromofluorobenzene (S)	%				106	105	43-137			
Dibromofluoromethane (S)	%				99	103	70-130			
Toluene-d8 (S)	%				98	99	55-137			

MATRIX SPIKE SAMPLE: 834658	
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Parameter	Units	4082127001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<4.3	500	587	117	70-130	
1,2-Dichloroethane	ug/L	<4.8	500	516	103	70-146	
2-Butanone (MEK)	ug/L	<27.0		<27.0			
Benzene	ug/L	<5.0	500	528	106	70-137	
Carbon tetrachloride	ug/L	<3.7	500	512	102	70-154	
Chlorobenzene	ug/L	<3.6	500	537	107	70-130	
Chloroform	ug/L	<6.9	500	516	103	70-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

MATRIX SPIKE SAMPLE:	834658							
Parameter	Units	4082127001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Tetrachloroethene	ug/L	<4.7	500	535	107	70-130		
Trichloroethene	ug/L	<4.3	500	552	110	70-130		
Vinyl chloride	ug/L	<1.8	500	526	105	59-144		
4-Bromofluorobenzene (S)	%				107	43-137		
Dibromofluoromethane (S)	%				99	70-130		
Toluene-d8 (S)	%				98	55-137		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	OEXT/19291	Analysis Method:	EPA 8082
QC Batch Method:	EPA 3541	Analysis Description:	8082 GCS PCB
Associated Lab Samples:	4082161001		

METHOD BLANK: 833315	Matrix: Solid
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Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	08/05/13 16:59	
Decachlorobiphenyl (S)	%	93	48-130	08/05/13 16:59	
Tetrachloro-m-xylene (S)	%	77	40-130	08/05/13 16:59	

LABORATORY CONTROL SAMPLE: 833316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	438	88	70-130	
Decachlorobiphenyl (S)	%			89	48-130	
Tetrachloro-m-xylene (S)	%			74	40-130	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 833317 833318

Parameter	Units	4082212001		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		Spke	Spke								
PCB-1016 (Aroclor 1016)	ug/kg	<661			<661	<661					31
PCB-1221 (Aroclor 1221)	ug/kg	<661			<661	<661					31
PCB-1232 (Aroclor 1232)	ug/kg	<661			<661	<661					31
PCB-1242 (Aroclor 1242)	ug/kg	5360			6220	5940				5	31
PCB-1248 (Aroclor 1248)	ug/kg	<661			<661	<661					31
PCB-1254 (Aroclor 1254)	ug/kg	<661			<661	<661					31
PCB-1260 (Aroclor 1260)	ug/kg	<661	882	882	1060J	995J	120	113	40-149		31
Decachlorobiphenyl (S)	%						0	0	48-130		S4
Tetrachloro-m-xylene (S)	%						0	0	40-130		S4

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

QC Batch: OEXT/19391 Analysis Method: EPA 8270  
QC Batch Method: EPA 3510 Analysis Description: 8270 TCLP MSSV  
Associated Lab Samples: 4082161001

METHOD BLANK: 837558 Matrix: Water

Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<1.7	10.0	08/13/13 10:49	
2,4,5-Trichlorophenol	ug/L	<2.0	10.0	08/13/13 10:49	
2,4,6-Trichlorophenol	ug/L	<2.1	10.0	08/13/13 10:49	
2,4-Dinitrotoluene	ug/L	<1.6	10.0	08/13/13 10:49	
2-Methylphenol(o-Cresol)	ug/L	<1.9	10.0	08/13/13 10:49	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.5	10.0	08/13/13 10:49	
Hexachloro-1,3-butadiene	ug/L	<1.3	20.0	08/13/13 10:49	
Hexachlorobenzene	ug/L	<2.2	10.0	08/13/13 10:49	
Hexachloroethane	ug/L	<1.2	10.0	08/13/13 10:49	
Nitrobenzene	ug/L	<2.7	10.0	08/13/13 10:49	
Pentachlorophenol	ug/L	<2.2	20.0	08/13/13 10:49	
Pyridine	ug/L	<2.9	10.0	08/13/13 10:49	
2,4,6-Tribromophenol (S)	%	87	34-143	08/13/13 10:49	
2-Fluorobiphenyl (S)	%	96	60-130	08/13/13 10:49	
Nitrobenzene-d5 (S)	%	84	59-130	08/13/13 10:49	
Phenol-d6 (S)	%	39	19-130	08/13/13 10:49	

LABORATORY CONTROL SAMPLE: 837559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	29.3	59	53-130	
2,4,5-Trichlorophenol	ug/L	50	53.9	108	70-130	
2,4,6-Trichlorophenol	ug/L	50	47.2	94	70-130	
2,4-Dinitrotoluene	ug/L	50	56.5	113	69-134	
2-Methylphenol(o-Cresol)	ug/L	50	39.9	80	48-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	37.3	75	43-130	
Hexachloro-1,3-butadiene	ug/L	50	34.1	68	53-130	
Hexachlorobenzene	ug/L	50	47.7	95	59-130	
Hexachloroethane	ug/L	50	25.5	51	47-130	
Nitrobenzene	ug/L	50	52.4	105	66-130	
Pentachlorophenol	ug/L	50	51.6	103	54-130	
Pyridine	ug/L	50	16.9	34	10-130	
2,4,6-Tribromophenol (S)	%			62	34-143	
2-Fluorobiphenyl (S)	%			62	60-130	
Nitrobenzene-d5 (S)	%			63	59-130	
Phenol-d6 (S)	%			28	19-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

MATRIX SPIKE SAMPLE:	837560						
Parameter	Units	4082092001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		ND	250	162J	65	50-130
2,4,5-Trichlorophenol	ug/L		ND	250	207J	83	65-130
2,4,6-Trichlorophenol	ug/L		ND	250	192J	77	64-130
2,4-Dinitrotoluene	ug/L		ND	250	244J	98	49-136
2-Methylphenol(o-Cresol)	ug/L		ND	250	270J	73	33-130
3&4-Methylphenol(m&p Cresol)	ug/L		ND	250	427J	51	35-130
Hexachloro-1,3-butadiene	ug/L		ND	250	192J	77	48-130
Hexachlorobenzene	ug/L		ND	250	228J	91	57-130
Hexachloroethane	ug/L		ND	250	125J	50	45-130
Nitrobenzene	ug/L		ND	250	245J	98	62-130
Pentachlorophenol	ug/L		ND	250	143J	57	10-149
Pyridine	ug/L		ND	250	<143	38	10-130
2,4,6-Tribromophenol (S)	%					80	34-143
2-Fluorobiphenyl (S)	%					94	60-130
Nitrobenzene-d5 (S)	%					86	59-130
Phenol-d6 (S)	%					32	19-130

MATRIX SPIKE SAMPLE:	837561						
Parameter	Units	4082324001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		<8.6	250	193	77	50-130
2,4,5-Trichlorophenol	ug/L		<10	250	262	105	65-130
2,4,6-Trichlorophenol	ug/L		<10.7	250	237	95	64-130
2,4-Dinitrotoluene	ug/L		<8.0	250	277	111	49-136
2-Methylphenol(o-Cresol)	ug/L		<9.7	250	202	81	33-130
3&4-Methylphenol(m&p Cresol)	ug/L		<7.7	250	174	70	35-130
Hexachloro-1,3-butadiene	ug/L		<6.6	250	213	85	48-130
Hexachlorobenzene	ug/L		<11.1	250	249	99	57-130
Hexachloroethane	ug/L		<5.8	250	175	70	45-130
Nitrobenzene	ug/L		<13.7	250	272	109	62-130
Pentachlorophenol	ug/L		<10.8	250	242	97	10-149
Pyridine	ug/L		<14.3	250	74.1	30	10-130
2,4,6-Tribromophenol (S)	%					90	34-143
2-Fluorobiphenyl (S)	%					95	60-130
Nitrobenzene-d5 (S)	%					95	59-130
Phenol-d6 (S)	%					37	19-130

MATRIX SPIKE SAMPLE:	837562						
Parameter	Units	4082159001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		<8.6	250	205	82	50-130
2,4,5-Trichlorophenol	ug/L		<10	250	257	103	65-130
2,4,6-Trichlorophenol	ug/L		<10.7	250	230	92	64-130
2,4-Dinitrotoluene	ug/L		<8.0	250	264	106	49-136
2-Methylphenol(o-Cresol)	ug/L		<9.7	250	187	75	33-130

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

MATRIX SPIKE SAMPLE:	837562						
Parameter	Units	4082159001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
3&4-Methylphenol(m&p Cresol)	ug/L	<7.7	250	167	67	35-130	
Hexachloro-1,3-butadiene	ug/L	<6.6	250	214	86	48-130	
Hexachlorobenzene	ug/L	<11.1	250	264	105	57-130	
Hexachloroethane	ug/L	<5.8	250	194	78	45-130	
Nitrobenzene	ug/L	<13.7	250	249	100	62-130	
Pentachlorophenol	ug/L	<10.8	250	277	111	10-149	
Pyridine	ug/L	<14.3	250	79.4	32	10-130	
2,4,6-Tribromophenol (S)	%				93	34-143	
2-Fluorobiphenyl (S)	%				94	60-130	
Nitrobenzene-d5 (S)	%				93	59-130	
Phenol-d6 (S)	%				37	19-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch: PMST/8758

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 4082161001

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SAMPLE DUPLICATE: 838380

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.6	6.6	0	10	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	WET/15853	Analysis Method:	EPA 1010
QC Batch Method:	EPA 1010	Analysis Description:	1010 Flash Point, Closed Cup
Associated Lab Samples:	4082161001		

LABORATORY CONTROL SAMPLE: 834488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.1			

SAMPLE DUPLICATE: 835130

Parameter	Units	4082161001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch: WET/42814 Analysis Method: SW-846 7.3.4.2

QC Batch Method: SW-846 7.3.4.2 Analysis Description: Reactive Sulfide

Associated Lab Samples: 4082161001

METHOD BLANK: 1234378 Matrix: Solid

Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	0.0J	100	08/12/13 09:00	

LABORATORY CONTROL SAMPLE: 1234379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	183	92	77-110	

MATRIX SPIKE SAMPLE: 1234380

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg		ND	500	427	85	67-116

SAMPLE DUPLICATE: 1234381

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	0.0J		30	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch: WET/15939 Analysis Method: EPA 9040

QC Batch Method: EPA 9040 Analysis Description: 9040 pH

Associated Lab Samples: 4082161001

SAMPLE DUPLICATE: 839424

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.9	7.7	2	20	1q,H6

SAMPLE DUPLICATE: 839425

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.6	8.7	1	20	H6

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch: WET/15841

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 4082161001

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SAMPLE DUPLICATE: 833806

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	PASS	PASS			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

QC Batch: WET/15843 Analysis Method: SM 2710F  
QC Batch Method: SM 2710F Analysis Description: Spec.Gravity  
Associated Lab Samples: 4082161001

SAMPLE DUPLICATE: 833859

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity	no units	4082160001	1.5	1.6	5	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	WETA/15777	Analysis Method:	EPA 420.1
QC Batch Method:	EPA 420.1	Analysis Description:	420.1 Phenolics
Associated Lab Samples:	4082161001		

METHOD BLANK: 1502529	Matrix: Water
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Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	50.0	08/15/13 15:30	

LABORATORY CONTROL SAMPLE & LCSD:	1502530	1502531	
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Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Phenolics, Total Recoverable	ug/L	1000	922	1010	92	101	90-110	9	20	

MATRIX SPIKE SAMPLE:	1502532	1502531	
----------------------	---------	---------	--

Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	1000	913	91	90-110	

MATRIX SPIKE SAMPLE:	1502533	1502531	
----------------------	---------	---------	--

Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	41.8J	1000	1090	104	90-110	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

QC Batch:	WETA/25754	Analysis Method:	SW-846 7.3.3.2
QC Batch Method:	SW-846 7.3.3.2	Analysis Description:	733C Reactive Cyanide
Associated Lab Samples:	4082161001		

METHOD BLANK: 1234788 Matrix: Solid

Associated Lab Samples: 4082161001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	0.0J	0.025	08/12/13 09:06	

LABORATORY CONTROL SAMPLE: 1234789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	.5	0.51	101	71-123	

MATRIX SPIKE SAMPLE: 1234790

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	ND	.5	0.51	100	57-132	

SAMPLE DUPLICATE: 1234791

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.0070J		23	

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082161

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-K Pace Analytical Services - Kansas City

PASI-M Pace Analytical Services - Minneapolis

### BATCH QUALIFIERS

Batch: MSSV/5886

[IP] Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

Batch: WETA/15777

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

### ANALYTE QUALIFIERS

1q Due to sample matrix, DI water was added to sample in a 1:1 ratio and sample was stirred prior to analysis.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082161

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082161001	PROT B-5	EPA 3541	OEXT/19291	EPA 8082	GCSV/9977
4082161001	PROT B-5	EPA 3010	MPRP/8926	EPA 6010	ICP/7897
4082161001	PROT B-5	EPA 7470	MERP/3798	EPA 7470	MERC/4787
4082161001	PROT B-5	EPA 3510	OEXT/19391	EPA 8270	MSSV/5886
4082161001	PROT B-5	EPA 1311	TCLP/3052	EPA 8260	MSV/20755
4082161001	PROT B-5	ASTM D2974-87	PMST/8758		
4082161001	PROT B-5	EPA 1010	WET/15853		
4082161001	PROT B-5	SW-846 7.3.4.2	WET/42814		
4082161001	PROT B-5	EPA 9040	WET/15939		
4082161001	PROT B-5	EPA 9095	WET/15841		
4082161001	PROT B-5	SM 2710F	WET/15843		
4082161001	PROT B-5	EPA 420.1	WETA/15777		
4082161001	PROT B-5	SW-846 7.3.3.2	WETA/25754		

### REPORT OF LABORATORY ANALYSIS

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Pace Analytical™

Sample Condition Upon Receipt

Client Name: Himalayan

Project # 4082162

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Other CS Logistic

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 NA

Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20 /Corr:

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 8/27/13

Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5. Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>S</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed Lab Std #/ID of preservative Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		If checked, see attached form for additional comments <input type="checkbox"/>

Client Notification/ Resolution:

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

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

Project Manager Review: MAT for DM

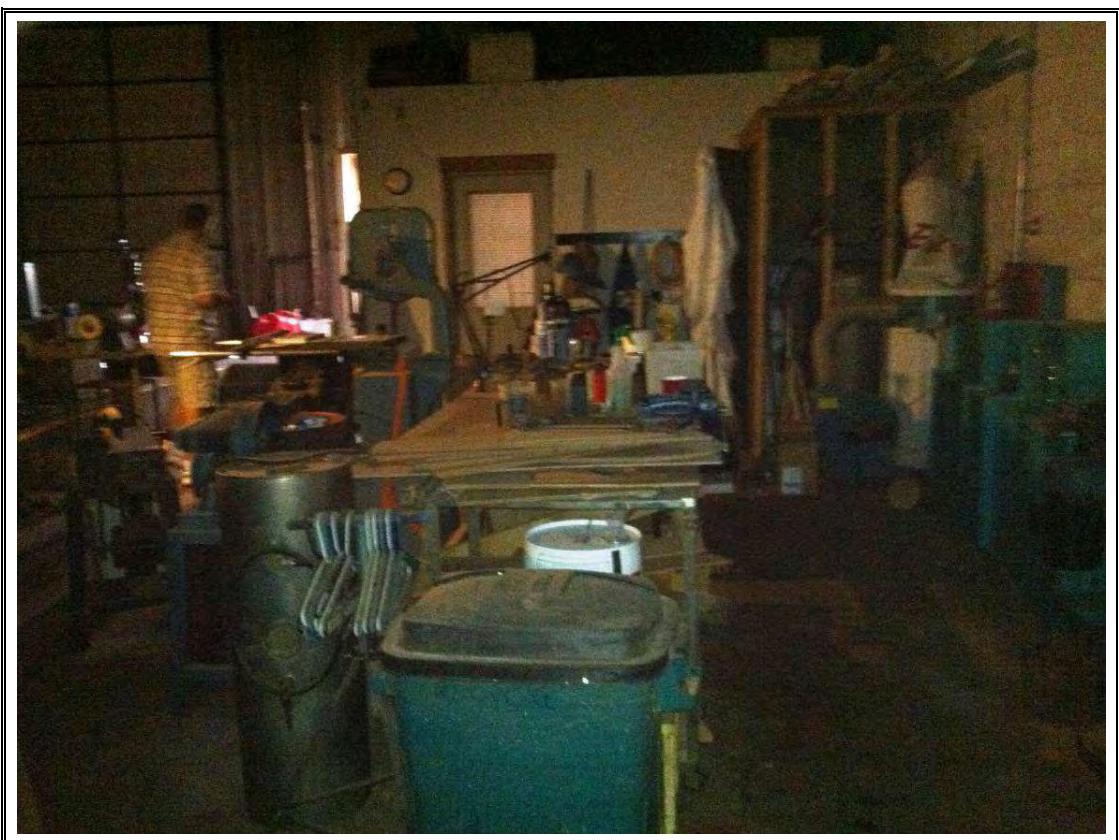
Date: 8/2/13

**ATTACHMENT E**

**SITE PHOTOGRAPHS**



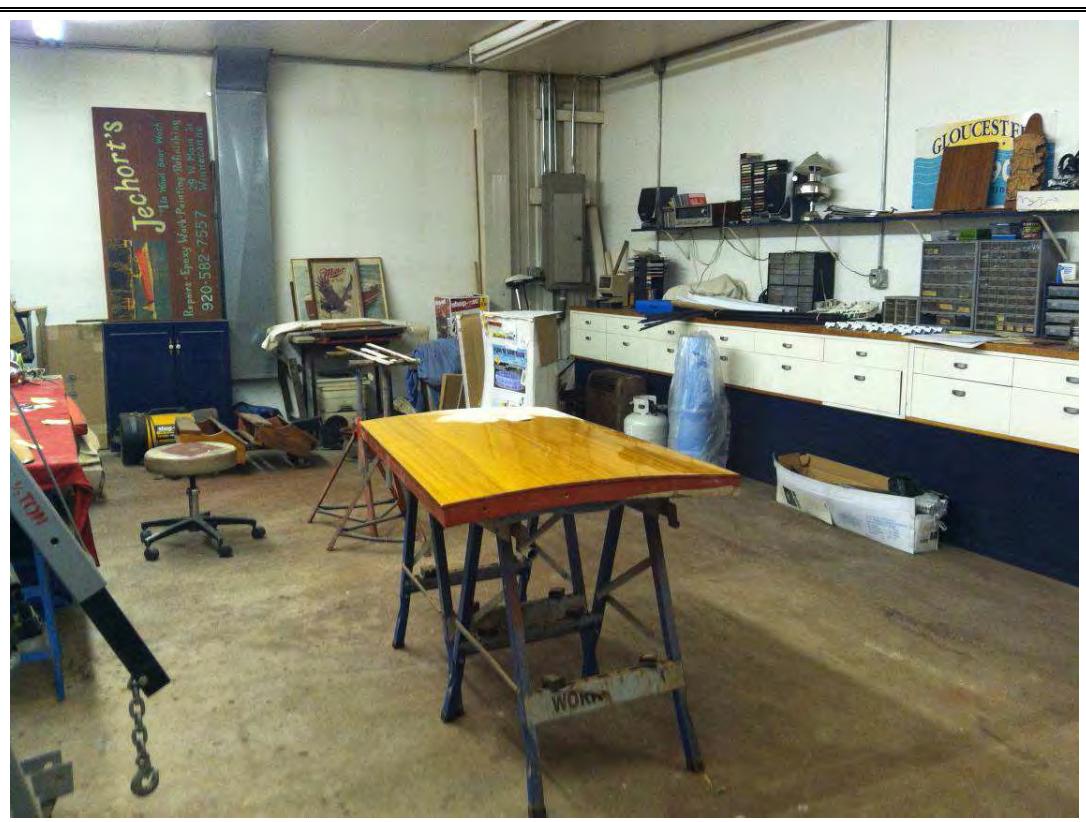
Site #5: View of southeast corner of property from alley; location of boring B-5-3.



Site #5: Interior view of wood boat working area.



Site #5: Interior view of wood boat working area.



Site #5: Interior view of wood boat working area.

**APPENDIX D**

**THE OTHER PLACE**  
**[SITE #8]**

## **1.0 SITE DESCRIPTION**

The Other Place (19-21 W. Main Street) is located near the southeast quadrant of the intersection of W. Main Street (STH 116) and 1<sup>st</sup> Street [hereafter referred to as the site] (see Figure 3.1, Attachment A). The site is part of the northeast ¼ of the northwest ¼ of Section 21, Township 19 North, Range 15 East, in the Village of Winneconne, Winnebago County, Wisconsin. According to the Winnebago County GIS Parcel Profiler Site, the site is currently owned by Mary S Holtz Living Trust.

Based on Himalayan's inspection of the site on July 30, 2013, the site is utilized as a restaurant/bar named "The Other Place" (see Photographs, Attachment E). Himalayan entered the public areas of the bar; however, we were not granted access to the remaining portions of the building. While the inspection was scheduled with the owner, she could not be reached during our site visit.

The predominant land surface at the site is an asphalt covered parking lot on the west side of the property, with a small grass covered area on the northern and southern sides of the building. The entire eastern portion of the site abuts the Wolf River shoreline.

The land use surrounding the site is generally commercial properties.

## **2.0 SITE HISTORY**

In August 2012, Himalayan performed a Phase 1 Hazardous Materials Assessment (HMA) of the project corridor and identified the site at 19-21 W. Main Street as one of the sites with hazardous material concerns [Ref. 2]. Based on the information obtained from the Phase 1 HMA, the site was utilized as a former blacksmith and paint shop and may also contain unknown fill materials.

According to the Sanborn maps reviewed, the site was utilized as a woodworking, blacksmith, and paint shop in 1893 and 1898, as woodworking and a blacksmith facility in 1904, and as the White House Milk Company livery and a boat house in 1913. Based on the information obtained from these maps, the shoreline of the Wolf River varies over time and it appears that fill materials may have been used on site.

According to the Wisconsin Department of Agriculture, Trade and Consumer Protection's (DATCP) storage tank records, no tanks are registered to the site [Ref. 3]

Based on the interview with the owner during the Phase 1 investigation, it appears that the building was constructed prior to 1980, therefore, potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

### **3.0 PURPOSE AND PROPOSED ACQUISITION/CONSTRUCTION**

The purpose of this Phase 2 HMI was to identify the potential presence and nature of contamination at the site. The Phase 2 HMI was performed in general accordance with FDM Procedure 21-35-10 (revised, December 2011), and the Wisconsin Department of Natural Resources (WDNR) rules and regulations [Ref. 4].

Based on the proposed design plans, the maximum depths of excavation at this site are anticipated to be about 4 feet bgs for MSE Walls, 15 feet bgs for roadway construction, 8 feet bgs for water / sewer, and about 5 feet bgs for lighting / signal bases. Up to 65 feet of R/W (strip) acquisition is anticipated at this site, which includes relocation of the existing building.

### **4.0 SOILS AND GROUNDWATER CHARACTERIZATION**

On July 31, 2013, Horizon Construction and Exploration (Horizon), under a contract with Himalayan, advanced three soil borings (B-8-1 to B-8-3) at the site (see Figure 3.2, Attachment A). The general boring locations were in the areas considered to have the highest potential for encountering contamination based on the information obtained during the Phase 1 HMA, and/or proposed improvements at the site. Borings were advanced to a depth of 15 feet bgs. Boring B-8-1 is located in the area of a former blacksmith shop, B-8-2 is located near a former rail road spur, and B-8-3 is located near a former coal storage area. Additionally, both borings B-8-1 and B-8-3 are located in the area of filling along the shoreline.

Each of the borings was converted to temporary groundwater monitoring wells (W-8-1, W-8-2, and W-8-3) to facilitate groundwater sampling. The wells were constructed in general compliance with WDNR guidelines for temporary monitoring wells [Ref. 5]. The wells consisted of a 10-foot section of slotted 1-inch polyvinyl chloride (PVC) pipe attached to unslotted PVC riser pipe extending to the surface. Refer to Well Construction Forms in Attachment C for additional details on temporary well construction.

After completion of sampling, all boreholes/wells were abandoned by filling them with granular bentonite, in accordance with Wis. Adm. Code NR 141. The Borehole Abandonment Forms for each borehole/well are presented in Attachment B.

#### **4.1 Soil Sampling**

Based on field observations, two soil samples from each boring were collected and submitted for laboratory analysis.

The soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and the eight Resource Conservation and Recovery Act (RCRA) metals [arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury].

## **4.2 Groundwater Sampling**

Himalayan performed groundwater sampling at the site, following the boring activities. Samples were obtained from each temporary monitoring well (MW-8-1, MW-8-2 and MW-8-3) for VOCs and RCRA metals analysis.

# **5.0 SUBSURFACE CONDITIONS**

## **5.1 Soil Conditions**

Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to depths of approximately 2 to 12 feet bgs. The fill materials consisted mainly of dark brown sandy clay, peat / muck with trace wood fragments, medium to fine sand with gravel, cinders, and shell fragments.

Native brown to red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal depths of 15 feet bgs.

Refer to soil boring logs in Attachment B for more detailed descriptions of the soils encountered at each boring location.

Continuous soil samples were obtained from the borings and field-screened for the presence of volatile organic vapors using a photoionization detector (PID). The field screening results for the collected 34 soil samples were all zero and are summarized in Table 1. No staining or odors were noted in the boring logs (see Attachment B). Note that asphalt was being overlain on STH 116 at the time of Himalayan's field work; therefore, it is possible that background calibration may have been elevated on the PID.

<b>TABLE 1</b> <b>FIELD SCREENING RESULTS</b> <b>Phase 2 Hazardous Materials Investigation</b> <b>The Other Place (19-21 W. Main Street)</b> <b>Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>			
Boring ID	B-8-1	B-8-2	B-8-3
Date	7/31/13	7/31/13	7/31/13
Depth (feet)	0-2	---	---
	2-4	0.0	0.0
	4-6	0.0	0.0
	6-8	0.0	NR
	8-10	0.0	NR
	10-12	0.0	NR
	12-14	0.0	0.0
	14-15	0.0*	0.0*

Notes:  
Results provided in instrument units (IU).  
NR = No recovery  
\* = sample depth equals 14 – 15 feet

## 5.2 Groundwater Conditions

Saturated soil conditions were observed in all boreholes, at depths ranging from 5 to 7 feet bgs. Groundwater was encountered in each temporary well, at depths ranging from 4.1 to 5.5 feet bgs. It should be noted that groundwater depths can vary throughout the year, depending on several factors including seasonal variations in precipitation, infiltration, and surface water runoff.

Refer to the soil boring logs in Attachment B for additional information regarding groundwater conditions encountered at each boring location.

## 6.0 ANALYTICAL RESULTS

### 6.1 Soil Samples

Laboratory analyses were performed on two soil samples selected from each borehole, at various depths ranging from 2 to 12 feet bgs.

No GRO was detected in any of the samples collected. DRO (2.3 J to 300 mg/kg) was detected in all six samples. The DRO concentration in B-8-1 8-10' (300 mg/kg) was the only soil sample exceeding the generic NR 720 RCL [Ref. 6]. A "J" denotes a concentration flagged by the laboratory as an estimated concentration.

Several VOCs were detected in sample B-8-1 8-10' and B-8-2 2-4' including 1,2,4-trimethylbenzene (53.0 J µg/kg), naphthalene (82.7 µg/kg), toluene (92.4 to 190 J µg/kg), trichloroethene (43.9 J µg/kg), and total xylenes (181.8 J µg/kg) are all below their respective NR 720 RCLs or no standard has been established.

Seven of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, and selenium) were detected in the soil samples analyzed. Arsenic (3.5 to 6.0 mg/kg) was detected above the NR 720 generic soil RCL (direct contact pathway) of 0.039 mg/kg for the non-industrial use scenario, in all six samples. Chromium (4.7 to 25.6 mg/kg) was detected in each of the soil samples. Chromium concentrations in four samples (B-8-1 2-4' at 16.5 mg/kg, B-8-1 8-10' at 22.3 mg/kg, B-8-3 2-4' at 25.6 mg/kg, and B-8-3 10-12' at 22.0 mg/kg) were detected above the NR 720 RCL, for hexavalent chromium only.

Lead (11.3 to 101 mg/kg) was detected in each of the soil samples. Concentrations in two samples (B-8-1 8-10' at 101 mg/kg and B-8-3 10-12' at 54.5 mg/kg) exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-8-1 8-10' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L.

Barium (38.2 to 89.5 mg/kg), cadmium (0.27 J to 0.86 mg/kg), and mercury (0.035 to 0.81 mg/kg) were detected in each of the samples. Selenium (0.77 to 2.2 mg/kg) was also detected in two samples. All of these detected metals are all below their respective NR 720 RCLs or no standard has been established. Additionally, silver was not detected in any of the samples analyzed.

Eighteen PAHs were detected in several of the soil samples (See Table 2). Concentrations of seven compounds were detected in five samples that were above their respective Interim RCLs [Ref. 7]. Benzo(a)pyrene (26.6 to 2,220 mg/kg) was detected in all samples, except B-8-2 10-12'. Benzo(b)fluoranthene was detected in B-8-1 2-4' (238 µg/kg), B-8-1 8-10' (165 µg/kg), and B-8-3 10-12' (1,600 µg/kg), dibenzo(a,h)anthracene was detected in B-8-1 2-4' (53.2 µg/kg) and B-8-3 10-12' (293 µg/kg), indeno(1,2,3-c,d)pyrene was detected in B-8-1 2-4' (166 µg/kg) and B-8-3 10-12' (955 µg/kg). Additionally, benzo(a)anthracene (2,160 µg/kg) benzo(k)fluoranthene (1,520 µg/kg) and phenanthrene (3,790 µg/kg) were detected in B-8-3 10-12'.

Table 2 presents the summary of soil quality results. Also, refer to Figure 3.2, Attachment A for sample locations and analytical results.

**TABLE 2**  
**SOIL QUALITY RESULTS - DETECTED COMPOUNDS**  
**Phase 2 Hazardous Materials Investigation**  
**The Other Place (19 and 21 W. Main Street), Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D.	B-8-1		B-8-2		B-8-3		Generic NR 720 RCL**
Depth (feet)	2-4	8-10	2-4	10-12	2-4	10-12	
Collection Date	7/31/2013		7/31/2013		7/31/2013		
<b>GRO (mg/kg)</b>	<3.0	<9.4	<2.9	<4.5	<3.0	<5.2	100/250*
<b>DRO (mg/kg)</b>	19.4	<b>300</b>	30.2	2.4 J	2.3	16.6	100/250*
<b>PAHs (µg/kg)</b>							
Acenaphthene	<9.5	51.1 J	<9.0	<14.3	<10.0	<134	38,000
Acenaphthylene	31.5	55.7 J	<9.0	<14.3	<10.0	262 J	700
Anthracene	96.2	80.7	<9.0	<14.3	<10.0	778	3,000,000
Benzo(a)anthracene	312	168	24.7	<14.3	23.0	<b>2,160</b>	88
Benzo(a)pyrene	<b>316</b>	<b>162</b>	<b>26.6</b>	<5.1	<b>30.4</b>	<b>2,220</b>	8.8
Benzo(b)fluoranthene	<b>238</b>	<b>165</b>	38.0	21.4 J	40.8	<b>1,600</b>	88
Benzo(g,h,i)perylene	195	67.8	20.6	<14.3	25.1	1,120	1800
Benzo(k)fluoranthene	265	164	21.3	<5.0	26.4	<b>1,520</b>	880
Chrysene	295	185	37.6	<14.3	32.7	2,290	8800
Dienz(a,h)anthracene	<b>53.2</b>	<29.0	<9.0	<14.3	<10.0	<b>293</b>	8.8
Fluoranthene	683	452	42.2	<14.3	52.2	4,570	500,000
Fluorene	10.7 J	80.9	<9.0	<14.3	<10.0	<134	100,000
Indeno(1,2,3-cd)pyrene	<b>166</b>	74.8	15.2 J	<14.3	18.6 J	<b>955</b>	88
1-Methylnaphthalene	8.0 J	45.1 J	35.8	<5.0	8.5 J	110 J	23,000
2-Methylnaphthalene	10.7 J	68.6	39.7	<14.3	<10.0	<134	20,000
Naphthalene	17.9 J	347	24.5	<14.3	<10.0	175 J	400
Phenanthrene	407	381	54.2	14.4 J	29.0	<b>3,790</b>	1800
Pyrene	636	373	39.0	<14.3	44.1	4,440	500,000
<b>VOCs (µg/kg)</b>							
1,2,4-Trimethylbenzene	<28.7	<28.7	53.0 J	<25.0	<26.9	<25.8	NSE
Naphthalene	<28.7	<28.7	82.7	<25.0	<26.9	<25.8	NSE
Toluene	<28.7	190 J	92.4	<25.0	<26.9	<25.8	1,500
Trichloroethene	<28.7	<28.7	43.9 J	<25.0	<26.9	<25.8	NSE
m&p-Xylene	<57.5	<57.5	115 J	<50.0	<53.8	<51.5	4,100
o-Xylene	<28.7	<28.7	66.8 J	<25.0	<26.9	<25.8	
<b>TCLP (mg/L)</b>							
Lead	NA	< 0.015	NA	NA	NA	NA	
<b>RCRA Metals (mg/kg)</b>							
Arsenic	<b>3.5</b>	<b>5.3 J</b>	<b>4.4</b>	<b>5.4</b>	<b>5.8</b>	<b>6.0</b>	0.039 (b)
Barium	65.6	81.2	82.4	38.2	71.9	89.5	NSE
Cadmium	0.29 J	0.42 J	0.27 J	0.86	0.29 J	0.42 J	8 (b)
Chromium	<b>16.5</b>	<b>22.3</b>	4.7	9.9	<b>25.6</b>	<b>22.0</b>	14 (a) (b)
Lead	14.8	<b>101</b>	32.6	17.9	11.3	<b>54.5</b>	50 (b)
Mercury	0.068	0.81	0.035	0.098	0.041	0.13	NSE
Selenium	<0.68	2.2 J	0.77 J	<0.90	<0.63	<1.1	NSE
Silver	<0.24	<0.70	<0.21	<0.32	<0.23	<0.41	NSE

Notes: Analytes detected above the method detection limit (MDL) in at least one sample are included in the Table  
GRO= Gasoline Range Organics; DRO= Diesel Range Organics; VOC= Volatile Organic Compounds; TCLP= Toxicity characteristic leaching procedure  
RCRA = Resource Conservation and Recovery Act; **Bold** results indicate concentrations exceeding NR 720 or Interim RCLs  
mg/kg=milligrams per kilogram and mg/L milligrams per liter=parts per million (ppm); µg/kg=micrograms per kilogram=parts per billion (ppb)  
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit ; NSE = No Standard Established; RCL= (a) = NR 720 RCL for Chromium, hexavalent (b) = NR 720 RCL for non-industrial land use  
\* = RCLs (mg/kg) based on permeability of soils per NR 720 \*\* = Interim RCL (µg/kg) for groundwater pathway (Source: WDNR Pub RR-519-97)

Refer to Attachment D for complete laboratory report for each sample.

## 6.2 Groundwater Samples

Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-8-1, MW-8-2, and MW-8-3, no VOCs were detected at concentrations exceeding their respective NR 140 Enforcement Standards (ES) or Preventative Action Levels (PAL) [Ref. 8].

Four of the eight RCRA metals were detected in the samples. Arsenic (*7.6 J* µg/L) was identified in MW-8-3, chromium (1.9 µg/L) was identified in MW-8-1, and lead (4.3 µg/L) was identified in MW-8-2, which were all above their respective NR 140 PAL. Barium (110 and 207 µg/L) was detected below the NR 140 PAL in all samples.

Also refer to Figure 3.3 in Appendix B for the well locations and Appendix D for the laboratory results.

TABLE 3 GROUNDWATER RESULTS - DETECTED COMPOUNDS Phase 2 Hazardous Materials Investigation The Other Place (19 and 21 W. Main Street), Winneconne, Winnebago County Project ID: 6190-17-00					
Sample I.D.	MW-8-1	MW-8-2	MW-8-3	NR 140 ES (µg/L)	NR 140 PAL (µg/L)
Collection Date	7/31/13	7/31/13	7/31/13		
VOCs (µg/L)					
	ND	ND	ND	---	---
RCRA Metals (µg/L)					
Arsenic	<4.2	<4.2	<i>7.6 J</i>	10	1
Barium	207	189	110	2,000	400
Cadmium	<0.48	<0.48	<0.48	100	10
Chromium	<i>1.9 J</i>	<1.4	<1.4	5	0.5
Lead	<2.7	<i>4.3 J</i>	<2.7	15	1.5
Mercury	<0.10	<0.10	<0.10	2	0.2
Selenium	<5.2	<5.2	<5.2	50	10
Silver	<1.7	<1.7	<1.7	50	10
Notes: Analytes detected above the method detection limit (MDL) in at least one sample are included in the Table VOCs = Volatile Organic Compounds RCRA = Resource Conservation and Recovery Act µg/L = micrograms per liter = parts per billion (ppb) ND = Not Detected <i>J</i> = Concentration reported is between the Method Detection Limit and the Limit of Quantitation (Adjusted Reporting Limit) Italics results indicate concentrations exceeding NR 140 PAL Bold results indicate concentrations exceeding NR 140 ES ES = Enforcement Standard per NR 140; PAL = Preventative Action Limit					

### **6.3 Waste Characterization Sample**

A composite soil sample was compiled from the site (Proto B-8) for landfill acceptance criteria to provide waste characterization for potential off-site disposal and/or treatment of contaminated soils at a landfill.

Based on the laboratory analytical results, no cyanide, PCBs, TCLP VOCs, and TCLP Semi-Volatiles were detected in the sample. TCLP metal detections consisted of lead (0.040 mg/L) and mercury (0.00026 mg/L). The general chemistry results for the sample included: flashpoint >210 deg. F, pH 7.9, specific gravity 1.5, sulfide 0.0 J mg/kg. No free liquids were encountered in the sample.

Table 4 presents the summary of soil quality results for the composite sample. See Attachment D for complete laboratory report.

**TABLE 4**  
**LABORATORY ANALYTICAL RESULTS - Protocol B**  
**Phase 2 Hazardous Materials Investigation**  
**The Other Place (19 and 21 W. Main Street), Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D. Proto B-8	Sample Results	Units
<b>General Chemistry</b>		
% of Solids	67.6	%
Cyanide (total)	0.0080 J	mg/kg
Flashpoint	>210	°F
pH	7.9	pH Units
Specific Gravity	1.5	N/A
Free liquids	Fail	N/A
Sulfide	0.0 J	mg/kg
<b>TCLP Metals</b>		
Arsenic	<0.12	mg/L
Barium	<1.2	mg/L
Cadmium	<0.0025	mg/L
Chromium	<0.12	mg/L
Copper	<0.12	mg/L
Lead	0.040	mg/L
Mercury	0.00026	mg/L
Nickel	<0.12	mg/L
Selenium	<0.12	mg/L
Silver	<0.12	mg/L
Zinc	<0.12	mg/L
<b>PCBs</b>		
PCB-1016	<0.037	mg/kg
PCB-1221	<0.037	mg/kg
PCB-1232	<0.037	mg/kg
PCB-1242	<0.037	mg/kg
PCB-1248	<0.037	mg/kg
PCB-1254	<0.037	mg/kg
PCB-1260	<0.037	mg/kg
<b>TCLP VOCs</b>		
Benzene	<0.005	mg/L
Methyl Ethyl Ketone	<0.027	mg/L
Carbon Tetrachloride	<0.0037	mg/L
Chlorobenzene	<0.0036	mg/L
Chloroform	<0.0069	mg/L
1,2-Dichloroethane	<0.0048	mg/L
1,1-Dichloroethene	<0.0043	mg/L
Tetrachloroethene	<0.0047	mg/L
Trichloroethene	<0.0043	mg/L
Vinyl Chloride	<0.0018	mg/L

**TABLE 4 (Continued)**  
**LABORATORY ANALYTICAL RESULTS – Protocol B**  
**Phase 2 Hazardous Materials Investigation**  
**The Other Place (19 and 21 W. Main Street)**  
**Project ID: 6190-17-00**

Sample I.D. Proto B-8	Sample Results	Units
<b>TCLP Semi-VOCs</b>		
1,4-Dichlorobenzene	<0.0086	mg/L
2,4-Dinitrotoluene	<0.0080	mg/L
Hexachloro-1,3-butadiene	<0.0066	mg/L
Hexachlorobenzene	<0.0111	mg/L
Hexachloroethane	<0.0058	mg/L
2-Methylphenol (o-Cresol)	<0.0097	mg/L
3&4-Methylphenol (m&p Cresol)	<0.0077	mg/L
Nitrobenzene	<0.0137	mg/L
Pentachlorophenol	<0.0108	mg/L
Pyridine	<0.0143	mg/L
2,4,5-Trichlorophenol	<0.010	mg/L
2,4,6-Trichlorophenol	<0.0107	mg/L
Notes: VOCs = Volatile Organic Compounds mg/kg = milligrams per kilogram = parts per million (ppm) mg/L = milligrams per liter = parts per million (ppm) TCLP = Toxicity Characteristic Leaching Procedure		

## 7.0 FINDINGS

- Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to depths of approximately 2 to 12 feet bgs. The fill materials consisted mainly of dark brown sandy clay, peat / muck with trace wood fragments, medium to fine sand with gravel, cinders, and shell fragments. Native brown to red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal depths of 15 feet bgs. Groundwater was encountered in each temporary well, at depths ranging from 4.1 to 5.5 feet bgs.
- No elevated PID readings were detected in the soil samples retrieved from the borings.
- No GRO was detected in any of the samples collected. The DRO concentration in B-8-1 8-10' was the only soil sample exceeding the generic NR 720 RCL.
- Several VOCs were detected in sample B-8-1 8-10' and B-8-2 2-4' including 1,2,4-trimethylbenzene, naphthalene, toluene, trichloroethene, and total xylenes are all below their respective NR 720 RCLs or no standard has been established.

- Seven of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 generic soil RCL in all six samples. Chromium was detected in each of the soil samples. Chromium concentrations in four samples (B-8-1 2-4', B-8-1 8-10', B-8-3 2-4', and B-8-3 10-12') were detected above the NR 720 RCL, for hexavalent chromium only.
- Lead was detected in each of the soil samples. Concentrations in two samples (B-8-1 8-10' and B-8-3 10-12') exceeded the NR 720 RCL. A Toxicity Characteristic Leaching Procedure (TCLP) test was conducted on sample B-8-1 8-10' because the lead concentration exceeded 20 times the NR 661 toxicity levels. The TCLP result was <0.015 mg/L, which is well below the NR 661 toxicity characteristic level of 5 mg/L.
- Cadmium was detected in each of the samples analyzed at concentrations which are below the NR 720 RCL. No standards exist for barium, mercury, and selenium detected in the samples.
- Concentrations of seven compounds (benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene, benzo(a)anthracene, benzo(k)fluoranthene, and phenanthrene) were detected in five samples that were above their respective Interim RCLs.
- Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-8-1, MW-8-2, and MW-8-3, no VOCs were detected.
- Arsenic in MW-8-3, chromium in MW-8-1, and lead in MW-8-2 were detected above their respective NR 140 PAL criteria. Barium was also detected in all of the groundwater samples, at concentrations below the NR 140 PAL.
- Based on the interview with the owner during the Phase 1 investigation, it appears that the building was constructed prior to 1980; therefore, potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

- Based on the results of Himalayan's Phase 2 HMI, evidence of hazardous substance release (petroleum and RCRA metals impacts) was documented at the site. Petroleum and RCRA metals impacts detected in the soil borings appear to be associated with the former blacksmith / paint shop at the site or possibly unknown fill materials along the shoreline. Therefore, Himalayan recommends that a Phase 3 hazardous materials investigation (FDM Procedure: 21-35-15) be considered for the site to fully characterize and define the lateral and vertical extent of soil and groundwater contamination and assist in determining the value of the parcel for acquisition purposes, prior to the total take of the site.

- The petroleum and RCRA metals impacts discovered at the site should be reported to the WDNR in order to satisfy the notification requirements per hazardous substance spills law, Section 292.11(2).
- Pre-demolition asbestos and lead surveys should be performed to evaluate whether ACMs or LBP are present in the structure. All demolition activities should be performed in accordance with local, state, and federal regulations.

## **9.0 REFERENCES**

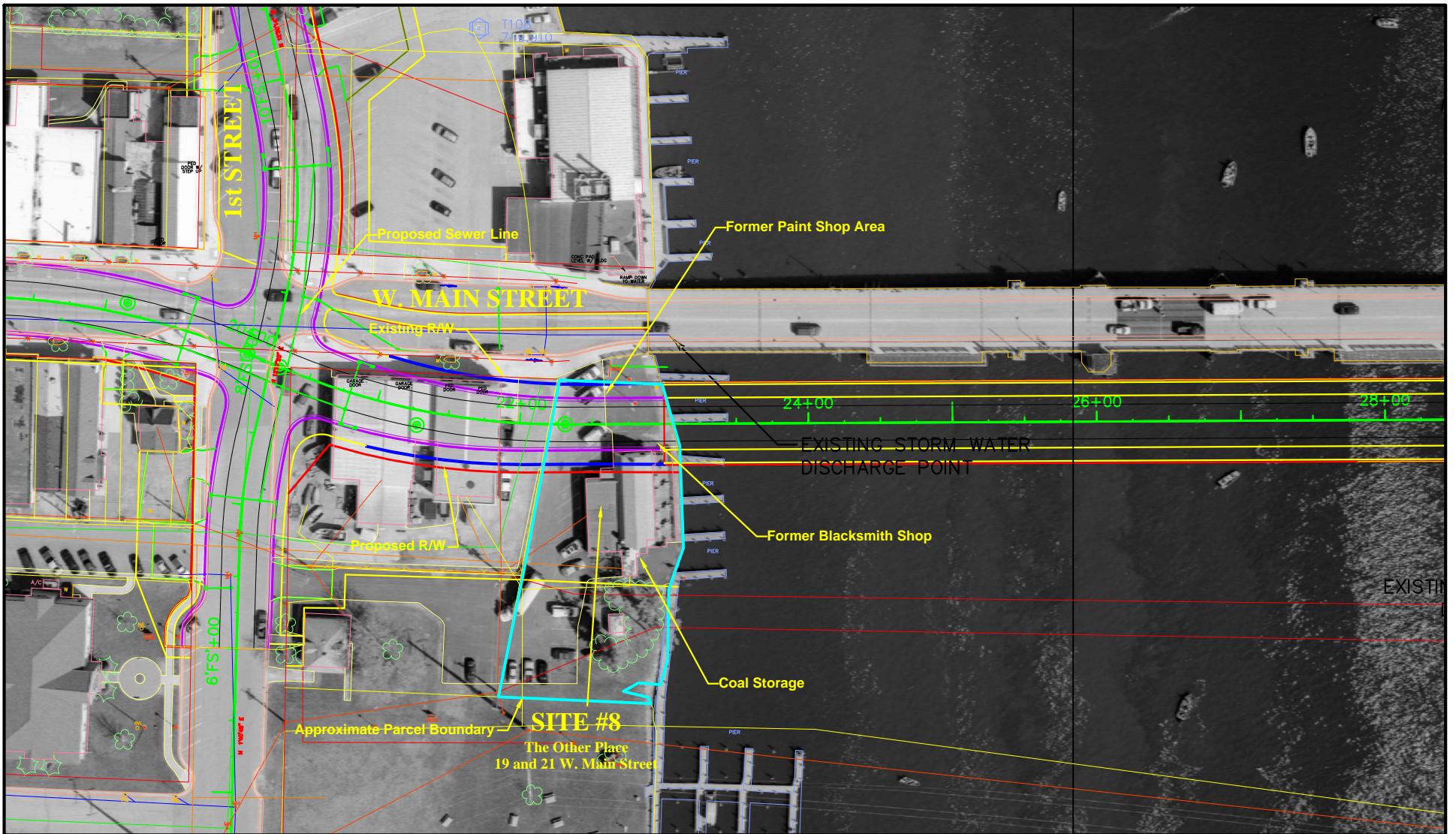
1. Winnebago County GIS Website. WINGS Property Profiler.  
[http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis\\_menu.cgi](http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis_menu.cgi)
2. Himalayan Consultants, LLC, (August 2012). Phase I Hazardous Material Assessment, WisDOT Project ID 1030-20-00, STH 116 Corridor Study (2nd Street - 2nd Avenue), Winneconne, Winnebago County, Wisconsin.
3. Wisconsin Department of Agriculture, Trade and Consumer Protection - Storage Tank Database –[http://apps.commerce.state.wi.us/ER\\_Tanks/ER-EN-TankSearch.htm](http://apps.commerce.state.wi.us/ER_Tanks/ER-EN-TankSearch.htm)
4. Wisconsin Department of Transportation (December 2011). Facilities Development Manual, Procedures 21-35-10 and 21-35-30.
5. Wisconsin Department Natural Resources (March 2011). Wisconsin Administrative Code NR 141, Groundwater Monitoring Well Requirements.
6. Wisconsin Department Natural Resources (September 2007). Wisconsin Administrative Code NR 720, Soil Cleanup Standards.
7. Wisconsin Department Natural Resources (April 1997). Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, Publication RR-519-97.
8. Wisconsin Department Natural Resources (January 2012). Wisconsin Administrative Code NR 140, Groundwater Quality.

## **ATTACHMENTS**

- Attachment A. Figures  
Figure 3.1. Site Overview Map  
Figure 3.2. Soil Quality Map  
Figure 3.3. Groundwater Quality Map
- Attachment B. Soil Boring Logs and Borehole Abandonment Forms
- Attachment C. Well Construction Forms
- Attachment D. Laboratory Analytical Reports – Soil, Groundwater, and Waste Characterization
- Attachment E. Site Photographs

## **ATTACHMENT A**

### **FIGURES**

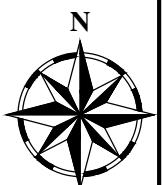


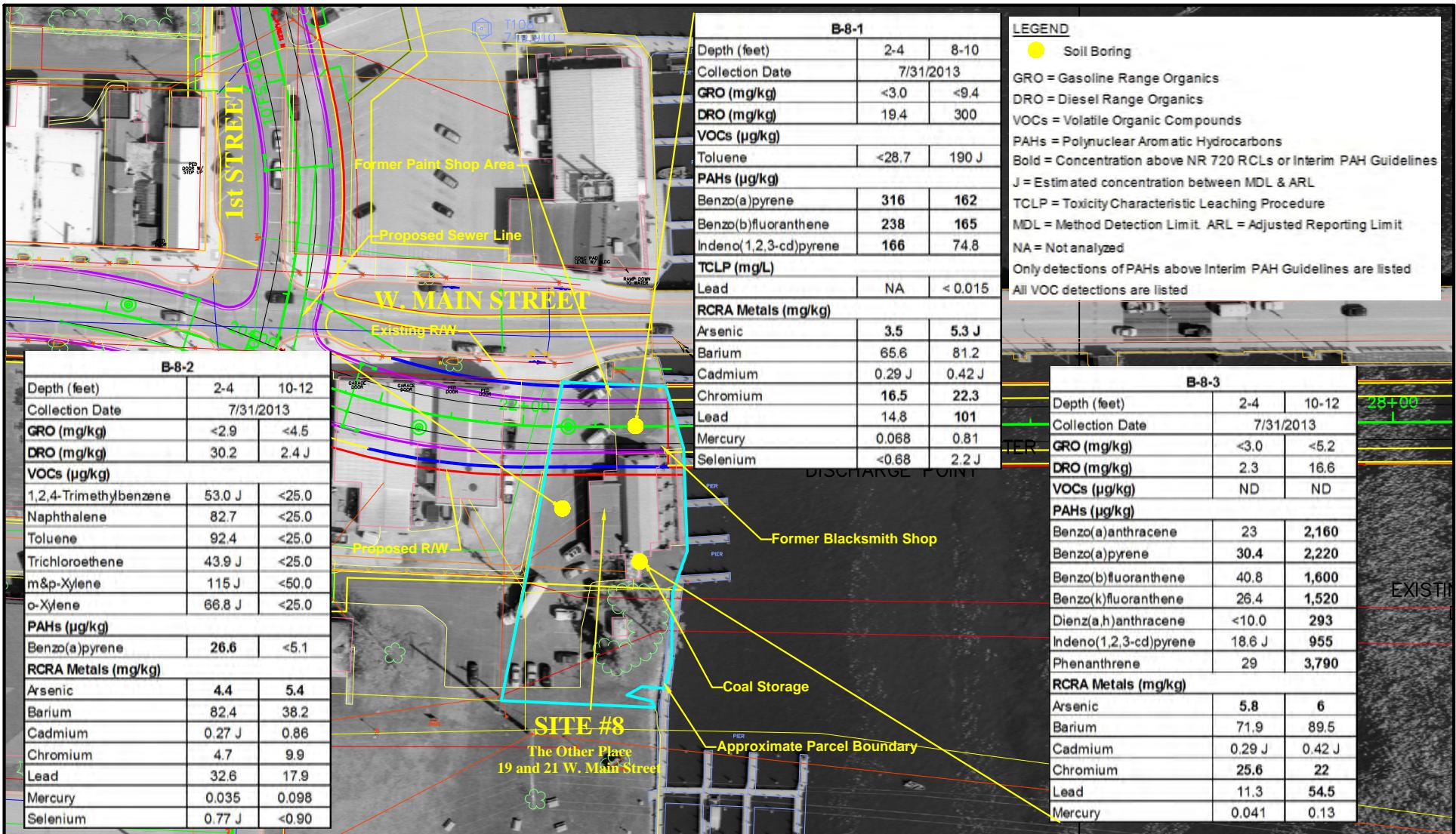
**FIGURE 3.1: SITE OVERVIEW MAP**



**HIMALAYAN CONSULTANTS, LLC**  
Engineers and Hydrogeologists  
W156 N11357 Pilgrim Road  
Germantown, Wisconsin 53022  
Phone: (262) 502-0066  
Fax: (262) 502-0077

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin





Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

0 50 100 200  
Scale:

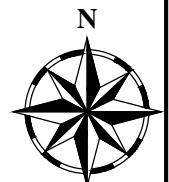
**FIGURE 3.2: SOIL QUALITY MAP**

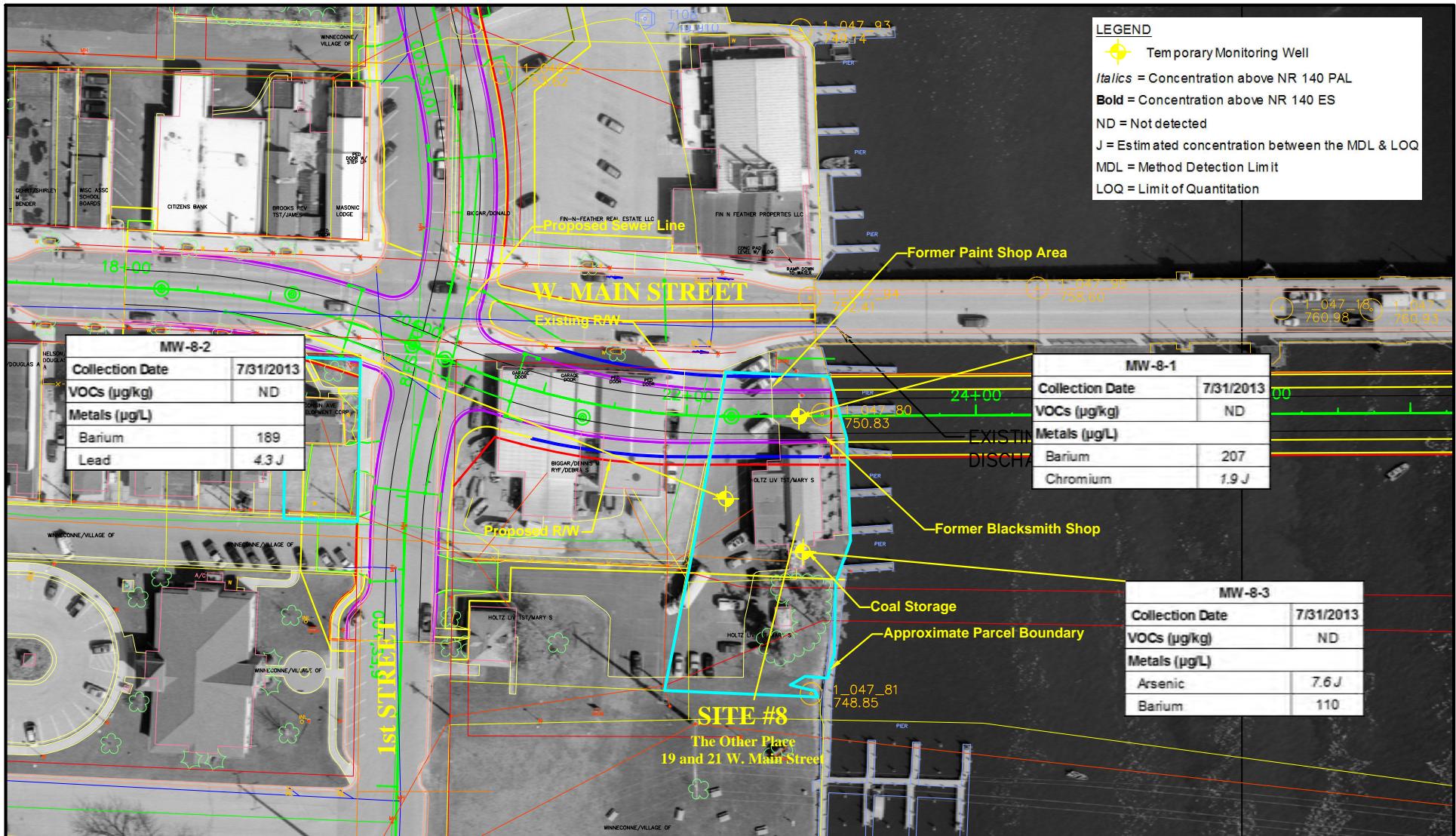


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Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

0 50 100 200  
Scale:



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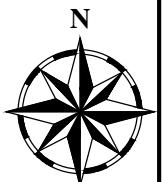
**FIGURE 3.3: GROUNDWATER QUALITY MAP**

**Project ID: 6190-17-00**

**STH 116**

**2nd Street - 2nd Avenue**

**Winneconne, Winnebago County, Wisconsin**



## **ATTACHMENT B**

### **SOIL BORING LOGS AND BOREHOLE ABANDONMENT FORMS**



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #8

Boring No. B-8-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Reco.	Moist.	N-Value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 36"		D		0	Brown silty sand topsoil (fill)						
			M		2	Dark brown clayey sand, with trace gravel and trace cinders (fill)						0
			M		3	Brown clay with some large gravel (fill)						0
			M		4	Large gravel with little medium grain light brown sand (fill) Lab Sample (2' - 4')						0
			M		5	Dark brown sandy clay with some large gravel (fill)						0
2	GP 42"	W			6	Dark brown sandy clay with some large gravel (fill)						0
			M		7	Large gravel with some medium to coarse grain light brown sand (fill)						0
			M		8	Black peat with some partially decomposed wood fragments/cinders, and trace large gravel (fill)						0
					9	Lab Sample (8' - 10') Wet at 9.5'						0
					10	Brown clayey sand with some large gravel (fill)						0
						Dark brown to black muck, with some mostly decomposed wood fragments, and trace gravel (fill)						
WATER LEVEL OBSERVATIONS							GENERAL NOTES					
While Drilling _____							Start <u>7/31/13</u>	Complete <u>7/31/13</u>				
Upon Completion of Drilling <u>5.5 feet</u>							Crew Chief <u>AS</u>	Rig <u>DT-66</u>				
Time After Drilling _____							Drilling Method: <u>Geoprobe</u>					
Depth to Water _____												
Depth to Cave-in _____												

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #8

Boring No. B-8-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
3	GP 48"		W		12											0
					13											0
					14											
					15											
					16											
					17											
					18											
					19											
					20											
					21											
					22											
					23											
					24											
End of Boring = 15.0 Feet																

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

(6) Comments \_\_\_\_\_

(7) Name of Person or Firm Doing Sealing Work		Date of Abandonment
<b>Horizon</b>		<b>7/31/13</b>
Signature of Person Doing Work		Date Signed
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>
City, State, Zip Code <b>Grafton, WI 53024</b>		

<b>FOR DNR OR COUNTY USE ONLY</b>	
Date Received	Noted By
Comments	



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #8

Boring No. B-8-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
1	GP 24"	W	M	M	0	Asphalt pavement										
					2	Large and small gravel with some medium grain brown sand (fill)										0
			M	M	4	Large gravel with few gray medium grain sand (fill)										0
					5.0'	Black sand, gravel, wood fibers, asphalt (fill) Lab Sample (2' - 4')										
					6	Wet at 5.0' Brown to gray coarse grain sand with some gravel, cinders, and shell fragments (fill)										
					8	No Recovery (5' - 10')										
2	GP 0"				10	Dark brown to black silty sand, with some small and large gravel, wood fragments, and shell fragments (fill) Lab Sample (10' - 12')										
WATER LEVEL OBSERVATIONS											GENERAL NOTES					
While Drilling _____											Start <u>7/31/13</u> Complete <u>7/31/13</u>					
Upon Completion of Drilling <u>4.2 feet</u>											Crew Chief <u>AS</u> Rig <u>DT-66</u>					
Time After Drilling _____											Drilling Method: <u>Geoprobe</u>					
Depth to Water _____																
Depth to Cave-in _____																

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #8

Boring No. B-8-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
			W		12											0
			M		14											0
3	GP	60"			12											
					14											
					16											
					18											
					20											
					22											
					24											

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>		
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #8</b>		
Common Well Name <b>B-8-2</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.	
Grid Location ____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W. <b>NE</b> 1/4 of <b>NW</b> 1/4 of Sec. <b>21</b> ; T. <b>19</b> N; R. <b>15</b> <input checked="" type="checkbox"/> E			Street Address of Well <b>19-21 W. Main Street</b>		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>		
Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> S. <input type="checkbox"/> C. <input type="checkbox"/> N. Zone			Present Well Owner	Original Owner	
Reason For Abandonment <b>Temporary Well</b>			Street Address or Route of Owner		
			City, State, Zip Code		
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>					
Original Construction Date <b>7/31/13</b>			<b>(4) PUMP, LINER, SCREEN, CASING &amp; SEALING MATERIAL</b>		
<input type="checkbox"/> Monitoring Well	If a Well Construction Report is available, please attach.		Pump & Piping Removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Water Well			Liner(s) Removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input checked="" type="checkbox"/> Borehole / Drillhole	Screen Removed?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable		
Construction Type:	Casing Left in Place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug	Was casing Cut Off Below Surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>	Did Sealing Material Rise to Surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Formation Type:	Did Material Settle After 24 Hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock	If Yes, Was Hole Retopped?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Total Well Depth (ft.) <b>15.0</b> (From groundsurface)	Required Method of Placing Sealing Material				
Casing Diameter (in.) _____	<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped				
Casing Depth (ft.) _____	<input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>				
Lower Drillhole Diameter (in.) _____	Sealing Materials	For monitoring wells and monitoring well boreholes or			
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet	<input type="checkbox"/> Neat Cement Grout				
Depth to Water (Feet) <b>4.2</b> Feet	<input type="checkbox"/> Sand-Cement (Concrete) Grout				
Depth to Water (Feet) <b>4.2</b> Feet	<input type="checkbox"/> Concrete				
Depth to Water (Feet) <b>4.2</b> Feet	<input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)				
Depth to Water (Feet) <b>4.2</b> Feet	<input type="checkbox"/> Bentonite-Sand Slurry " "				
Depth to Water (Feet) <b>4.2</b> Feet	<input checked="" type="checkbox"/> Bentonite Chips				
(5) Material Used To Fill Well/Drillhole <b>3/8" Chipped Bentonite</b>			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume
			<b>Surface</b>	<b>15</b>	<b>20 lbs</b>

(6) Comments \_\_\_\_\_

(7) Name of Person or Firm Doing Sealing Work		Date of Abandonment
<b>Horizon</b>		<b>7/31/13</b>
Signature of Person Doing Work		Date Signed
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>
City, State, Zip Code <b>Grafton, WI 53024</b>		

<b>FOR DNR OR COUNTY USE ONLY</b>	
Date Received	Noted By
Comments	



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #8

Boring No. B-8-3  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	Type	Recov.	Moist.	N-value	Depth (ft.)	SAMPLE	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
								q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 36"		D		0		Brown silty sand topsoil (fill)						
			M		2		Small and large gravel with little medium grain brown sand (fill)						0
			M		4		Brown silty clay with trace small and large gravel (fill) Lab Sample (2' - 4')						0
1	GP 36"		M		6		Brown silty clay with trace small and large gravel (fill)						0
			M		8		Black peat with some partially decomposed wood fragments(fill) Wood (tree root)						0
2	GP 36"		M		10		Brown medium plasticity clay (fill)						0
			W				Dark brown muck with trace wood fragments (fill)						0
							Wet at 10'						
							Lab Sample (10' - 12')						
WATER LEVEL OBSERVATIONS							GENERAL NOTES						
While Drilling _____							Start <u>7/31/13</u>	Complete <u>7/31/13</u>					
Upon Completion of Drilling <u>4.1 feet</u>							Crew Chief <u>AS</u>	Rig <u>DT-66</u>					
Time After Drilling _____							Drilling Method: <u>Geoprobe</u>						
Depth to Water _____													
Depth to Cave-in _____													

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #8

Boring No. B-8-3  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
3	GP 60 "		M		12											0
					14											0
					16											
					18											
					20											
					22											
					24											
End of Boring = 15.0 Feet																

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>										
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #8</b>										
Common Well Name <b>B-8-3</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.									
Grid Location NE 1/4 of NW 1/4 of Sec. <b>21</b> ; T. <b>19</b> N; R. <b>15</b> <input checked="" type="checkbox"/> E ft. <input type="checkbox"/> N. <input type="checkbox"/> S., ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>19-21 W. Main Street</b>										
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>										
Lat. _____ Long. _____ or St. Plane _____ ft. N. ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone			Present Well Owner   Original Owner										
Reason For Abandonment <b>Temporary Well</b>			Street Address or Route of Owner										
			City, State, Zip Code										
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>													
Original Construction Date <b>7/31/13</b>			Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No										
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole			If a Well Construction Report is available, please attach.										
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>			Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No										
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>										
Total Well Depth (ft.) <b>15.0</b> Casing Diameter (in.) _____ (From groundsurface) Casing Depth (ft.) _____			Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips										
Lower Drillhole Diameter (in.) _____ Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			For monitoring wells and monitoring well boreholes only <input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grout <input type="checkbox"/> Bentonite - Sand Slurry										
Depth to Water (Feet) <b>4.1</b> Feet													
<b>(5)</b> Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume								
<b>3/8" Chipped Bentonite</b>			<b>Surface</b>	<b>15</b>	<b>20 lbs</b>								
<b>(6) Comments</b> _____													
<b>(7) Name of Person or Firm Doing Sealing Work</b>			<b>Date of Abandonment</b>										
<b>Horizon</b>			<b>7/31/13</b>										
Signature of Person Doing Work		Date Signed											
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>											
Comments													
<table border="1"> <tr> <th colspan="2"><b>FOR DNR OR COUNTY USE ONLY</b></th> </tr> <tr> <td>Date Received</td> <td>Noted By</td> </tr> <tr> <td colspan="2">Comments</td> </tr> <tr> <td colspan="2"></td> </tr> </table>						<b>FOR DNR OR COUNTY USE ONLY</b>		Date Received	Noted By	Comments			
<b>FOR DNR OR COUNTY USE ONLY</b>													
Date Received	Noted By												
Comments													

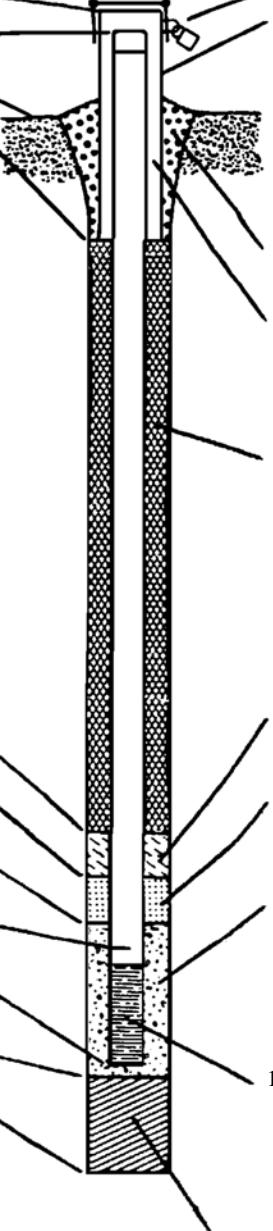
**ATTACHMENT C**

**WELL CONSTRUCTION FORMS**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-8-1</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/31/13</b>	
Type of Well Well Code _____		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
A. Protective pipe, top elevation _____ ft. MSL		1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation <b>O</b> ft. MSL		c. Material: Steel <input type="checkbox"/> 0 4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom _____ ft MSL or _____ ft.		d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input checked="" type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top _____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --		
F. Fine sand, top _____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --		
G. Filter pack, top _____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above		
H. Screen joint, top _____ ft. MSL or <b>5</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8		
I. Well bottom _____ ft. MSL or <b>15</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --		
J. Filter pack, bottom _____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>		
K. Borehole bottom _____ ft. MSL or <b>15</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>		
L. Borehole diameter <b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --		
M. O.D. well casing <b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --		
N. I.D. well casing <b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.		
11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/> --			



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

Signature

Firm **Himalayan Consultants, LLC**

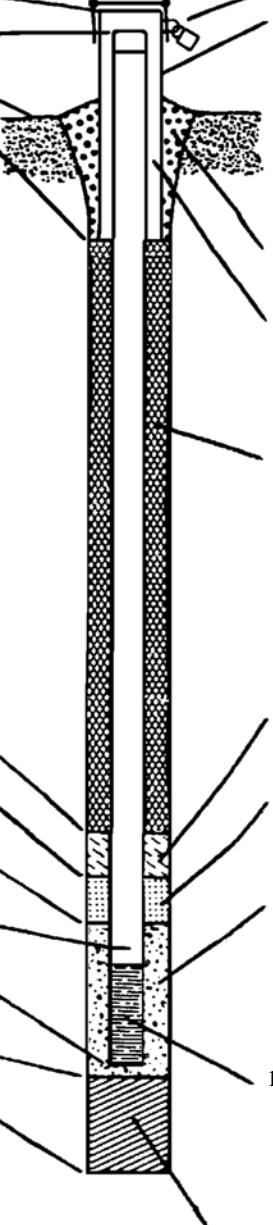
**W156 N11357 Pilgrim Road, Germantown, WI 53022**

**Tel. (262) 502-0066, Fax (262) 502-0077**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-8-2</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/31/13</b>	
Type of Well Well Code _____		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
A. Protective pipe, top elevation _____ ft. MSL		1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation <b>O</b> ft. MSL		c. Material: Steel <input type="checkbox"/> 0.4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom _____ ft MSL or _____ ft.		d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input checked="" type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0.2 Air <input type="checkbox"/> 0.1 Drilling Mud <input type="checkbox"/> 0.3 None <input checked="" type="checkbox"/> 9.9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top _____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3.0 Concrete <input type="checkbox"/> 0.1 Other <input type="checkbox"/> --		
F. Fine sand, top _____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3.0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --		
G. Filter pack, top _____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3.3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3.5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3.1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5.0 e. _____ Ft <sup>3</sup> volume added for any of the above		
H. Screen joint, top _____ ft. MSL or <b>5</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0.1 Tremie pumped <input type="checkbox"/> 0.2 Gravity <input type="checkbox"/> 0.8		
I. Well bottom _____ ft. MSL or <b>15</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3.3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3.2 c. _____ Other <input type="checkbox"/> --		
J. Filter pack, bottom _____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>		
K. Borehole bottom _____ ft. MSL or <b>15</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>		
L. Borehole diameter <b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2.3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2.4 Other <input type="checkbox"/> --		
M. O.D. well casing <b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/> --		
N. I.D. well casing <b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.		
11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1.4 Other <input type="checkbox"/> --			



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

Signature

Firm **Himalayan Consultants, LLC**

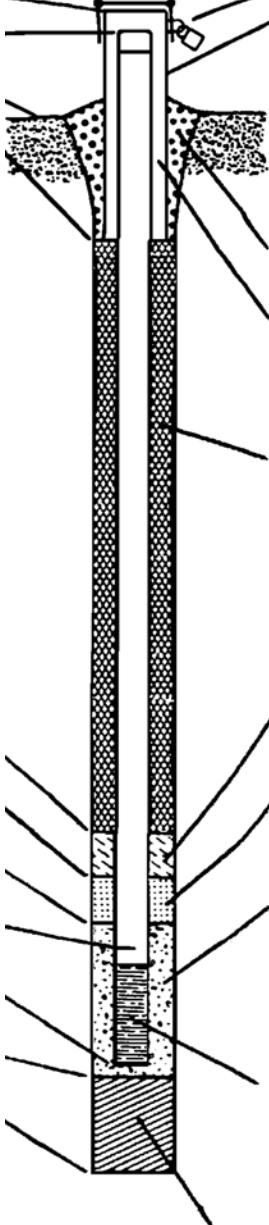
**W156 N11357 Pilgrim Road, Germantown, WI 53022**

**Tel. (262) 502-0066, Fax (262) 502-0077**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-8-3</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/31/13</b>	
Type of Well Well Code _____		Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
A. Protective pipe, top elevation _____ ft. MSL		1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation <b>O</b> ft. MSL		c. Material: Steel <input type="checkbox"/> 0 4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom _____ ft MSL or _____ ft.		d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top _____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --		
F. Fine sand, top _____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --		
G. Filter pack, top _____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above		
H. Screen joint, top _____ ft. MSL or <b>5</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8		
I. Well bottom _____ ft. MSL or <b>15</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --		
J. Filter pack, bottom _____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>		
K. Borehole bottom _____ ft. MSL or <b>15</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>		
L. Borehole diameter <b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --		
M. O.D. well casing <b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --		
N. I.D. well casing <b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.		
11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/> --			



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

Signature

Firm **Himalayan Consultants, LLC**

**W156 N11357 Pilgrim Road, Germantown, WI 53022**

**Tel. (262) 502-0066, Fax (262) 502-0077**

## **ATTACHMENT D**

### **LABORATORY ANALYTICAL REPORTS - SOIL, GROUNDWATER, AND WASTE CHARACTERIZATION**

## **SOIL ANALYTICAL**

August 26, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REVISED REPORT: TCLP lead has been added to 4082165002.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## SAMPLE SUMMARY

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082165001	B-8-1 (2-4)	Solid	07/31/13 09:50	08/02/13 09:45
4082165002	B-8-1 (8-10)	Solid	07/31/13 10:05	08/02/13 09:45
4082165003	B-8-2 (2-4)	Solid	07/31/13 08:55	08/02/13 09:45
4082165004	B-8-2 (10-12)	Solid	07/31/13 09:30	08/02/13 09:45
4082165005	B-8-3 (2-4)	Solid	07/31/13 10:25	08/02/13 09:45
4082165006	B-8-3 (10-12)	Solid	07/31/13 10:35	08/02/13 09:45

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## SAMPLE ANALYTE COUNT

Project: 6019-17-00 WINNECONNE  
 Pace Project No.: 4082165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082165001	B-8-1 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	AH	1	PASI-G
4082165002	B-8-1 (8-10)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 6010	DLB	1	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
4082165003	B-8-2 (2-4)	ASTM D2974-87	AH	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
4082165004	B-8-2 (10-12)	ASTM D2974-87	AH	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
4082165005	B-8-3 (2-4)	ASTM D2974-87	AH	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
4082165006	B-8-3 (10-12)	ASTM D2974-87	AH	1	PASI-G
		WI MOD DRO	CAC	1	PASI-G

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## SAMPLE ANALYTE COUNT

Project: 6019-17-00 WINNECONNE  
 Pace Project No.: 4082165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	AH	1	PASI-G

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**HITS ONLY**

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
<b>4082165001</b>	<b>B-8-1 (2-4)</b>						
WI MOD DRO	Diesel Range Organics	19.4	mg/kg	1.9	08/09/13 10:55	T4	
EPA 6010	Arsenic	3.5	mg/kg	2.3	08/14/13 17:08		
EPA 6010	Barium	65.6	mg/kg	0.57	08/14/13 17:08	M0	
EPA 6010	Cadmium	0.29J	mg/kg	0.57	08/14/13 17:08		
EPA 6010	Chromium	16.5	mg/kg	0.57	08/14/13 17:08	M0	
EPA 6010	Lead	14.8	mg/kg	1.1	08/14/13 17:08		
EPA 7471	Mercury	0.068	mg/kg	0.0076	08/16/13 09:50		
EPA 8270 by SIM	Acenaphthylene	31.5	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Anthracene	96.2	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Benzo(a)anthracene	312	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Benzo(a)pyrene	316	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Benzo(b)fluoranthene	238	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Benzo(g,h,i)perylene	195	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Benzo(k)fluoranthene	265	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Chrysene	295	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Dibenz(a,h)anthracene	53.2	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Fluoranthene	683	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Fluorene	10.7J	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	166	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	1-Methylnaphthalene	8.0J	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	2-Methylnaphthalene	10.7J	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Naphthalene	17.9J	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Phenanthrene	407	ug/kg	19.1	08/13/13 17:31		
EPA 8270 by SIM	Pyrene	636	ug/kg	19.1	08/13/13 17:31		
ASTM D2974-87	Percent Moisture	12.7	%	0.10	08/07/13 17:29		
<b>4082165002</b>	<b>B-8-1 (8-10)</b>						
WI MOD DRO	Diesel Range Organics	300	mg/kg	16.7	08/09/13 11:59	T4	
EPA 6010	Arsenic	5.3J	mg/kg	6.6	08/14/13 17:15		
EPA 6010	Barium	81.2	mg/kg	1.6	08/14/13 17:15		
EPA 6010	Cadmium	0.42J	mg/kg	1.6	08/14/13 17:15		
EPA 6010	Chromium	22.3	mg/kg	1.6	08/14/13 17:15		
EPA 6010	Lead	101	mg/kg	3.3	08/14/13 17:15		
EPA 6010	Selenium	2.2J	mg/kg	6.6	08/14/13 17:15		
EPA 6010	Lead	<0.015	mg/L	0.038	08/23/13 16:07		
EPA 7471	Mercury	0.81	mg/kg	0.022	08/16/13 09:56		
EPA 8270 by SIM	Acenaphthene	51.1J	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Acenaphthylene	55.7J	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Anthracene	80.7	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Benzo(a)anthracene	168	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Benzo(a)pyrene	162	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Benzo(b)fluoranthene	165	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Benzo(g,h,i)perylene	67.8	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Benzo(k)fluoranthene	164	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Chrysene	185	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Fluoranthene	452	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Fluorene	80.9	ug/kg	58.0	08/16/13 12:57		
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	74.8	ug/kg	58.0	08/16/13 12:57		

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Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>4082165002</b>	<b>B-8-1 (8-10)</b>					
EPA 8270 by SIM	1-Methylnaphthalene	45.1J	ug/kg	58.0	08/16/13 12:57	
EPA 8270 by SIM	2-Methylnaphthalene	68.6	ug/kg	58.0	08/16/13 12:57	
EPA 8270 by SIM	Naphthalene	347	ug/kg	58.0	08/16/13 12:57	
EPA 8270 by SIM	Phenanthrene	381	ug/kg	58.0	08/16/13 12:57	
EPA 8270 by SIM	Pyrene	373	ug/kg	58.0	08/16/13 12:57	
EPA 8260	Toluene	190J	ug/kg	240	08/06/13 19:01	
ASTM D2974-87	Percent Moisture	71.3	%	0.10	08/07/13 17:29	
<b>4082165003</b>	<b>B-8-2 (2-4)</b>					
WI MOD DRO	Diesel Range Organics	30.2	mg/kg	1.6	08/09/13 11:01	T4
EPA 6010	Arsenic	4.4	mg/kg	2.0	08/14/13 17:18	
EPA 6010	Barium	82.4	mg/kg	0.50	08/14/13 17:18	
EPA 6010	Cadmium	0.27J	mg/kg	0.50	08/14/13 17:18	
EPA 6010	Chromium	4.7	mg/kg	0.50	08/14/13 17:18	
EPA 6010	Lead	32.6	mg/kg	0.99	08/14/13 17:18	
EPA 6010	Selenium	0.77J	mg/kg	2.0	08/14/13 17:18	
EPA 7471	Mercury	0.035	mg/kg	0.0071	08/16/13 09:58	
EPA 8270 by SIM	Benzo(a)anthracene	24.7	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Benzo(a)pyrene	26.6	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Benzo(b)fluoranthene	38.0	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Benzo(g,h,i)perylene	20.6	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Benzo(k)fluoranthene	21.3	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Chrysene	37.6	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Fluoranthene	42.2	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	15.2J	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	1-Methylnaphthalene	35.8	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	2-Methylnaphthalene	39.7	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Naphthalene	24.5	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Phenanthrene	54.2	ug/kg	17.9	08/13/13 20:25	
EPA 8270 by SIM	Pyrene	39.0	ug/kg	17.9	08/13/13 20:25	
EPA 8260	1,2,4-Trimethylbenzene	53.0J	ug/kg	68.7	08/06/13 19:24	
EPA 8260	Naphthalene	82.7	ug/kg	68.7	08/06/13 19:24	
EPA 8260	Toluene	92.4	ug/kg	68.7	08/06/13 19:24	
EPA 8260	Trichloroethene	43.9J	ug/kg	68.7	08/06/13 19:24	
EPA 8260	m&p-Xylene	115J	ug/kg	137	08/06/13 19:24	
EPA 8260	o-Xylene	66.8J	ug/kg	68.7	08/06/13 19:24	
ASTM D2974-87	Percent Moisture	7.1	%	0.10	08/07/13 17:29	
<b>4082165004</b>	<b>B-8-2 (10-12)</b>					
WI MOD DRO	Diesel Range Organics	2.4J	mg/kg	3.0	08/09/13 11:47	
EPA 6010	Arsenic	5.4	mg/kg	3.0	08/14/13 17:24	
EPA 6010	Barium	38.2	mg/kg	0.76	08/14/13 17:24	
EPA 6010	Cadmium	0.86	mg/kg	0.76	08/14/13 17:24	
EPA 6010	Chromium	9.9	mg/kg	0.76	08/14/13 17:24	
EPA 6010	Lead	17.9	mg/kg	1.5	08/14/13 17:24	
EPA 7471	Mercury	0.098	mg/kg	0.010	08/16/13 10:00	
EPA 8270 by SIM	Benzo(b)fluoranthene	21.4J	ug/kg	28.5	08/13/13 17:49	
EPA 8270 by SIM	Phenanthrene	14.4J	ug/kg	28.5	08/13/13 17:49	

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Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>4082165004</b>	<b>B-8-2 (10-12)</b>					
ASTM D2974-87	Percent Moisture	41.6 %		0.10	08/07/13 17:29	
<b>4082165005</b>	<b>B-8-3 (2-4)</b>					
WI MOD DRO	Diesel Range Organics	2.3 mg/kg		1.9	08/09/13 11:53	
EPA 6010	Arsenic	5.8 mg/kg		2.1	08/14/13 17:26	
EPA 6010	Barium	71.9 mg/kg		0.53	08/14/13 17:26	
EPA 6010	Cadmium	0.29J mg/kg		0.53	08/14/13 17:26	
EPA 6010	Chromium	25.6 mg/kg		0.53	08/14/13 17:26	
EPA 6010	Lead	11.3 mg/kg		1.1	08/14/13 17:26	
EPA 7471	Mercury	0.041 mg/kg		0.0071	08/16/13 10:02	
EPA 8270 by SIM	Benzo(a)anthracene	23.0 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Benzo(a)pyrene	30.4 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Benzo(b)fluoranthene	40.8 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Benzo(g,h,i)perylene	25.1 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Benzo(k)fluoranthene	26.4 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Chrysene	32.7 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Fluoranthene	52.2 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	18.6J ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	1-Methylnaphthalene	8.5J ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Phenanthrene	29.0 ug/kg		20.0	08/13/13 18:06	
EPA 8270 by SIM	Pyrene	44.1 ug/kg		20.0	08/13/13 18:06	
ASTM D2974-87	Percent Moisture	16.8 %		0.10	08/07/13 17:29	
<b>4082165006</b>	<b>B-8-3 (10-12)</b>					
WI MOD DRO	Diesel Range Organics	16.6 mg/kg		3.7	08/09/13 11:18	T4
EPA 6010	Arsenic	6.0 mg/kg		3.8	08/14/13 17:28	
EPA 6010	Barium	89.5 mg/kg		0.95	08/14/13 17:28	
EPA 6010	Cadmium	0.42J mg/kg		0.95	08/14/13 17:28	
EPA 6010	Chromium	22.0 mg/kg		0.95	08/14/13 17:28	
EPA 6010	Lead	54.5 mg/kg		1.9	08/14/13 17:28	
EPA 7471	Mercury	0.13 mg/kg		0.013	08/16/13 10:05	
EPA 8270 by SIM	Acenaphthylene	262J ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Anthracene	778 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Benzo(a)anthracene	2160 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Benzo(a)pyrene	2220 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Benzo(b)fluoranthene	1600 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Benzo(g,h,i)perylene	1120 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Benzo(k)fluoranthene	1520 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Chrysene	2290 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Dibenz(a,h)anthracene	293 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Fluoranthene	4570 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	955 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	1-Methylnaphthalene	110J ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Naphthalene	175J ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Phenanthrene	3790 ug/kg		268	08/14/13 17:09	
EPA 8270 by SIM	Pyrene	4440 ug/kg		268	08/14/13 17:09	
ASTM D2974-87	Percent Moisture	50.2 %		0.10	08/07/13 17:29	

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-1 (2-4) Lab ID: 4082165001 Collected: 07/31/13 09:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	19.4 mg/kg		1.9	0.77	1	08/05/13 09:46	08/09/13 10:55		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.0 mg/kg		3.0	3.0	1	08/05/13 08:14	08/05/13 11:28		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.5 mg/kg		2.3	0.62	1	08/14/13 11:30	08/14/13 17:08	7440-38-2	
Barium	65.6 mg/kg		0.57	0.099	1	08/14/13 11:30	08/14/13 17:08	7440-39-3	M0
Cadmium	0.29J mg/kg		0.57	0.058	1	08/14/13 11:30	08/14/13 17:08	7440-43-9	
Chromium	16.5 mg/kg		0.57	0.14	1	08/14/13 11:30	08/14/13 17:08	7440-47-3	M0
Lead	14.8 mg/kg		1.1	0.33	1	08/14/13 11:30	08/14/13 17:08	7439-92-1	
Selenium	<0.68 mg/kg		2.3	0.68	1	08/14/13 11:30	08/14/13 17:08	7782-49-2	
Silver	<0.24 mg/kg		1.1	0.24	1	08/14/13 11:30	08/14/13 17:08	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.068 mg/kg		0.0076	0.0038	1	08/15/13 09:33	08/16/13 09:50	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.5 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	83-32-9	
Acenaphthylene	31.5 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	208-96-8	
Anthracene	96.2 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	120-12-7	
Benzo(a)anthracene	312 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	56-55-3	
Benzo(a)pyrene	316 ug/kg		19.1	3.4	1	08/12/13 12:00	08/13/13 17:31	50-32-8	
Benzo(b)fluoranthene	238 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	205-99-2	
Benzo(g,h,i)perylene	195 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	191-24-2	
Benzo(k)fluoranthene	265 ug/kg		19.1	3.4	1	08/12/13 12:00	08/13/13 17:31	207-08-9	
Chrysene	295 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	218-01-9	
Dibenz(a,h)anthracene	53.2 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	53-70-3	
Fluoranthene	683 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	206-44-0	
Fluorene	10.7J ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	86-73-7	
Indeno(1,2,3-cd)pyrene	166 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	193-39-5	
1-Methylnaphthalene	8.0J ug/kg		19.1	3.4	1	08/12/13 12:00	08/13/13 17:31	90-12-0	
2-Methylnaphthalene	10.7J ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	91-57-6	
Naphthalene	17.9J ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	91-20-3	
Phenanthrene	407 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	85-01-8	
Pyrene	636 ug/kg		19.1	9.5	1	08/12/13 12:00	08/13/13 17:31	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	70 %	40-130		1	08/12/13 12:00	08/13/13 17:31	321-60-8		
Terphenyl-d14 (S)	90 %	40-130		1	08/12/13 12:00	08/13/13 17:31	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<28.7 ug/kg		69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	630-20-6	W
1,1,1-Trichloroethane	<28.7 ug/kg		69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	71-55-6	W
1,1,2,2-Tetrachloroethane	<28.7 ug/kg		69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

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**Sample: B-8-1 (2-4)**      Lab ID: **4082165001**      Collected: 07/31/13 09:50      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	79-00-5		W
1,1-Dichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-34-3		W
1,1-Dichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-35-4		W
1,1-Dichloropropene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	563-58-6		W
1,2,3-Trichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	87-61-6		W
1,2,3-Trichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	96-18-4		W
1,2,4-Trichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	120-82-1		W
1,2,4-Trimethylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	95-63-6		W
1,2-Dibromo-3-chloropropane	<57.3 ug/kg	287	57.3	1	08/05/13 11:05	08/06/13 18:38	96-12-8		W
1,2-Dibromoethane (EDB)	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	106-93-4		W
1,2-Dichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	95-50-1		W
1,2-Dichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	107-06-2		W
1,2-Dichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	78-87-5		W
1,3,5-Trimethylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	108-67-8		W
1,3-Dichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	541-73-1		W
1,3-Dichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	142-28-9		W
1,4-Dichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	106-46-7		W
2,2-Dichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	594-20-7		W
2-Butanone (MEK)	<136 ug/kg	287	136	1	08/05/13 11:05	08/06/13 18:38	78-93-3		W
2-Chlorotoluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	95-49-8		W
4-Chlorotoluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	106-43-4		W
Benzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	71-43-2		W
Bromobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	108-86-1		W
Bromochloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	74-97-5		W
Bromodichloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-27-4		W
Bromoform	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-25-2		W
Bromomethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	74-83-9		W
Carbon tetrachloride	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	56-23-5		W
Chlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	108-90-7		W
Chloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-00-3		W
Chloroform	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	67-66-3		W
Chloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	74-87-3		W
Dibromochloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	124-48-1		W
Dibromomethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	74-95-3		W
Dichlorodifluoromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-71-8		W
Diisopropyl ether	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	108-20-3		W
Ethylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	100-41-4		W
Hexachloro-1,3-butadiene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	87-68-3		W
Isopropylbenzene (Cumene)	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	98-82-8		W
Methyl-tert-butyl ether	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	1634-04-4		W
Methylene Chloride	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-09-2		W
Naphthalene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	91-20-3		W
Styrene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	100-42-5		W
Tetrachloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	127-18-4		W
Toluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-1 (2-4) Lab ID: 4082165001 Collected: 07/31/13 09:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	79-01-6	W	
Trichlorofluoromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-69-4	W	
Vinyl chloride	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	75-01-4	W	
cis-1,2-Dichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	156-59-2	W	
cis-1,3-Dichloropropene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	10061-01-5	W	
m&p-Xylene	<57.5 ug/kg	138	57.5	1	08/05/13 11:05	08/06/13 18:38	179601-23-1	W	
n-Butylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	104-51-8	W	
n-Propylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	103-65-1	W	
o-Xylene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	95-47-6	W	
p-Isopropyltoluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	99-87-6	W	
sec-Butylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	135-98-8	W	
tert-Butylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	98-06-6	W	
trans-1,2-Dichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	156-60-5	W	
trans-1,3-Dichloropropene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 18:38	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	95 %	57-130		1	08/05/13 11:05	08/06/13 18:38	1868-53-7		
Toluene-d8 (S)	102 %	54-133		1	08/05/13 11:05	08/06/13 18:38	2037-26-5		
4-Bromofluorobenzene (S)	90 %	49-130		1	08/05/13 11:05	08/06/13 18:38	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	12.7 %		0.10	0.10	1		08/07/13 17:29		

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Sample: B-8-1 (8-10) Lab ID: 4082165002 Collected: 07/31/13 10:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	300 mg/kg		16.7	6.7	3	08/05/13 09:46	08/09/13 11:59		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<9.4 mg/kg		9.4	9.4	1	08/05/13 08:14	08/05/13 15:46		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.3J mg/kg		6.6	1.8	1	08/14/13 11:30	08/14/13 17:15	7440-38-2	
Barium	81.2 mg/kg		1.6	0.29	1	08/14/13 11:30	08/14/13 17:15	7440-39-3	
Cadmium	0.42J mg/kg		1.6	0.17	1	08/14/13 11:30	08/14/13 17:15	7440-43-9	
Chromium	22.3 mg/kg		1.6	0.41	1	08/14/13 11:30	08/14/13 17:15	7440-47-3	
Lead	101 mg/kg		3.3	0.96	1	08/14/13 11:30	08/14/13 17:15	7439-92-1	
Selenium	2.2J mg/kg		6.6	1.9	1	08/14/13 11:30	08/14/13 17:15	7782-49-2	
Silver	<0.70 mg/kg		3.3	0.70	1	08/14/13 11:30	08/14/13 17:15	7440-22-4	
<b>6010 MET ICP, TCLP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 08/22/13 00:00								
Lead	<0.015 mg/L		0.038	0.015	1	08/23/13 10:00	08/23/13 16:07	7439-92-1	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.81 mg/kg		0.022	0.011	1	08/15/13 09:33	08/16/13 09:56	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	51.1J ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	83-32-9	
Acenaphthylene	55.7J ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	208-96-8	
Anthracene	80.7 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	120-12-7	
Benzo(a)anthracene	168 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	56-55-3	
Benzo(a)pyrene	162 ug/kg		58.0	10.3	1	08/14/13 08:27	08/16/13 12:57	50-32-8	
Benzo(b)fluoranthene	165 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	205-99-2	
Benzo(g,h,i)perylene	67.8 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	191-24-2	
Benzo(k)fluoranthene	164 ug/kg		58.0	10.2	1	08/14/13 08:27	08/16/13 12:57	207-08-9	
Chrysene	185 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	218-01-9	
Dibenz(a,h)anthracene	<29.0 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	53-70-3	
Fluoranthene	452 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	206-44-0	
Fluorene	80.9 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	86-73-7	
Indeno(1,2,3-cd)pyrene	74.8 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	193-39-5	
1-Methylnaphthalene	45.1J ug/kg		58.0	10.3	1	08/14/13 08:27	08/16/13 12:57	90-12-0	
2-Methylnaphthalene	68.6 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	91-57-6	
Naphthalene	347 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	91-20-3	
Phenanthrene	381 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	85-01-8	
Pyrene	373 ug/kg		58.0	29.0	1	08/14/13 08:27	08/16/13 12:57	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	48 %	40-130		1	08/14/13 08:27	08/16/13 12:57	321-60-8		
Terphenyl-d14 (S)	47 %	40-130		1	08/14/13 08:27	08/16/13 12:57	1718-51-0		

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Sample: B-8-1 (8-10) Lab ID: 4082165002 Collected: 07/31/13 10:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,1,1,2-Tetrachloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	630-20-6	W	
1,1,1-Trichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	71-55-6	W	
1,1,2,2-Tetrachloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	79-34-5	W	
1,1,2-Trichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	79-00-5	W	
1,1-Dichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-34-3	W	
1,1-Dichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-35-4	W	
1,1-Dichloropropene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	563-58-6	W	
1,2,3-Trichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	87-61-6	W	
1,2,3-Trichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	96-18-4	W	
1,2,4-Trichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	120-82-1	W	
1,2,4-Trimethylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	95-63-6	W	
1,2-Dibromo-3-chloropropane	<57.3 ug/kg	287	57.3	1	08/05/13 11:05	08/06/13 19:01	96-12-8	W	
1,2-Dibromoethane (EDB)	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	106-93-4	W	
1,2-Dichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	95-50-1	W	
1,2-Dichloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	107-06-2	W	
1,2-Dichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	78-87-5	W	
1,3,5-Trimethylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	108-67-8	W	
1,3-Dichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	541-73-1	W	
1,3-Dichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	142-28-9	W	
1,4-Dichlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	106-46-7	W	
2,2-Dichloropropane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	594-20-7	W	
2-Butanone (MEK)	<136 ug/kg	287	136	1	08/05/13 11:05	08/06/13 19:01	78-93-3	W	
2-Chlorotoluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	95-49-8	W	
4-Chlorotoluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	106-43-4	W	
Benzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	71-43-2	W	
Bromobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	108-86-1	W	
Bromochloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	74-97-5	W	
Bromodichloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-27-4	W	
Bromoform	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-25-2	W	
Bromomethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	74-83-9	W	
Carbon tetrachloride	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	56-23-5	W	
Chlorobenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	108-90-7	W	
Chloroethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-00-3	W	
Chloroform	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	67-66-3	W	
Chloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	74-87-3	W	
Dibromochloromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	124-48-1	W	
Dibromomethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	74-95-3	W	
Dichlorodifluoromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-71-8	W	
Diisopropyl ether	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	108-20-3	W	
Ethylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	100-41-4	W	
Hexachloro-1,3-butadiene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	87-68-3	W	
Isopropylbenzene (Cumene)	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	98-82-8	W	
Methyl-tert-butyl ether	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	1634-04-4	W	
Methylene Chloride	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-09-2	W	
Naphthalene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	91-20-3	W	

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-1 (8-10) Lab ID: 4082165002 Collected: 07/31/13 10:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Styrene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	100-42-5	W	
Tetrachloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	127-18-4	W	
Toluene	190J ug/kg	240	100	1	08/05/13 11:05	08/06/13 19:01	108-88-3		
Trichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	79-01-6	W	
Trichlorofluoromethane	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-69-4	W	
Vinyl chloride	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	75-01-4	W	
cis-1,2-Dichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	156-59-2	W	
cis-1,3-Dichloropropene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	10061-01-5	W	
m&p-Xylene	<57.5 ug/kg	138	57.5	1	08/05/13 11:05	08/06/13 19:01	179601-23-1	W	
n-Butylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	104-51-8	W	
n-Propylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	103-65-1	W	
o-Xylene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	95-47-6	W	
p-Isopropyltoluene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	99-87-6	W	
sec-Butylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	135-98-8	W	
tert-Butylbenzene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	98-06-6	W	
trans-1,2-Dichloroethene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	156-60-5	W	
trans-1,3-Dichloropropene	<28.7 ug/kg	69.0	28.7	1	08/05/13 11:05	08/06/13 19:01	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	83 %	57-130		1	08/05/13 11:05	08/06/13 19:01	1868-53-7		
Toluene-d8 (S)	91 %	54-133		1	08/05/13 11:05	08/06/13 19:01	2037-26-5		
4-Bromofluorobenzene (S)	78 %	49-130		1	08/05/13 11:05	08/06/13 19:01	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	71.3 %	0.10	0.10	1			08/07/13 17:29		

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-2 (2-4) Lab ID: 4082165003 Collected: 07/31/13 08:55 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	30.2 mg/kg		1.6	0.65	1	08/05/13 09:46	08/09/13 11:01		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.9 mg/kg		2.9	2.9	1	08/05/13 08:14	08/05/13 13:22		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.4 mg/kg		2.0	0.54	1	08/14/13 11:30	08/14/13 17:18	7440-38-2	
Barium	82.4 mg/kg		0.50	0.086	1	08/14/13 11:30	08/14/13 17:18	7440-39-3	
Cadmium	0.27J mg/kg		0.50	0.050	1	08/14/13 11:30	08/14/13 17:18	7440-43-9	
Chromium	4.7 mg/kg		0.50	0.12	1	08/14/13 11:30	08/14/13 17:18	7440-47-3	
Lead	32.6 mg/kg		0.99	0.29	1	08/14/13 11:30	08/14/13 17:18	7439-92-1	
Selenium	0.77J mg/kg		2.0	0.59	1	08/14/13 11:30	08/14/13 17:18	7782-49-2	
Silver	<0.21 mg/kg		0.99	0.21	1	08/14/13 11:30	08/14/13 17:18	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.035 mg/kg		0.0071	0.0036	1	08/15/13 09:33	08/16/13 09:58	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	83-32-9	
Acenaphthylene	<9.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	208-96-8	
Anthracene	<9.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	120-12-7	
Benzo(a)anthracene	24.7 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	56-55-3	
Benzo(a)pyrene	26.6 ug/kg		17.9	3.2	1	08/13/13 08:22	08/13/13 20:25	50-32-8	
Benzo(b)fluoranthene	38.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	205-99-2	
Benzo(g,h,i)perylene	20.6 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	191-24-2	
Benzo(k)fluoranthene	21.3 ug/kg		17.9	3.2	1	08/13/13 08:22	08/13/13 20:25	207-08-9	
Chrysene	37.6 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	218-01-9	
Dibenz(a,h)anthracene	<9.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	53-70-3	
Fluoranthene	42.2 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	206-44-0	
Fluorene	<9.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	86-73-7	
Indeno(1,2,3-cd)pyrene	15.2J ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	193-39-5	
1-Methylnaphthalene	35.8 ug/kg		17.9	3.2	1	08/13/13 08:22	08/13/13 20:25	90-12-0	
2-Methylnaphthalene	39.7 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	91-57-6	
Naphthalene	24.5 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	91-20-3	
Phenanthrene	54.2 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	85-01-8	
Pyrene	39.0 ug/kg		17.9	9.0	1	08/13/13 08:22	08/13/13 20:25	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	64 %	40-130		1	08/13/13 08:22	08/13/13 20:25	321-60-8		
Terphenyl-d14 (S)	76 %	40-130		1	08/13/13 08:22	08/13/13 20:25	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	630-20-6	W
1,1,1-Trichloroethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Sample: B-8-2 (2-4) Lab ID: 4082165003 Collected: 07/31/13 08:55 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	79-00-5		W
1,1-Dichloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-34-3		W
1,1-Dichloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-35-4		W
1,1-Dichloropropene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	563-58-6		W
1,2,3-Trichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	87-61-6		W
1,2,3-Trichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	96-18-4		W
1,2,4-Trichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	120-82-1		W
1,2,4-Trimethylbenzene	53.0 ug/kg	68.7	28.6	1	08/05/13 11:05	08/06/13 19:24	95-63-6		
1,2-Dibromo-3-chloropropane	<53.0 ug/kg	266	53.0	1	08/05/13 11:05	08/06/13 19:24	96-12-8		W
1,2-Dibromoethane (EDB)	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	106-93-4		W
1,2-Dichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	95-50-1		W
1,2-Dichloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	107-06-2		W
1,2-Dichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	78-87-5		W
1,3,5-Trimethylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	108-67-8		W
1,3-Dichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	541-73-1		W
1,3-Dichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	142-28-9		W
1,4-Dichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	106-46-7		W
2,2-Dichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	594-20-7		W
2-Butanone (MEK)	<126 ug/kg	266	126	1	08/05/13 11:05	08/06/13 19:24	78-93-3		W
2-Chlorotoluene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	95-49-8		W
4-Chlorotoluene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	106-43-4		W
Benzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	71-43-2		W
Bromobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	108-86-1		W
Bromochloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	74-97-5		W
Bromodichloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-27-4		W
Bromoform	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-25-2		W
Bromomethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	74-83-9		W
Carbon tetrachloride	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	56-23-5		W
Chlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	108-90-7		W
Chloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-00-3		W
Chloroform	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	67-66-3		W
Chloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	74-87-3		W
Dibromochloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	124-48-1		W
Dibromomethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	74-95-3		W
Dichlorodifluoromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-71-8		W
Diisopropyl ether	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	108-20-3		W
Ethylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	100-41-4		W
Hexachloro-1,3-butadiene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	87-68-3		W
Isopropylbenzene (Cumene)	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	98-82-8		W
Methyl-tert-butyl ether	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	1634-04-4		W
Methylene Chloride	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-09-2		W
Naphthalene	82.7 ug/kg	68.7	28.6	1	08/05/13 11:05	08/06/13 19:24	91-20-3		
Styrene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	100-42-5		W
Tetrachloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	127-18-4		W
Toluene	92.4 ug/kg	68.7	28.6	1	08/05/13 11:05	08/06/13 19:24	108-88-3		

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-2 (2-4) Lab ID: 4082165003 Collected: 07/31/13 08:55 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	43.9J ug/kg		68.7	28.6	1	08/05/13 11:05	08/06/13 19:24	79-01-6	
Trichlorofluoromethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-69-4	W
Vinyl chloride	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	75-01-4	W
cis-1,2-Dichloroethene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	156-59-2	W
cis-1,3-Dichloropropene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	10061-01-5	W
m&p-Xylene	115J ug/kg		137	57.3	1	08/05/13 11:05	08/06/13 19:24	179601-23-1	
n-Butylbenzene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	104-51-8	W
n-Propylbenzene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	103-65-1	W
o-Xylene	66.8J ug/kg		68.7	28.6	1	08/05/13 11:05	08/06/13 19:24	95-47-6	
p-Isopropyltoluene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	99-87-6	W
sec-Butylbenzene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	135-98-8	W
tert-Butylbenzene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	98-06-6	W
trans-1,2-Dichloroethene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	156-60-5	W
trans-1,3-Dichloropropene	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 19:24	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	97 %		57-130		1	08/05/13 11:05	08/06/13 19:24	1868-53-7	
Toluene-d8 (S)	102 %		54-133		1	08/05/13 11:05	08/06/13 19:24	2037-26-5	
4-Bromofluorobenzene (S)	91 %		49-130		1	08/05/13 11:05	08/06/13 19:24	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	7.1 %		0.10	0.10	1			08/07/13 17:29	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-2 (10-12) Lab ID: 4082165004 Collected: 07/31/13 09:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<b>2.4J</b> mg/kg		3.0	1.2	1	08/05/13 09:46	08/09/13 11:47		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<b>&lt;4.5</b> mg/kg		4.5	4.5	1	08/05/13 08:14	08/05/13 13:51		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	<b>5.4</b> mg/kg		3.0	0.82	1	08/14/13 11:30	08/14/13 17:24	7440-38-2	
Barium	<b>38.2</b> mg/kg		0.76	0.13	1	08/14/13 11:30	08/14/13 17:24	7440-39-3	
Cadmium	<b>0.86</b> mg/kg		0.76	0.077	1	08/14/13 11:30	08/14/13 17:24	7440-43-9	
Chromium	<b>9.9</b> mg/kg		0.76	0.19	1	08/14/13 11:30	08/14/13 17:24	7440-47-3	
Lead	<b>17.9</b> mg/kg		1.5	0.45	1	08/14/13 11:30	08/14/13 17:24	7439-92-1	
Selenium	<b>&lt;0.90</b> mg/kg		3.0	0.90	1	08/14/13 11:30	08/14/13 17:24	7782-49-2	
Silver	<b>&lt;0.32</b> mg/kg		1.5	0.32	1	08/14/13 11:30	08/14/13 17:24	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	<b>0.098</b> mg/kg		0.010	0.0052	1	08/15/13 09:33	08/16/13 10:00	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	83-32-9	
Acenaphthylene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	208-96-8	
Anthracene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	120-12-7	
Benzo(a)anthracene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	56-55-3	
Benzo(a)pyrene	<b>&lt;5.1</b> ug/kg		28.5	5.1	1	08/13/13 08:22	08/13/13 17:49	50-32-8	
Benzo(b)fluoranthene	<b>21.4J</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	205-99-2	
Benzo(g,h,i)perylene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	191-24-2	
Benzo(k)fluoranthene	<b>&lt;5.0</b> ug/kg		28.5	5.0	1	08/13/13 08:22	08/13/13 17:49	207-08-9	
Chrysene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	218-01-9	
Dibenz(a,h)anthracene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	53-70-3	
Fluoranthene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	206-44-0	
Fluorene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	193-39-5	
1-Methylnaphthalene	<b>&lt;5.0</b> ug/kg		28.5	5.0	1	08/13/13 08:22	08/13/13 17:49	90-12-0	
2-Methylnaphthalene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	91-57-6	
Naphthalene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	91-20-3	
Phenanthrene	<b>14.4J</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	85-01-8	
Pyrene	<b>&lt;14.3</b> ug/kg		28.5	14.3	1	08/13/13 08:22	08/13/13 17:49	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	54 %	40-130			1	08/13/13 08:22	08/13/13 17:49	321-60-8	
Terphenyl-d14 (S)	60 %	40-130			1	08/13/13 08:22	08/13/13 17:49	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<b>&lt;25.0</b> ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	630-20-6	W
1,1,1-Trichloroethane	<b>&lt;25.0</b> ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	71-55-6	W
1,1,2,2-Tetrachloroethane	<b>&lt;25.0</b> ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Sample: B-8-2 (10-12) Lab ID: 4082165004 Collected: 07/31/13 09:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	79-00-5	W	
1,1-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-34-3	W	
1,1-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-35-4	W	
1,1-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	563-58-6	W	
1,2,3-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	87-61-6	W	
1,2,3-Trichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	96-18-4	W	
1,2,4-Trichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	120-82-1	W	
1,2,4-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	95-63-6	W	
1,2-Dibromo-3-chloropropane	<49.8 ug/kg	250	49.8	1	08/05/13 11:05	08/06/13 19:47	96-12-8	W	
1,2-Dibromoethane (EDB)	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	106-93-4	W	
1,2-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	95-50-1	W	
1,2-Dichloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	107-06-2	W	
1,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	78-87-5	W	
1,3,5-Trimethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	108-67-8	W	
1,3-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	541-73-1	W	
1,3-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	142-28-9	W	
1,4-Dichlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	106-46-7	W	
2,2-Dichloropropane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	594-20-7	W	
2-Butanone (MEK)	<118 ug/kg	250	118	1	08/05/13 11:05	08/06/13 19:47	78-93-3	W	
2-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	95-49-8	W	
4-Chlorotoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	106-43-4	W	
Benzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	71-43-2	W	
Bromobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	108-86-1	W	
Bromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	74-97-5	W	
Bromodichloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-27-4	W	
Bromoform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-25-2	W	
Bromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	74-83-9	W	
Carbon tetrachloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	56-23-5	W	
Chlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	108-90-7	W	
Chloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-00-3	W	
Chloroform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	67-66-3	W	
Chloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	74-87-3	W	
Dibromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	124-48-1	W	
Dibromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	74-95-3	W	
Dichlorodifluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-71-8	W	
Diisopropyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	108-20-3	W	
Ethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	100-41-4	W	
Hexachloro-1,3-butadiene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	87-68-3	W	
Isopropylbenzene (Cumene)	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	98-82-8	W	
Methyl-tert-butyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	1634-04-4	W	
Methylene Chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-09-2	W	
Naphthalene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	91-20-3	W	
Styrene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	100-42-5	W	
Tetrachloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	127-18-4	W	
Toluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	108-88-3	W	

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-2 (10-12) Lab ID: 4082165004 Collected: 07/31/13 09:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	79-01-6	W	
Trichlorofluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-69-4	W	
Vinyl chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	75-01-4	W	
cis-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	156-59-2	W	
cis-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	10061-01-5	W	
m&p-Xylene	<50.0 ug/kg	120	50.0	1	08/05/13 11:05	08/06/13 19:47	179601-23-1	W	
n-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	104-51-8	W	
n-Propylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	103-65-1	W	
o-Xylene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	95-47-6	W	
p-Isopropyltoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	99-87-6	W	
sec-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	135-98-8	W	
tert-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	98-06-6	W	
trans-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	156-60-5	W	
trans-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 19:47	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	74 %	57-130		1	08/05/13 11:05	08/06/13 19:47	1868-53-7		
Toluene-d8 (S)	80 %	54-133		1	08/05/13 11:05	08/06/13 19:47	2037-26-5		
4-Bromofluorobenzene (S)	67 %	49-130		1	08/05/13 11:05	08/06/13 19:47	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	41.6 %		0.10	0.10	1		08/07/13 17:29		

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-3 (2-4) Lab ID: 4082165005 Collected: 07/31/13 10:25 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	2.3 mg/kg		1.9	0.77	1	08/05/13 09:46	08/09/13 11:53		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.0 mg/kg		3.0	3.0	1	08/05/13 08:14	08/05/13 11:56		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.8 mg/kg		2.1	0.58	1	08/14/13 11:30	08/14/13 17:26	7440-38-2	
Barium	71.9 mg/kg		0.53	0.093	1	08/14/13 11:30	08/14/13 17:26	7440-39-3	
Cadmium	0.29J mg/kg		0.53	0.054	1	08/14/13 11:30	08/14/13 17:26	7440-43-9	
Chromium	25.6 mg/kg		0.53	0.13	1	08/14/13 11:30	08/14/13 17:26	7440-47-3	
Lead	11.3 mg/kg		1.1	0.31	1	08/14/13 11:30	08/14/13 17:26	7439-92-1	
Selenium	<0.63 mg/kg		2.1	0.63	1	08/14/13 11:30	08/14/13 17:26	7782-49-2	
Silver	<0.23 mg/kg		1.1	0.23	1	08/14/13 11:30	08/14/13 17:26	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.041 mg/kg		0.0071	0.0035	1	08/15/13 09:33	08/16/13 10:02	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	83-32-9	
Acenaphthylene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	208-96-8	
Anthracene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	120-12-7	
Benzo(a)anthracene	23.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	56-55-3	
Benzo(a)pyrene	30.4 ug/kg		20.0	3.6	1	08/13/13 08:22	08/13/13 18:06	50-32-8	
Benzo(b)fluoranthene	40.8 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	205-99-2	
Benzo(g,h,i)perylene	25.1 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	191-24-2	
Benzo(k)fluoranthene	26.4 ug/kg		20.0	3.5	1	08/13/13 08:22	08/13/13 18:06	207-08-9	
Chrysene	32.7 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	218-01-9	
Dibenz(a,h)anthracene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	53-70-3	
Fluoranthene	52.2 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	206-44-0	
Fluorene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	86-73-7	
Indeno(1,2,3-cd)pyrene	18.6J ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	193-39-5	
1-Methylnaphthalene	8.5J ug/kg		20.0	3.5	1	08/13/13 08:22	08/13/13 18:06	90-12-0	
2-Methylnaphthalene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	91-57-6	
Naphthalene	<10.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	91-20-3	
Phenanthrene	29.0 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	85-01-8	
Pyrene	44.1 ug/kg		20.0	10.0	1	08/13/13 08:22	08/13/13 18:06	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	63 %	40-130		1	08/13/13 08:22	08/13/13 18:06	321-60-8		
Terphenyl-d14 (S)	78 %	40-130		1	08/13/13 08:22	08/13/13 18:06	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	630-20-6	W
1,1,1-Trichloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Sample: B-8-3 (2-4) Lab ID: 4082165005 Collected: 07/31/13 10:25 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	79-00-5	W	
1,1-Dichloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-34-3	W	
1,1-Dichloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-35-4	W	
1,1-Dichloropropene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	563-58-6	W	
1,2,3-Trichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	87-61-6	W	
1,2,3-Trichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	96-18-4	W	
1,2,4-Trichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	120-82-1	W	
1,2,4-Trimethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	95-63-6	W	
1,2-Dibromo-3-chloropropane	<53.6 ug/kg	269	53.6	1	08/05/13 11:05	08/06/13 20:10	96-12-8	W	
1,2-Dibromoethane (EDB)	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	106-93-4	W	
1,2-Dichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	95-50-1	W	
1,2-Dichloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	107-06-2	W	
1,2-Dichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	78-87-5	W	
1,3,5-Trimethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	108-67-8	W	
1,3-Dichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	541-73-1	W	
1,3-Dichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	142-28-9	W	
1,4-Dichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	106-46-7	W	
2,2-Dichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	594-20-7	W	
2-Butanone (MEK)	<127 ug/kg	269	127	1	08/05/13 11:05	08/06/13 20:10	78-93-3	W	
2-Chlorotoluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	95-49-8	W	
4-Chlorotoluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	106-43-4	W	
Benzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	71-43-2	W	
Bromobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	108-86-1	W	
Bromochloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	74-97-5	W	
Bromodichloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-27-4	W	
Bromoform	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-25-2	W	
Bromomethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	74-83-9	W	
Carbon tetrachloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	56-23-5	W	
Chlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	108-90-7	W	
Chloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-00-3	W	
Chloroform	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	67-66-3	W	
Chloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	74-87-3	W	
Dibromochloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	124-48-1	W	
Dibromomethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	74-95-3	W	
Dichlorodifluoromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-71-8	W	
Diisopropyl ether	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	108-20-3	W	
Ethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	100-41-4	W	
Hexachloro-1,3-butadiene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	87-68-3	W	
Isopropylbenzene (Cumene)	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	98-82-8	W	
Methyl-tert-butyl ether	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	1634-04-4	W	
Methylene Chloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-09-2	W	
Naphthalene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	91-20-3	W	
Styrene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	100-42-5	W	
Tetrachloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	127-18-4	W	
Toluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	108-88-3	W	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

Sample: B-8-3 (2-4) Lab ID: 4082165005 Collected: 07/31/13 10:25 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	79-01-6	W
Trichlorofluoromethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-69-4	W
Vinyl chloride	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	75-01-4	W
cis-1,2-Dichloroethene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	156-59-2	W
cis-1,3-Dichloropropene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	10061-01-5	W
m&p-Xylene	<53.8 ug/kg		129	53.8	1	08/05/13 11:05	08/06/13 20:10	179601-23-1	W
n-Butylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	104-51-8	W
n-Propylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	103-65-1	W
o-Xylene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	95-47-6	W
p-Isopropyltoluene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	99-87-6	W
sec-Butylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	135-98-8	W
tert-Butylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	98-06-6	W
trans-1,2-Dichloroethene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	156-60-5	W
trans-1,3-Dichloropropene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 20:10	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	92 %		57-130		1	08/05/13 11:05	08/06/13 20:10	1868-53-7	
Toluene-d8 (S)	97 %		54-133		1	08/05/13 11:05	08/06/13 20:10	2037-26-5	
4-Bromofluorobenzene (S)	85 %		49-130		1	08/05/13 11:05	08/06/13 20:10	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	16.8 %		0.10	0.10	1			08/07/13 17:29	

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-3 (10-12) Lab ID: 4082165006 Collected: 07/31/13 10:35 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	16.6 mg/kg		3.7	1.5	1	08/05/13 09:46	08/09/13 11:18		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<5.2 mg/kg		5.2	5.2	1	08/05/13 08:14	08/05/13 12:25		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	6.0 mg/kg		3.8	1.0	1	08/14/13 11:30	08/14/13 17:28	7440-38-2	
Barium	89.5 mg/kg		0.95	0.17	1	08/14/13 11:30	08/14/13 17:28	7440-39-3	
Cadmium	0.42J mg/kg		0.95	0.097	1	08/14/13 11:30	08/14/13 17:28	7440-43-9	
Chromium	22.0 mg/kg		0.95	0.24	1	08/14/13 11:30	08/14/13 17:28	7440-47-3	
Lead	54.5 mg/kg		1.9	0.56	1	08/14/13 11:30	08/14/13 17:28	7439-92-1	
Selenium	<1.1 mg/kg		3.8	1.1	1	08/14/13 11:30	08/14/13 17:28	7782-49-2	
Silver	<0.41 mg/kg		1.9	0.41	1	08/14/13 11:30	08/14/13 17:28	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.13 mg/kg		0.013	0.0066	1	08/15/13 09:33	08/16/13 10:05	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<134 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	83-32-9	
Acenaphthylene	262J ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	208-96-8	
Anthracene	778 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	120-12-7	
Benzo(a)anthracene	2160 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	56-55-3	
Benzo(a)pyrene	2220 ug/kg		268	47.7	4	08/13/13 08:22	08/14/13 17:09	50-32-8	
Benzo(b)fluoranthene	1600 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	205-99-2	
Benzo(g,h,i)perylene	1120 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	191-24-2	
Benzo(k)fluoranthene	1520 ug/kg		268	47.1	4	08/13/13 08:22	08/14/13 17:09	207-08-9	
Chrysene	2290 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	218-01-9	
Dibenz(a,h)anthracene	293 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	53-70-3	
Fluoranthene	4570 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	206-44-0	
Fluorene	<134 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	86-73-7	
Indeno(1,2,3-cd)pyrene	955 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	193-39-5	
1-Methylnaphthalene	110J ug/kg		268	47.3	4	08/13/13 08:22	08/14/13 17:09	90-12-0	
2-Methylnaphthalene	<134 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	91-57-6	
Naphthalene	175J ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	91-20-3	
Phenanthrene	3790 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	85-01-8	
Pyrene	4440 ug/kg		268	134	4	08/13/13 08:22	08/14/13 17:09	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	61 %	40-130		4	08/13/13 08:22	08/14/13 17:09	321-60-8		
Terphenyl-d14 (S)	74 %	40-130		4	08/13/13 08:22	08/14/13 17:09	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	630-20-6	W
1,1,1-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

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**Sample: B-8-3 (10-12)**      Lab ID: **4082165006**      Collected: 07/31/13 10:35      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	79-00-5	W	
1,1-Dichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-34-3	W	
1,1-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-35-4	W	
1,1-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	563-58-6	W	
1,2,3-Trichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	87-61-6	W	
1,2,3-Trichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	96-18-4	W	
1,2,4-Trichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	120-82-1	W	
1,2,4-Trimethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	95-63-6	W	
1,2-Dibromo-3-chloropropane	<51.4 ug/kg	258	51.4	1	08/05/13 11:05	08/06/13 20:33	96-12-8	W	
1,2-Dibromoethane (EDB)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	106-93-4	W	
1,2-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	95-50-1	W	
1,2-Dichloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	107-06-2	W	
1,2-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	78-87-5	W	
1,3,5-Trimethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	108-67-8	W	
1,3-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	541-73-1	W	
1,3-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	142-28-9	W	
1,4-Dichlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	106-46-7	W	
2,2-Dichloropropane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	594-20-7	W	
2-Butanone (MEK)	<122 ug/kg	258	122	1	08/05/13 11:05	08/06/13 20:33	78-93-3	W	
2-Chlorotoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	95-49-8	W	
4-Chlorotoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	106-43-4	W	
Benzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	71-43-2	W	
Bromobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	108-86-1	W	
Bromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	74-97-5	W	
Bromodichloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-27-4	W	
Bromoform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-25-2	W	
Bromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	74-83-9	W	
Carbon tetrachloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	56-23-5	W	
Chlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	108-90-7	W	
Chloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-00-3	W	
Chloroform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	67-66-3	W	
Chloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	74-87-3	W	
Dibromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	124-48-1	W	
Dibromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	74-95-3	W	
Dichlorodifluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-71-8	W	
Diisopropyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	108-20-3	W	
Ethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	100-41-4	W	
Hexachloro-1,3-butadiene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	87-68-3	W	
Isopropylbenzene (Cumene)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	98-82-8	W	
Methyl-tert-butyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	1634-04-4	W	
Methylene Chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-09-2	W	
Naphthalene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	91-20-3	W	
Styrene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	100-42-5	W	
Tetrachloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	127-18-4	W	
Toluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	108-88-3	W	

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## ANALYTICAL RESULTS

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Sample: B-8-3 (10-12) Lab ID: 4082165006 Collected: 07/31/13 10:35 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	79-01-6	W	
Trichlorofluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-69-4	W	
Vinyl chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	75-01-4	W	
cis-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	156-59-2	W	
cis-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	10061-01-5	W	
m&p-Xylene	<51.5 ug/kg	124	51.5	1	08/05/13 11:05	08/06/13 20:33	179601-23-1	W	
n-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	104-51-8	W	
n-Propylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	103-65-1	W	
o-Xylene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	95-47-6	W	
p-Isopropyltoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	99-87-6	W	
sec-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	135-98-8	W	
tert-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	98-06-6	W	
trans-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	156-60-5	W	
trans-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 20:33	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	80 %	57-130		1	08/05/13 11:05	08/06/13 20:33	1868-53-7		
Toluene-d8 (S)	87 %	54-133		1	08/05/13 11:05	08/06/13 20:33	2037-26-5		
4-Bromofluorobenzene (S)	76 %	49-130		1	08/05/13 11:05	08/06/13 20:33	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	50.2 %		0.10	0.10	1		08/07/13 17:29		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: GCV/10696 Analysis Method: WI MOD GRO

QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

METHOD BLANK: 833281 Matrix: Solid

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<2.5	2.5	08/05/13 09:04	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833282 833283

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	10	9.8	10.2	98	102	80-120	4	20	

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: MERP/3806 Analysis Method: EPA 7471

QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

METHOD BLANK: 839475 Matrix: Solid

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Mercury	mg/kg	<0.0033	0.0067	08/16/13 09:46	

LABORATORY CONTROL SAMPLE: 839476

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Mercury	mg/kg	.17	0.17	100	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 839477 839478

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		4082165001	Spike	Spike	Result	Result	% Rec	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	mg/kg	0.068	.19	.19	0.25	0.26	95	101	85-115	5	20		

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch:	MPRP/8968	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
Associated Lab Samples:	4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006		

METHOD BLANK: 838989 Matrix: Solid

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.54	2.0	08/14/13 17:04	
Barium	mg/kg	<0.087	0.50	08/14/13 17:04	
Cadmium	mg/kg	<0.051	0.50	08/14/13 17:04	
Chromium	mg/kg	<0.13	0.50	08/14/13 17:04	
Lead	mg/kg	<0.29	1.0	08/14/13 17:04	
Selenium	mg/kg	<0.59	2.0	08/14/13 17:04	
Silver	mg/kg	<0.21	1.0	08/14/13 17:04	

LABORATORY CONTROL SAMPLE: 838990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	45.1	90	80-120	
Barium	mg/kg	50	47.6	95	80-120	
Cadmium	mg/kg	50	44.8	90	80-120	
Chromium	mg/kg	50	46.1	92	80-120	
Lead	mg/kg	50	44.9	90	80-120	
Selenium	mg/kg	50	44.9	90	80-120	
Silver	mg/kg	25	21.9	88	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 838991 838992

Parameter	Units	MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	RPD	Max Qual
		4082165001	Result	Conc.	Conc.	Result	Result	% Rec	% Rec				
Arsenic	mg/kg	3.5	57.3	57	48.8	49.2	79	80	75-125	1	20		
Barium	mg/kg	65.6	57.3	57	108	99.9	73	60	75-125	7	20	M0	
Cadmium	mg/kg	0.29J	57.3	57	47.3	46.9	82	82	75-125	1	20		
Chromium	mg/kg	16.5	57.3	57	59.9	58.8	76	74	75-125	2	20	M0	
Lead	mg/kg	14.8	57.3	57	63.6	62.3	85	83	75-125	2	20		
Selenium	mg/kg	<0.68	57.3	57	45.0	44.8	78	78	75-125	0	20		
Silver	mg/kg	<0.24	28.6	28.5	23.4	23.3	82	82	75-125	0	20		

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch:	MPRP/9009	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	4082165002		

METHOD BLANK: 843847	Matrix: Water
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Associated Lab Samples: 4082165002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	<0.0030	0.0075	08/23/13 15:50	

LABORATORY CONTROL SAMPLE: 843848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	.5	0.50	100	80-120	

MATRIX SPIKE SAMPLE: 843849

Parameter	Units	4082773001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	0.021J	2.5	2.4	95	75-125	

MATRIX SPIKE SAMPLE: 843850

Parameter	Units	4082971001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.4	95	75-125	

MATRIX SPIKE SAMPLE: 843851

Parameter	Units	4082971003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.4	97	75-125	

MATRIX SPIKE SAMPLE: 843853

Parameter	Units	4083031001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.015	2.5	2.4	97	75-125	

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## **QUALITY CONTROL DATA**

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: MSV/20741 Analysis Method: EPA 8260  
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level M  
Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

METHOD BLANK: 833920 Matrix: Solid

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	08/06/13 12:28	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
2,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
2-Butanone (MEK)	ug/kg	<118	250	08/06/13 12:28	
2-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
Benzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromodichloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromoform	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Carbon tetrachloride	ug/kg	<25.0	60.0	08/06/13 12:28	
Chlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroform	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Diisopropyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Ethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	08/06/13 12:28	

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

METHOD BLANK: 833920

Matrix: Solid

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	08/06/13 12:28	
m&p-Xylene	ug/kg	<50.0	120	08/06/13 12:28	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Methylene Chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Propylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Naphthalene	ug/kg	<25.0	60.0	08/06/13 12:28	
o-Xylene	ug/kg	<25.0	60.0	08/06/13 12:28	
p-Isopropyltoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
sec-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Styrene	ug/kg	<25.0	60.0	08/06/13 12:28	
tert-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Tetrachloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Toluene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichlorofluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Vinyl chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Bromofluorobenzene (S)	%	95	49-130	08/06/13 12:28	
Dibromofluoromethane (S)	%	100	57-130	08/06/13 12:28	
Toluene-d8 (S)	%	104	54-133	08/06/13 12:28	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833921

833922

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2440	2470	98	99	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2680	2930	107	117	70-130	9	20	
1,1,2-Trichloroethane	ug/kg	2500	2780	2860	111	114	70-130	3	20	
1,1-Dichloroethane	ug/kg	2500	2630	2640	105	106	70-130	0	20	
1,1-Dichloroethene	ug/kg	2500	2460	2460	98	98	64-130	0	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2400	2700	96	108	68-130	12	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2170	2540	87	102	50-150	16	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2580	2710	103	108	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	2500	2610	2630	104	105	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2320	2400	93	96	70-130	4	20	
1,2-Dichloropropane	ug/kg	2500	2870	2940	115	117	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	2500	2660	2640	106	106	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	2500	2520	2580	101	103	70-130	2	20	
Benzene	ug/kg	2500	2750	2890	110	115	70-130	5	20	
Bromodichloromethane	ug/kg	2500	2600	2590	104	103	70-130	1	20	
Bromoform	ug/kg	2500	2390	2490	95	100	63-130	4	20	
Bromomethane	ug/kg	2500	1970	2040	79	82	41-142	4	20	
Carbon tetrachloride	ug/kg	2500	2480	2550	99	102	70-130	3	20	
Chlorobenzene	ug/kg	2500	2600	2620	104	105	70-130	1	20	

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

LABORATORY CONTROL SAMPLE & LCSD:		833922								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroethane	ug/kg	2500	1670	1750	67	70	57-130	5	20	
Chloroform	ug/kg	2500	2540	2650	102	106	70-130	4	20	
Chloromethane	ug/kg	2500	1790	1840	71	73	57-130	3	20	
cis-1,2-Dichloroethene	ug/kg	2500	2760	2870	110	115	70-130	4	20	
cis-1,3-Dichloropropene	ug/kg	2500	2570	2640	103	105	70-130	2	20	
Dibromochloromethane	ug/kg	2500	2470	2510	99	100	70-130	2	20	
Dichlorodifluoromethane	ug/kg	2500	1000	1060	40	42	31-150	5	20	
Ethylbenzene	ug/kg	2500	2550	2590	102	104	65-137	2	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2580	2620	103	105	70-130	1	20	
m&p-Xylene	ug/kg	5000	5310	5480	106	110	64-139	3	20	
Methyl-tert-butyl ether	ug/kg	2500	2540	2720	101	109	69-130	7	20	
Methylene Chloride	ug/kg	2500	2650	2660	106	106	70-130	0	20	
o-Xylene	ug/kg	2500	2500	2590	100	104	63-135	4	20	
Styrene	ug/kg	2500	2650	2730	106	109	69-130	3	20	
Tetrachloroethene	ug/kg	2500	2580	2680	103	107	70-130	4	20	
Toluene	ug/kg	2500	2730	2720	109	109	70-130	0	20	
trans-1,2-Dichloroethene	ug/kg	2500	2720	2830	109	113	70-130	4	20	
trans-1,3-Dichloropropene	ug/kg	2500	2350	2460	94	98	70-130	4	20	
Trichloroethene	ug/kg	2500	2600	2560	104	103	70-130	2	20	
Trichlorofluoromethane	ug/kg	2500	1980	2100	79	84	50-150	6	20	
Vinyl chloride	ug/kg	2500	2020	2070	81	83	57-130	3	20	
4-Bromofluorobenzene (S)	%				93	93	49-130			
Dibromofluoromethane (S)	%				96	104	57-130			
Toluene-d8 (S)	%				100	102	54-133			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: OEXT/19409

QC Batch Method: EPA 3546

Associated Lab Samples: 4082165001

METHOD BLANK: 838032

Matrix: Solid

Associated Lab Samples: 4082165001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.9	16.7	08/13/13 11:18	
2-Methylnaphthalene	ug/kg	<8.3	16.7	08/13/13 11:18	
Acenaphthene	ug/kg	<8.3	16.7	08/13/13 11:18	
Acenaphthylene	ug/kg	<8.3	16.7	08/13/13 11:18	
Anthracene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(a)anthracene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(a)pyrene	ug/kg	<3.0	16.7	08/13/13 11:18	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	08/13/13 11:18	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	08/13/13 11:18	
Chrysene	ug/kg	<8.3	16.7	08/13/13 11:18	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	08/13/13 11:18	
Fluoranthene	ug/kg	<8.3	16.7	08/13/13 11:18	
Fluorene	ug/kg	<8.3	16.7	08/13/13 11:18	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	08/13/13 11:18	
Naphthalene	ug/kg	<8.3	16.7	08/13/13 11:18	
Phenanthrene	ug/kg	<8.3	16.7	08/13/13 11:18	
Pyrene	ug/kg	<8.3	16.7	08/13/13 11:18	
2-Fluorobiphenyl (S)	%	58	40-130	08/13/13 11:18	
Terphenyl-d14 (S)	%	66	40-130	08/13/13 11:18	

LABORATORY CONTROL SAMPLE: 838033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	211	63	47-130	
2-Methylnaphthalene	ug/kg	333	196	59	48-130	
Acenaphthene	ug/kg	333	210	63	55-130	
Acenaphthylene	ug/kg	333	214	64	55-130	
Anthracene	ug/kg	333	233	70	66-130	
Benzo(a)anthracene	ug/kg	333	213	64	55-130	
Benzo(a)pyrene	ug/kg	333	253	76	56-130	
Benzo(b)fluoranthene	ug/kg	333	210	63	53-130	
Benzo(g,h,i)perylene	ug/kg	333	229	69	51-130	
Benzo(k)fluoranthene	ug/kg	333	215	64	52-130	
Chrysene	ug/kg	333	238	71	58-130	
Dibenz(a,h)anthracene	ug/kg	333	216	65	55-130	
Fluoranthene	ug/kg	333	229	69	62-130	
Fluorene	ug/kg	333	217	65	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	215	64	54-130	
Naphthalene	ug/kg	333	173	52	41-130	
Phenanthrene	ug/kg	333	223	67	60-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

LABORATORY CONTROL SAMPLE: 838033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	229	69	51-130	
2-Fluorobiphenyl (S)	%			67	40-130	
Terphenyl-d14 (S)	%			71	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 838034 838035

Parameter	Units	4082556007		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Conc.	Spike Conc.	Result								
1-Methylnaphthalene	ug/kg	<3.2	366	366	111	222	30	61	42-130	66	32	M1,R1	
2-Methylnaphthalene	ug/kg	<9.2	366	366	106	214	29	58	34-130	68	35	M1,R1	
Acenaphthene	ug/kg	<9.2	366	366	111	221	30	60	31-130	66	35	M1,R1	
Acenaphthylene	ug/kg	<9.2	366	366	112	226	31	62	32-130	68	25	M1,R1	
Anthracene	ug/kg	<9.2	366	366	116	234	31	63	39-131	67	38	M1,R1	
Benz(a)anthracene	ug/kg	<9.2	366	366	114	224	30	60	29-130	65	30	R1	
Benz(a)pyrene	ug/kg	4.2J	366	366	131	237	35	63	35-130	58	33	R1	
Benz(b)fluoranthene	ug/kg	15.8J	366	366	129	241	31	62	21-142	61	44	R1	
Benz(g,h,i)perylene	ug/kg	<9.2	366	366	108	212	28	57	12-134	65	33	R1	
Benz(k)fluoranthene	ug/kg	4.4J	366	366	112	213	29	57	35-130	62	37	M1,R1	
Chrysene	ug/kg	<9.2	366	366	118	231	30	61	37-130	64	38	M1,R1	
Dibenz(a,h)anthracene	ug/kg	<9.2	366	366	112	218	30	59	23-130	65	27	R1	
Fluoranthene	ug/kg	10.8J	366	366	121	237	30	62	29-137	65	50	R1	
Fluorene	ug/kg	<9.2	366	366	111	224	30	61	32-130	68	32	M1,R1	
Indeno(1,2,3-cd)pyrene	ug/kg	<9.2	366	366	110	213	29	57	17-134	64	28	R1	
Naphthalene	ug/kg	<9.2	366	366	86.0	193	23	53	24-130	77	40	M1,R1	
Phenanthrene	ug/kg	<9.2	366	366	120	238	31	63	27-135	66	46	R1	
Pyrene	ug/kg	<9.2	366	366	121	234	31	61	24-130	63	49	R1	
2-Fluorobiphenyl (S)	%						29	55	40-130			S0	
Terphenyl-d14 (S)	%						36	66	40-130			S0	

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch:	OEXT/19410	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
Associated Lab Samples:	4082165003, 4082165004, 4082165005, 4082165006		

METHOD BLANK: 838046                                  Matrix: Solid

Associated Lab Samples: 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.9	16.7	08/13/13 13:37	
2-Methylnaphthalene	ug/kg	<8.3	16.7	08/13/13 13:37	
Acenaphthene	ug/kg	<8.3	16.7	08/13/13 13:37	
Acenaphthylene	ug/kg	<8.3	16.7	08/13/13 13:37	
Anthracene	ug/kg	<8.3	16.7	08/13/13 13:37	
Benzo(a)anthracene	ug/kg	<8.3	16.7	08/13/13 13:37	
Benzo(a)pyrene	ug/kg	<3.0	16.7	08/13/13 13:37	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	08/13/13 13:37	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	08/13/13 13:37	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	08/13/13 13:37	
Chrysene	ug/kg	<8.3	16.7	08/13/13 13:37	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	08/13/13 13:37	
Fluoranthene	ug/kg	<8.3	16.7	08/13/13 13:37	
Fluorene	ug/kg	<8.3	16.7	08/13/13 13:37	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	08/13/13 13:37	
Naphthalene	ug/kg	<8.3	16.7	08/13/13 13:37	
Phenanthrene	ug/kg	<8.3	16.7	08/13/13 13:37	
Pyrene	ug/kg	<8.3	16.7	08/13/13 13:37	
2-Fluorobiphenyl (S)	%	55	40-130	08/13/13 13:37	
Terphenyl-d14 (S)	%	71	40-130	08/13/13 13:37	

LABORATORY CONTROL SAMPLE: 838047

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	272	81	47-130	
2-Methylnaphthalene	ug/kg	333	252	76	48-130	
Acenaphthene	ug/kg	333	268	80	55-130	
Acenaphthylene	ug/kg	333	276	83	55-130	
Anthracene	ug/kg	333	285	86	66-130	
Benzo(a)anthracene	ug/kg	333	263	79	55-130	
Benzo(a)pyrene	ug/kg	333	308	92	56-130	
Benzo(b)fluoranthene	ug/kg	333	281	84	53-130	
Benzo(g,h,i)perylene	ug/kg	333	279	84	51-130	
Benzo(k)fluoranthene	ug/kg	333	260	78	52-130	
Chrysene	ug/kg	333	290	87	58-130	
Dibenz(a,h)anthracene	ug/kg	333	268	81	55-130	
Fluoranthene	ug/kg	333	277	83	62-130	
Fluorene	ug/kg	333	277	83	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	272	82	54-130	
Naphthalene	ug/kg	333	237	71	41-130	
Phenanthrene	ug/kg	333	266	80	60-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

LABORATORY CONTROL SAMPLE: 838047

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	285	86	51-130	
2-Fluorobiphenyl (S)	%			84	40-130	
Terphenyl-d14 (S)	%			100	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 838154 838155

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		4082267001	Result	Spike Conc.	MS Result						
1-Methylnaphthalene	ug/kg	64.0J	357	357	197J	262J	37	55	42-130	32	M6
2-Methylnaphthalene	ug/kg	<179	357	357	<179	224J	16	36	34-130	35	M6
Acenaphthene	ug/kg	523	357	357	279J	547	-68	7	31-130	35	M6
Acenaphthylene	ug/kg	<179	357	357	<179	222J	38	57	32-130	25	
Anthracene	ug/kg	1270	357	357	389	1040	-247	-65	39-131	91	38 M6,R1
Benz(a)anthracene	ug/kg	2820	357	357	1270	2410	-434	-114	29-130	62	30 M6,R1
Benz(a)pyrene	ug/kg	3230	357	357	1520	2950	-480	-79	35-130	64	33 M6,R1
Benz(b)fluoranthene	ug/kg	2660	357	357	1500	3070	-325	113	21-142	68	44 M6,R1
Benz(g,h,i)perylene	ug/kg	2020	357	357	1060	1940	-268	-21	12-134	59	33 M6,R1
Benz(k)fluoranthene	ug/kg	2870	357	357	1290	2110	-440	-211	35-130	48	37 M6,R1
Chrysene	ug/kg	3340	357	357	1630	3030	-479	-86	37-130	60	38 M6,R1
Dibenz(a,h)anthracene	ug/kg	547	357	357	362	633	-52	24	23-130	55	27 M6,R1
Fluoranthene	ug/kg	8440	357	357	3360	6780	-1420	-465	29-137	68	50 M6,R1
Fluorene	ug/kg	474	357	357	222J	521	-71	13	32-130	32	M6
Indeno(1,2,3-cd)pyrene	ug/kg	1720	357	357	892	1700	-232	-6	17-134	62	28 M6,R1
Naphthalene	ug/kg	209J	357	357	183J	293J	-7	24	24-130	40	M6
Phenanthrene	ug/kg	6360	357	357	2050	4600	-1210	-494	27-135	77	46 M6,R1
Pyrene	ug/kg	6440	357	357	2760	5440	-1030	-280	24-130	65	49 M6,R1
2-Fluorobiphenyl (S)	%						0	0	40-130		S4
Terphenyl-d14 (S)	%						0	0	40-130		S4

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: OEXT/19437

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3546

Analysis Description: 8270/3546 MSSV PAH by SIM

Associated Lab Samples: 4082165002

METHOD BLANK: 839285

Matrix: Solid

Associated Lab Samples: 4082165002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.9	16.7	08/15/13 10:45	
2-Methylnaphthalene	ug/kg	<8.3	16.7	08/15/13 10:45	
Acenaphthene	ug/kg	<8.3	16.7	08/15/13 10:45	
Acenaphthylene	ug/kg	<8.3	16.7	08/15/13 10:45	
Anthracene	ug/kg	<8.3	16.7	08/15/13 10:45	
Benzo(a)anthracene	ug/kg	<8.3	16.7	08/15/13 10:45	
Benzo(a)pyrene	ug/kg	<3.0	16.7	08/15/13 10:45	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	08/15/13 10:45	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	08/15/13 10:45	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	08/15/13 10:45	
Chrysene	ug/kg	<8.3	16.7	08/15/13 10:45	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	08/15/13 10:45	
Fluoranthene	ug/kg	<8.3	16.7	08/15/13 10:45	
Fluorene	ug/kg	<8.3	16.7	08/15/13 10:45	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	08/15/13 10:45	
Naphthalene	ug/kg	<8.3	16.7	08/15/13 10:45	
Phenanthrene	ug/kg	<8.3	16.7	08/15/13 10:45	
Pyrene	ug/kg	<8.3	16.7	08/15/13 10:45	
2-Fluorobiphenyl (S)	%	63	40-130	08/15/13 10:45	
Terphenyl-d14 (S)	%	73	40-130	08/15/13 10:45	

LABORATORY CONTROL SAMPLE: 839286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	197	59	47-130	
2-Methylnaphthalene	ug/kg	333	187	56	48-130	
Acenaphthene	ug/kg	333	222	67	55-130	
Acenaphthylene	ug/kg	333	222	67	55-130	
Anthracene	ug/kg	333	247	74	66-130	
Benzo(a)anthracene	ug/kg	333	234	70	55-130	
Benzo(a)pyrene	ug/kg	333	258	77	56-130	
Benzo(b)fluoranthene	ug/kg	333	242	72	53-130	
Benzo(g,h,i)perylene	ug/kg	333	250	75	51-130	
Benzo(k)fluoranthene	ug/kg	333	236	71	52-130	
Chrysene	ug/kg	333	262	79	58-130	
Dibenz(a,h)anthracene	ug/kg	333	246	74	55-130	
Fluoranthene	ug/kg	333	250	75	62-130	
Fluorene	ug/kg	333	233	70	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	242	73	54-130	
Naphthalene	ug/kg	333	147	44	41-130	
Phenanthrene	ug/kg	333	246	74	60-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

LABORATORY CONTROL SAMPLE: 839286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	255	76	51-130	
2-Fluorobiphenyl (S)	%			67	40-130	
Terphenyl-d14 (S)	%			71	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 839287 839288

Parameter	Units	4082807003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<3.5	401	401	292	259	73	65	42-130	12	32	
2-Methylnaphthalene	ug/kg	<10.0	401	401	274	237	68	58	34-130	15	35	
Acenaphthene	ug/kg	<10.0	401	401	303	253	76	63	31-130	18	35	
Acenaphthylene	ug/kg	<10.0	401	401	310	253	77	63	32-130	20	25	
Anthracene	ug/kg	<10.0	401	401	321	268	80	67	39-131	18	38	
Benz(a)anthracene	ug/kg	18.9J	401	401	306	252	71	58	29-130	19	30	
Benz(a)pyrene	ug/kg	32.3	401	401	319	279	71	62	35-130	13	33	
Benz(b)fluoranthene	ug/kg	38.6	401	401	311	245	68	51	21-142	24	44	
Benz(g,h,i)perylene	ug/kg	17.5J	401	401	216	167	49	37	12-134	26	33	
Benz(k)fluoranthene	ug/kg	32.9	401	401	318	278	71	61	35-130	13	37	
Chrysene	ug/kg	34.0	401	401	332	275	74	60	37-130	19	38	
Dibenz(a,h)anthracene	ug/kg	<10.0	401	401	271	210	66	51	23-130	25	27	
Fluoranthene	ug/kg	40.1	401	401	323	266	70	56	29-137	19	50	
Fluorene	ug/kg	<10.0	401	401	317	260	79	65	32-130	20	32	
Indeno(1,2,3-cd)pyrene	ug/kg	15.8J	401	401	253	197	59	45	17-134	25	28	
Naphthalene	ug/kg	<10.0	401	401	230	205	57	51	24-130	12	40	
Phenanthrene	ug/kg	14.3J	401	401	319	257	76	61	27-135	21	46	
Pyrene	ug/kg	37.7	401	401	336	285	74	62	24-130	16	49	
2-Fluorobiphenyl (S)	%						73	56	40-130			
Terphenyl-d14 (S)	%						87	67	40-130			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: OEXT/19293 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

METHOD BLANK: 833322 Matrix: Solid

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	08/09/13 09:38	

LABORATORY CONTROL SAMPLE & LCSD: 833323 833324

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	33.0	35.5	82	89	70-120	7	20	

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## QUALITY CONTROL DATA

Project: 6019-17-00 WINNECONNE

Pace Project No.: 4082165

QC Batch: PMST/8742 Analysis Method: ASTM D2974-87

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

Associated Lab Samples: 4082165001, 4082165002, 4082165003, 4082165004, 4082165005, 4082165006

SAMPLE DUPLICATE: 835208

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4081934020	14.0	14.1	1	10

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## QUALIFIERS

Project: 6019-17-00 WINNECONNE  
 Pace Project No.: 4082165

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.  
 ND - Not Detected at or above adjusted reporting limit.  
 J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
 MDL - Adjusted Method Detection Limit.  
 PRL - Pace Reporting Limit.  
 RL - Reporting Limit.  
 S - Surrogate  
 1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.  
 Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
 LCS(D) - Laboratory Control Sample (Duplicate)  
 MS(D) - Matrix Spike (Duplicate)  
 DUP - Sample Duplicate  
 RPD - Relative Percent Difference  
 NC - Not Calculable.  
 SG - Silica Gel - Clean-Up  
 U - Indicates the compound was analyzed for, but not detected.  
 N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
 Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
 TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### BATCH QUALIFIERS

Batch: MSV/20744  
 [M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.  
 Batch: MSSV/5900  
 [IP] Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

### ANALYTE QUALIFIERS

- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- R1 RPD value was outside control limits.
- S0 Surrogate recovery outside laboratory control limits.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.
- T4 Result reported for hydrocarbons within the method-specific range that do not match pattern of laboratory standard.
- W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 6019-17-00 WINNECONNE  
Pace Project No.: 4082165

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082165001	B-8-1 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082165002	B-8-1 (8-10)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082165003	B-8-2 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082165004	B-8-2 (10-12)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082165005	B-8-3 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082165006	B-8-3 (10-12)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082165001	B-8-1 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082165002	B-8-1 (8-10)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082165003	B-8-2 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082165004	B-8-2 (10-12)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082165005	B-8-3 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082165006	B-8-3 (10-12)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082165001	B-8-1 (2-4)	EPA 3050	MPRP/8968	EPA 6010	ICP/7929
4082165002	B-8-1 (8-10)	EPA 3050	MPRP/8968	EPA 6010	ICP/7929
4082165003	B-8-2 (2-4)	EPA 3050	MPRP/8968	EPA 6010	ICP/7929
4082165004	B-8-2 (10-12)	EPA 3050	MPRP/8968	EPA 6010	ICP/7929
4082165005	B-8-3 (2-4)	EPA 3050	MPRP/8968	EPA 6010	ICP/7929
4082165006	B-8-3 (10-12)	EPA 3050	MPRP/8968	EPA 6010	ICP/7929
4082165002	B-8-1 (8-10)	EPA 3010	MPRP/9009	EPA 6010	ICP/7969
4082165001	B-8-1 (2-4)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082165002	B-8-1 (8-10)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082165003	B-8-2 (2-4)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082165004	B-8-2 (10-12)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082165005	B-8-3 (2-4)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082165006	B-8-3 (10-12)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082165001	B-8-1 (2-4)	EPA 3546	OEXT/19409	EPA 8270 by SIM	MSSV/5887
4082165002	B-8-1 (8-10)	EPA 3546	OEXT/19437	EPA 8270 by SIM	MSSV/5900
4082165003	B-8-2 (2-4)	EPA 3546	OEXT/19410	EPA 8270 by SIM	MSSV/5889
4082165004	B-8-2 (10-12)	EPA 3546	OEXT/19410	EPA 8270 by SIM	MSSV/5889
4082165005	B-8-3 (2-4)	EPA 3546	OEXT/19410	EPA 8270 by SIM	MSSV/5889
4082165006	B-8-3 (10-12)	EPA 3546	OEXT/19410	EPA 8270 by SIM	MSSV/5889
4082165001	B-8-1 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082165002	B-8-1 (8-10)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082165003	B-8-2 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082165004	B-8-2 (10-12)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082165005	B-8-3 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082165006	B-8-3 (10-12)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082165001	B-8-1 (2-4)	ASTM D2974-87	PMST/8742		
4082165002	B-8-1 (8-10)	ASTM D2974-87	PMST/8742		
4082165003	B-8-2 (2-4)	ASTM D2974-87	PMST/8742		
4082165004	B-8-2 (10-12)	ASTM D2974-87	PMST/8742		
4082165005	B-8-3 (2-4)	ASTM D2974-87	PMST/8742		
4082165006	B-8-3 (10-12)	ASTM D2974-87	PMST/8742		

**REPORT OF LABORATORY ANALYSIS**

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## Sample Condition Upon Receipt

Client Name: Himalayan Project # 4082165

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace  
Tracking #: \_\_\_\_\_

Project # 4082165  
Other CS Logistic

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: 72.0 /Corr:

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 8/2/13

Initials: MLV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5. Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. 001 2-4oz ag4 ID read "B-5-1 (2-4)"
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. 002 2-4oz Ag4 ID's read "B-5-1(8-10)" Matched by time + packaging. 004 liquid Matched by packaging. No ID/date/time
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed Lab Std #/ID of preservative Date/ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

If checked, see attached form for additional comments

### Client Notification/ Resolution:

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

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

Project Manager Review: Cef A Dm

Date: 8/2/13

## **GROUNDWATER ANALYTICAL**

August 13, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082164001	MW-8-1	Water	07/31/13 11:00	08/02/13 09:45
4082164002	MW-8-2	Water	07/31/13 10:50	08/02/13 09:45
4082164003	MW-8-3	Water	07/31/13 11:10	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6109-17-00 WINNECONNE  
 Pace Project No.: 4082164

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082164001	MW-8-1	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
4082164002	MW-8-2	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
4082164003	MW-8-3	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Sample: MW-8-1	Lab ID: 4082164001	Collected: 07/31/13 11:00	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	<4.2 ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:03	7440-38-2	
Barium, Dissolved	207 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:03	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:03	7440-43-9	
Chromium, Dissolved	1.9J ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:03	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:03	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:03	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:03	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:17	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/06/13 18:57	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/06/13 18:57	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/06/13 18:57	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/06/13 18:57	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/06/13 18:57	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/06/13 18:57	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/06/13 18:57	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/06/13 18:57	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/06/13 18:57	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/06/13 18:57	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/06/13 18:57	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/06/13 18:57	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 18:57	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/06/13 18:57	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/06/13 18:57	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 18:57	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 18:57	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/06/13 18:57	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/06/13 18:57	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/06/13 18:57	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/06/13 18:57	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/06/13 18:57	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/06/13 18:57	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/06/13 18:57	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/06/13 18:57	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/06/13 18:57	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/06/13 18:57	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 18:57	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/06/13 18:57	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/06/13 18:57	156-60-5	L3
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/06/13 18:57	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/06/13 18:57	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/06/13 18:57	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/06/13 18:57	563-58-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Sample: MW-8-1	Lab ID: 4082164001	Collected: 07/31/13 11:00	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/06/13 18:57	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/06/13 18:57	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/06/13 18:57	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 18:57	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/06/13 18:57	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/06/13 18:57	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/06/13 18:57	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/06/13 18:57	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/06/13 18:57	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/06/13 18:57	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 18:57	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/06/13 18:57	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/06/13 18:57	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/06/13 18:57	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/06/13 18:57	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/06/13 18:57	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/06/13 18:57	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 18:57	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 18:57	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/06/13 18:57	79-00-5	
Trichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 18:57	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/06/13 18:57	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/06/13 18:57	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/06/13 18:57	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 18:57	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/06/13 18:57	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/06/13 18:57	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/06/13 18:57	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93 %		43-137		1		08/06/13 18:57	460-00-4	
Dibromofluoromethane (S)	88 %		70-130		1		08/06/13 18:57	1868-53-7	
Toluene-d8 (S)	101 %		55-137		1		08/06/13 18:57	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Sample: MW-8-2	Lab ID: 4082164002	Collected: 07/31/13 10:50	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	<4.2 ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:05	7440-38-2	
Barium, Dissolved	189 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:05	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:05	7440-43-9	
Chromium, Dissolved	<1.4 ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:05	7440-47-3	
Lead, Dissolved	4.3J ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:05	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:05	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:05	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:20	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:20	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/06/13 19:20	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/06/13 19:20	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/06/13 19:20	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/06/13 19:20	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/06/13 19:20	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/06/13 19:20	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/06/13 19:20	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/06/13 19:20	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/06/13 19:20	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/06/13 19:20	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/06/13 19:20	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 19:20	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/06/13 19:20	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/06/13 19:20	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 19:20	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 19:20	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/06/13 19:20	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/06/13 19:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/06/13 19:20	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/06/13 19:20	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/06/13 19:20	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/06/13 19:20	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/06/13 19:20	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/06/13 19:20	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/06/13 19:20	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/06/13 19:20	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 19:20	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/06/13 19:20	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/06/13 19:20	156-60-5	L3
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/06/13 19:20	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/06/13 19:20	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/06/13 19:20	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/06/13 19:20	563-58-6	

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## ANALYTICAL RESULTS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Sample: MW-8-2	Lab ID: 4082164002	Collected: 07/31/13 10:50	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/06/13 19:20	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/06/13 19:20	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/06/13 19:20	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:20	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/06/13 19:20	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/06/13 19:20	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/06/13 19:20	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/06/13 19:20	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/06/13 19:20	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/06/13 19:20	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:20	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/06/13 19:20	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/06/13 19:20	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/06/13 19:20	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/06/13 19:20	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/06/13 19:20	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/06/13 19:20	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 19:20	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 19:20	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/06/13 19:20	79-00-5	
Trichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 19:20	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/06/13 19:20	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/06/13 19:20	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/06/13 19:20	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 19:20	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/06/13 19:20	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/06/13 19:20	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:20	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94 %		43-137		1		08/06/13 19:20	460-00-4	
Dibromofluoromethane (S)	93 %		70-130		1		08/06/13 19:20	1868-53-7	
Toluene-d8 (S)	100 %		55-137		1		08/06/13 19:20	2037-26-5	

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## ANALYTICAL RESULTS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Sample: MW-8-3	Lab ID: 4082164003	Collected: 07/31/13 11:10	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	7.6J ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:07	7440-38-2	
Barium, Dissolved	110 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:07	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:07	7440-43-9	
Chromium, Dissolved	<1.4 ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:07	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:07	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:07	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:07	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:22	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:43	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/06/13 19:43	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/06/13 19:43	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/06/13 19:43	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/06/13 19:43	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/06/13 19:43	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/06/13 19:43	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/06/13 19:43	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/06/13 19:43	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/06/13 19:43	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/06/13 19:43	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/06/13 19:43	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 19:43	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/06/13 19:43	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/06/13 19:43	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 19:43	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 19:43	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/06/13 19:43	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/06/13 19:43	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/06/13 19:43	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/06/13 19:43	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/06/13 19:43	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/06/13 19:43	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/06/13 19:43	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/06/13 19:43	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/06/13 19:43	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/06/13 19:43	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 19:43	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/06/13 19:43	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/06/13 19:43	156-60-5	L3
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/06/13 19:43	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/06/13 19:43	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/06/13 19:43	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/06/13 19:43	563-58-6	

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## ANALYTICAL RESULTS

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Sample: MW-8-3	Lab ID: 4082164003	Collected: 07/31/13 11:10	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/06/13 19:43	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/06/13 19:43	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/06/13 19:43	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:43	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/06/13 19:43	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/06/13 19:43	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/06/13 19:43	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/06/13 19:43	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/06/13 19:43	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/06/13 19:43	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:43	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/06/13 19:43	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/06/13 19:43	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/06/13 19:43	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/06/13 19:43	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/06/13 19:43	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/06/13 19:43	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 19:43	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 19:43	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/06/13 19:43	79-00-5	
Trichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 19:43	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/06/13 19:43	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/06/13 19:43	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/06/13 19:43	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 19:43	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/06/13 19:43	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/06/13 19:43	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/06/13 19:43	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93 %		43-137		1		08/06/13 19:43	460-00-4	
Dibromofluoromethane (S)	93 %		70-130		1		08/06/13 19:43	1868-53-7	
Toluene-d8 (S)	99 %		55-137		1		08/06/13 19:43	2037-26-5	

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## QUALITY CONTROL DATA

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

QC Batch: MERP/3796 Analysis Method: EPA 7470

QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved

Associated Lab Samples: 4082164001, 4082164002, 4082164003

METHOD BLANK: 836072 Matrix: Water

Associated Lab Samples: 4082164001, 4082164002, 4082164003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.10	0.20	08/09/13 11:59	

LABORATORY CONTROL SAMPLE: 836073

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	104	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 836074 836075

Parameter	Units	4082163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.10	5	5	5.2	5.3	102	106	85-115	3	20	

## REPORT OF LABORATORY ANALYSIS

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

## **QUALITY CONTROL DATA**

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

QC Batch: MPRP/8911 Analysis Method: EPA 6010  
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
Associated Lab Samples: 4082164001, 4082164002, 4082164003

METHOD BLANK: 833607 Matrix: Water

Associated Lab Samples: 4082164001, 4082164002, 4082164003

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Arsenic, Dissolved	ug/L	<4.2	20.0	08/06/13 11:44	
Barium, Dissolved	ug/L	<1.1	5.0	08/06/13 11:44	
Cadmium, Dissolved	ug/L	<0.48	5.0	08/06/13 11:44	
Chromium, Dissolved	ug/L	<1.4	5.0	08/06/13 11:44	
Lead, Dissolved	ug/L	<2.7	7.5	08/06/13 11:44	
Selenium, Dissolved	ug/L	<5.2	20.0	08/06/13 11:44	
Silver, Dissolved	ug/L	<1.7	10.0	08/06/13 11:44	

LABORATORY CONTROL SAMPLE: 833608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	483	97	80-120	
Barium, Dissolved	ug/L	500	490	98	80-120	
Cadmium, Dissolved	ug/L	500	479	96	80-120	
Chromium, Dissolved	ug/L	500	495	99	80-120	
Lead, Dissolved	ug/L	500	490	98	80-120	
Selenium, Dissolved	ug/L	500	492	98	80-120	
Silver, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 833609 833610

Parameter	4082163001		MS		MSD		% Rec	MSD % Rec	% Rec Limits	Max RPD		Qual
	Units	Result	Spike Conc.	Spike Conc.	MS Result	MSD Result				RPD	RPD	
Arsenic, Dissolved	ug/L	<4.2	500	500	498	511	99	101	75-125	2	20	
Barium, Dissolved	ug/L	161	500	500	643	654	96	99	75-125	2	20	
Cadmium, Dissolved	ug/L	<0.48	500	500	492	501	98	100	75-125	2	20	
Chromium, Dissolved	ug/L	<1.4	500	500	495	503	99	100	75-125	1	20	
Lead, Dissolved	ug/L	3.2J	500	500	493	497	98	99	75-125	1	20	
Selenium, Dissolved	ug/L	<5.2	500	500	513	526	103	105	75-125	3	20	
Silver, Dissolved	ug/L	<1.7	250	250	256	260	102	104	75-125	2	20	

## **REPORT OF LABORATORY ANALYSIS**

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## **QUALITY CONTROL DATA**

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

QC Batch: MSV/20740 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 4082164001, 4082164002, 4082164003

METHOD BLANK: 833828 Matrix: Water

Associated Lab Samples: 4082164001, 4082164002, 4082164003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/06/13 14:00	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/06/13 14:00	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/06/13 14:00	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/06/13 14:00	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/06/13 14:00	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/06/13 14:00	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/06/13 14:00	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/06/13 14:00	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/06/13 14:00	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/06/13 14:00	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/06/13 14:00	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/06/13 14:00	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/06/13 14:00	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/06/13 14:00	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/06/13 14:00	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/06/13 14:00	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/06/13 14:00	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/06/13 14:00	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/06/13 14:00	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/06/13 14:00	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/06/13 14:00	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/06/13 14:00	
2-Chlorotoluene	ug/L	<0.48	1.0	08/06/13 14:00	
4-Chlorotoluene	ug/L	<0.48	1.0	08/06/13 14:00	
Benzene	ug/L	<0.50	1.0	08/06/13 14:00	
Bromobenzene	ug/L	<0.48	1.0	08/06/13 14:00	
Bromochloromethane	ug/L	<0.49	1.0	08/06/13 14:00	
Bromodichloromethane	ug/L	<0.45	1.0	08/06/13 14:00	
Bromoform	ug/L	<0.23	1.0	08/06/13 14:00	
Bromomethane	ug/L	<0.43	5.0	08/06/13 14:00	
Carbon tetrachloride	ug/L	<0.37	1.0	08/06/13 14:00	
Chlorobenzene	ug/L	<0.36	1.0	08/06/13 14:00	
Chloroethane	ug/L	<0.44	1.0	08/06/13 14:00	
Chloroform	ug/L	<0.69	5.0	08/06/13 14:00	
Chloromethane	ug/L	<0.39	1.0	08/06/13 14:00	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/06/13 14:00	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/06/13 14:00	
Dibromochloromethane	ug/L	<1.9	5.0	08/06/13 14:00	
Dibromomethane	ug/L	<0.48	1.0	08/06/13 14:00	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/06/13 14:00	
Diisopropyl ether	ug/L	<0.50	1.0	08/06/13 14:00	
Ethylbenzene	ug/L	<0.50	1.0	08/06/13 14:00	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/06/13 14:00	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

METHOD BLANK: 833828

Matrix: Water

Associated Lab Samples: 4082164001, 4082164002, 4082164003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/06/13 14:00	
m&p-Xylene	ug/L	<0.82	2.0	08/06/13 14:00	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/06/13 14:00	
Methylene Chloride	ug/L	<0.36	1.0	08/06/13 14:00	
n-Butylbenzene	ug/L	<0.40	1.0	08/06/13 14:00	
n-Propylbenzene	ug/L	<0.50	1.0	08/06/13 14:00	
Naphthalene	ug/L	<2.5	5.0	08/06/13 14:00	
o-Xylene	ug/L	<0.50	1.0	08/06/13 14:00	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/06/13 14:00	
sec-Butylbenzene	ug/L	<0.60	5.0	08/06/13 14:00	
Styrene	ug/L	<0.35	1.0	08/06/13 14:00	
tert-Butylbenzene	ug/L	<0.42	1.0	08/06/13 14:00	
Tetrachloroethene	ug/L	<0.47	1.0	08/06/13 14:00	
Toluene	ug/L	<0.44	1.0	08/06/13 14:00	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/06/13 14:00	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/06/13 14:00	
Trichloroethene	ug/L	<0.43	1.0	08/06/13 14:00	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/06/13 14:00	
Vinyl chloride	ug/L	<0.18	1.0	08/06/13 14:00	
4-Bromofluorobenzene (S)	%	93	43-137	08/06/13 14:00	
Dibromofluoromethane (S)	%	90	70-130	08/06/13 14:00	
Toluene-d8 (S)	%	100	55-137	08/06/13 14:00	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833829

833830

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	20.7	105	104	70-136	2	20	
1,1,2,2-Tetrachloroethane	ug/L	20	19.6	19.0	98	95	70-130	3	20	
1,1,2-Trichloroethane	ug/L	20	20.9	20.3	104	102	70-130	3	20	
1,1-Dichloroethane	ug/L	20	21.6	21.2	108	106	70-146	2	20	
1,1-Dichloroethene	ug/L	20	22.0	21.2	110	106	70-130	4	20	
1,2,4-Trichlorobenzene	ug/L	20	23.3	23.5	116	117	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	20	16.4	16.2	82	81	46-150	1	20	
1,2-Dibromoethane (EDB)	ug/L	20	20.3	19.6	102	98	70-130	4	20	
1,2-Dichlorobenzene	ug/L	20	22.1	21.7	110	109	70-130	2	20	
1,2-Dichloroethane	ug/L	20	20.9	19.2	105	96	70-144	9	20	
1,2-Dichloropropane	ug/L	20	22.4	21.2	112	106	70-136	5	20	
1,3-Dichlorobenzene	ug/L	20	22.0	21.9	110	110	70-130	0	20	
1,4-Dichlorobenzene	ug/L	20	21.9	22.4	109	112	70-130	2	20	
Benzene	ug/L	20	21.8	21.3	109	106	70-137	2	20	
Bromodichloromethane	ug/L	20	19.7	19.0	99	95	70-133	4	20	
Bromoform	ug/L	20	20.2	19.0	101	95	59-130	6	20	
Bromomethane	ug/L	20	15.9	17.7	80	89	41-148	10	20	
Carbon tetrachloride	ug/L	20	21.3	20.6	106	103	70-154	3	20	
Chlorobenzene	ug/L	20	22.5	22.0	113	110	70-130	2	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits		RPD	
Chloroethane	ug/L	20	23.2	23.0	116	115	70-139	1	20	
Chloroform	ug/L	20	20.8	19.9	104	100	70-130	4	20	
Chloromethane	ug/L	20	19.4	19.2	97	96	45-154	1	20	
cis-1,2-Dichloroethene	ug/L	20	20.4	19.5	102	97	70-130	5	20	
cis-1,3-Dichloropropene	ug/L	20	19.6	18.8	98	94	70-136	4	20	
Dibromochloromethane	ug/L	20	19.9	19.3	99	97	70-130	3	20	
Dichlorodifluoromethane	ug/L	20	20.0	19.4	100	97	20-157	3	20	
Ethylbenzene	ug/L	20	23.1	22.6	116	113	70-130	2	20	
Isopropylbenzene (Cumene)	ug/L	20	24.8	24.1	124	120	70-130	3	20	
m&p-Xylene	ug/L	40	46.5	44.7	116	112	70-130	4	20	
Methyl-tert-butyl ether	ug/L	20	21.4	19.2	107	96	59-141	11	20	
Methylene Chloride	ug/L	20	22.1	21.8	110	109	70-130	1	20	
o-Xylene	ug/L	20	23.2	22.8	116	114	70-130	2	20	
Styrene	ug/L	20	22.0	21.5	110	108	70-130	2	20	
Tetrachloroethene	ug/L	20	22.8	21.8	114	109	70-130	4	20	
Toluene	ug/L	20	22.4	21.6	112	108	70-130	3	20	
trans-1,2-Dichloroethene	ug/L	20	27.4	24.4	137	122	70-130	12	20 L0	
trans-1,3-Dichloropropene	ug/L	20	18.8	18.2	94	91	55-135	3	20	
Trichloroethene	ug/L	20	23.0	21.7	115	109	70-130	6	20	
Trichlorofluoromethane	ug/L	20	23.4	22.6	117	113	50-150	3	20	
Vinyl chloride	ug/L	20	20.9	20.6	105	103	61-143	1	20	
4-Bromofluorobenzene (S)	%				102	101	43-137			
Dibromofluoromethane (S)	%					98	95	70-130		
Toluene-d8 (S)	%					101	99	55-137		

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## QUALIFIERS

Project: 6109-17-00 WINNECONNE

Pace Project No.: 4082164

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

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

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6109-17-00 WINNECONNE  
Pace Project No.: 4082164

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082164001	MW-8-1	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082164002	MW-8-2	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082164003	MW-8-3	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082164001	MW-8-1	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082164002	MW-8-2	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082164003	MW-8-3	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082164001	MW-8-1	EPA 8260	MSV/20740		
4082164002	MW-8-2	EPA 8260	MSV/20740		
4082164003	MW-8-3	EPA 8260	MSV/20740		

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## Sample Condition Upon Receipt

Client Name: Himalayan

Project # 4082164

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Other CS Logistic

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: 20 / Corr:

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:  
Date: 8-2-13  
Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12) exceptions: VOA, Coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed <u>MV</u> Lab Std #/ID of preservative Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. <u>Added to COC by lab</u> <u>8/2/13 MV</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>299</u>		

If checked, see attached form for additional comments

### Client Notification/ Resolution:

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

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

Project Manager Review: \_\_\_\_\_

MAT fm DM

Date: 8-2-13

## **WASTE CHARACTERIZATION ANALYTICAL**

August 19, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082160

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### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
 A2LA Certification #: 2926.01  
 Alaska Certification #: UST-078  
 Alaska Certification #MN00064  
 Arizona Certification #: AZ-0014  
 Arkansas Certification #: 88-0680  
 California Certification #: 01155CA  
 Colorado Certification #Pace  
 Connecticut Certification #: PH-0256  
 EPA Region 8 Certification #: Pace  
 Florida/NELAP Certification #: E87605  
 Georgia Certification #: 959  
 Hawaii Certification #Pace  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Kansas Certification #: E-10167  
 Louisiana Certification #: 03086  
 Louisiana Certification #: LA080009  
 Maine Certification #: 2007029  
 Maryland Certification #: 322  
 Michigan DEQ Certification #: 9909  
 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
 Montana Certification #: MT CERT0092  
 Nebraska Certification #: Pace  
 Nevada Certification #: MN\_00064  
 New Jersey Certification #: MN-002  
 New York Certification #: 11647  
 North Carolina Certification #: 530  
 North Dakota Certification #: R-036  
 Ohio VAP Certification #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Certification #: MN200001  
 Oregon Certification #: MN300001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification  
 Tennessee Certification #: 02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Virginia/DCLS Certification #: 002521  
 Virginia/VELAP Certification #: 460163  
 Washington Certification #: C754  
 West Virginia Certification #: 382  
 Wisconsin Certification #: 999407970

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
 Florida/NELAP Certification #: E87948  
 Illinois Certification #: 200050  
 Kentucky Certification #: 82  
 Louisiana Certification #: 04168  
 Minnesota Certification #: 055-999-334

New York Certification #: 11888  
 North Dakota Certification #: R-150  
 South Carolina Certification #: 83006001  
 US Dept of Agriculture #: S-76505  
 Wisconsin Certification #: 405132750

### Kansas Certification IDs

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

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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082160001	PROT B-8	Solid	07/31/13 10:45	08/02/13 09:45

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082160

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082160001	PROT B-8	EPA 8082	BLM	10	PASI-G
		EPA 6010	DLB	10	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8270	RJN	16	PASI-G
		EPA 8260	HNW	13	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		SW-846 7.3.4.2	AJM	1	PASI-K
		EPA 9040	KMS	1	PASI-G
		EPA 9095	HKV	1	PASI-G
		SM 2710F	HKV	1	PASI-G
		EPA 420.1	KEO	1	PASI-M
		SW-846 7.3.3.2	AJM	1	PASI-K

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

Sample: PROT B-8 Lab ID: 4082160001 Collected: 07/31/13 10:45 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB</b>	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	12674-11-2	
PCB-1221 (Aroclor 1221)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	11104-28-2	
PCB-1232 (Aroclor 1232)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	11141-16-5	
PCB-1242 (Aroclor 1242)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	53469-21-9	
PCB-1248 (Aroclor 1248)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	12672-29-6	
PCB-1254 (Aroclor 1254)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	11097-69-1	
PCB-1260 (Aroclor 1260)	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	11096-82-5	
PCB, Total	<37.0 ug/kg		74.0	37.0	1	08/05/13 12:00	08/05/13 23:35	1336-36-3	
<b>Surrogates</b>									
Tetrachloro-m-xylene (S)	81 %		40-130		1	08/05/13 12:00	08/05/13 23:35	877-09-8	
Decachlorobiphenyl (S)	84 %		48-130		1	08/05/13 12:00	08/05/13 23:35	2051-24-3	
<b>6010 MET ICP, TCLP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
Arsenic	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7440-38-2	
Barium	<1.2 mg/L		2.5	1.2	1	08/07/13 10:45	08/07/13 16:48	7440-39-3	
Cadmium	<0.0025 mg/L		0.0050	0.0025	1	08/07/13 10:45	08/07/13 16:48	7440-43-9	
Chromium	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7440-47-3	
Copper	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7440-50-8	
Lead	0.040 mg/L		0.038	0.015	1	08/07/13 10:45	08/07/13 16:48	7439-92-1	
Nickel	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7440-02-0	
Selenium	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7782-49-2	
Silver	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7440-22-4	
Zinc	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:48	7440-66-6	
<b>7470 Mercury, TCLP</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
Mercury	0.26 ug/L		0.20	0.10	1	08/12/13 11:15	08/12/13 15:04	7439-97-6	
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
1,4-Dichlorobenzene	<8.6 ug/L		50.0	8.6	1	08/12/13 12:00	08/15/13 23:37	106-46-7	
2,4-Dinitrotoluene	<8.0 ug/L		50.0	8.0	1	08/12/13 12:00	08/15/13 23:37	121-14-2	
Hexachloro-1,3-butadiene	<6.6 ug/L		100	6.6	1	08/12/13 12:00	08/15/13 23:37	87-68-3	
Hexachlorobenzene	<11.1 ug/L		50.0	11.1	1	08/12/13 12:00	08/15/13 23:37	118-74-1	
Hexachloroethane	<5.8 ug/L		50.0	5.8	1	08/12/13 12:00	08/15/13 23:37	67-72-1	
2-Methylphenol(o-Cresol)	<9.7 ug/L		50.0	9.7	1	08/12/13 12:00	08/15/13 23:37	95-48-7	
3&4-Methylphenol(m&p Cresol)	<7.7 ug/L		50.0	7.7	1	08/12/13 12:00	08/15/13 23:37		
Nitrobenzene	<13.7 ug/L		50.0	13.7	1	08/12/13 12:00	08/15/13 23:37	98-95-3	
Pentachlorophenol	<10.8 ug/L		100	10.8	1	08/12/13 12:00	08/15/13 23:37	87-86-5	
Pyridine	<14.3 ug/L		50.0	14.3	1	08/12/13 12:00	08/15/13 23:37	110-86-1	
2,4,5-Trichlorophenol	<10 ug/L		50.0	10	1	08/12/13 12:00	08/15/13 23:37	95-95-4	
2,4,6-Trichlorophenol	<10.7 ug/L		50.0	10.7	1	08/12/13 12:00	08/15/13 23:37	88-06-2	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

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**Sample: PROT B-8**      **Lab ID: 4082160001**      Collected: 07/31/13 10:45      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	90 %	59-130		1	08/12/13 12:00	08/15/13 23:37	4165-60-0		
2-Fluorobiphenyl (S)	94 %	60-130		1	08/12/13 12:00	08/15/13 23:37	321-60-8		
Phenol-d6 (S)	33 %	19-130		1	08/12/13 12:00	08/15/13 23:37	13127-88-3		
2,4,6-Tribromophenol (S)	91 %	34-143		1	08/12/13 12:00	08/15/13 23:37	118-79-6		
<b>8260 MSV TCLP</b>	Analytical Method: EPA 8260 Preparation Method: EPA 1311								
Benzene	<5.0 ug/L	10.0	5.0	10	08/06/13 00:00	08/09/13 12:00	71-43-2		
2-Butanone (MEK)	<27.0 ug/L	200	27.0	10	08/06/13 00:00	08/09/13 12:00	78-93-3		
Carbon tetrachloride	<3.7 ug/L	10.0	3.7	10	08/06/13 00:00	08/09/13 12:00	56-23-5		
Chlorobenzene	<3.6 ug/L	10.0	3.6	10	08/06/13 00:00	08/09/13 12:00	108-90-7		
Chloroform	<6.9 ug/L	50.0	6.9	10	08/06/13 00:00	08/09/13 12:00	67-66-3		
1,2-Dichloroethane	<4.8 ug/L	10.0	4.8	10	08/06/13 00:00	08/09/13 12:00	107-06-2		
1,1-Dichloroethene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 12:00	75-35-4		
Tetrachloroethylene	<4.7 ug/L	10.0	4.7	10	08/06/13 00:00	08/09/13 12:00	127-18-4		
Trichloroethylene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 12:00	79-01-6		
Vinyl chloride	<1.8 ug/L	10.0	1.8	10	08/06/13 00:00	08/09/13 12:00	75-01-4		
<b>Surrogates</b>									
Toluene-d8 (S)	101 %	55-137		10	08/06/13 00:00	08/09/13 12:00	2037-26-5		
4-Bromofluorobenzene (S)	95 %	43-137		10	08/06/13 00:00	08/09/13 12:00	460-00-4		
Dibromofluoromethane (S)	97 %	70-130		10	08/06/13 00:00	08/09/13 12:00	1868-53-7		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	32.4 %	0.10	0.10	1			08/13/13 13:24		
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F			1			08/07/13 15:58		
<b>Reactive Sulfide</b>	Analytical Method: SW-846 7.3.4.2								
Sulfide, Reactive	0.0J mg/kg	100		1			08/12/13 09:00		
<b>9040 pH</b>	Analytical Method: EPA 9040								
pH	7.9 Std. Units	0.10	0.010	1			08/14/13 23:00		1q,H6
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	FAIL no units			1			08/06/13 09:56		
<b>Specific Gravity</b>	Analytical Method: SM 2710F								
Specific Gravity	1.5 no units			1			08/06/13 10:51		
<b>Phenolics, Total Recoverable</b>	Analytical Method: EPA 420.1								
Phenolics, Total Recoverable	<15.0 ug/L	50.0	15.0	1			08/15/13 15:30		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

Sample: PROT B-8 Lab ID: 4082160001 Collected: 07/31/13 10:45 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>733C S Reactive Cyanide</b>	Analytical Method: SW-846 7.3.3.2								
Cyanide, Reactive	<b>0.0080J</b> mg/kg	0.025		1			08/12/13 09:11		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	MERP/3798	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury TCLP
Associated Lab Samples:	4082160001		

METHOD BLANK: 837733	Matrix: Water
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Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.10	0.20	08/12/13 14:53	

LABORATORY CONTROL SAMPLE: 837734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	85-115	

MATRIX SPIKE SAMPLE: 837735

Parameter	Units	4082092001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.3	106	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 837736 837737

Parameter	Units	4082159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.38	5	5	5.6	5.5	104	103	85-115	1	20	

MATRIX SPIKE SAMPLE: 837738

Parameter	Units	4082217001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.38	5	5.3	98	85-115	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	MPRP/8926	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	4082160001		

METHOD BLANK: 834575                                  Matrix: Water

Associated Lab Samples: 4082160001

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Arsenic	mg/L	<0.025	0.050	08/07/13 16:37	
Barium	mg/L	<0.25	0.50	08/07/13 16:37	
Cadmium	mg/L	<0.00050	0.0010	08/07/13 16:37	
Chromium	mg/L	<0.025	0.050	08/07/13 16:37	
Copper	mg/L	<0.025	0.050	08/07/13 16:37	
Lead	mg/L	<0.0030	0.0075	08/07/13 16:37	
Nickel	mg/L	<0.025	0.050	08/07/13 16:37	
Selenium	mg/L	<0.025	0.050	08/07/13 16:37	
Silver	mg/L	<0.025	0.050	08/07/13 16:37	
Zinc	mg/L	<0.025	0.050	08/07/13 16:37	

LABORATORY CONTROL SAMPLE: 834576

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Arsenic	mg/L	.5	0.50	99	80-120	
Barium	mg/L	.5	0.52	103	80-120	
Cadmium	mg/L	.5	0.50	99	80-120	
Chromium	mg/L	.5	0.51	102	80-120	
Copper	mg/L	.5	0.51	102	80-120	
Lead	mg/L	.5	0.50	100	80-120	
Nickel	mg/L	.5	0.51	103	80-120	
Selenium	mg/L	.5	0.51	101	80-120	
Silver	mg/L	.25	0.25	101	80-120	
Zinc	mg/L	.5	0.51	102	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 834577                          834578

Parameter	Units	MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		4082159001	Spk Conc.	Spk Conc.	MS Result	MSD Result	% Rec	MSD % Rec						
Arsenic	mg/L	<0.12	2.5	2.5	2.6	2.6	102	101	75-125	1	20			
Barium	mg/L	<1.2	2.5	2.5	3.1	3.0	101	99	75-125	2	20			
Cadmium	mg/L	<0.0025	2.5	2.5	2.5	2.5	102	101	75-125	1	20			
Chromium	mg/L	<0.12	2.5	2.5	2.6	2.6	102	103	75-125	0	20			
Copper	mg/L	<0.12	2.5	2.5	2.6	2.6	103	102	75-125	1	20			
Lead	mg/L	<0.015	2.5	2.5	2.5	2.5	99	100	75-125	1	20			
Nickel	mg/L	<0.12	2.5	2.5	2.5	2.6	102	102	75-125	1	20			
Selenium	mg/L	<0.12	2.5	2.5	2.6	2.6	103	104	75-125	2	20			
Silver	mg/L	<0.12	1.2	1.2	1.3	1.3	104	103	75-125	0	20			
Zinc	mg/L	<0.12	2.5	2.5	2.7	2.6	103	103	75-125	0	20			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

MATRIX SPIKE SAMPLE:		834579	4082217001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Parameter	Units	Result						
Arsenic	mg/L	<0.12	2.5	2.5	100	75-125		
Barium	mg/L	<1.2	2.5	2.7	102	75-125		
Cadmium	mg/L	<0.0025	2.5	2.5	100	75-125		
Chromium	mg/L	<0.12	2.5	2.6	103	75-125		
Copper	mg/L	<0.12	2.5	2.6	102	75-125		
Lead	mg/L	<0.015	2.5	2.5	101	75-125		
Nickel	mg/L	<0.12	2.5	2.6	103	75-125		
Selenium	mg/L	<0.12	2.5	2.6	103	75-125		
Silver	mg/L	<0.12	1.2	1.3	103	75-125		
Zinc	mg/L	<0.12	2.5	2.7	104	75-125		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	MSV/20755	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV TCLP
Associated Lab Samples:	4082160001		

METHOD BLANK: 834655                          Matrix: Water

Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/09/13 08:11	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/09/13 08:11	
Benzene	ug/L	<0.50	1.0	08/09/13 08:11	
Carbon tetrachloride	ug/L	<0.37	1.0	08/09/13 08:11	
Chlorobenzene	ug/L	<0.36	1.0	08/09/13 08:11	
Chloroform	ug/L	<0.69	5.0	08/09/13 08:11	
Tetrachloroethene	ug/L	<0.47	1.0	08/09/13 08:11	
Trichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
Vinyl chloride	ug/L	<0.18	1.0	08/09/13 08:11	
4-Bromofluorobenzene (S)	%	97	43-137	08/09/13 08:11	
Dibromofluoromethane (S)	%	93	70-130	08/09/13 08:11	
Toluene-d8 (S)	%	100	55-137	08/09/13 08:11	

LABORATORY CONTROL SAMPLE &amp; LCSD: 834656                          834657

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/L	50	57.8	58.5	116	117	70-130	1	20	
1,2-Dichloroethane	ug/L	50	52.5	53.0	105	106	70-144	1	20	
Benzene	ug/L	50	53.6	53.1	107	106	70-137	1	20	
Carbon tetrachloride	ug/L	50	50.6	50.9	101	102	70-154	0	20	
Chlorobenzene	ug/L	50	54.8	53.3	110	107	70-130	3	20	
Chloroform	ug/L	50	52.8	51.9	106	104	70-130	2	20	
Tetrachloroethene	ug/L	50	54.4	53.6	109	107	70-130	2	20	
Trichloroethene	ug/L	50	57.8	55.0	116	110	70-130	5	20	
Vinyl chloride	ug/L	50	53.1	53.4	106	107	61-143	1	20	
4-Bromofluorobenzene (S)	%				106	105	43-137			
Dibromofluoromethane (S)	%				99	103	70-130			
Toluene-d8 (S)	%				98	99	55-137			

MATRIX SPIKE SAMPLE: 834658

Parameter	Units	4082127001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<4.3	500	587	117	70-130	
1,2-Dichloroethane	ug/L	<4.8	500	516	103	70-146	
2-Butanone (MEK)	ug/L	<27.0		<27.0			
Benzene	ug/L	<5.0	500	528	106	70-137	
Carbon tetrachloride	ug/L	<3.7	500	512	102	70-154	
Chlorobenzene	ug/L	<3.6	500	537	107	70-130	
Chloroform	ug/L	<6.9	500	516	103	70-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

MATRIX SPIKE SAMPLE: 834658

Parameter	Units	4082127001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	<4.7	500	535	107	70-130	
Trichloroethene	ug/L	<4.3	500	552	110	70-130	
Vinyl chloride	ug/L	<1.8	500	526	105	59-144	
4-Bromofluorobenzene (S)	%				107	43-137	
Dibromofluoromethane (S)	%				99	70-130	
Toluene-d8 (S)	%				98	55-137	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	OEXT/19291	Analysis Method:	EPA 8082
QC Batch Method:	EPA 3541	Analysis Description:	8082 GCS PCB
Associated Lab Samples:	4082160001		

METHOD BLANK: 833315    Matrix: Solid

Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	08/05/13 16:59	
Decachlorobiphenyl (S)	%	93	48-130	08/05/13 16:59	
Tetrachloro-m-xylene (S)	%	77	40-130	08/05/13 16:59	

LABORATORY CONTROL SAMPLE: 833316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	438	88	70-130	
Decachlorobiphenyl (S)	%			89	48-130	
Tetrachloro-m-xylene (S)	%			74	40-130	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 833317    833318

Parameter	Units	4082212001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<661			<661	<661					31	
PCB-1221 (Aroclor 1221)	ug/kg	<661			<661	<661					31	
PCB-1232 (Aroclor 1232)	ug/kg	<661			<661	<661					31	
PCB-1242 (Aroclor 1242)	ug/kg	5360			6220	5940				5	31	
PCB-1248 (Aroclor 1248)	ug/kg	<661			<661	<661					31	
PCB-1254 (Aroclor 1254)	ug/kg	<661			<661	<661					31	
PCB-1260 (Aroclor 1260)	ug/kg	<661	882	882	1060J	995J	120	113	40-149		31	
Decachlorobiphenyl (S)	%						0	0	48-130		S4	
Tetrachloro-m-xylene (S)	%						0	0	40-130		S4	

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

QC Batch: OEXT/19391 Analysis Method: EPA 8270  
QC Batch Method: EPA 3510 Analysis Description: 8270 TCLP MSSV  
Associated Lab Samples: 4082160001

METHOD BLANK: 837558 Matrix: Water

Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	<1.7	10.0	08/13/13 10:49	
2,4,5-Trichlorophenol	ug/L	<2.0	10.0	08/13/13 10:49	
2,4,6-Trichlorophenol	ug/L	<2.1	10.0	08/13/13 10:49	
2,4-Dinitrotoluene	ug/L	<1.6	10.0	08/13/13 10:49	
2-Methylphenol(o-Cresol)	ug/L	<1.9	10.0	08/13/13 10:49	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.5	10.0	08/13/13 10:49	
Hexachloro-1,3-butadiene	ug/L	<1.3	20.0	08/13/13 10:49	
Hexachlorobenzene	ug/L	<2.2	10.0	08/13/13 10:49	
Hexachloroethane	ug/L	<1.2	10.0	08/13/13 10:49	
Nitrobenzene	ug/L	<2.7	10.0	08/13/13 10:49	
Pentachlorophenol	ug/L	<2.2	20.0	08/13/13 10:49	
Pyridine	ug/L	<2.9	10.0	08/13/13 10:49	
2,4,6-Tribromophenol (S)	%	87	34-143	08/13/13 10:49	
2-Fluorobiphenyl (S)	%	96	60-130	08/13/13 10:49	
Nitrobenzene-d5 (S)	%	84	59-130	08/13/13 10:49	
Phenol-d6 (S)	%	39	19-130	08/13/13 10:49	

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LABORATORY CONTROL SAMPLE: 837559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	29.3	59	53-130	
2,4,5-Trichlorophenol	ug/L	50	53.9	108	70-130	
2,4,6-Trichlorophenol	ug/L	50	47.2	94	70-130	
2,4-Dinitrotoluene	ug/L	50	56.5	113	69-134	
2-Methylphenol(o-Cresol)	ug/L	50	39.9	80	48-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	37.3	75	43-130	
Hexachloro-1,3-butadiene	ug/L	50	34.1	68	53-130	
Hexachlorobenzene	ug/L	50	47.7	95	59-130	
Hexachloroethane	ug/L	50	25.5	51	47-130	
Nitrobenzene	ug/L	50	52.4	105	66-130	
Pentachlorophenol	ug/L	50	51.6	103	54-130	
Pyridine	ug/L	50	16.9	34	10-130	
2,4,6-Tribromophenol (S)	%			62	34-143	
2-Fluorobiphenyl (S)	%			62	60-130	
Nitrobenzene-d5 (S)	%			63	59-130	
Phenol-d6 (S)	%			28	19-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

MATRIX SPIKE SAMPLE:	837560						
Parameter	Units	4082092001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		ND	250	162J	65	50-130
2,4,5-Trichlorophenol	ug/L		ND	250	207J	83	65-130
2,4,6-Trichlorophenol	ug/L		ND	250	192J	77	64-130
2,4-Dinitrotoluene	ug/L		ND	250	244J	98	49-136
2-Methylphenol(o-Cresol)	ug/L		ND	250	270J	73	33-130
3&4-Methylphenol(m&p Cresol)	ug/L		ND	250	427J	51	35-130
Hexachloro-1,3-butadiene	ug/L		ND	250	192J	77	48-130
Hexachlorobenzene	ug/L		ND	250	228J	91	57-130
Hexachloroethane	ug/L		ND	250	125J	50	45-130
Nitrobenzene	ug/L		ND	250	245J	98	62-130
Pentachlorophenol	ug/L		ND	250	143J	57	10-149
Pyridine	ug/L		ND	250	<143	38	10-130
2,4,6-Tribromophenol (S)	%					80	34-143
2-Fluorobiphenyl (S)	%					94	60-130
Nitrobenzene-d5 (S)	%					86	59-130
Phenol-d6 (S)	%					32	19-130

MATRIX SPIKE SAMPLE:	837561						
Parameter	Units	4082324001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		<8.6	250	193	77	50-130
2,4,5-Trichlorophenol	ug/L		<10	250	262	105	65-130
2,4,6-Trichlorophenol	ug/L		<10.7	250	237	95	64-130
2,4-Dinitrotoluene	ug/L		<8.0	250	277	111	49-136
2-Methylphenol(o-Cresol)	ug/L		<9.7	250	202	81	33-130
3&4-Methylphenol(m&p Cresol)	ug/L		<7.7	250	174	70	35-130
Hexachloro-1,3-butadiene	ug/L		<6.6	250	213	85	48-130
Hexachlorobenzene	ug/L		<11.1	250	249	99	57-130
Hexachloroethane	ug/L		<5.8	250	175	70	45-130
Nitrobenzene	ug/L		<13.7	250	272	109	62-130
Pentachlorophenol	ug/L		<10.8	250	242	97	10-149
Pyridine	ug/L		<14.3	250	74.1	30	10-130
2,4,6-Tribromophenol (S)	%					90	34-143
2-Fluorobiphenyl (S)	%					95	60-130
Nitrobenzene-d5 (S)	%					95	59-130
Phenol-d6 (S)	%					37	19-130

MATRIX SPIKE SAMPLE:	837562						
Parameter	Units	4082159001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		<8.6	250	205	82	50-130
2,4,5-Trichlorophenol	ug/L		<10	250	257	103	65-130
2,4,6-Trichlorophenol	ug/L		<10.7	250	230	92	64-130
2,4-Dinitrotoluene	ug/L		<8.0	250	264	106	49-136
2-Methylphenol(o-Cresol)	ug/L		<9.7	250	187	75	33-130

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

MATRIX SPIKE SAMPLE:	837562						
Parameter	Units	4082159001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
3&4-Methylphenol(m&p Cresol)	ug/L	<7.7	250	167	67	35-130	
Hexachloro-1,3-butadiene	ug/L	<6.6	250	214	86	48-130	
Hexachlorobenzene	ug/L	<11.1	250	264	105	57-130	
Hexachloroethane	ug/L	<5.8	250	194	78	45-130	
Nitrobenzene	ug/L	<13.7	250	249	100	62-130	
Pentachlorophenol	ug/L	<10.8	250	277	111	10-149	
Pyridine	ug/L	<14.3	250	79.4	32	10-130	
2,4,6-Tribromophenol (S)	%				93	34-143	
2-Fluorobiphenyl (S)	%				94	60-130	
Nitrobenzene-d5 (S)	%				93	59-130	
Phenol-d6 (S)	%				37	19-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch: PMST/8758

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 4082160001

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SAMPLE DUPLICATE: 838380

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.6	6.6	0	10	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	WET/15853	Analysis Method:	EPA 1010
QC Batch Method:	EPA 1010	Analysis Description:	1010 Flash Point, Closed Cup
Associated Lab Samples:	4082160001		

LABORATORY CONTROL SAMPLE: 834488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.1			

SAMPLE DUPLICATE: 835130

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch: WET/42814 Analysis Method: SW-846 7.3.4.2

QC Batch Method: SW-846 7.3.4.2 Analysis Description: Reactive Sulfide

Associated Lab Samples: 4082160001

METHOD BLANK: 1234378 Matrix: Solid

Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	0.0J	100	08/12/13 09:00	

LABORATORY CONTROL SAMPLE: 1234379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	183	92	77-110	

MATRIX SPIKE SAMPLE: 1234380

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	ND	500	427	85	67-116	

SAMPLE DUPLICATE: 1234381

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	0.0J		30	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch: WET/15939 Analysis Method: EPA 9040

QC Batch Method: EPA 9040 Analysis Description: 9040 pH

Associated Lab Samples: 4082160001

SAMPLE DUPLICATE: 839424

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.9	7.7	2	20	1q,H6

SAMPLE DUPLICATE: 839425

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.6	8.7	1	20	H6

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch: WET/15841

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 4082160001

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SAMPLE DUPLICATE: 833806

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	PASS	PASS			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

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QC Batch: WET/15843 Analysis Method: SM 2710F  
QC Batch Method: SM 2710F Analysis Description: Spec.Gravity  
Associated Lab Samples: 4082160001

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SAMPLE DUPLICATE: 833859

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity	no units	4082160001	1.5	1.6	5	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	WETA/15777	Analysis Method:	EPA 420.1
QC Batch Method:	EPA 420.1	Analysis Description:	420.1 Phenolics
Associated Lab Samples:	4082160001		

METHOD BLANK: 1502529	Matrix: Water
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Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	50.0	08/15/13 15:30	

LABORATORY CONTROL SAMPLE & LCSD:	1502530	1502531
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Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Phenolics, Total Recoverable	ug/L	1000	922	1010	92	101	90-110	9	20	

MATRIX SPIKE SAMPLE:	1502532
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Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	1000	913	91	90-110	

MATRIX SPIKE SAMPLE:	1502533
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Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	41.8J	1000	1090	104	90-110	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

QC Batch:	WETA/25754	Analysis Method:	SW-846 7.3.3.2
QC Batch Method:	SW-846 7.3.3.2	Analysis Description:	733C Reactive Cyanide
Associated Lab Samples:	4082160001		

METHOD BLANK: 1234788	Matrix: Solid
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Associated Lab Samples: 4082160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	0.0J	0.025	08/12/13 09:06	

LABORATORY CONTROL SAMPLE: 1234789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	.5	0.51	101	71-123	

MATRIX SPIKE SAMPLE: 1234790

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	ND	.5	0.51	100	57-132	

SAMPLE DUPLICATE: 1234791

Parameter	Units	60150703001 Result	Dup Result	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.0070J	23	

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082160

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-K Pace Analytical Services - Kansas City

PASI-M Pace Analytical Services - Minneapolis

### BATCH QUALIFIERS

Batch: MSSV/5886

[IP] Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

Batch: WETA/15777

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

### ANALYTE QUALIFIERS

1q Due to sample matrix, DI water was added to sample in a 1:1 ratio and sample was stirred prior to analysis.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082160

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082160001	PROT B-8	EPA 3541	OEXT/19291	EPA 8082	GCSV/9977
4082160001	PROT B-8	EPA 3010	MPRP/8926	EPA 6010	ICP/7897
4082160001	PROT B-8	EPA 7470	MERP/3798	EPA 7470	MERC/4787
4082160001	PROT B-8	EPA 3510	OEXT/19391	EPA 8270	MSSV/5886
4082160001	PROT B-8	EPA 1311	TCLP/3052	EPA 8260	MSV/20755
4082160001	PROT B-8	ASTM D2974-87	PMST/8758		
4082160001	PROT B-8	EPA 1010	WET/15853		
4082160001	PROT B-8	SW-846 7.3.4.2	WET/42814		
4082160001	PROT B-8	EPA 9040	WET/15939		
4082160001	PROT B-8	EPA 9095	WET/15841		
4082160001	PROT B-8	SM 2710F	WET/15843		
4082160001	PROT B-8	EPA 420.1	WETA/15777		
4082160001	PROT B-8	SW-846 7.3.3.2	WETA/25754		

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(Please Print Clearly)

**Company Name:** Himalayan Consultants  
**Branch/Location:** Michelle Reed  
**Project Contact:** Michelle Reed  
**Phone:** 262 502 006  
**Project Number:** 6190-17-80

**Project Name:** Winneconne

W.I.

Michelle Reed

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## Sample Condition Upon Receipt

Client Name: Himalayan

Project # 4082166

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Other CS Logistic

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: 20 /Corr: \_\_\_\_\_

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Person examining contents:  
Date: 8/2/13  
Initials: MV

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Date/Time: _____	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER: <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Initial when completed Lab Std #/ID of preservative Date/ Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):				

If checked, see attached form for additional comments

**Client Notification/ Resolution:**

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

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

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

Project Manager Review: \_\_\_\_\_

NAT for DM

Date: \_\_\_\_\_

8-2-13

**ATTACHMENT E**

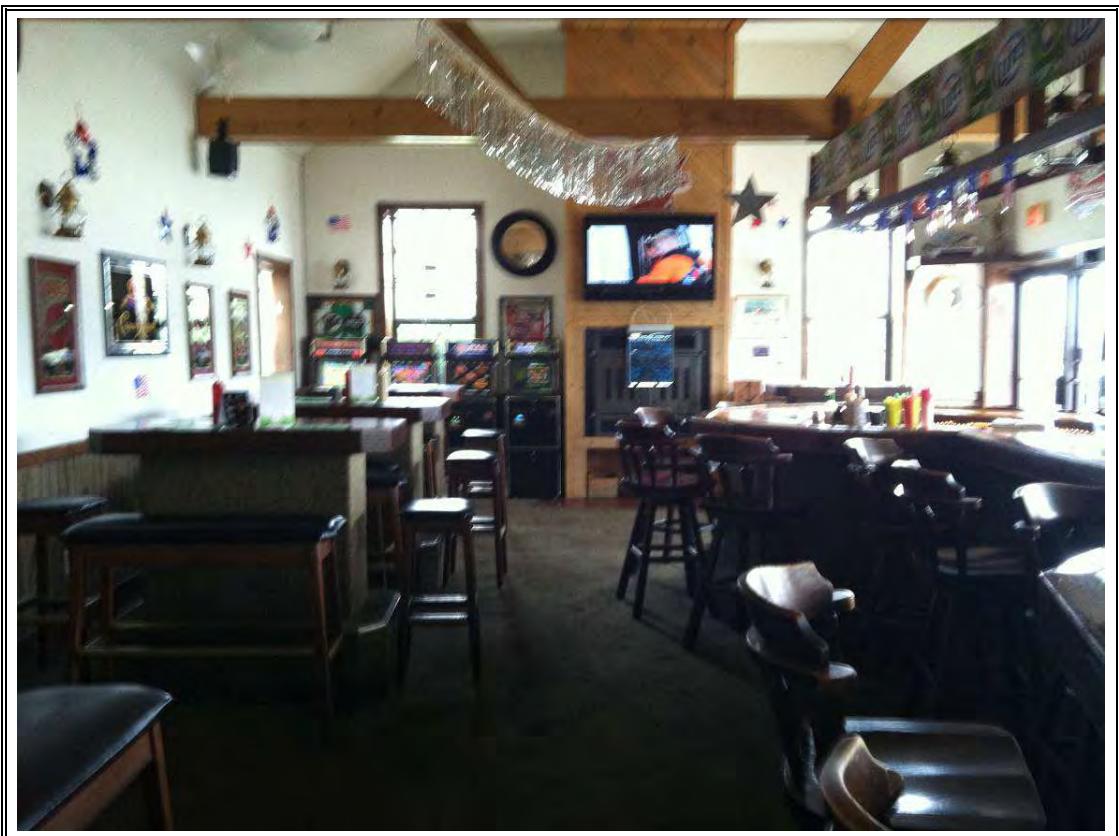
**SITE PHOTOGRAPHS**



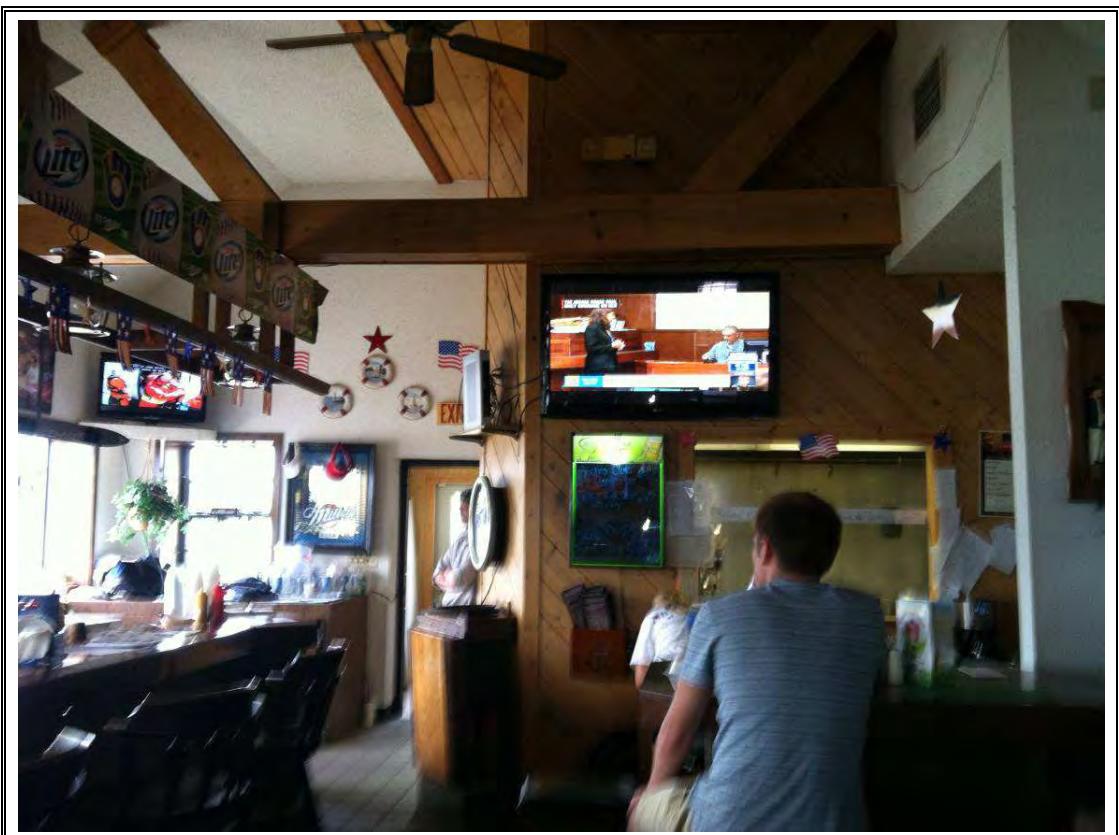
Site #8: Location of boring B-8-3 near former coal storage area.



Site #8: Location of boring B-8-2 (orange cone).



Site #8: Interior view facing north.



Site #8: Interior view facing south.

## **APPENDIX E**

**A1 AUTO SALES, INC. /  
STEVE'S MARINE SERVICE  
[SITE #11]**

## **1.0 SITE DESCRIPTION**

A1 Auto Sales, Inc. / Steve's Marine Service (105 E. Main Street) is located near the southeast quadrant of the intersection of E. Main Street (STH 116) and 1<sup>st</sup> Avenue [hereafter referred to as the site] (see Figure 3.1, Attachment A). The site is part of the northeast ¼ of the northwest ¼ of Section 21, Township 19 North, Range 15 East, in the Village of Winneconne, Winnebago County, Wisconsin. According to the Winnebago County GIS Parcel Profiler Site, the site is currently owned by Steven Brooks.

Based on Himalayan's inspection of the site on July 30, 2013, the site is utilized as an auto and boat repair facility (see Photographs, Attachment E).

The predominant land surface at the site is a concrete covered parking lot on the northwest side of the property, with a gravel driveway on the southern side of the building. The eastern portion of the site contains the repair building.

The land use surrounding the site is generally commercial properties.

## **2.0 SITE HISTORY**

In August 2012, Himalayan performed a Phase 1 Hazardous Materials Assessment (HMA) of the project corridor and identified the site at 105 E. Main Street as one of the sites with hazardous material concerns [Ref. 2]. Based on the information obtained from the Phase 1 HMA, the site was previously utilized as an auto repair facility, a former re-sale facility, a boat repair facility, a small engine repair facility, and an auto dealership.

According to Himalayan's personal interviews with the former and current site owners, gas pumps and tanks associated with the former auto dealership on site from the 1950s to the 1970s, were removed from the northwest portion of the site approximately 25 years ago. Inspection of historical aerial photographs from the 1960's and 1970's also indicate the presence of a pump island in this same area. According to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) storage tank records, no tanks are registered to the site [Ref. 3].

Based on the age of the building (at least 1950s), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

## **3.0 PURPOSE AND PROPOSED ACQUISITION/CONSTRUCTION**

The purpose of this Phase 2 HMI was to identify the potential presence and nature of contamination at the site. The Phase 2 HMI was performed in general accordance with FDM Procedure 21-35-10

(revised, December 2011), and the Wisconsin Department of Natural Resources (WDNR) rules and regulations [Ref. 4].

Based on the proposed design plans, the maximum depths of excavation adjacent to the site are anticipated to be about 2 feet bgs for roadway construction, 8 feet bgs for water / sewer, and approximately 5 feet bgs for lighting / signal bases. Up to 60 feet of R/W (strip) acquisition is anticipated at this site, which includes relocation of the existing building.

## **4.0 SOILS AND GROUNDWATER CHARACTERIZATION**

On July 30, 2013, Horizon Construction and Exploration (Horizon), under a contract with Himalayan, advanced three soil borings (B-11-1 to B-11-3) at the site (see Figure 3.2, Attachment A). The general boring locations were in the areas considered to have the highest potential for encountering contamination based on the information obtained during the Phase 1 HMA, and/or proposed improvements at the site. Borings were advanced to a depth of 20 feet bgs. Boring B-11-1 and B-11-2 were located in the area of a former pump island and UST area, and B-11-3 was located near the overhead door on the north portion of the former auto / boat repair building.

Each of the borings were converted to temporary groundwater monitoring wells (W-11-1, W-11-2, and W-11-3) to facilitate groundwater sampling. The wells were constructed in general compliance with WDNR guidelines for temporary monitoring wells [Ref. 4]. The wells consisted of a 10-foot section of slotted 1-inch polyvinyl chloride (PVC) pipe attached to unslotted PVC riser pipe extending to the surface. Refer to Well Construction Forms in Attachment C for additional details on temporary well construction.

After completion of sampling, all boreholes/wells were abandoned by filling them with granular bentonite, in accordance with Wis. Adm. Code NR 141. The Borehole Abandonment Forms for each borehole/well are presented in Attachment B.

### **4.1 Soil Sampling**

Based on field observations, two soil samples from each boring were collected and submitted for laboratory analysis. The soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), and the eight Resource Conservation and Recovery Act (RCRA) metals [arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury].

### **4.2 Groundwater Sampling**

Himalayan performed groundwater collection at the site on the day following the boring activities. Groundwater samples were obtained from each temporary monitoring well (MW-11-1, MW-11-2,

MW-11-3) and submitted for laboratory analysis. The water samples were analyzed for VOCs and RCRA metals.

## 5.0 SUBSURFACE CONDITIONS

### 5.1 Soil Conditions

Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to a depth of approximately 6 feet bgs. The fill materials consisted mainly of red sandy clay, with trace wood and brick fragments, medium to fine sand with gravel, cinders, and glass fragments.

Native brown to red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal depths of 20 feet bgs. Refer to soil boring logs in Attachment B for more detailed descriptions of the soils encountered at each boring location.

Continuous soil samples were obtained from the borings and field-screened for the presence of volatile organic vapors using a photoionization detector (PID). The field screening results for the collected 30 soil samples were all zero and are summarized in Table 1. No staining or odors were noted in the boring logs (see Attachment B). Note that asphalt was being overlain on STH 116 at the time of Himalayan's field work; therefore, it is possible that background calibration may have been elevated on the PID.

TABLE 1 FIELD SCREENING RESULTS Phase 2 Hazardous Materials Investigation A1 Auto Sales, Inc. / Steve's Marine Service (105 E. Main Street) Winneconne, Winnebago County Project ID: 6190-17-00				
Boring ID	B-11-1	B-11-2	B-11-3	
Date	7/30/13	7/30/13	7/30/13	
Depth (feet)	0-2	0.0	0.0	0.0
	2-4	0.0	0.0	0.0
	4-6	0.0	0.0	0.0
	6-8	0.0	0.0	0.0
	8-10	0.0	0.0	0.0
	10-12	0.0	0.0	0.0
	12-14	0.0	0.0	0.0
	14-16	0.0	0.0	0.0
	16-18	0.0	0.0	0.0
	18-20	0.0	0.0	0.0
Notes: Results provided in instrument units (IU).				

## **5.2     Groundwater Conditions**

Groundwater was encountered in each temporary well, at depths ranging from 7.2 to 14.2 feet bgs. It should be noted that groundwater depths can vary throughout the year, depending on several factors that include seasonal variations in precipitation, infiltration, and surface water runoff.

Refer to the soil boring logs in Attachment B for additional groundwater information encountered at each boring location.

## **6.0     ANALYTICAL RESULTS**

### **6.1     Soil Samples**

Laboratory analyses was performed on two soil samples selected from each borehole, at various depths ranging from 2 to 12 feet bgs.

No GRO was detected in any of the samples collected. DRO was detected in B-11-1 2-4' (2.9 mg/kg) below the NR 720 RCL [Ref. 6].

Two VOCs were detected in two of the soil samples. Tetrachloroethene (74.7 to 169 µg/kg) and trichloroethene (162 to 195 µg/kg) were both detected in B-11-1 8-10' and B-11-2 10-12'. No NR 720 RCL has been established for either of these VOCs.

Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic (1.2 to 4.9 mg/kg) was detected above the NR 720 RCL in each of the six samples. Chromium (6.6 to 22.1 mg/kg) was detected in each of the soil samples. Concentrations in five samples (B-11-1 8-10' at 22.1 mg/kg, B-11-2 10-12' at 18.5 mg/kg, and B-11-3 8-10' at 19.7 mg/kg) were detected above the NR 720 RCL, hexavalent chromium only.

Lead (1.9 to 5.4 mg/kg) was detected in each of the soil samples, below the NR 720 RCL.

Barium (16.8 to 85.8 mg/kg), cadmium (0.13 J to 0.28 J mg/kg), and mercury (0.010 to 0.11 mg/kg) were also detected in several of the samples, below their respective NR 720 RCLs or no standard has been established. A "J" denotes a concentration flagged by the laboratory as an estimated concentration. Additionally, selenium and silver were not detected in any of the samples analyzed.

**TABLE 2**  
**SOIL QUALITY RESULTS - DETECTED COMPOUNDS**

Phase 2 Hazardous Materials Investigation  
**A1 Auto Sales, Inc. / Steve's Marine Service (105-113 E. Main Street), Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D.	B-11-1		B-11-2		B-11-3		Generic NR 720 RCL
Depth (feet)	2-4	8-10	2-4	10-12	2-4	8-10	
Collection Date	7/30/2013		7/30/2013		7/30/2013		
<b>GRO (mg/kg)</b>	<2.7	<3.1	<2.7	<3.1	<2.8	<3.2	100/250*
<b>DRO (mg/kg)</b>	2.9	<0.77	<0.72	<0.82	<0.74	<0.77	100/250*
<b>VOCs (µg/kg)</b>							
Tetrachloroethene	<27.5	169	<26.9	74.7	<25.8	<25.0	NSE
Trichloroethene	<27.5	195	<26.9	162	<25.8	<25.0	NSE
<b>RCRA Metals (mg/kg)</b>							
Arsenic	<b>4.4</b>	<b>4.9</b>	<b>4.2</b>	<b>4.3</b>	<b>1.2 J</b>	<b>3.9</b>	0.039 (b)
Barium	25.9	85.8	51.2	68.8	16.8	73.3	NSE
Cadmium	0.13 J	0.28 J	0.20 J	0.26 J	<0.047	<0.23 J	8 (b)
Chromium	13.0	<b>22.1</b>	12.6	<b>18.5</b>	6.6	<b>19.7</b>	14 (a) (b)
Lead	4.1	5.4	4.3	7.7	1.9	4.9	50 (b)
Mercury	0.017	0.010	0.11	0.016	<0.0032	<0.0076	NSE

Notes:  
Analytes detected above the method detection limit (MDL) in at least one sample are included in the Table  
GRO= Gasoline Range Organics; DRO= Diesel Range Organics; VOC= Volatile Organic Compounds; TCLP= Toxicity characteristic leaching procedure  
RCRA = Resource Conservation and Recovery Act; **Bold** results indicate concentrations exceeding NR 720 or Interim RCLs  
mg/kg=milligrams per kilogram and mg/L milligrams per liter=parts per million (ppm); µg/kg=micrograms per kilogram=parts per billion (ppb)  
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit ; NSE = No Standard Established; RCL= Residual  
\* = RCLs (mg/kg) based on permeability of soils per NR 720 for groundwater protection

Table 2 presents the summary of soil quality results. Also, refer to Figure 3.2, Attachment A for sample locations and analytical results.

Refer to Attachment D for complete laboratory report for each sample.

## 6.2 Groundwater Samples

Based on the laboratory analytical results of groundwater samples collected from temporary wells MW-11-1, MW-11-2, and MW-11-3, no petroleum constituents were detected in any of the water samples. However, chlorinated solvents were detected in each of the samples. Trichloroethene (18.9 to 383 µg/L) was detected above the NR 140 ES in each of the three samples. Tetrachloroethene was detected above the NR 140 ES in MW-11-1 (7.4 µg/L) and MW-11-2 (21.8 µg/L) and above the NR 140 PAL in MW-11-3 (0.50 J µg/L). Vinyl chloride was detected above the NR 140 ES in MW-11-1 (4.6 µg/L) and MW-11-2 (1.5 J µg/L).

Cis-1,2-dichloroethene was detected in MW-11-1 (11.0 µg/L) and MW-11-2 (19.4 µg/L) above the NR 140 PAL.

Trans-1,2-dichloroethene (0.66 µg/L) and 2-butanone (MEK) (4.4 J µg/) were also detected in MW-11-1, but are below their respective NR 140 PALs.

Four of the eight RCRA metals were detected in the samples. Arsenic (8.3 J µg/L) was identified in MW-11-2, chromium (3.7 J µg/L) was identified in MW-11-3, and lead (3.2 J µg/L) was identified in MW-11-1, and are all above their respective NR 140 PAL. Barium (89.6 to 161 µg/L) was detected below the NR 140 PAL in all samples.

Also refer to Figure 3.3 in Attachment B for the well locations and Attachment D for the laboratory results.

TABLE 3 GROUNDWATER RESULTS - DETECTED COMPOUNDS Phase 2 Hazardous Materials Investigation A1 Auto Sales, Inc. / Steve's Marine Service (105 E. Main Street), Winneconne, Winnebago County Project ID: 6190-17-00					
Sample I.D.	MW-11-1	MW-11-2	MW-11-3	NR 140 ES (µg/L)	NR 140 PAL (µg/L)
Collection Date	7/31/13	7/31/13	7/31/13		
<b>VOCs (µg/L)</b>					
2-Butanone (MEK)	4.4 J	<13.5	<2.7	460	90
cis-1,2-Dichloroethene	11.0	19.4	<0.42	70	7
trans-1,2-Dichloroethene	0.66 J	<1.9	<0.37	100	20
Tetrachloroethene	7.4	<b>21.8</b>	0.50 J	5	0.5
Trichloroethene	<b>289</b>	<b>383</b>	<b>18.9</b>	5	0.5
Vinyl chloride	4.6	<b>1.5 J</b>	<0.18	0.2	0.02
<b>RCRA Metals (µg/L)</b>					
Arsenic	<4.2	8.3 J	<4.2	10	1
Barium	161	125	89.6	2,000	400
Chromium	<1.4	<1.4	3.7 J	5	0.5
Lead	3.2 J	<2.7	<2.7	15	1.5
Notes: Analytes detected above the method detection limit (MDL) in at least one sample are included in the Table VOCs = Volatile Organic Compounds RCRA = Resource Conservation and Recovery Act µg/L = micrograms per liter = parts per billion (ppb) J = Concentration reported is between the Method Detection Limit and the Limit of Quantitation Italics results indicate concentrations exceeding NR 140 PAL Bold results indicate concentrations exceeding NR 140 ES ES = Enforcement Standard per NR 140; PAL = Preventative Action Limit					

### 6.3 Waste Characterization Sample

A composite soil sample (Proto B-11) was collected from the site for landfill acceptance criteria (Protocol B) to provide waste characterization for potential off-site disposal and/or treatment of contaminated soils at a landfill.

Based on the laboratory analytical results, no cyanide, PCBs, TCLP VOCs, and TCLP Semivolatiles were detected in the sample. The general chemistry results for the sample included:

flashpoint >210 deg. F, pH 8.4, specific gravity 1.6, sulfide 10.4 J mg/kg. No free liquids were encountered in the sample.

Table 4 presents the summary of soil quality results for the composite sample. See Attachment D for complete laboratory report.

TABLE 4		
LABORATORY ANALYTICAL RESULTS - Protocol B		
Phase 2 Hazardous Materials Investigation		
Creative Tile and Marble (29-31 W. Main Street), Winneconne, Winnebago County		
Project ID: 6190-17-00		
Sample I.D. : Proto B-8	Sample Results	Units
Sample I.D. : Proto B-8		
<b>General Chemistry</b>		
% of Solids	87.2	%
Cyanide (total)	0.0070 J	mg/kg
Flashpoint	>210	°F
pH	8.4	pH Units
Specific Gravity	1.6	N/A
Free liquids	Pass	N/A
Sulfide	10.4 J	mg/kg
<b>TCLP Metals</b>		
Arsenic	<0.12	mg/L
Barium	<1.2	mg/L
Cadmium	<0.0025	mg/L
Chromium	<0.12	mg/L
Copper	<0.12	mg/L
Lead	<0.015	mg/L
Mercury	<0.10	mg/L
Nickel	<0.12	mg/L
Selenium	<0.12	mg/L
Silver	<0.12	mg/L
Zinc	<0.12	mg/L
<b>PCBs</b>		
PCB-1016	<0.0287	mg/kg
PCB-1221	<0.0287	mg/kg
PCB-1232	<0.0287	mg/kg
PCB-1242	<0.0287	mg/kg
PCB-1248	<0.0287	mg/kg
PCB-1254	<0.0287	mg/kg
PCB-1260	<0.0287	mg/kg
<b>TCLP VOCs</b>		
Benzene	<0.005	mg/L
Methyl Ethyl Ketone	<0.027	mg/L
Carbon Tetrachloride	<0.0037	mg/L
Chlorobenzene	<0.0036	mg/L
Chloroform	<0.0069	mg/L
1,2-Dichloroethane	<0.0048	mg/L
1,1-Dichloroethene	<0.0043	mg/L
Tetrachloroethene	<0.0047	mg/L
Trichloroethene	<0.0043	mg/L
Vinyl Chloride	<0.0018	mg/L

<b>TABLE 4 (Continued)</b> <b>LABORATORY ANALYTICAL RESULTS – Protocol B</b> <b>Phase 2 Hazardous Materials Investigation</b> <b>Creative Tile and Marble (29-31 W. Main Street), Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>		
Sample I.D. Proto B-8	Sample Results	Units
<b>TCLP Semi-VOCs</b>		
1,4-Dichlorobenzene	<0.0086	mg/L
2,4-Dinitrotoluene	<0.0080	mg/L
Hexachloro-1,3-butadiene	<0.0066	mg/L
Hexachlorobenzene	<0.0111	mg/L
Hexachloroethane	<0.0058	mg/L
2-Methylphenol (o-Cresol)	<0.0097	
3&4-Methylphenol (m&p Cresol)	<0.0077	mg/L
Nitrobenzene	<0.0137	mg/L
Pentachlorophenol	<0.0108	mg/L
Pyridine	<0.0143	mg/L
2,4,5-Trichlorophenol	<0.010	mg/L
2,4,6-Trichlorophenol	<0.0107	mg/L
Notes: VOCs = Volatile Organic Compounds mg/kg = milligrams per kilogram = parts per million (ppm) mg/L = milligrams per liter = parts per million (ppm) TCLP = Toxicity Characteristic Leaching Procedure		

## 7.0 FINDINGS

- Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to a depth of approximately 6 feet bgs. The fill materials consisted mainly of red sandy clay, with trace wood and brick fragments, medium to fine sand with gravel, cinders, and glass fragments. Native brown to red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal depths of 20 feet bgs. Groundwater was encountered in each temporary well, at depths ranging from 7.2 to 14.2 feet bgs.
- No GRO was detected in any of the samples collected. DRO was detected in B-11-1 2-4' below the NR 720 RCL.
- Two VOCs were detected in two of the soil samples. Tetrachloroethene and trichloroethene were both detected in B-11-1 8-10' and B-11-2 10-12'. No NR 720 RCL has been established for either of these VOCs.

- Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the six samples. Chromium was detected in each of the soil samples. Concentrations in five samples were detected above the NR 720 RCL, hexavalent chromium only. Lead was detected in each of the samples analyzed at concentrations which are below the NR 720 RCL. No standards exist for barium and mercury detected in the samples
- No petroleum constituents were detected in any of the water samples.
- Trichloroethene was detected above the NR 140 ES in each of the three samples. Tetrachloroethene was detected above the NR 140 ES in MW-11-1 and MW-11-2 and above the NR 140 PAL in MW-11-3. Vinyl chloride was detected above the NR 140 ES in MW-11-1 and MW-11-2. Cis-1,2-dichloroethene was detected in MW-11-1 and MW-11-2 above the NR 140 PAL. Trans-1,2-dichloroethene and 2-butanone (MEK) were also detected in MW-11-1, but are below their respective NR 140 PALs.
- Arsenic was identified in MW-11-2, chromium was identified in MW-11-3, and lead was identified in MW-11-1, and are all above their respective NR 140 PAL. Barium was detected below the NR 140 PAL in all samples.
- Based on the laboratory analytical results, no cyanide, PCBs, TCLP VOCs, and TCLP Semivolatiles were detected in the waste characterization sample. The general chemistry results for the sample included: flashpoint >210 deg. F, pH 8.4, specific gravity 1.6, sulfide 10.4 J mg/kg. No free liquids were encountered in the sample.
- Based on the age of the building (at least 1893), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

- Based on the results of Himalayan's Phase 2 HMI, evidence of hazardous substance release (chlorinated solvent impacts) was documented at the site. Therefore, Himalayan recommends that a Phase 3 hazardous materials investigation (FDM Procedure: 21-35-15) be considered for the site to fully characterize and define the lateral and vertical extent of soil and groundwater contamination and assist in determining the value of the parcel for acquisition purposes, prior to the total take of the site.
- The impacts discovered at the site should be reported to the WDNR in order to satisfy the notification requirements per hazardous substance spills law, Section 292.11(2).

- Pre-demolition asbestos and lead surveys should be performed to evaluate whether ACMs or LBP are present in the structure. All demolition activities should be performed in accordance with local, state, and federal regulations.

## **9.0 REFERENCES**

1. Winnebago County GIS Website. WINGS Property Profiler.  
[http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis\\_menu.cgi](http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis_menu.cgi)
2. Himalayan Consultants, LLC, (August 2012). Phase I Hazardous Material Assessment, WisDOT Project ID 1030-20-00, STH 116 Corridor Study (2nd Street - 2nd Avenue), Winneconne, Winnebago County, Wisconsin.
3. Wisconsin Department of Agriculture, Trade and Consumer Protection - Storage Tank Database –[http://apps.commerce.state.wi.us/ER\\_Tanks/ER-EN-TankSearch.htm](http://apps.commerce.state.wi.us/ER_Tanks/ER-EN-TankSearch.htm)
4. Wisconsin Department of Transportation (December 2011). Facilities Development Manual, Procedures 21-35-10 and 21-35-30.
5. Wisconsin Department Natural Resources (March 2011). Wisconsin Administrative Code NR 141, Groundwater Monitoring Well Requirements.
6. Wisconsin Department Natural Resources (September 2007). Wisconsin Administrative Code NR 720, Soil Cleanup Standards.
7. Wisconsin Department Natural Resources (January 2012). Wisconsin Administrative Code NR 140, Groundwater Quality.

## **ATTACHMENTS**

Attachment A.

Figures

- Figure 3.1. Site Overview Map
- Figure 3.2. Soil Quality Map
- Figure 3.3. Groundwater Quality Map

Attachment B.

Soil Boring Logs and Borehole Abandonment Forms

Attachment C.

Well Construction Forms

Attachment D.

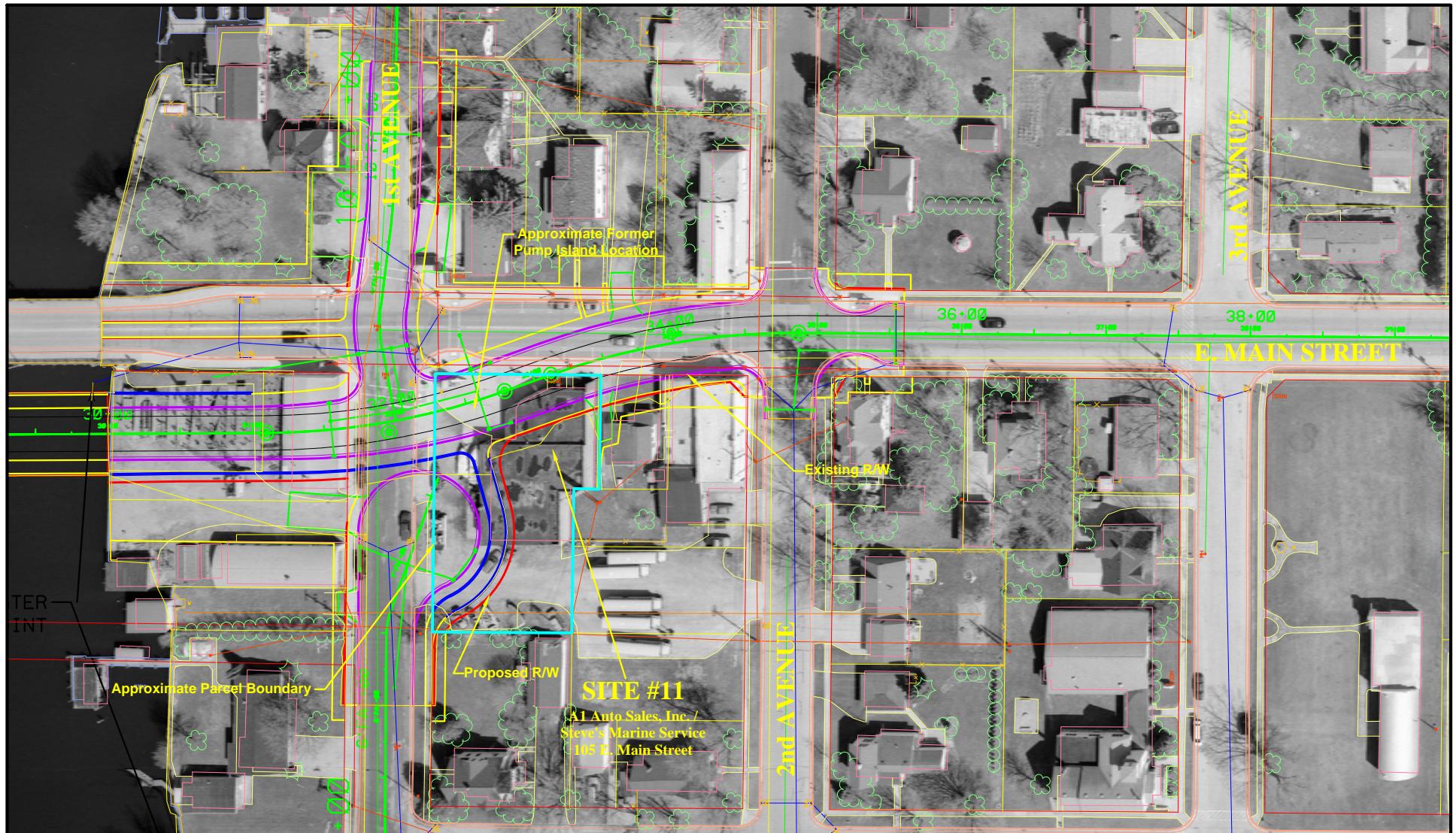
Laboratory Analytical Reports – Soil, Groundwater, and Waste Characterization

Attachment E.

Site Photographs

## **ATTACHMENT A**

### **FIGURES**



Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

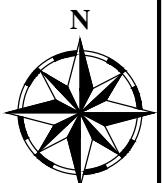
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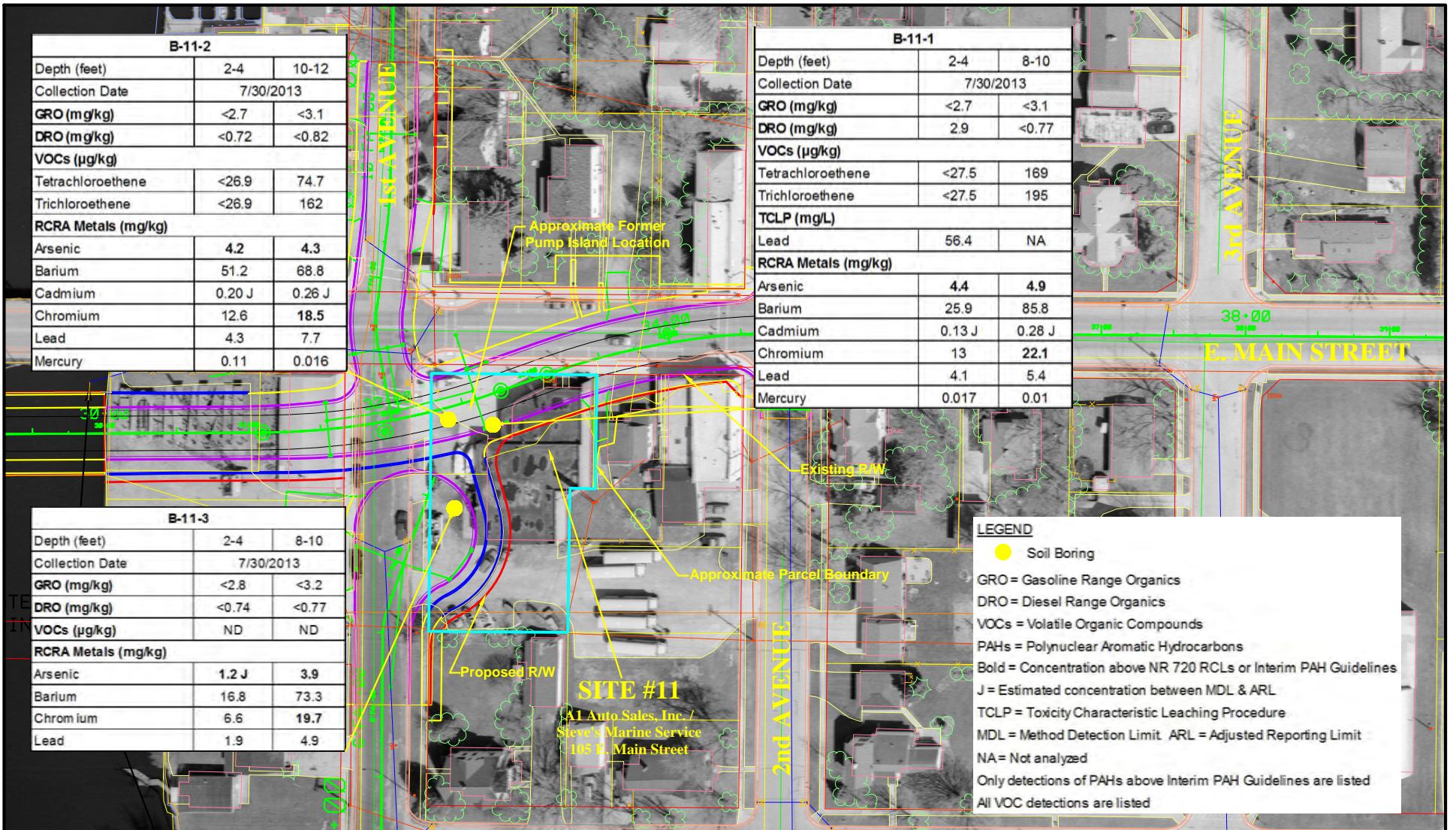
**FIGURE 3.1: SITE OVERVIEW MAP**



**HIMALAYAN CONSULTANTS, LLC**  
Engineers and Hydrogeologists  
W156 N11357 Pilgrim Road  
Germantown, Wisconsin 53022  
Phone: (262) 502-0066  
Fax: (262) 502-0077

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin





Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

0 50 100 200  
Scale:

**FIGURE 3.2: SOIL QUALITY MAP**



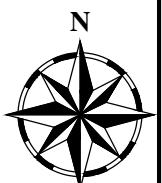
**HIMALAYAN CONSULTANTS, LLC**  
Engineers and Hydrogeologists  
W156 N11357 Pilgrim Road  
Germantown, Wisconsin 53022  
Phone: (262) 502-0066  
Fax: (262) 502-0077

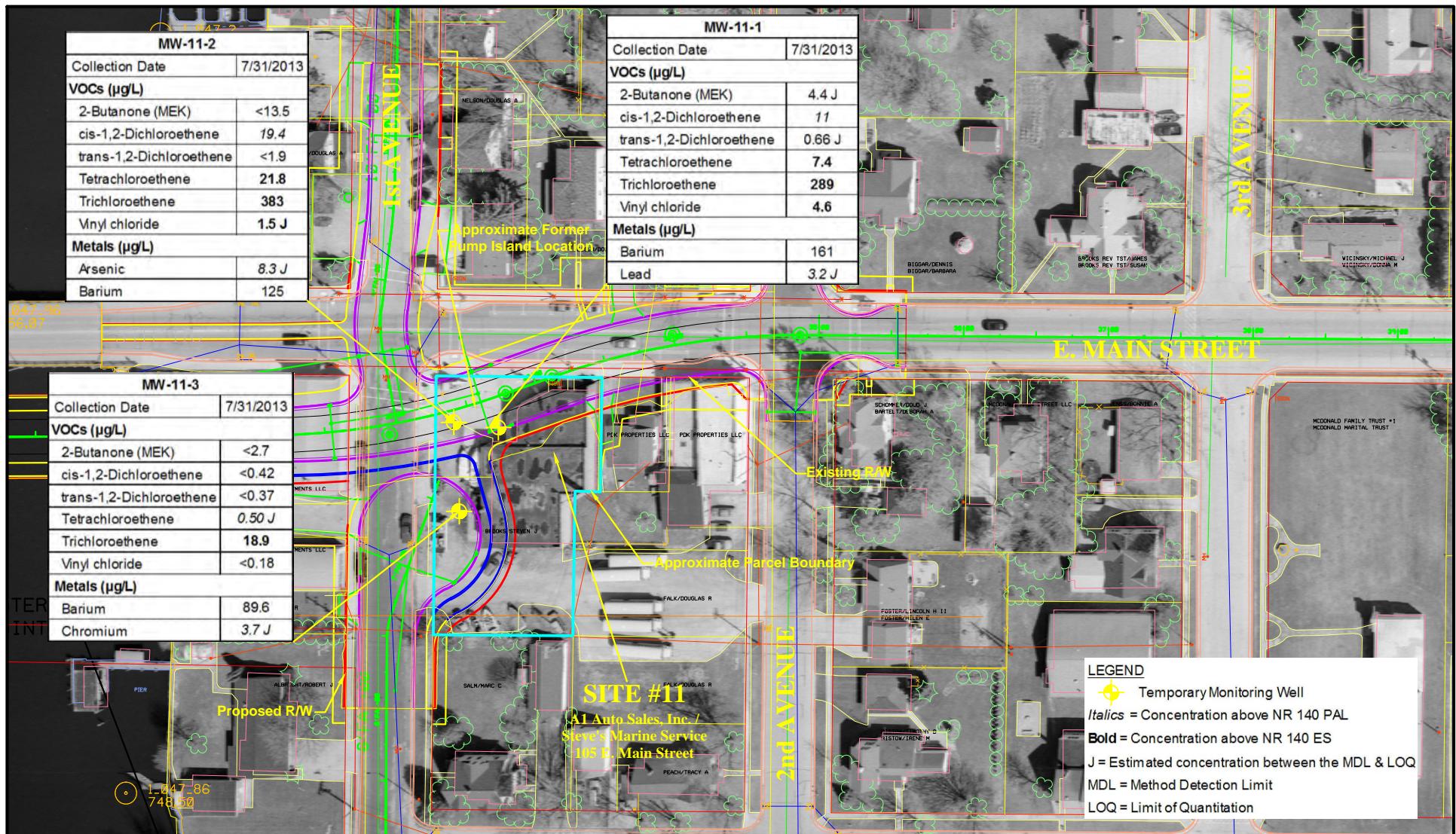
**Project ID: 6190-17-00**

**STH 116**

**2nd Street - 2nd Avenue**

**Winneconne, Winnebago County, Wisconsin**





Source: Base Map Provided By EMCS, Inc.  
Aerial Provided by CH2M Hill

Scale:



**HIMALAYAN CONSULTANTS, LLC**  
Engineers and Hydrogeologists  
W156 N11357 Pilgrim Road  
Germantown, Wisconsin 53022  
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Fax: (262) 502-0077

**FIGURE 3.3: GROUNDWATER QUALITY MAP**

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin

## **ATTACHMENT B**

### **SOIL BORING LOGS AND BOREHOLE ABANDONMENT FORMS**



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #11

Boring No. B-11-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 30"	D	M		0	Concrete pavement Reddish brown clayey sand, with some small and large gravel (fill)						0
		D			2							0
		M			4	Lab Sample (2' - 4') Very light brown fine grain sand, with some small and large gravel (fill) Dark brown to black silty sand, with some partially decomposed wood fragments (fill)						0
		M			6	Dark gray to black sandy clay, with trace gravel, wood fibers, and glass fragments (fill) Red medium plasticity clay, with little small and large gravel						0
		M			8							0
2	GP 60"				10	Lab Sample (8' - 10') Red medium plasticity clay, with little small and large gravel						0
WATER LEVEL OBSERVATIONS							GENERAL NOTES					
While Drilling							Start	7/30/13	Complete	7/31/13		
Upon Completion of Drilling	<u>Dry</u>						Crew Chief	<u>AS</u>	Rig	<u>B-57</u>		
Time After Drilling	<u>24 hours</u>						Drilling Method:	<u>Geoprobe</u>				
Depth to Water	<u>14.2</u>											
Depth to Cave-in												

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #11

Boring No. B-11-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 42"		M		12							0
					14							0
					16							0
					18							0
4	GP 60"		M		20							0
					22							
					24							
End of Boring = 20.0 Feet												

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>		
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #11</b>		
Common Well Name <b>B-11-1</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.	
Grid Location NE 1/4 of NE 1/4 of Sec. <b>21</b> ; T. <b>19</b> N; R. <b>15</b> <input checked="" type="checkbox"/> E ft. <input type="checkbox"/> N. <input type="checkbox"/> S., ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>105 E. Main Street</b>		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>		
Lat. _____ Long. _____ or St. Plane _____ ft. N. ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone			Present Well Owner   Original Owner		
Reason For Abandonment <b>Temporary well</b>			Street Address or Route of Owner		
			City, State, Zip Code		
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>					
Original Construction Date <b>7/30/13</b>			Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole			If a Well Construction Report is available, please attach.		
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>			Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>		
Total Well Depth (ft.) <b>20.0</b> Casing Diameter (in.) _____ (From groundsurface) Casing Depth (ft.) _____			Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips		
Lower Drillhole Diameter (in.) _____ Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			For monitoring wells and monitoring well boreholes only <input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grout <input type="checkbox"/> Bentonite - Sand Slurry		
Depth to Water (Feet) <b>14.2</b> Feet					
<b>(5)</b> Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume
<b>3/8" Chipped Bentonite</b>			<b>Surface</b>	<b>20</b>	<b>25 lbs</b>
(6) Comments _____					
<b>(7) Name of Person or Firm Doing Sealing Work</b>			Date of Abandonment		
<b>Horizon</b>			<b>7/31/13</b>		
Signature of Person Doing Work		Date Signed			
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>			
Comments					
<b>FOR DNR OR COUNTY USE ONLY</b>					
Date Received		Noted By			
Comments					



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #11

Boring No. B-11-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
1	GP 36"		D	M	0	Concrete pavement										
					2	Red clayey sand with little small and large gravel (fill)										0
			M	M	4	Red sandy clay (fill)										0
					6	Dark brown to black non-plastic silty clay, with little partially decomposed wood fragments, and trace large gravel (fill) Lab Sample (2' - 4')										
2	GP 60"		M	M	8	Dark brown to black non-plastic silty clay, with little partially decomposed wood fragments, and trace large gravel (fill)										0
					10	Large and small gravel with some medium to coarse grain brown sand, and possible red brick fragments (fill) Red low plasticity clay with little small and large gravel										0
			M	M	12	Red low plasticity clay with little small and large gravel										0
					14	Lab Sample (10' - 12')										
WATER LEVEL OBSERVATIONS											GENERAL NOTES					
While Drilling _____											Start <u>7/30/13</u> Complete <u>7/31/13</u>					
Upon Completion of Drilling <u>Dry</u>											Crew Chief <u>AS</u> Rig <u>B-57</u>					
Time After Drilling <u>24 hours</u>											Drilling Method: <u>Geoprobe</u>					
Depth to Water <u>7.3 feet</u>																
Depth to Cave-in _____																

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #11

Boring No. B-11-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60"		M		12							0
					14							0
					16	Red low plasticity clay with little small and large gravel						0
			M		18							0
4	GP 60"				20	End of Boring = 20.0 Feet						0
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>		
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #11</b>		
Common Well Name <b>B-11-2</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.	
Grid Location <sup>NE</sup> 1/4 of <u>NE</u> 1/4 of Sec. <u>21</u> ; T. <u>19</u> N; R. <u>15</u> <input checked="" type="checkbox"/> E <u>W</u> _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>105 E. Main Street</b>		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>		
Lat. _____ Long. _____ or			Present Well Owner   Original Owner		
St. Plane _____ ft. N. ft. E. <input type="checkbox"/> S <input type="checkbox"/> C <input type="checkbox"/> N Zone			Street Address or Route of Owner		
Reason For Abandonment <b>Temporary well</b>		City, State, Zip Code			
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>					
Original Construction Date <b>7/30/13</b>		Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No  Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No			
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole		If a Well Construction Report is available, please attach.			
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>			
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock					
Total Well Depth (ft.) <b>20.0</b> (From groundsurface)		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips			
Lower Drillhole Diameter (in.) _____		For monitoring wells and monitoring well boreholes or			
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet		<input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grout <input type="checkbox"/> Bentonite - Sand Slurry			
Depth to Water (Feet) <b>7.3</b> Feet					
(5) Material Used To Fill Well/Drillhole <b>3/8" Chipped Bentonite</b>			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume
			<b>Surface</b>	<b>20</b>	<b>25 lbs</b>

(6) Comments \_\_\_\_\_

(7) Name of Person or Firm Doing Sealing Work		Date of Abandonment
<b>Horizon</b>		<b>7/31/13</b>
Signature of Person Doing Work		Date Signed
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>
City, State, Zip Code <b>Grafton, WI 53024</b>		

<b>FOR DNR OR COUNTY USE ONLY</b>	
Date Received	Noted By
Comments	



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #11

Boring No. B-11-3  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

SAMPLE						VISUAL CLASSIFICATION and Remarks					SOIL PROPERTIES					PID ppm
No.	Type	Recov.	Moist.	N-Value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf						
1	GP 42"		D M M	M	0	Small and large gravel with some medium to coarse grain brown sand (fill)										0
						Dark brown to black clayey sand with some small and large gravel (fill)										0
						Medium to coarse grain poorly graded brown sand (fill)										0
						Fine to medium grain poorly graded red sand										0
						Lab Sample (2' - 4')										0
						Red clayey sand										0
						Red medium plasticity clay, with little small and large gravel										0
						Lab Sample (8' - 10')										0
2	GP 60"			M	10	Red medium plasticity clay, with little small and large gravel										0
WATER LEVEL OBSERVATIONS											GENERAL NOTES					
While Drilling _____											Start <u>7/30/13</u> Complete <u>7/31/13</u>					
Upon Completion of Drilling <u>Dry</u>											Crew Chief <u>AS</u> Rig <u>B-57</u>					
Time After Drilling <u>24 hours</u>											Drilling Method: <u>Geoprobe</u>					
Depth to Water <u>7.2 feet</u>																
Depth to Cave-in _____																

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

Location Site #11

Boring No. B-11-3  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60"		M		12							0
3	GP 60"		M		14							0
3	GP 60"				16	Red medium plasticity clay, with little small and large gravel						0
4	GP 60"		M		18							0
4	GP 60"				20	End of Boring = 20.0 Feet						0
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>			
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #11</b>			
Common Well Name <u>B-11-3</u> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.		
Grid Location  ____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.  Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			Street Address of Well <b>105 E. Main Street</b> City, Village or Town <b>Winneconne</b>			
Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> S. <input type="checkbox"/> C. <input type="checkbox"/> N. Zone			Present Well Owner	Original Owner		
Reason For Abandonment <b>Temporary well</b>			Street Address or Route of Owner			
			City, State, Zip Code			
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>						
Original Construction Date <u>7/30/13</u>			<b>(4) PUMP, LINER, SCREEN, CASING &amp; SEALING MATERIAL</b>			
<input type="checkbox"/> Monitoring Well		Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable				
<input type="checkbox"/> Water Well		Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable				
<input checked="" type="checkbox"/> Borehole / Drillhole		Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable				
Construction Type:  <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <u>Direct Push</u>			Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Formation Type:  <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Total Well Depth (ft.) <u>20.0</u> Casing Diameter (in.) _____ (From groundsurface)			Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Casing Depth (ft.) _____			Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Lower Drillhole Diameter (in.) _____			If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			Required Method of Placing Sealing Material  <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <u>Gravity</u>			
Depth to Water (Feet) <u>7.2</u> Feet			Sealing Materials  <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips			For monitoring wells and monitoring well boreholes or
(5) Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight
<u>3/8" Chipped Bentonite</u>			<u>Surface</u>	<u>20</u>	<u>25 lbs</u>	

(6) Comments \_\_\_\_\_

(7) Name of Person or Firm Doing Sealing Work		Date of Abandonment
<b>Horizon</b>		<b>7/31/13</b>
Signature of Person Doing Work		Date Signed
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>
City, State, Zip Code <b>Grafton, WI 53024</b>		

<b>FOR DNR OR COUNTY USE ONLY</b>	
Date Received	Noted By
Comments	

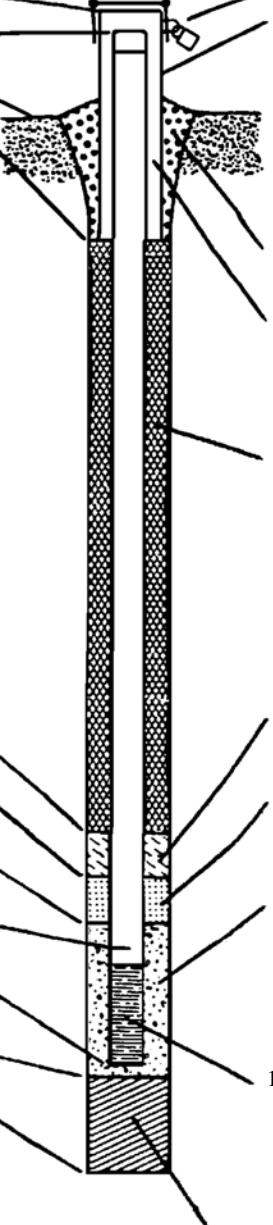
**ATTACHMENT C**

**WELL CONSTRUCTION FORMS**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-11-1</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	
Facility ID		Wis. Unique Well Number   DNR Well Number	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NE 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom	ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top	ft. MSL or _____ ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
F. Fine sand, top	ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup> --	
G. Filter pack, top	ft. MSL or _____ ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup> --	
H. Screen joint, top	ft. MSL or <b>10</b> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
I. Well bottom	ft. MSL or <b>20</b> ft.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
J. Filter pack, bottom	ft. MSL or _____ ft.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
K. Borehole bottom	ft. MSL or <b>20</b> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/> --	
L. Borehole diameter	in.		
M. O.D. well casing	in.		
N. I.D. well casing	in.		



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

Signature

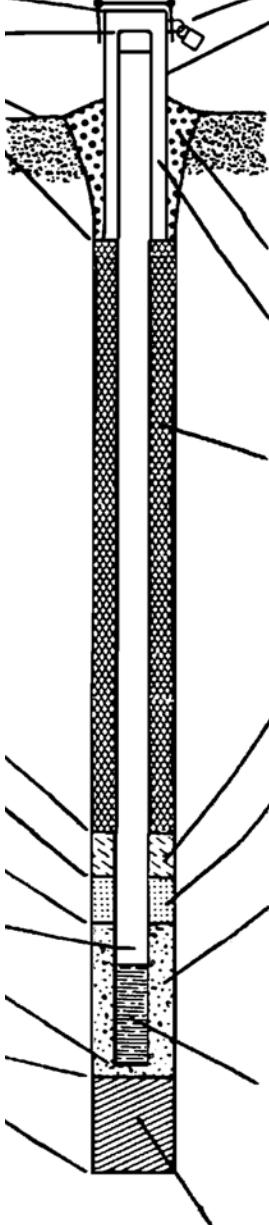
Firm **Himalayan Consultants, LLC**

W156 N11357 Pilgrim Road, Germantown, WI 53022  
Tel. (262) 502-0066, Fax (262) 502-0077

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-11-2</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/30/13</b>	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NE 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	_____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	_____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	<b>O</b> ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 <b>N/A</b> Other <input type="checkbox"/> --	
D. Surface seal, bottom	_____ ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____ _____			
E. Bentonite seal, top	_____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
F. Fine sand, top	_____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --	
G. Filter pack, top	_____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above	
H. Screen joint, top	_____ ft. MSL or <b>10</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8	
I. Well bottom	_____ ft. MSL or <b>20</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
J. Filter pack, bottom	_____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
K. Borehole bottom	_____ ft. MSL or <b>20</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
L. Borehole diameter	<b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
M. O.D. well casing	<b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
N. I.D. well casing	<b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
11. Backfill material (below filter pack): None <input type="checkbox"/> 1 4 Other <input type="checkbox"/> --			



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Signature

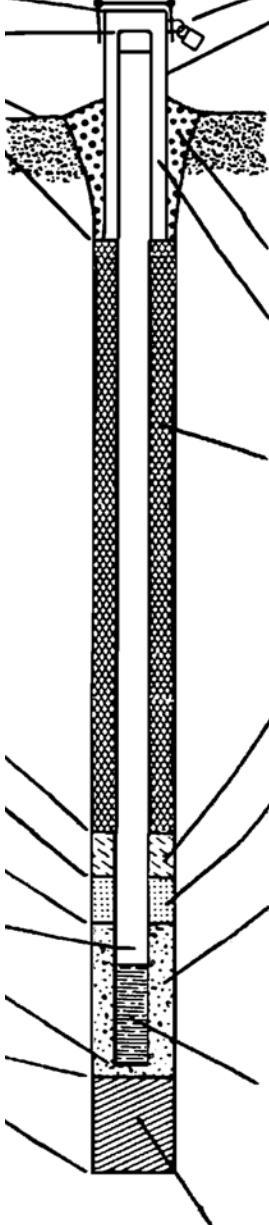
Firm **Himalayan Consultants, LLC**

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Tel. (262) 502-0066, Fax (262) 502-0077

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-11-3</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/30/13</b>	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NE 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	_____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	_____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	<b>O</b> ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 <b>N/A</b> Other <input type="checkbox"/> --	
D. Surface seal, bottom	_____ ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____ _____			
E. Bentonite seal, top	_____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
F. Fine sand, top	_____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> -- Other <input type="checkbox"/> --	
G. Filter pack, top	_____ ft. MSL or _____ ft.	5. Annular space seal: a. Granular Bentonite <input type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3 5 c. _____ Lbs/gal mud weight.... Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite..... Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above	
H. Screen joint, top	_____ ft. MSL or <b>10</b> ft.	f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input type="checkbox"/> 0 8	
I. Well bottom	_____ ft. MSL or <b>20</b> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
J. Filter pack, bottom	_____ ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
K. Borehole bottom	_____ ft. MSL or <b>20</b> ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
L. Borehole diameter	<b>2</b> in.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
M. O.D. well casing	<b>1.3</b> in.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
N. I.D. well casing	<b>0.8</b> in.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
11. Backfill material (below filter pack): None <input type="checkbox"/> 1 4 Other <input type="checkbox"/> --			



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

Signature

Firm **Himalayan Consultants, LLC**

W156 N11357 Pilgrim Road, Germantown, WI 53022  
Tel. (262) 502-0066, Fax (262) 502-0077

## **ATTACHMENT D**

### **LABORATORY ANALYTICAL REPORTS - SOIL, GROUNDWATER, AND WASTE CHARACTERIZATION**

## **SOIL ANALYTICAL**

August 15, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082162

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082162001	B-11-1 (2-4)	Solid	07/30/13 15:40	08/02/13 09:45
4082162002	B-11-1 (8-10)	Solid	07/30/13 15:50	08/02/13 09:45
4082162003	B-11-2 (2-4)	Solid	07/30/13 16:15	08/02/13 09:45
4082162004	B-11-2 (10-12)	Solid	07/30/13 16:25	08/02/13 09:45
4082162005	B-11-3 (2-4)	Solid	07/30/13 16:50	08/02/13 09:45
4082162006	B-11-3 (8-10)	Solid	07/30/13 17:00	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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 without the written consent of Pace Analytical Services, Inc..

## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082162001	B-11-1 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082162002	B-11-1 (8-10)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082162003	B-11-2 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082162004	B-11-2 (10-12)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082162005	B-11-3 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4082162006	B-11-3 (8-10)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	SKW	1	PASI-G

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

**HITS ONLY**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>4082162001</b>	<b>B-11-1 (2-4)</b>					
WI MOD DRO	Diesel Range Organics	2.9 mg/kg		1.9	08/09/13 10:19	
EPA 6010	Arsenic	4.4 mg/kg		2.1	08/07/13 14:40	
EPA 6010	Barium	25.9 mg/kg		0.53	08/07/13 14:40	
EPA 6010	Cadmium	0.13J mg/kg		0.53	08/07/13 14:40	
EPA 6010	Chromium	13.0 mg/kg		0.53	08/07/13 14:40	
EPA 6010	Lead	4.1 mg/kg		1.1	08/09/13 11:21	
EPA 7471	Mercury	0.017 mg/kg		0.0054	08/15/13 11:50	
ASTM D2974-87	Percent Moisture	6.4 %		0.10	08/13/13 13:24	
<b>4082162002</b>	<b>B-11-1 (8-10)</b>					
EPA 6010	Arsenic	4.9 mg/kg		2.2	08/07/13 14:47	
EPA 6010	Barium	85.8 mg/kg		0.56	08/07/13 14:47	
EPA 6010	Cadmium	0.28J mg/kg		0.56	08/07/13 14:47	
EPA 6010	Chromium	22.1 mg/kg		0.56	08/07/13 14:47	
EPA 6010	Lead	5.4 mg/kg		1.1	08/09/13 11:28	
EPA 7471	Mercury	0.010 mg/kg		0.0071	08/15/13 11:52	
EPA 8260	Tetrachloroethene	169 ug/kg		79.7	08/06/13 16:42	
EPA 8260	Trichloroethene	195 ug/kg		79.7	08/06/13 16:42	
ASTM D2974-87	Percent Moisture	15.4 %		0.10	08/13/13 13:24	
<b>4082162003</b>	<b>B-11-2 (2-4)</b>					
EPA 6010	Arsenic	4.2 mg/kg		2.0	08/07/13 14:49	
EPA 6010	Barium	51.2 mg/kg		0.50	08/07/13 14:49	
EPA 6010	Cadmium	0.20J mg/kg		0.50	08/07/13 14:49	
EPA 6010	Chromium	12.6 mg/kg		0.50	08/07/13 14:49	
EPA 6010	Lead	4.3 mg/kg		1.0	08/09/13 11:30	
EPA 7471	Mercury	0.11 mg/kg		0.0055	08/15/13 11:54	
ASTM D2974-87	Percent Moisture	7.2 %		0.10	08/13/13 13:24	
<b>4082162004</b>	<b>B-11-2 (10-12)</b>					
EPA 6010	Arsenic	4.3 mg/kg		2.2	08/07/13 14:51	
EPA 6010	Barium	68.8 mg/kg		0.55	08/07/13 14:51	
EPA 6010	Cadmium	0.26J mg/kg		0.55	08/07/13 14:51	
EPA 6010	Chromium	18.5 mg/kg		0.55	08/07/13 14:51	
EPA 6010	Lead	7.7 mg/kg		1.1	08/09/13 11:33	
EPA 7471	Mercury	0.016 mg/kg		0.0066	08/15/13 11:56	
EPA 8260	Tetrachloroethene	74.7 ug/kg		70.2	08/06/13 17:28	
EPA 8260	Trichloroethene	162 ug/kg		70.2	08/06/13 17:28	
ASTM D2974-87	Percent Moisture	14.5 %		0.10	08/13/13 13:24	
<b>4082162005</b>	<b>B-11-3 (2-4)</b>					
EPA 6010	Arsenic	1.2J mg/kg		1.9	08/07/13 14:54	
EPA 6010	Barium	16.8 mg/kg		0.47	08/07/13 14:54	
EPA 6010	Chromium	6.6 mg/kg		0.47	08/07/13 14:54	
EPA 6010	Lead	1.9 mg/kg		1.0	08/09/13 11:35	
ASTM D2974-87	Percent Moisture	6.0 %		0.10	08/13/13 13:24	
<b>4082162006</b>	<b>B-11-3 (8-10)</b>					
EPA 6010	Arsenic	3.9 mg/kg		2.3	08/07/13 14:56	

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## HITS ONLY

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082162

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
<b>4082162006</b>	<b>B-11-3 (8-10)</b>						
EPA 6010	Barium	73.3	mg/kg	0.56	08/07/13 14:56		
EPA 6010	Cadmium	0.23J	mg/kg	0.56	08/07/13 14:56		
EPA 6010	Chromium	19.7	mg/kg	0.56	08/07/13 14:56		
EPA 6010	Lead	4.9	mg/kg	1.1	08/09/13 11:37		
EPA 6010	Silver	<0.24	mg/kg	1.1	08/07/13 14:56		
EPA 7471	Mercury	0.0076	mg/kg	0.0073	08/15/13 12:05		
ASTM D2974-87	Percent Moisture	14.1	%	0.10	08/13/13 13:24		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

Sample: B-11-1 (2-4) Lab ID: 4082162001 Collected: 07/30/13 15:40 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	2.9 mg/kg		1.9	0.77	1	08/05/13 09:46	08/09/13 10:19		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.7 mg/kg		2.7	2.7	1	08/05/13 08:14	08/05/13 16:14		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.4 mg/kg		2.1	0.58	1	08/06/13 15:20	08/07/13 14:40	7440-38-2	
Barium	25.9 mg/kg		0.53	0.093	1	08/06/13 15:20	08/07/13 14:40	7440-39-3	
Cadmium	0.13J mg/kg		0.53	0.054	1	08/06/13 15:20	08/07/13 14:40	7440-43-9	
Chromium	13.0 mg/kg		0.53	0.13	1	08/06/13 15:20	08/07/13 14:40	7440-47-3	
Lead	4.1 mg/kg		1.1	0.31	1	08/08/13 15:00	08/09/13 11:21	7439-92-1	
Selenium	<0.63 mg/kg		2.1	0.63	1	08/06/13 15:20	08/07/13 14:40	7782-49-2	
Silver	<0.23 mg/kg		1.1	0.23	1	08/06/13 15:20	08/07/13 14:40	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.017 mg/kg		0.0054	0.0027	1	08/14/13 15:27	08/15/13 11:50	7439-97-6	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	630-20-6	W
1,1,1-Trichloroethane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	71-55-6	W
1,1,2,2-Tetrachloroethane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	79-34-5	W
1,1,2-Trichloroethane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	79-00-5	W
1,1-Dichloroethane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-34-3	W
1,1-Dichloroethene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-35-4	W
1,1-Dichloropropene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	563-58-6	W
1,2,3-Trichlorobenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	87-61-6	W
1,2,3-Trichloropropane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	96-18-4	W
1,2,4-Trichlorobenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	120-82-1	W
1,2,4-Trimethylbenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	95-63-6	W
1,2-Dibromo-3-chloropropane	<54.8 ug/kg		275	54.8	1	08/05/13 11:05	08/06/13 16:19	96-12-8	W
1,2-Dibromoethane (EDB)	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	106-93-4	W
1,2-Dichlorobenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	95-50-1	W
1,2-Dichloroethane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	107-06-2	W
1,2-Dichloropropane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	78-87-5	W
1,3,5-Trimethylbenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	108-67-8	W
1,3-Dichlorobenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	541-73-1	W
1,3-Dichloropropane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	142-28-9	W
1,4-Dichlorobenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	106-46-7	W
2,2-Dichloropropane	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	594-20-7	W
2-Butanone (MEK)	<130 ug/kg		275	130	1	08/05/13 11:05	08/06/13 16:19	78-93-3	W
2-Chlorotoluene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	95-49-8	W
4-Chlorotoluene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	106-43-4	W
Benzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	71-43-2	W
Bromobenzene	<27.5 ug/kg		65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	108-86-1	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-1 (2-4) Lab ID: 4082162001 Collected: 07/30/13 15:40 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Bromochloromethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	74-97-5		W
Bromodichloromethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-27-4		W
Bromoform	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-25-2		W
Bromomethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	74-83-9		W
Carbon tetrachloride	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	56-23-5		W
Chlorobenzene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	108-90-7		W
Chloroethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-00-3		W
Chloroform	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	67-66-3		W
Chloromethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	74-87-3		W
Dibromochloromethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	124-48-1		W
Dibromomethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	74-95-3		W
Dichlorodifluoromethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-71-8		W
Diisopropyl ether	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	108-20-3		W
Ethylbenzene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	100-41-4		W
Hexachloro-1,3-butadiene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	87-68-3		W
Isopropylbenzene (Cumene)	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	98-82-8		W
Methyl-tert-butyl ether	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	1634-04-4		W
Methylene Chloride	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-09-2		W
Naphthalene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	91-20-3		W
Styrene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	100-42-5		W
Tetrachloroethene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	127-18-4		W
Toluene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	108-88-3		W
Trichloroethene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	79-01-6		W
Trichlorofluoromethane	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-69-4		W
Vinyl chloride	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	75-01-4		W
cis-1,2-Dichloroethene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	156-59-2		W
cis-1,3-Dichloropropene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	10061-01-5		W
m&p-Xylene	<54.9 ug/kg	132	54.9	1	08/05/13 11:05	08/06/13 16:19	179601-23-1		W
n-Butylbenzene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	104-51-8		W
n-Propylbenzene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	103-65-1		W
o-Xylene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	95-47-6		W
p-Isopropyltoluene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	99-87-6		W
sec-Butylbenzene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	135-98-8		W
tert-Butylbenzene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	98-06-6		W
trans-1,2-Dichloroethene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	156-60-5		W
trans-1,3-Dichloropropene	<27.5 ug/kg	65.9	27.5	1	08/05/13 11:05	08/06/13 16:19	10061-02-6		W
<b>Surrogates</b>									
Dibromofluoromethane (S)	100 %	57-130		1	08/05/13 11:05	08/06/13 16:19	1868-53-7		
Toluene-d8 (S)	106 %	54-133		1	08/05/13 11:05	08/06/13 16:19	2037-26-5		
4-Bromofluorobenzene (S)	95 %	49-130		1	08/05/13 11:05	08/06/13 16:19	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	6.4 %	0.10	0.10	1			08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-1 (8-10) Lab ID: 4082162002 Collected: 07/30/13 15:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.77 mg/kg		1.9	0.77	1	08/05/13 09:46	08/09/13 10:25		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.1 mg/kg		3.1	3.1	1	08/05/13 08:14	08/05/13 20:03		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.9 mg/kg		2.2	0.60	1	08/06/13 15:20	08/07/13 14:47	7440-38-2	
Barium	85.8 mg/kg		0.56	0.096	1	08/06/13 15:20	08/07/13 14:47	7440-39-3	
Cadmium	0.28J mg/kg		0.56	0.056	1	08/06/13 15:20	08/07/13 14:47	7440-43-9	
Chromium	22.1 mg/kg		0.56	0.14	1	08/06/13 15:20	08/07/13 14:47	7440-47-3	
Lead	5.4 mg/kg		1.1	0.32	1	08/08/13 15:00	08/09/13 11:28	7439-92-1	
Selenium	<0.66 mg/kg		2.2	0.66	1	08/06/13 15:20	08/07/13 14:47	7782-49-2	
Silver	<0.24 mg/kg		1.1	0.24	1	08/06/13 15:20	08/07/13 14:47	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.010 mg/kg		0.0071	0.0035	1	08/14/13 15:27	08/15/13 11:52	7439-97-6	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	630-20-6	W
1,1,1-Trichloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	71-55-6	W
1,1,2,2-Tetrachloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	79-34-5	W
1,1,2-Trichloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	79-00-5	W
1,1-Dichloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-34-3	W
1,1-Dichloroethene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-35-4	W
1,1-Dichloropropene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	563-58-6	W
1,2,3-Trichlorobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	87-61-6	W
1,2,3-Trichloropropane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	96-18-4	W
1,2,4-Trichlorobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	120-82-1	W
1,2,4-Trimethylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	95-63-6	W
1,2-Dibromo-3-chloropropane	<56.0 ug/kg		281	56.0	1	08/05/13 11:05	08/06/13 16:42	96-12-8	W
1,2-Dibromoethane (EDB)	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	106-93-4	W
1,2-Dichlorobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	95-50-1	W
1,2-Dichloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	107-06-2	W
1,2-Dichloropropane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	78-87-5	W
1,3,5-Trimethylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	108-67-8	W
1,3-Dichlorobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	541-73-1	W
1,3-Dichloropropane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	142-28-9	W
1,4-Dichlorobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	106-46-7	W
2,2-Dichloropropane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	594-20-7	W
2-Butanone (MEK)	<133 ug/kg		281	133	1	08/05/13 11:05	08/06/13 16:42	78-93-3	W
2-Chlorotoluene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	95-49-8	W
4-Chlorotoluene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	106-43-4	W
Benzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	71-43-2	W
Bromobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	108-86-1	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-1 (8-10) Lab ID: 4082162002 Collected: 07/30/13 15:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Bromochloromethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	74-97-5	W
Bromodichloromethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-27-4	W
Bromoform	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-25-2	W
Bromomethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	74-83-9	W
Carbon tetrachloride	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	56-23-5	W
Chlorobenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	108-90-7	W
Chloroethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-00-3	W
Chloroform	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	67-66-3	W
Chloromethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	74-87-3	W
Dibromochloromethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	124-48-1	W
Dibromomethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	74-95-3	W
Dichlorodifluoromethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-71-8	W
Diisopropyl ether	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	108-20-3	W
Ethylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	100-41-4	W
Hexachloro-1,3-butadiene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	87-68-3	W
Isopropylbenzene (Cumene)	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	98-82-8	W
Methyl-tert-butyl ether	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	1634-04-4	W
Methylene Chloride	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-09-2	W
Naphthalene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	91-20-3	W
Styrene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	100-42-5	W
Tetrachloroethene	169 ug/kg		79.7	33.2	1	08/05/13 11:05	08/06/13 16:42	127-18-4	
Toluene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	108-88-3	W
Trichloroethene	195 ug/kg		79.7	33.2	1	08/05/13 11:05	08/06/13 16:42	79-01-6	
Trichlorofluoromethane	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-69-4	W
Vinyl chloride	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	75-01-4	W
cis-1,2-Dichloroethene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	156-59-2	W
cis-1,3-Dichloropropene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	10061-01-5	W
m&p-Xylene	<56.2 ug/kg		135	56.2	1	08/05/13 11:05	08/06/13 16:42	179601-23-1	W
n-Butylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	104-51-8	W
n-Propylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	103-65-1	W
o-Xylene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	95-47-6	W
p-Isopropyltoluene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	99-87-6	W
sec-Butylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	135-98-8	W
tert-Butylbenzene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	98-06-6	W
trans-1,2-Dichloroethene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	156-60-5	W
trans-1,3-Dichloropropene	<28.1 ug/kg		67.4	28.1	1	08/05/13 11:05	08/06/13 16:42	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	99 %		57-130		1	08/05/13 11:05	08/06/13 16:42	1868-53-7	
Toluene-d8 (S)	105 %		54-133		1	08/05/13 11:05	08/06/13 16:42	2037-26-5	
4-Bromofluorobenzene (S)	94 %		49-130		1	08/05/13 11:05	08/06/13 16:42	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	15.4 %		0.10	0.10	1			08/13/13 13:24	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-2 (2-4) Lab ID: 4082162003 Collected: 07/30/13 16:15 Received: 08/02/13 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.72 mg/kg		1.8	0.72	1	08/05/13 09:46	08/09/13 10:31		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.7 mg/kg		2.7	2.7	1	08/05/13 08:14	08/05/13 14:48		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.2 mg/kg		2.0	0.54	1	08/06/13 15:20	08/07/13 14:49	7440-38-2	
Barium	51.2 mg/kg		0.50	0.087	1	08/06/13 15:20	08/07/13 14:49	7440-39-3	
Cadmium	0.20J mg/kg		0.50	0.051	1	08/06/13 15:20	08/07/13 14:49	7440-43-9	
Chromium	12.6 mg/kg		0.50	0.13	1	08/06/13 15:20	08/07/13 14:49	7440-47-3	
Lead	4.3 mg/kg		1.0	0.30	1	08/08/13 15:00	08/09/13 11:30	7439-92-1	
Selenium	<0.60 mg/kg		2.0	0.60	1	08/06/13 15:20	08/07/13 14:49	7782-49-2	
Silver	<0.21 mg/kg		1.0	0.21	1	08/06/13 15:20	08/07/13 14:49	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.11 mg/kg		0.0055	0.0027	1	08/14/13 15:27	08/15/13 11:54	7439-97-6	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	630-20-6	W
1,1,1-Trichloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	79-34-5	W
1,1,2-Trichloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	79-00-5	W
1,1-Dichloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-34-3	W
1,1-Dichloroethene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-35-4	W
1,1-Dichloropropene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	563-58-6	W
1,2,3-Trichlorobenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	87-61-6	W
1,2,3-Trichloropropane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	96-18-4	W
1,2,4-Trichlorobenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	120-82-1	W
1,2,4-Trimethylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	95-63-6	W
1,2-Dibromo-3-chloropropane	<53.6 ug/kg		269	53.6	1	08/05/13 11:05	08/06/13 17:05	96-12-8	W
1,2-Dibromoethane (EDB)	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	106-93-4	W
1,2-Dichlorobenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	95-50-1	W
1,2-Dichloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	107-06-2	W
1,2-Dichloropropane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	78-87-5	W
1,3,5-Trimethylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	108-67-8	W
1,3-Dichlorobenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	541-73-1	W
1,3-Dichloropropane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	142-28-9	W
1,4-Dichlorobenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	106-46-7	W
2,2-Dichloropropane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	594-20-7	W
2-Butanone (MEK)	<127 ug/kg		269	127	1	08/05/13 11:05	08/06/13 17:05	78-93-3	W
2-Chlorotoluene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	95-49-8	W
4-Chlorotoluene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	106-43-4	W
Benzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	71-43-2	W
Bromobenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	108-86-1	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-2 (2-4) Lab ID: 4082162003 Collected: 07/30/13 16:15 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Bromochloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	74-97-5		W
Bromodichloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-27-4		W
Bromoform	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-25-2		W
Bromomethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	74-83-9		W
Carbon tetrachloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	56-23-5		W
Chlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	108-90-7		W
Chloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-00-3		W
Chloroform	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	67-66-3		W
Chloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	74-87-3		W
Dibromochloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	124-48-1		W
Dibromomethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	74-95-3		W
Dichlorodifluoromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-71-8		W
Diisopropyl ether	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	108-20-3		W
Ethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	100-41-4		W
Hexachloro-1,3-butadiene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	87-68-3		W
Isopropylbenzene (Cumene)	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	98-82-8		W
Methyl-tert-butyl ether	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	1634-04-4		W
Methylene Chloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-09-2		W
Naphthalene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	91-20-3		W
Styrene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	100-42-5		W
Tetrachloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	127-18-4		W
Toluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	108-88-3		W
Trichloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	79-01-6		W
Trichlorofluoromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-69-4		W
Vinyl chloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	75-01-4		W
cis-1,2-Dichloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	156-59-2		W
cis-1,3-Dichloropropene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	10061-01-5		W
m&p-Xylene	<53.8 ug/kg	129	53.8	1	08/05/13 11:05	08/06/13 17:05	179601-23-1		W
n-Butylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	104-51-8		W
n-Propylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	103-65-1		W
o-Xylene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	95-47-6		W
p-Isopropyltoluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	99-87-6		W
sec-Butylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	135-98-8		W
tert-Butylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	98-06-6		W
trans-1,2-Dichloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	156-60-5		W
trans-1,3-Dichloropropene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 17:05	10061-02-6		W
<b>Surrogates</b>									
Dibromofluoromethane (S)	95 %	57-130		1	08/05/13 11:05	08/06/13 17:05	1868-53-7		
Toluene-d8 (S)	101 %	54-133		1	08/05/13 11:05	08/06/13 17:05	2037-26-5		
4-Bromofluorobenzene (S)	91 %	49-130		1	08/05/13 11:05	08/06/13 17:05	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	7.2 %	0.10	0.10	1			08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-2 (10-12) Lab ID: 4082162004 Collected: 07/30/13 16:25 Received: 08/02/13 09:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.82 mg/kg		2.0	0.82	1	08/05/13 09:46	08/09/13 10:37		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.1 mg/kg		3.1	3.1	1	08/05/13 08:14	08/05/13 16:43		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.3 mg/kg		2.2	0.59	1	08/06/13 15:20	08/07/13 14:51	7440-38-2	
Barium	68.8 mg/kg		0.55	0.095	1	08/06/13 15:20	08/07/13 14:51	7440-39-3	
Cadmium	0.26J mg/kg		0.55	0.056	1	08/06/13 15:20	08/07/13 14:51	7440-43-9	
Chromium	18.5 mg/kg		0.55	0.14	1	08/06/13 15:20	08/07/13 14:51	7440-47-3	
Lead	7.7 mg/kg		1.1	0.31	1	08/08/13 15:00	08/09/13 11:33	7439-92-1	
Selenium	<0.65 mg/kg		2.2	0.65	1	08/06/13 15:20	08/07/13 14:51	7782-49-2	
Silver	<0.23 mg/kg		1.1	0.23	1	08/06/13 15:20	08/07/13 14:51	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.016 mg/kg		0.0066	0.0033	1	08/14/13 15:27	08/15/13 11:56	7439-97-6	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	630-20-6	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	79-34-5	W
1,1,2-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	79-00-5	W
1,1-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-34-3	W
1,1-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-35-4	W
1,1-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	563-58-6	W
1,2,3-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	87-61-6	W
1,2,3-Trichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	96-18-4	W
1,2,4-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	120-82-1	W
1,2,4-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	95-63-6	W
1,2-Dibromo-3-chloropropane	<49.8 ug/kg		250	49.8	1	08/05/13 11:05	08/06/13 17:28	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	106-93-4	W
1,2-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	95-50-1	W
1,2-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	107-06-2	W
1,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	78-87-5	W
1,3,5-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	108-67-8	W
1,3-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	541-73-1	W
1,3-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	142-28-9	W
1,4-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	106-46-7	W
2,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	594-20-7	W
2-Butanone (MEK)	<118 ug/kg		250	118	1	08/05/13 11:05	08/06/13 17:28	78-93-3	W
2-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	95-49-8	W
4-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	106-43-4	W
Benzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	71-43-2	W
Bromobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	108-86-1	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-2 (10-12) Lab ID: 4082162004 Collected: 07/30/13 16:25 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Bromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	74-97-5		W
Bromodichloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-27-4		W
Bromoform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-25-2		W
Bromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	74-83-9		W
Carbon tetrachloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	56-23-5		W
Chlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	108-90-7		W
Chloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-00-3		W
Chloroform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	67-66-3		W
Chloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	74-87-3		W
Dibromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	124-48-1		W
Dibromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	74-95-3		W
Dichlorodifluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-71-8		W
Diisopropyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	108-20-3		W
Ethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	100-41-4		W
Hexachloro-1,3-butadiene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	87-68-3		W
Isopropylbenzene (Cumene)	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	98-82-8		W
Methyl-tert-butyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	1634-04-4		W
Methylene Chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-09-2		W
Naphthalene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	91-20-3		W
Styrene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	100-42-5		W
Tetrachloroethene	74.7 ug/kg	70.2	29.2	1	08/05/13 11:05	08/06/13 17:28	127-18-4		
Toluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	108-88-3		W
Trichloroethene	162 ug/kg	70.2	29.2	1	08/05/13 11:05	08/06/13 17:28	79-01-6		
Trichlorofluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-69-4		W
Vinyl chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	75-01-4		W
cis-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	156-59-2		W
cis-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	10061-01-5		W
m&p-Xylene	<50.0 ug/kg	120	50.0	1	08/05/13 11:05	08/06/13 17:28	179601-23-1		W
n-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	104-51-8		W
n-Propylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	103-65-1		W
o-Xylene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	95-47-6		W
p-Isopropyltoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	99-87-6		W
sec-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	135-98-8		W
tert-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	98-06-6		W
trans-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	156-60-5		W
trans-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 17:28	10061-02-6		W
<b>Surrogates</b>									
Dibromofluoromethane (S)	96 %	57-130		1	08/05/13 11:05	08/06/13 17:28	1868-53-7		
Toluene-d8 (S)	103 %	54-133		1	08/05/13 11:05	08/06/13 17:28	2037-26-5		
4-Bromofluorobenzene (S)	90 %	49-130		1	08/05/13 11:05	08/06/13 17:28	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	14.5 %	0.10	0.10	1			08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-3 (2-4) Lab ID: 4082162005 Collected: 07/30/13 16:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.74 mg/kg		1.8	0.74	1	08/05/13 09:46	08/09/13 10:43		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<2.8 mg/kg		2.8	2.8	1	08/05/13 08:14	08/05/13 10:30		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.2J mg/kg		1.9	0.51	1	08/06/13 15:20	08/07/13 14:54	7440-38-2	
Barium	16.8 mg/kg		0.47	0.081	1	08/06/13 15:20	08/07/13 14:54	7440-39-3	
Cadmium	<0.047 mg/kg		0.47	0.047	1	08/06/13 15:20	08/07/13 14:54	7440-43-9	
Chromium	6.6 mg/kg		0.47	0.12	1	08/06/13 15:20	08/07/13 14:54	7440-47-3	
Lead	1.9 mg/kg		1.0	0.29	1	08/08/13 15:00	08/09/13 11:35	7439-92-1	
Selenium	<0.55 mg/kg		1.9	0.55	1	08/06/13 15:20	08/07/13 14:54	7782-49-2	
Silver	<0.20 mg/kg		0.93	0.20	1	08/06/13 15:20	08/07/13 14:54	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	<0.0032 mg/kg		0.0064	0.0032	1	08/14/13 15:27	08/15/13 11:58	7439-97-6	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	630-20-6	W
1,1,1-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	79-34-5	W
1,1,2-Trichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	79-00-5	W
1,1-Dichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-34-3	W
1,1-Dichloroethene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-35-4	W
1,1-Dichloropropene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	563-58-6	W
1,2,3-Trichlorobenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	87-61-6	W
1,2,3-Trichloropropane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	96-18-4	W
1,2,4-Trichlorobenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	120-82-1	W
1,2,4-Trimethylbenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	95-63-6	W
1,2-Dibromo-3-chloropropane	<51.4 ug/kg		258	51.4	1	08/05/13 11:05	08/06/13 17:52	96-12-8	W
1,2-Dibromoethane (EDB)	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	106-93-4	W
1,2-Dichlorobenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	95-50-1	W
1,2-Dichloroethane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	107-06-2	W
1,2-Dichloropropane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	78-87-5	W
1,3,5-Trimethylbenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	108-67-8	W
1,3-Dichlorobenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	541-73-1	W
1,3-Dichloropropane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	142-28-9	W
1,4-Dichlorobenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	106-46-7	W
2,2-Dichloropropane	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	594-20-7	W
2-Butanone (MEK)	<122 ug/kg		258	122	1	08/05/13 11:05	08/06/13 17:52	78-93-3	W
2-Chlorotoluene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	95-49-8	W
4-Chlorotoluene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	106-43-4	W
Benzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	71-43-2	W
Bromobenzene	<25.8 ug/kg		61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	108-86-1	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-3 (2-4) Lab ID: 4082162005 Collected: 07/30/13 16:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Bromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	74-97-5		W
Bromodichloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-27-4		W
Bromoform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-25-2		W
Bromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	74-83-9		W
Carbon tetrachloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	56-23-5		W
Chlorobenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	108-90-7		W
Chloroethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-00-3		W
Chloroform	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	67-66-3		W
Chloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	74-87-3		W
Dibromochloromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	124-48-1		W
Dibromomethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	74-95-3		W
Dichlorodifluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-71-8		W
Diisopropyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	108-20-3		W
Ethylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	100-41-4		W
Hexachloro-1,3-butadiene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	87-68-3		W
Isopropylbenzene (Cumene)	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	98-82-8		W
Methyl-tert-butyl ether	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	1634-04-4		W
Methylene Chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-09-2		W
Naphthalene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	91-20-3		W
Styrene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	100-42-5		W
Tetrachloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	127-18-4		W
Toluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	108-88-3		W
Trichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	79-01-6		W
Trichlorofluoromethane	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-69-4		W
Vinyl chloride	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	75-01-4		W
cis-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	156-59-2		W
cis-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	10061-01-5		W
m&p-Xylene	<51.5 ug/kg	124	51.5	1	08/05/13 11:05	08/06/13 17:52	179601-23-1		W
n-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	104-51-8		W
n-Propylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	103-65-1		W
o-Xylene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	95-47-6		W
p-Isopropyltoluene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	99-87-6		W
sec-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	135-98-8		W
tert-Butylbenzene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	98-06-6		W
trans-1,2-Dichloroethene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	156-60-5		W
trans-1,3-Dichloropropene	<25.8 ug/kg	61.9	25.8	1	08/05/13 11:05	08/06/13 17:52	10061-02-6		W
<b>Surrogates</b>									
Dibromofluoromethane (S)	97 %	57-130		1	08/05/13 11:05	08/06/13 17:52	1868-53-7		
Toluene-d8 (S)	103 %	54-133		1	08/05/13 11:05	08/06/13 17:52	2037-26-5		
4-Bromofluorobenzene (S)	93 %	49-130		1	08/05/13 11:05	08/06/13 17:52	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	6.0 %	0.10	0.10	1			08/13/13 13:24		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-3 (8-10) Lab ID: 4082162006 Collected: 07/30/13 17:00 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.77 mg/kg		1.9	0.77	1	08/05/13 09:46	08/09/13 10:49		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.2 mg/kg		3.2	3.2	1	08/05/13 08:14	08/05/13 10:59		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.9 mg/kg		2.3	0.61	1	08/06/13 15:20	08/07/13 14:56	7440-38-2	
Barium	73.3 mg/kg		0.56	0.098	1	08/06/13 15:20	08/07/13 14:56	7440-39-3	
Cadmium	0.23J mg/kg		0.56	0.057	1	08/06/13 15:20	08/07/13 14:56	7440-43-9	
Chromium	19.7 mg/kg		0.56	0.14	1	08/06/13 15:20	08/07/13 14:56	7440-47-3	
Lead	4.9 mg/kg		1.1	0.31	1	08/08/13 15:00	08/09/13 11:37	7439-92-1	
Selenium	<0.67 mg/kg		2.3	0.67	1	08/06/13 15:20	08/07/13 14:56	7782-49-2	
Silver	<0.24 mg/kg		1.1	0.24	1	08/06/13 15:20	08/07/13 14:56	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.0076 mg/kg		0.0073	0.0036	1	08/14/13 15:27	08/15/13 12:05	7439-97-6	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	630-20-6	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	79-34-5	W
1,1,2-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	79-00-5	W
1,1-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-34-3	W
1,1-Dichloroethene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-35-4	W
1,1-Dichloropropene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	563-58-6	W
1,2,3-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	87-61-6	W
1,2,3-Trichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	96-18-4	W
1,2,4-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	120-82-1	W
1,2,4-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	95-63-6	W
1,2-Dibromo-3-chloropropane	<49.8 ug/kg		250	49.8	1	08/05/13 11:05	08/06/13 18:15	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	106-93-4	W
1,2-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	95-50-1	W
1,2-Dichloroethane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	107-06-2	W
1,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	78-87-5	W
1,3,5-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	108-67-8	W
1,3-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	541-73-1	W
1,3-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	142-28-9	W
1,4-Dichlorobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	106-46-7	W
2,2-Dichloropropane	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	594-20-7	W
2-Butanone (MEK)	<118 ug/kg		250	118	1	08/05/13 11:05	08/06/13 18:15	78-93-3	W
2-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	95-49-8	W
4-Chlorotoluene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	106-43-4	W
Benzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	71-43-2	W
Bromobenzene	<25.0 ug/kg		60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	108-86-1	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

Sample: B-11-3 (8-10) Lab ID: 4082162006 Collected: 07/30/13 17:00 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Bromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	74-97-5		W
Bromodichloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-27-4		W
Bromoform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-25-2		W
Bromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	74-83-9		W
Carbon tetrachloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	56-23-5		W
Chlorobenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	108-90-7		W
Chloroethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-00-3		W
Chloroform	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	67-66-3		W
Chloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	74-87-3		W
Dibromochloromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	124-48-1		W
Dibromomethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	74-95-3		W
Dichlorodifluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-71-8		W
Diisopropyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	108-20-3		W
Ethylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	100-41-4		W
Hexachloro-1,3-butadiene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	87-68-3		W
Isopropylbenzene (Cumene)	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	98-82-8		W
Methyl-tert-butyl ether	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	1634-04-4		W
Methylene Chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-09-2		W
Naphthalene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	91-20-3		W
Styrene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	100-42-5		W
Tetrachloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	127-18-4		W
Toluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	108-88-3		W
Trichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	79-01-6		W
Trichlorofluoromethane	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-69-4		W
Vinyl chloride	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	75-01-4		W
cis-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	156-59-2		W
cis-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	10061-01-5		W
m&p-Xylene	<50.0 ug/kg	120	50.0	1	08/05/13 11:05	08/06/13 18:15	179601-23-1		W
n-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	104-51-8		W
n-Propylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	103-65-1		W
o-Xylene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	95-47-6		W
p-Isopropyltoluene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	99-87-6		W
sec-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	135-98-8		W
tert-Butylbenzene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	98-06-6		W
trans-1,2-Dichloroethene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	156-60-5		W
trans-1,3-Dichloropropene	<25.0 ug/kg	60.0	25.0	1	08/05/13 11:05	08/06/13 18:15	10061-02-6		W
<b>Surrogates</b>									
Dibromofluoromethane (S)	92 %	57-130		1	08/05/13 11:05	08/06/13 18:15	1868-53-7		
Toluene-d8 (S)	98 %	54-133		1	08/05/13 11:05	08/06/13 18:15	2037-26-5		
4-Bromofluorobenzene (S)	90 %	49-130		1	08/05/13 11:05	08/06/13 18:15	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	14.1 %	0.10	0.10	1			08/13/13 13:24		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch: GCV/10696 Analysis Method: WI MOD GRO

QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

METHOD BLANK: 833281 Matrix: Solid

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<2.5	2.5	08/05/13 09:04	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833282 833283

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	10	9.8	10.2	98	102	80-120	4	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch:	MERP/3805	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006		

METHOD BLANK: 839231	Matrix: Solid
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Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Mercury	mg/kg	<0.0033	0.0067	08/15/13 11:15	

LABORATORY CONTROL SAMPLE: 839232

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Mercury	mg/kg	.17	0.17	100	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 839233 839234

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		4082157001	Spike										
Mercury	mg/kg	0.018	.18	.18	0.20	0.19	98	95	85-115	2	20		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch: MPRP/8918 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

METHOD BLANK: 834148 Matrix: Solid

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.54	2.0	08/07/13 14:35	
Barium	mg/kg	<0.087	0.50	08/07/13 14:35	
Cadmium	mg/kg	<0.051	0.50	08/07/13 14:35	
Chromium	mg/kg	0.13J	0.50	08/07/13 14:35	
Selenium	mg/kg	<0.59	2.0	08/07/13 14:35	
Silver	mg/kg	<0.21	1.0	08/07/13 14:35	

LABORATORY CONTROL SAMPLE: 834149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	51.3	103	80-120	
Barium	mg/kg	50	52.9	106	80-120	
Cadmium	mg/kg	50	50.7	101	80-120	
Chromium	mg/kg	50	52.3	105	80-120	
Selenium	mg/kg	50	51.7	103	80-120	
Silver	mg/kg	25	25.4	101	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 834150 834151

Parameter	Units	4082162001		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD RPD	Max Qual
		Result	Spike Conc.	Spike Conc.	Result					
Arsenic	mg/kg	3.6	53.4	53.1	52.8	52.2	91	90	75-125	1 20
Barium	mg/kg	23.3	53.4	53.1	76.5	79.5	95	101	75-125	4 20
Cadmium	mg/kg	0.20J	53.4	53.1	50.1	49.5	94	93	75-125	1 20
Chromium	mg/kg	10.8	53.4	53.1	59.7	59.3	87	87	75-125	1 20
Selenium	mg/kg	<0.63	53.4	53.1	48.6	48.6	90	91	75-125	0 20
Silver	mg/kg	<0.23	26.7	26.6	25.4	24.9	94	93	75-125	2 20

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch: MPRP/8935 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

METHOD BLANK: 835593 Matrix: Solid

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.29	1.0	08/09/13 11:17	

LABORATORY CONTROL SAMPLE: 835594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	50	48.9	98	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 835595 835596

Parameter	Units	4082162001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Lead	mg/kg	4.1	53.1	53	47.3	46.1	81	79	75-125	3	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch: MSV/20741 Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

METHOD BLANK: 833920 Matrix: Solid

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	08/06/13 12:28	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
2,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
2-Butanone (MEK)	ug/kg	<118	250	08/06/13 12:28	
2-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
Benzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromodichloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromoform	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Carbon tetrachloride	ug/kg	<25.0	60.0	08/06/13 12:28	
Chlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroform	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Diisopropyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Ethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	08/06/13 12:28	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

METHOD BLANK: 833920

Matrix: Solid

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	08/06/13 12:28	
m&p-Xylene	ug/kg	<50.0	120	08/06/13 12:28	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Methylene Chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Propylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Naphthalene	ug/kg	<25.0	60.0	08/06/13 12:28	
o-Xylene	ug/kg	<25.0	60.0	08/06/13 12:28	
p-Isopropyltoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
sec-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Styrene	ug/kg	<25.0	60.0	08/06/13 12:28	
tert-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Tetrachloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Toluene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichlorofluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Vinyl chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Bromofluorobenzene (S)	%	95	49-130	08/06/13 12:28	
Dibromofluoromethane (S)	%	100	57-130	08/06/13 12:28	
Toluene-d8 (S)	%	104	54-133	08/06/13 12:28	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833921

833922

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2440	2470	98	99	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2680	2930	107	117	70-130	9	20	
1,1,2-Trichloroethane	ug/kg	2500	2780	2860	111	114	70-130	3	20	
1,1-Dichloroethane	ug/kg	2500	2630	2640	105	106	70-130	0	20	
1,1-Dichloroethene	ug/kg	2500	2460	2460	98	98	64-130	0	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2400	2700	96	108	68-130	12	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2170	2540	87	102	50-150	16	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2580	2710	103	108	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	2500	2610	2630	104	105	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2320	2400	93	96	70-130	4	20	
1,2-Dichloropropane	ug/kg	2500	2870	2940	115	117	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	2500	2660	2640	106	106	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	2500	2520	2580	101	103	70-130	2	20	
Benzene	ug/kg	2500	2750	2890	110	115	70-130	5	20	
Bromodichloromethane	ug/kg	2500	2600	2590	104	103	70-130	1	20	
Bromoform	ug/kg	2500	2390	2490	95	100	63-130	4	20	
Bromomethane	ug/kg	2500	1970	2040	79	82	41-142	4	20	
Carbon tetrachloride	ug/kg	2500	2480	2550	99	102	70-130	3	20	
Chlorobenzene	ug/kg	2500	2600	2620	104	105	70-130	1	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

LABORATORY CONTROL SAMPLE & LCSD:		833922								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroethane	ug/kg	2500	1670	1750	67	70	57-130	5	20	
Chloroform	ug/kg	2500	2540	2650	102	106	70-130	4	20	
Chloromethane	ug/kg	2500	1790	1840	71	73	57-130	3	20	
cis-1,2-Dichloroethene	ug/kg	2500	2760	2870	110	115	70-130	4	20	
cis-1,3-Dichloropropene	ug/kg	2500	2570	2640	103	105	70-130	2	20	
Dibromochloromethane	ug/kg	2500	2470	2510	99	100	70-130	2	20	
Dichlorodifluoromethane	ug/kg	2500	1000	1060	40	42	31-150	5	20	
Ethylbenzene	ug/kg	2500	2550	2590	102	104	65-137	2	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2580	2620	103	105	70-130	1	20	
m&p-Xylene	ug/kg	5000	5310	5480	106	110	64-139	3	20	
Methyl-tert-butyl ether	ug/kg	2500	2540	2720	101	109	69-130	7	20	
Methylene Chloride	ug/kg	2500	2650	2660	106	106	70-130	0	20	
o-Xylene	ug/kg	2500	2500	2590	100	104	63-135	4	20	
Styrene	ug/kg	2500	2650	2730	106	109	69-130	3	20	
Tetrachloroethene	ug/kg	2500	2580	2680	103	107	70-130	4	20	
Toluene	ug/kg	2500	2730	2720	109	109	70-130	0	20	
trans-1,2-Dichloroethene	ug/kg	2500	2720	2830	109	113	70-130	4	20	
trans-1,3-Dichloropropene	ug/kg	2500	2350	2460	94	98	70-130	4	20	
Trichloroethene	ug/kg	2500	2600	2560	104	103	70-130	2	20	
Trichlorofluoromethane	ug/kg	2500	1980	2100	79	84	50-150	6	20	
Vinyl chloride	ug/kg	2500	2020	2070	81	83	57-130	3	20	
4-Bromofluorobenzene (S)	%				93	93	49-130			
Dibromofluoromethane (S)	%				96	104	57-130			
Toluene-d8 (S)	%				100	102	54-133			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch: OEXT/19293 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

METHOD BLANK: 833322 Matrix: Solid

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	08/09/13 09:38	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833323 833324

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	33.0	35.5	82	89	70-120	7	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

QC Batch: PMST/8758 Analysis Method: ASTM D2974-87

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

Associated Lab Samples: 4082162001, 4082162002, 4082162003, 4082162004, 4082162005, 4082162006

SAMPLE DUPLICATE: 838380

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.6	6.6	0	10	

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082162

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### BATCH QUALIFIERS

Batch: MSV/20744

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

### ANALYTE QUALIFIERS

W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082162001	B-11-1 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082162002	B-11-1 (8-10)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082162003	B-11-2 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082162004	B-11-2 (10-12)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082162005	B-11-3 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082162006	B-11-3 (8-10)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082162001	B-11-1 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082162002	B-11-1 (8-10)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082162003	B-11-2 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082162004	B-11-2 (10-12)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082162005	B-11-3 (2-4)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082162006	B-11-3 (8-10)	TPH GRO/PVOC WI ext.	GCV/10696	WI MOD GRO	GCV/10697
4082162001	B-11-1 (2-4)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082162001	B-11-1 (2-4)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082162002	B-11-1 (8-10)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082162002	B-11-1 (8-10)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082162003	B-11-2 (2-4)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082162003	B-11-2 (2-4)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082162004	B-11-2 (10-12)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082162004	B-11-2 (10-12)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082162005	B-11-3 (2-4)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082162005	B-11-3 (2-4)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082162006	B-11-3 (8-10)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082162006	B-11-3 (8-10)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082162001	B-11-1 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082162002	B-11-1 (8-10)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082162003	B-11-2 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082162004	B-11-2 (10-12)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082162005	B-11-3 (2-4)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082162006	B-11-3 (8-10)	EPA 7471	MERP/3805	EPA 7471	MERC/4803
4082162001	B-11-1 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082162002	B-11-1 (8-10)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082162003	B-11-2 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082162004	B-11-2 (10-12)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082162005	B-11-3 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082162006	B-11-3 (8-10)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082162001	B-11-1 (2-4)	ASTM D2974-87	PMST/8758		
4082162002	B-11-1 (8-10)	ASTM D2974-87	PMST/8758		
4082162003	B-11-2 (2-4)	ASTM D2974-87	PMST/8758		
4082162004	B-11-2 (10-12)	ASTM D2974-87	PMST/8758		
4082162005	B-11-3 (2-4)	ASTM D2974-87	PMST/8758		

**REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082162

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082162006	B-11-3 (8-10)	ASTM D2974-87	PMST/8758		

## REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Himalayan Consultants  
Branch/Location:

Project Contact: Michelle Reed

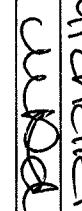
Phone: 262-502-0066

Project Number: 6190-17-00

Project Name: Winneconne

Project State: WI

Sampled By (Print): Michelle Reed

Sampled By (Sign): 

PO #:

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

On your sample  NOT needed on your sample

MS/MSD Matrix Codes

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

## CHAIN OF CUSTODY

www.pacelabs.com

4082162  
31 of 32

Quote #:

Mail To Contact:

Mail To Address:

Invoice To Contact: Michelle Reed

Invoice To Company:

Invoice To Address:

Comments Lab Comments (Lab Use Only)

Profile #

Analyses Requested

G20 D20 RCRA metals

TCLP VOCs TCLP metals

VOCs

hold all TCLPs VOCs metals

8/24/2012 240ml 14oz P1 14oz S

Rush Turnaround Time Requested - Prelims  
(Rush TAT subject to approval/surcharge)  
Date Needed:  
Transmit Prelim Rush Results by (complete what you want):

Relinquished By:

Mary Tanner

Date/Time:

8/11/13 15:30

Received By:

Mary Tanner

Date/Time:

8/11/13 9:37

Received By:

Mary Tanner

Date/Time:

8/11/13 9:37

PACE Project No.

4082162

Receipt Temp = 201 °C

Sample Receipt pH

OK / Adjusted

Cooler Custody Seal

Present / Not Present

Intact / Not Intact

Special pricing and release of liability

Pace Analytical™

Sample Condition Upon Receipt

Client Name: Himalayan Project # 4082162  
Other CS Logistic

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

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: 20 /Corr:

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 8/2/13

Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>S</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2, NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics. OTHER: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Initial when completed Lab Std #ID of preservative Date/ Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		If checked, see attached form for additional comments <input type="checkbox"/>

Client Notification/ Resolution:

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

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

Project Manager Review: Jeff G. Day

Date: 8/2/13

Page 32 of 32

## **GROUNDWATER ANALYTICAL**

August 13, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082163001	MW-11-1	Water	07/31/13 13:35	08/02/13 09:45
4082163002	MW-11-2	Water	07/31/13 13:20	08/02/13 09:45
4082163003	MW-11-3	Water	07/31/13 13:30	08/02/13 09:45

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082163

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082163001	MW-11-1	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
4082163002	MW-11-2	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
4082163003	MW-11-3	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Sample: MW-11-1	Lab ID: 4082163001	Collected: 07/31/13 13:35	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	<4.2 ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 11:52	7440-38-2	
Barium, Dissolved	161 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 11:52	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 11:52	7440-43-9	
Chromium, Dissolved	<1.4 ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 11:52	7440-47-3	
Lead, Dissolved	3.2J ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 11:52	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 11:52	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 11:52	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:03	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/07/13 12:09	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/07/13 12:09	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/07/13 12:09	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/07/13 12:09	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/07/13 12:09	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/07/13 12:09	74-83-9	
2-Butanone (MEK)	4.4J ug/L		20.0	2.7	1		08/07/13 12:09	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/07/13 12:09	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/07/13 12:09	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/07/13 12:09	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/07/13 12:09	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/07/13 12:09	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 12:09	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/07/13 12:09	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/07/13 12:09	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 12:09	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 12:09	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/07/13 12:09	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/07/13 12:09	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/07/13 12:09	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/07/13 12:09	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/07/13 12:09	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/07/13 12:09	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/07/13 12:09	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/07/13 12:09	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/07/13 12:09	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/07/13 12:09	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 12:09	75-35-4	
cis-1,2-Dichloroethene	11.0 ug/L		1.0	0.42	1		08/07/13 12:09	156-59-2	
trans-1,2-Dichloroethene	0.66J ug/L		1.0	0.37	1		08/07/13 12:09	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/07/13 12:09	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/07/13 12:09	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/07/13 12:09	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/07/13 12:09	563-58-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Sample: MW-11-1	Lab ID: 4082163001	Collected: 07/31/13 13:35	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/07/13 12:09	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/07/13 12:09	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/07/13 12:09	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 12:09	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/07/13 12:09	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/07/13 12:09	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/07/13 12:09	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/07/13 12:09	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/07/13 12:09	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/07/13 12:09	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 12:09	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/07/13 12:09	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/07/13 12:09	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/07/13 12:09	79-34-5	
Tetrachloroethene	7.4 ug/L		1.0	0.47	1		08/07/13 12:09	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/07/13 12:09	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/07/13 12:09	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 12:09	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 12:09	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/07/13 12:09	79-00-5	
Trichloroethene	289 ug/L		1.0	0.43	1		08/07/13 12:09	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/07/13 12:09	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/07/13 12:09	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/07/13 12:09	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 12:09	108-67-8	
Vinyl chloride	4.6 ug/L		1.0	0.18	1		08/07/13 12:09	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/07/13 12:09	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/07/13 12:09	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89 %		43-137		1		08/07/13 12:09	460-00-4	
Dibromofluoromethane (S)	98 %		70-130		1		08/07/13 12:09	1868-53-7	
Toluene-d8 (S)	95 %		55-137		1		08/07/13 12:09	2037-26-5	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Sample: MW-11-2	Lab ID: 4082163002	Collected: 07/31/13 13:20	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	8.3J ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 11:59	7440-38-2	
Barium, Dissolved	125 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 11:59	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 11:59	7440-43-9	
Chromium, Dissolved	<1.4 ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 11:59	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 11:59	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 11:59	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 11:59	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:09	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	71-43-2	
Bromobenzene	<2.4 ug/L		5.0	2.4	5		08/06/13 12:01	108-86-1	
Bromochloromethane	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	74-97-5	
Bromodichloromethane	<2.3 ug/L		5.0	2.3	5		08/06/13 12:01	75-27-4	
Bromoform	<1.2 ug/L		5.0	1.2	5		08/06/13 12:01	75-25-2	
Bromomethane	<2.1 ug/L		25.0	2.1	5		08/06/13 12:01	74-83-9	
2-Butanone (MEK)	<13.5 ug/L		100	13.5	5		08/06/13 12:01	78-93-3	
n-Butylbenzene	<2.0 ug/L		5.0	2.0	5		08/06/13 12:01	104-51-8	
sec-Butylbenzene	<3.0 ug/L		25.0	3.0	5		08/06/13 12:01	135-98-8	
tert-Butylbenzene	<2.1 ug/L		5.0	2.1	5		08/06/13 12:01	98-06-6	
Carbon tetrachloride	<1.8 ug/L		5.0	1.8	5		08/06/13 12:01	56-23-5	
Chlorobenzene	<1.8 ug/L		5.0	1.8	5		08/06/13 12:01	108-90-7	
Chloroethane	<2.2 ug/L		5.0	2.2	5		08/06/13 12:01	75-00-3	
Chloroform	<3.4 ug/L		25.0	3.4	5		08/06/13 12:01	67-66-3	
Chloromethane	<1.9 ug/L		5.0	1.9	5		08/06/13 12:01	74-87-3	
2-Chlorotoluene	<2.4 ug/L		5.0	2.4	5		08/06/13 12:01	95-49-8	
4-Chlorotoluene	<2.4 ug/L		5.0	2.4	5		08/06/13 12:01	106-43-4	
1,2-Dibromo-3-chloropropane	<7.5 ug/L		25.0	7.5	5		08/06/13 12:01	96-12-8	
Dibromochloromethane	<9.5 ug/L		25.0	9.5	5		08/06/13 12:01	124-48-1	
1,2-Dibromoethane (EDB)	<1.9 ug/L		5.0	1.9	5		08/06/13 12:01	106-93-4	
Dibromomethane	<2.4 ug/L		5.0	2.4	5		08/06/13 12:01	74-95-3	
1,2-Dichlorobenzene	<2.2 ug/L		5.0	2.2	5		08/06/13 12:01	95-50-1	
1,3-Dichlorobenzene	<2.3 ug/L		5.0	2.3	5		08/06/13 12:01	541-73-1	
1,4-Dichlorobenzene	<2.2 ug/L		5.0	2.2	5		08/06/13 12:01	106-46-7	
Dichlorodifluoromethane	<2.0 ug/L		5.0	2.0	5		08/06/13 12:01	75-71-8	
1,1-Dichloroethane	<1.4 ug/L		5.0	1.4	5		08/06/13 12:01	75-34-3	
1,2-Dichloroethane	<2.4 ug/L		5.0	2.4	5		08/06/13 12:01	107-06-2	
1,1-Dichloroethene	<2.1 ug/L		5.0	2.1	5		08/06/13 12:01	75-35-4	
cis-1,2-Dichloroethene	19.4 ug/L		5.0	2.1	5		08/06/13 12:01	156-59-2	
trans-1,2-Dichloroethene	<1.9 ug/L		5.0	1.9	5		08/06/13 12:01	156-60-5	
1,2-Dichloropropane	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	78-87-5	
1,3-Dichloropropane	<2.3 ug/L		5.0	2.3	5		08/06/13 12:01	142-28-9	
2,2-Dichloropropane	<1.8 ug/L		5.0	1.8	5		08/06/13 12:01	594-20-7	
1,1-Dichloropropene	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	563-58-6	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Sample: MW-11-2	Lab ID: 4082163002	Collected: 07/31/13 13:20	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<1.5 ug/L		5.0	1.5	5		08/06/13 12:01	10061-01-5	
trans-1,3-Dichloropropene	<1.3 ug/L		5.0	1.3	5		08/06/13 12:01	10061-02-6	
Diisopropyl ether	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	108-20-3	
Ethylbenzene	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	100-41-4	
Hexachloro-1,3-butadiene	<6.3 ug/L		25.0	6.3	5		08/06/13 12:01	87-68-3	
Isopropylbenzene (Cumene)	<1.7 ug/L		5.0	1.7	5		08/06/13 12:01	98-82-8	
p-Isopropyltoluene	<2.0 ug/L		5.0	2.0	5		08/06/13 12:01	99-87-6	
Methylene Chloride	<1.8 ug/L		5.0	1.8	5		08/06/13 12:01	75-09-2	
Methyl-tert-butyl ether	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	1634-04-4	
Naphthalene	<12.5 ug/L		25.0	12.5	5		08/06/13 12:01	91-20-3	
n-Propylbenzene	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	103-65-1	
Styrene	<1.7 ug/L		5.0	1.7	5		08/06/13 12:01	100-42-5	
1,1,1,2-Tetrachloroethane	<2.3 ug/L		5.0	2.3	5		08/06/13 12:01	630-20-6	
1,1,2,2-Tetrachloroethane	<1.9 ug/L		5.0	1.9	5		08/06/13 12:01	79-34-5	
Tetrachloroethene	21.8 ug/L		5.0	2.4	5		08/06/13 12:01	127-18-4	
Toluene	<2.2 ug/L		5.0	2.2	5		08/06/13 12:01	108-88-3	
1,2,3-Trichlorobenzene	<3.8 ug/L		25.0	3.8	5		08/06/13 12:01	87-61-6	
1,2,4-Trichlorobenzene	<12.5 ug/L		25.0	12.5	5		08/06/13 12:01	120-82-1	
1,1,1-Trichloroethane	<2.2 ug/L		5.0	2.2	5		08/06/13 12:01	71-55-6	
1,1,2-Trichloroethane	<1.9 ug/L		5.0	1.9	5		08/06/13 12:01	79-00-5	
Trichloroethene	383 ug/L		5.0	2.1	5		08/06/13 12:01	79-01-6	
Trichlorofluoromethane	<2.4 ug/L		5.0	2.4	5		08/06/13 12:01	75-69-4	
1,2,3-Trichloropropane	<2.3 ug/L		5.0	2.3	5		08/06/13 12:01	96-18-4	
1,2,4-Trimethylbenzene	<2.9 ug/L		25.0	2.9	5		08/06/13 12:01	95-63-6	
1,3,5-Trimethylbenzene	<12.5 ug/L		25.0	12.5	5		08/06/13 12:01	108-67-8	
Vinyl chloride	1.5J ug/L		5.0	0.92	5		08/06/13 12:01	75-01-4	
m&p-Xylene	<4.1 ug/L		10.0	4.1	5		08/06/13 12:01	179601-23-1	
o-Xylene	<2.5 ug/L		5.0	2.5	5		08/06/13 12:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95 %		43-137		5		08/06/13 12:01	460-00-4	
Dibromofluoromethane (S)	94 %		70-130		5		08/06/13 12:01	1868-53-7	pH
Toluene-d8 (S)	100 %		55-137		5		08/06/13 12:01	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Sample: MW-11-3	Lab ID: 4082163003	Collected: 07/31/13 13:30	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	<4.2 ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:01	7440-38-2	
Barium, Dissolved	89.6 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:01	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:01	7440-43-9	
Chromium, Dissolved	3.7J ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:01	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:01	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:01	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:01	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:11	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/06/13 12:42	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/06/13 12:42	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/06/13 12:42	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/06/13 12:42	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/06/13 12:42	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/06/13 12:42	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/06/13 12:42	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/06/13 12:42	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/06/13 12:42	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/06/13 12:42	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/06/13 12:42	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/06/13 12:42	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 12:42	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/06/13 12:42	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/06/13 12:42	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 12:42	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 12:42	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/06/13 12:42	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/06/13 12:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/06/13 12:42	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/06/13 12:42	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/06/13 12:42	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/06/13 12:42	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/06/13 12:42	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/06/13 12:42	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/06/13 12:42	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/06/13 12:42	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 12:42	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/06/13 12:42	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/06/13 12:42	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/06/13 12:42	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/06/13 12:42	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/06/13 12:42	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/06/13 12:42	563-58-6	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

Sample: MW-11-3	Lab ID: 4082163003	Collected: 07/31/13 13:30	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/06/13 12:42	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/06/13 12:42	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/06/13 12:42	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 12:42	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/06/13 12:42	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/06/13 12:42	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/06/13 12:42	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/06/13 12:42	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/06/13 12:42	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/06/13 12:42	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 12:42	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/06/13 12:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/06/13 12:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/06/13 12:42	79-34-5	
Tetrachloroethene	0.50J ug/L		1.0	0.47	1		08/06/13 12:42	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/06/13 12:42	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/06/13 12:42	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 12:42	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 12:42	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/06/13 12:42	79-00-5	
Trichloroethene	18.9 ug/L		1.0	0.43	1		08/06/13 12:42	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/06/13 12:42	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/06/13 12:42	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/06/13 12:42	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 12:42	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/06/13 12:42	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/06/13 12:42	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/06/13 12:42	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92 %		43-137		1		08/06/13 12:42	460-00-4	
Dibromofluoromethane (S)	89 %		70-130		1		08/06/13 12:42	1868-53-7	
Toluene-d8 (S)	99 %		55-137		1		08/06/13 12:42	2037-26-5	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

QC Batch:	MERP/3796	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury Dissolved
Associated Lab Samples:	4082163001, 4082163002, 4082163003		

METHOD BLANK: 836072 Matrix: Water

Associated Lab Samples: 4082163001, 4082163002, 4082163003

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Mercury, Dissolved	ug/L	<0.10	0.20	08/09/13 11:59	

LABORATORY CONTROL SAMPLE: 836073

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Mercury, Dissolved	ug/L	5	5.2	104	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 836074 836075

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		4082163001	Spike	Conc.	Result	Result	% Rec	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	<0.10	5	5	5.2	5.3	102	106	85-115	3	20		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

QC Batch:	MPRP/8911	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET Dissolved
Associated Lab Samples:	4082163001, 4082163002, 4082163003		

METHOD BLANK: 833607 Matrix: Water

Associated Lab Samples: 4082163001, 4082163002, 4082163003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<4.2	20.0	08/06/13 11:44	
Barium, Dissolved	ug/L	<1.1	5.0	08/06/13 11:44	
Cadmium, Dissolved	ug/L	<0.48	5.0	08/06/13 11:44	
Chromium, Dissolved	ug/L	<1.4	5.0	08/06/13 11:44	
Lead, Dissolved	ug/L	<2.7	7.5	08/06/13 11:44	
Selenium, Dissolved	ug/L	<5.2	20.0	08/06/13 11:44	
Silver, Dissolved	ug/L	<1.7	10.0	08/06/13 11:44	

LABORATORY CONTROL SAMPLE: 833608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	483	97	80-120	
Barium, Dissolved	ug/L	500	490	98	80-120	
Cadmium, Dissolved	ug/L	500	479	96	80-120	
Chromium, Dissolved	ug/L	500	495	99	80-120	
Lead, Dissolved	ug/L	500	490	98	80-120	
Selenium, Dissolved	ug/L	500	492	98	80-120	
Silver, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 833609 833610

Parameter	Units	MS		MSD		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		4082163001	Spike Conc.	Spike Conc.	MS Result								
Arsenic, Dissolved	ug/L	<4.2	500	500	498	511	99	101	101	75-125	2	20	
Barium, Dissolved	ug/L	161	500	500	643	654	96	99	99	75-125	2	20	
Cadmium, Dissolved	ug/L	<0.48	500	500	492	501	98	100	100	75-125	2	20	
Chromium, Dissolved	ug/L	<1.4	500	500	495	503	99	100	100	75-125	1	20	
Lead, Dissolved	ug/L	3.2J	500	500	493	497	98	99	99	75-125	1	20	
Selenium, Dissolved	ug/L	<5.2	500	500	513	526	103	105	105	75-125	3	20	
Silver, Dissolved	ug/L	<1.7	250	250	256	260	102	104	104	75-125	2	20	

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

QC Batch: MSV/20715 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 4082163002, 4082163003

METHOD BLANK: 832951 Matrix: Water

Associated Lab Samples: 4082163002, 4082163003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/05/13 06:39	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/05/13 06:39	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/05/13 06:39	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/05/13 06:39	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/05/13 06:39	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/05/13 06:39	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/05/13 06:39	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/05/13 06:39	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/05/13 06:39	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/05/13 06:39	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/05/13 06:39	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/05/13 06:39	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/05/13 06:39	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/05/13 06:39	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/05/13 06:39	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/05/13 06:39	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/05/13 06:39	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/05/13 06:39	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/05/13 06:39	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/05/13 06:39	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/05/13 06:39	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/05/13 06:39	
2-Chlorotoluene	ug/L	<0.48	1.0	08/05/13 06:39	
4-Chlorotoluene	ug/L	<0.48	1.0	08/05/13 06:39	
Benzene	ug/L	<0.50	1.0	08/05/13 06:39	
Bromobenzene	ug/L	<0.48	1.0	08/05/13 06:39	
Bromochloromethane	ug/L	<0.49	1.0	08/05/13 06:39	
Bromodichloromethane	ug/L	<0.45	1.0	08/05/13 06:39	
Bromoform	ug/L	<0.23	1.0	08/05/13 06:39	
Bromomethane	ug/L	<0.43	5.0	08/05/13 06:39	
Carbon tetrachloride	ug/L	<0.37	1.0	08/05/13 06:39	
Chlorobenzene	ug/L	<0.36	1.0	08/05/13 06:39	
Chloroethane	ug/L	<0.44	1.0	08/05/13 06:39	
Chloroform	ug/L	<0.69	5.0	08/05/13 06:39	
Chloromethane	ug/L	<0.39	1.0	08/05/13 06:39	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/05/13 06:39	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/05/13 06:39	
Dibromochloromethane	ug/L	<1.9	5.0	08/05/13 06:39	
Dibromomethane	ug/L	<0.48	1.0	08/05/13 06:39	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/05/13 06:39	
Diisopropyl ether	ug/L	<0.50	1.0	08/05/13 06:39	
Ethylbenzene	ug/L	<0.50	1.0	08/05/13 06:39	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/05/13 06:39	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

METHOD BLANK: 832951

Matrix: Water

Associated Lab Samples: 4082163002, 4082163003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/05/13 06:39	
m&p-Xylene	ug/L	<0.82	2.0	08/05/13 06:39	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/05/13 06:39	
Methylene Chloride	ug/L	<0.36	1.0	08/05/13 06:39	
n-Butylbenzene	ug/L	<0.40	1.0	08/05/13 06:39	
n-Propylbenzene	ug/L	<0.50	1.0	08/05/13 06:39	
Naphthalene	ug/L	<2.5	5.0	08/05/13 06:39	
o-Xylene	ug/L	<0.50	1.0	08/05/13 06:39	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/05/13 06:39	
sec-Butylbenzene	ug/L	<0.60	5.0	08/05/13 06:39	
Styrene	ug/L	<0.35	1.0	08/05/13 06:39	
tert-Butylbenzene	ug/L	<0.42	1.0	08/05/13 06:39	
Tetrachloroethene	ug/L	<0.47	1.0	08/05/13 06:39	
Toluene	ug/L	<0.44	1.0	08/05/13 06:39	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/05/13 06:39	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/05/13 06:39	
Trichloroethene	ug/L	<0.43	1.0	08/05/13 06:39	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/05/13 06:39	
Vinyl chloride	ug/L	<0.18	1.0	08/05/13 06:39	
4-Bromofluorobenzene (S)	%	94	43-137	08/05/13 06:39	
Dibromofluoromethane (S)	%	89	70-130	08/05/13 06:39	
Toluene-d8 (S)	%	99	55-137	08/05/13 06:39	

LABORATORY CONTROL SAMPLE &amp; LCSD: 832952

832953

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.8	49.2	96	98	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	51.8	52.5	104	105	70-130	1	20	
1,1,2-Trichloroethane	ug/L	50	49.2	51.4	98	103	70-130	4	20	
1,1-Dichloroethane	ug/L	50	51.6	53.9	103	108	70-146	4	20	
1,1-Dichloroethene	ug/L	50	53.8	55.1	108	110	70-130	2	20	
1,2,4-Trichlorobenzene	ug/L	50	53.6	55.4	107	111	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	50	44.7	44.7	89	89	46-150	0	20	
1,2-Dibromoethane (EDB)	ug/L	50	51.1	52.3	102	105	70-130	2	20	
1,2-Dichlorobenzene	ug/L	50	52.3	53.1	105	106	70-130	1	20	
1,2-Dichloroethane	ug/L	50	47.9	49.9	96	100	70-144	4	20	
1,2-Dichloropropane	ug/L	50	53.4	55.9	107	112	70-136	4	20	
1,3-Dichlorobenzene	ug/L	50	52.7	53.6	105	107	70-130	2	20	
1,4-Dichlorobenzene	ug/L	50	52.5	52.5	105	105	70-130	0	20	
Benzene	ug/L	50	50.9	51.8	102	104	70-137	2	20	
Bromodichloromethane	ug/L	50	50.1	53.1	100	106	70-133	6	20	
Bromoform	ug/L	50	47.5	49.6	95	99	59-130	4	20	
Bromomethane	ug/L	50	37.9	42.8	76	86	41-148	12	20	
Carbon tetrachloride	ug/L	50	46.1	48.7	92	97	70-154	6	20	
Chlorobenzene	ug/L	50	51.9	53.3	104	107	70-130	3	20	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

LABORATORY CONTROL SAMPLE & LCSD:		832953									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroethane	ug/L	50	53.4	54.4	107	109	70-139	2	20		
Chloroform	ug/L	50	48.8	50.2	98	100	70-130	3	20		
Chloromethane	ug/L	50	49.7	50.5	99	101	45-154	2	20		
cis-1,2-Dichloroethene	ug/L	50	49.0	51.5	98	103	70-130	5	20		
cis-1,3-Dichloropropene	ug/L	50	47.1	49.3	94	99	70-136	5	20		
Dibromochloromethane	ug/L	50	47.2	49.2	94	98	70-130	4	20		
Dichlorodifluoromethane	ug/L	50	43.7	44.4	87	89	20-157	1	20		
Ethylbenzene	ug/L	50	53.3	54.3	107	109	70-130	2	20		
Isopropylbenzene (Cumene)	ug/L	50	54.8	56.2	110	112	70-130	2	20		
m&p-Xylene	ug/L	100	108	109	108	109	70-130	2	20		
Methyl-tert-butyl ether	ug/L	50	48.3	49.7	97	99	59-141	3	20		
Methylene Chloride	ug/L	50	52.3	52.8	105	106	70-130	1	20		
o-Xylene	ug/L	50	54.8	56.1	110	112	70-130	2	20		
Styrene	ug/L	50	53.8	54.9	108	110	70-130	2	20		
Tetrachloroethene	ug/L	50	50.8	52.8	102	106	70-130	4	20		
Toluene	ug/L	50	51.7	52.9	103	106	70-130	2	20		
trans-1,2-Dichloroethene	ug/L	50	52.6	54.3	105	109	70-130	3	20		
trans-1,3-Dichloropropene	ug/L	50	46.5	48.6	93	97	55-135	4	20		
Trichloroethene	ug/L	50	52.7	53.6	105	107	70-130	2	20		
Trichlorofluoromethane	ug/L	50	56.1	57.3	112	115	50-150	2	20		
Vinyl chloride	ug/L	50	55.4	56.6	111	113	61-143	2	20		
4-Bromofluorobenzene (S)	%				102	101	43-137				
Dibromofluoromethane (S)	%				99	98	70-130				
Toluene-d8 (S)	%				99	100	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		832954 832955										
Parameter	Units	4082203002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.44	50	50	49.9	48.0	100	96	70-136	4	20	
1,1,2-Tetrachloroethane	ug/L	<0.38	50	50	52.8	50.0	106	100	70-130	5	20	
1,1,2-Trichloroethane	ug/L	<0.39	50	50	51.4	49.4	103	99	70-130	4	20	
1,1-Dichloroethane	ug/L	<0.28	50	50	54.5	51.9	109	104	70-146	5	20	
1,1-Dichloroethene	ug/L	<0.43	50	50	56.4	54.0	113	108	70-130	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.5	50	50	56.2	52.8	112	106	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	50	50	43.3	43.4	87	87	46-150	0	20	
1,2-Dibromoethane (EDB)	ug/L	<0.38	50	50	53.1	49.2	106	98	70-130	8	20	
1,2-Dichlorobenzene	ug/L	<0.44	50	50	53.4	51.2	106	102	70-130	4	20	
1,2-Dichloroethane	ug/L	<0.48	50	50	49.3	47.8	99	96	70-146	3	20	
1,2-Dichloropropane	ug/L	<0.50	50	50	55.3	53.3	111	107	70-136	4	20	
1,3-Dichlorobenzene	ug/L	<0.45	50	50	54.1	51.0	108	102	70-130	6	20	
1,4-Dichlorobenzene	ug/L	<0.43	50	50	53.3	51.0	107	102	70-130	4	20	
Benzene	ug/L	<0.50	50	50	53.5	50.4	107	101	70-137	6	20	
Bromodichloromethane	ug/L	<0.45	50	50	54.0	50.9	108	102	70-133	6	20	
Bromoform	ug/L	<0.23	50	50	48.7	46.7	97	93	57-130	4	20	
Bromomethane	ug/L	<0.43	50	50	43.6	43.0	87	86	41-148	1	20	
Carbon tetrachloride	ug/L	<0.37	50	50	48.6	47.1	97	94	70-154	3	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

Parameter	Units	4082203002		MS		MSD		MS		MSD		% Rec		Max	
		Result	Spike Conc.	Spike Conc.	Result	MSD	% Rec	MSD % Rec	% Rec Limits	MSD RPD	MSD RPD	% Rec RPD	% Rec RPD	Max Qual	Max Qual
Chlorobenzene	ug/L	<0.36	50	50	54.5	51.2	109	102	70-130	6	20				
Chloroethane	ug/L	<0.44	50	50	54.7	53.4	109	107	70-140	2	20				
Chloroform	ug/L	<0.69	50	50	50.9	48.5	102	97	70-130	5	20				
Chloromethane	ug/L	<0.39	50	50	52.5	49.7	105	99	45-154	6	20				
cis-1,2-Dichloroethene	ug/L	<0.42	50	50	51.7	50.2	103	100	70-130	3	20				
cis-1,3-Dichloropropene	ug/L	<0.29	50	50	49.9	47.0	100	94	70-136	6	20				
Dibromochloromethane	ug/L	<1.9	50	50	49.0	46.6	98	93	70-130	5	20				
Dichlorodifluoromethane	ug/L	<0.40	50	50	43.8	42.2	88	84	10-157	4	20				
Ethylbenzene	ug/L	<0.50	50	50	55.5	51.5	111	103	70-130	8	20				
Isopropylbenzene (Cumene)	ug/L	<0.34	50	50	57.3	53.5	115	107	70-130	7	20				
m&p-Xylene	ug/L	<0.82	100	100	111	105	111	105	70-130	6	20				
Methyl-tert-butyl ether	ug/L	<0.49	50	50	49.6	47.5	99	95	59-141	4	20				
Methylene Chloride	ug/L	<0.36	50	50	54.7	52.4	109	105	70-130	4	20				
o-Xylene	ug/L	<0.50	50	50	56.7	53.8	113	108	70-130	5	20				
Styrene	ug/L	<0.35	50	50	55.8	52.8	112	106	35-164	5	20				
Tetrachloroethene	ug/L	<0.47	50	50	53.9	50.2	107	100	70-130	7	20				
Toluene	ug/L	<0.44	50	50	54.4	51.1	109	102	70-130	6	20				
trans-1,2-Dichloroethene	ug/L	<0.37	50	50	55.8	53.4	112	107	70-130	4	20				
trans-1,3-Dichloropropene	ug/L	<0.26	50	50	49.1	45.8	98	92	55-137	7	20				
Trichloroethene	ug/L	<0.43	50	50	54.9	52.5	110	105	70-130	4	20				
Trichlorofluoromethane	ug/L	<0.48	50	50	58.6	55.7	117	111	50-150	5	20				
Vinyl chloride	ug/L	<0.18	50	50	56.9	54.8	114	110	59-144	4	20				
4-Bromofluorobenzene (S)	%						103	101	43-137						
Dibromofluoromethane (S)	%							98	97	70-130					
Toluene-d8 (S)	%							100	100	55-137					

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

## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

QC Batch: MSV/20720 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 4082163001

METHOD BLANK: 833245 Matrix: Water

Associated Lab Samples: 4082163001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/07/13 06:07	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/07/13 06:07	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/07/13 06:07	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/07/13 06:07	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/07/13 06:07	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/07/13 06:07	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/07/13 06:07	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/07/13 06:07	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/07/13 06:07	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/07/13 06:07	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/07/13 06:07	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/07/13 06:07	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/07/13 06:07	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/07/13 06:07	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/07/13 06:07	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/07/13 06:07	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/07/13 06:07	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/07/13 06:07	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/07/13 06:07	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/07/13 06:07	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/07/13 06:07	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/07/13 06:07	
2-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:07	
4-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:07	
Benzene	ug/L	<0.50	1.0	08/07/13 06:07	
Bromobenzene	ug/L	<0.48	1.0	08/07/13 06:07	
Bromochloromethane	ug/L	<0.49	1.0	08/07/13 06:07	
Bromodichloromethane	ug/L	<0.45	1.0	08/07/13 06:07	
Bromoform	ug/L	<0.23	1.0	08/07/13 06:07	
Bromomethane	ug/L	<0.43	5.0	08/07/13 06:07	
Carbon tetrachloride	ug/L	<0.37	1.0	08/07/13 06:07	
Chlorobenzene	ug/L	<0.36	1.0	08/07/13 06:07	
Chloroethane	ug/L	<0.44	1.0	08/07/13 06:07	
Chloroform	ug/L	<0.69	5.0	08/07/13 06:07	
Chloromethane	ug/L	<0.39	1.0	08/07/13 06:07	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/07/13 06:07	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/07/13 06:07	
Dibromochloromethane	ug/L	<1.9	5.0	08/07/13 06:07	
Dibromomethane	ug/L	<0.48	1.0	08/07/13 06:07	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/07/13 06:07	
Diisopropyl ether	ug/L	<0.50	1.0	08/07/13 06:07	
Ethylbenzene	ug/L	<0.50	1.0	08/07/13 06:07	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/07/13 06:07	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

METHOD BLANK: 833245

Matrix: Water

Associated Lab Samples: 4082163001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/07/13 06:07	
m&p-Xylene	ug/L	<0.82	2.0	08/07/13 06:07	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/07/13 06:07	
Methylene Chloride	ug/L	<0.36	1.0	08/07/13 06:07	
n-Butylbenzene	ug/L	<0.40	1.0	08/07/13 06:07	
n-Propylbenzene	ug/L	<0.50	1.0	08/07/13 06:07	
Naphthalene	ug/L	<2.5	5.0	08/07/13 06:07	
o-Xylene	ug/L	<0.50	1.0	08/07/13 06:07	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/07/13 06:07	
sec-Butylbenzene	ug/L	<0.60	5.0	08/07/13 06:07	
Styrene	ug/L	<0.35	1.0	08/07/13 06:07	
tert-Butylbenzene	ug/L	<0.42	1.0	08/07/13 06:07	
Tetrachloroethene	ug/L	<0.47	1.0	08/07/13 06:07	
Toluene	ug/L	<0.44	1.0	08/07/13 06:07	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/07/13 06:07	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/07/13 06:07	
Trichloroethene	ug/L	<0.43	1.0	08/07/13 06:07	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/07/13 06:07	
Vinyl chloride	ug/L	<0.18	1.0	08/07/13 06:07	
4-Bromofluorobenzene (S)	%	90	43-137	08/07/13 06:07	
Dibromofluoromethane (S)	%	98	70-130	08/07/13 06:07	
Toluene-d8 (S)	%	94	55-137	08/07/13 06:07	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833246

833247

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.5	48.9	95	98	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	46.9	49.0	94	98	70-130	4	20	
1,1,2-Trichloroethane	ug/L	50	50.3	51.4	101	103	70-130	2	20	
1,1-Dichloroethane	ug/L	50	50.3	52.3	101	105	70-146	4	20	
1,1-Dichloroethene	ug/L	50	49.6	52.2	99	104	70-130	5	20	
1,2,4-Trichlorobenzene	ug/L	50	47.7	50.7	95	101	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	50	40.9	42.9	82	86	46-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	50	49.7	51.5	99	103	70-130	4	20	
1,2-Dichlorobenzene	ug/L	50	49.9	51.7	100	103	70-130	3	20	
1,2-Dichloroethane	ug/L	50	52.3	54.0	105	108	70-144	3	20	
1,2-Dichloropropane	ug/L	50	53.9	54.1	108	108	70-136	0	20	
1,3-Dichlorobenzene	ug/L	50	47.2	48.6	94	97	70-130	3	20	
1,4-Dichlorobenzene	ug/L	50	47.4	48.9	95	98	70-130	3	20	
Benzene	ug/L	50	51.6	53.8	103	108	70-137	4	20	
Bromodichloromethane	ug/L	50	53.0	54.2	106	108	70-133	2	20	
Bromoform	ug/L	50	48.9	49.7	98	99	59-130	1	20	
Bromomethane	ug/L	50	40.0	43.6	80	87	41-148	9	20	
Carbon tetrachloride	ug/L	50	49.0	50.3	98	101	70-154	3	20	
Chlorobenzene	ug/L	50	52.0	52.3	104	105	70-130	1	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

LABORATORY CONTROL SAMPLE & LCSD:		833246									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroethane	ug/L	50	51.2	52.6	102	105	70-139	3	20		
Chloroform	ug/L	50	49.8	50.7	100	101	70-130	2	20		
Chloromethane	ug/L	50	43.1	44.7	86	89	45-154	4	20		
cis-1,2-Dichloroethene	ug/L	50	49.6	50.9	99	102	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	50	44.5	45.5	89	91	70-136	2	20		
Dibromochloromethane	ug/L	50	47.8	49.2	96	98	70-130	3	20		
Dichlorodifluoromethane	ug/L	50	29.7	30.6	59	61	20-157	3	20		
Ethylbenzene	ug/L	50	52.4	54.0	105	108	70-130	3	20		
Isopropylbenzene (Cumene)	ug/L	50	48.5	49.7	97	99	70-130	3	20		
m&p-Xylene	ug/L	100	108	110	108	110	70-130	2	20		
Methyl-tert-butyl ether	ug/L	50	33.4	34.7	67	69	59-141	4	20		
Methylene Chloride	ug/L	50	52.1	53.8	104	108	70-130	3	20		
o-Xylene	ug/L	50	49.5	51.1	99	102	70-130	3	20		
Styrene	ug/L	50	49.4	50.3	99	101	70-130	2	20		
Tetrachloroethene	ug/L	50	47.8	49.7	96	99	70-130	4	20		
Toluene	ug/L	50	51.6	52.5	103	105	70-130	2	20		
trans-1,2-Dichloroethene	ug/L	50	50.6	52.7	101	105	70-130	4	20		
trans-1,3-Dichloropropene	ug/L	50	42.1	44.4	84	89	55-135	5	20		
Trichloroethene	ug/L	50	55.0	55.9	110	112	70-130	2	20		
Trichlorofluoromethane	ug/L	50	47.9	49.6	96	99	50-150	3	20		
Vinyl chloride	ug/L	50	46.7	48.9	93	98	61-143	5	20		
4-Bromofluorobenzene (S)	%				101	101	43-137				
Dibromofluoromethane (S)	%				99	98	70-130				
Toluene-d8 (S)	%				96	94	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		833254										
Parameter	Units	4082224003	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<44.3	50	50	46.8	50.3	94	101	70-136	7	20	
1,1,2-Tetrachloroethane	ug/L	<38.4	50	50	47.2	48.6	94	97	70-130	3	20	
1,1,2-Trichloroethane	ug/L	<39.0	50	50	42.7	45.9	85	92	70-130	7	20	
1,1-Dichloroethane	ug/L	<28.5	50	50	48.0	51.1	96	102	70-146	6	20	
1,1-Dichloroethene	ug/L	<42.7	50	50	52.8	54.9	106	110	70-130	4	20	
1,2,4-Trichlorobenzene	ug/L	<250	50	50	50.7	54.2	101	108	70-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	<150	50	50	44.1	47.6	88	95	46-150	8	20	
1,2-Dibromoethane (EDB)	ug/L	<38.1	50	50	44.8	47.1	90	94	70-130	5	20	
1,2-Dichlorobenzene	ug/L	<43.9	50	50	46.5	50.1	93	100	70-130	8	20	
1,2-Dichloroethane	ug/L	<47.6	50	50	48.5	50.2	97	100	70-146	3	20	
1,2-Dichloropropane	ug/L	<49.8	50	50	49.1	52.0	98	104	70-136	6	20	
1,3-Dichlorobenzene	ug/L	<45.1	50	50	47.0	49.5	94	99	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<43.4	50	50	44.6	46.7	89	93	70-130	4	20	
Benzene	ug/L	<50.0	50	50	49.0	50.5	98	101	70-137	3	20	
Bromodichloromethane	ug/L	<45.3	50	50	52.2	54.6	104	109	70-133	5	20	
Bromoform	ug/L	<23.3	50	50	43.2	44.2	86	88	57-130	2	20	
Bromomethane	ug/L	<43.0	50	50	45.2	47.6	90	95	41-148	5	20	
Carbon tetrachloride	ug/L	<36.5	50	50	50.3	51.9	101	104	70-154	3	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

Parameter	Units	4082224003		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max				
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	MSD % Rec											
								MS Result	MSD Result	% Rec									
Chlorobenzene	ug/L	<35.8	50	50	46.5	48.3	93	97	70-130	4	20								
Chloroethane	ug/L	<44.4	50	50	52.5	54.6	105	109	70-140	4	20								
Chloroform	ug/L	<68.9	50	50	53.7	55.6	47	51	70-130	3	20	M1							
Chloromethane	ug/L	<38.8	50	50	51.7	56.3	103	113	45-154	9	20								
cis-1,2-Dichloroethene	ug/L	<41.9	50	50	47.4	47.9	95	96	70-130	1	20								
cis-1,3-Dichloropropene	ug/L	<29.0	50	50	46.7	48.8	93	98	70-136	4	20								
Dibromochloromethane	ug/L	<190	50	50	43.3	45.6	87	91	70-130	5	20								
Dichlorodifluoromethane	ug/L	<40.1	50	50	54.0	55.8	108	112	10-157	3	20								
Ethylbenzene	ug/L	<50.0	50	50	48.4	50.4	97	101	70-130	4	20								
Isopropylbenzene (Cumene)	ug/L	<34.1	50	50	44.8	46.7	90	93	70-130	4	20								
m&p-Xylene	ug/L	<81.7	100	100	98.2	103	98	103	70-130	5	20								
Methyl-tert-butyl ether	ug/L	62.8J	50	50	92.5	101	59	75	59-141	8	20								
Methylene Chloride	ug/L	<35.9	50	50	48.9	52.1	98	104	70-130	6	20								
o-Xylene	ug/L	<50.0	50	50	45.4	47.4	91	95	70-130	4	20								
Styrene	ug/L	<35.0	50	50	44.6	46.7	89	93	35-164	5	20								
Tetrachloroethene	ug/L	<47.2	50	50	42.0	44.0	84	88	70-130	5	20								
Toluene	ug/L	<43.9	50	50	43.0	46.0	86	92	70-130	7	20								
trans-1,2-Dichloroethene	ug/L	<37.1	50	50	49.6	51.5	99	103	70-130	4	20								
trans-1,3-Dichloropropene	ug/L	<26.2	50	50	37.8	40.5	76	81	55-137	7	20								
Trichloroethene	ug/L	<42.9	50	50	50.2	52.6	100	105	70-130	5	20								
Trichlorofluoromethane	ug/L	<47.7	50	50	54.7	55.5	109	111	50-150	2	20								
Vinyl chloride	ug/L	<18.5	50	50	54.5	56.6	109	113	59-144	4	20								
4-Bromofluorobenzene (S)	%						96	96	43-137										
Dibromofluoromethane (S)	%						99	99	70-130										
Toluene-d8 (S)	%						84	87	55-137										

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082163

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### 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.

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082163

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082163001	MW-11-1	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082163002	MW-11-2	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082163003	MW-11-3	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082163001	MW-11-1	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082163002	MW-11-2	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082163003	MW-11-3	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082163001	MW-11-1	EPA 8260	MSV/20720		
4082163002	MW-11-2	EPA 8260	MSV/20715		
4082163003	MW-11-3	EPA 8260	MSV/20715		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name:	Himalayan Consultants
Branch/Location:	
Project Contact:	Michelle Reed
Phone:	216 25820066
Project Number:	6190-17-00
Project Name:	Winneshiek
Project State:	WI
Sampled By (Print):	Michelle Reed
Sampled By (Sign):	
PO #:	

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

4082163

23 of 24

## CHAIN OF CUSTODY

Quote #:	4082163
Mail To Contact:	
Mail To Address:	

Preservation Codes	
A=None	B=HCl
C=H <sub>2</sub> SO <sub>4</sub>	D=HNO <sub>3</sub>
E=DI Water	F=Methanol
G=NaOH	H=Sodium Bisulfate Solution
I=Sodium Thiosulfate	J=Other

FILTERED?

(YES/NO)

PICK LETTER

(CODE)\*

Matrix Codes

On your sample

(billable)

NOT needed on

your sample

A = Air  
B = Biota  
C = Charcoal  
O = Oil  
S = Soil  
SW = Surface Water  
WW = Waste Water  
WP = Wipe

### Analyses Requested

VOCs

RCRA metals

CLIENT COMMENTS

(Lab Use Only)

Profile #

3-40mls 1-25mls

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1-40mls

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## Sample Condition Upon Receipt

Client Name: Himalayan Project # 4082163

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other CS Logistic

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: 120 /Corr: \_\_\_\_\_

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:  
Date: 8-2-13  
Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>M</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12) exceptions: VOA Coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed <u>MV</u> Lab Std #/ID of preservative Date/ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<i>Added to COC by lab</i> <u>8/12/13 MV</u>
Pace Trip Blank Lot # (if purchased):	<u>299</u>	

Client Notification/ Resolution:

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

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

If checked, see attached form for additional comments

Project Manager Review:

MAT for DM

Date: 8-2-13

## **WASTE CHARACTERIZATION ANALYTICAL**

August 19, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-77-00 WINNECONNE  
Pace Project No.: 4082158

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-77-00 WINNECONNE  
 Pace Project No.: 4082158

### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
 A2LA Certification #: 2926.01  
 Alaska Certification #: UST-078  
 Alaska Certification #MN00064  
 Arizona Certification #: AZ-0014  
 Arkansas Certification #: 88-0680  
 California Certification #: 01155CA  
 Colorado Certification #Pace  
 Connecticut Certification #: PH-0256  
 EPA Region 8 Certification #: Pace  
 Florida/NELAP Certification #: E87605  
 Georgia Certification #: 959  
 Hawaii Certification #Pace  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Kansas Certification #: E-10167  
 Louisiana Certification #: 03086  
 Louisiana Certification #: LA080009  
 Maine Certification #: 2007029  
 Maryland Certification #: 322  
 Michigan DEQ Certification #: 9909  
 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
 Montana Certification #: MT CERT0092  
 Nebraska Certification #: Pace  
 Nevada Certification #: MN\_00064  
 New Jersey Certification #: MN-002  
 New York Certification #: 11647  
 North Carolina Certification #: 530  
 North Dakota Certification #: R-036  
 Ohio VAP Certification #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Certification #: MN200001  
 Oregon Certification #: MN300001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification  
 Tennessee Certification #: 02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Virginia/DCLS Certification #: 002521  
 Virginia/VELAP Certification #: 460163  
 Washington Certification #: C754  
 West Virginia Certification #: 382  
 Wisconsin Certification #: 999407970

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
 Florida/NELAP Certification #: E87948  
 Illinois Certification #: 200050  
 Kentucky Certification #: 82  
 Louisiana Certification #: 04168  
 Minnesota Certification #: 055-999-334

New York Certification #: 11888  
 North Dakota Certification #: R-150  
 South Carolina Certification #: 83006001  
 US Dept of Agriculture #: S-76505  
 Wisconsin Certification #: 405132750

### Kansas Certification IDs

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

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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082158001	PROT B-11	Solid	07/30/13 05:10	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-77-00 WINNECONNE  
 Pace Project No.: 4082158

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082158001	PROT B-11	EPA 8082	BLM	10	PASI-G
		EPA 6010	DLB	10	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8270	RJN	16	PASI-G
		EPA 8260	HNW	13	PASI-G
		ASTM D2974-87	AH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		SW-846 7.3.4.2	AJM	1	PASI-K
		EPA 9045	KMS	1	PASI-G
		EPA 9095	HKV	1	PASI-G
		SM 2710F	HKV	1	PASI-G
		EPA 420.1	KEO	1	PASI-M
		SW-846 7.3.3.2	AJM	1	PASI-K

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

Sample: PROT B-11 Lab ID: 4082158001 Collected: 07/30/13 05:10 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB</b>	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	53469-21-9	
PCB-1248 (Aroclor 1248)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	12672-29-6	
PCB-1254 (Aroclor 1254)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	11097-69-1	
PCB-1260 (Aroclor 1260)	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	11096-82-5	
PCB, Total	<28.7 ug/kg		57.3	28.7	1	08/05/13 12:00	08/05/13 23:01	1336-36-3	
<b>Surrogates</b>									
Tetrachloro-m-xylene (S)	84 %		40-130		1	08/05/13 12:00	08/05/13 23:01	877-09-8	
Decachlorobiphenyl (S)	86 %		48-130		1	08/05/13 12:00	08/05/13 23:01	2051-24-3	
<b>6010 MET ICP, TCLP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 08/05/13 00:00								
Arsenic	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7440-38-2	
Barium	<1.2 mg/L		2.5	1.2	1	08/06/13 11:30	08/06/13 19:50	7440-39-3	
Cadmium	<0.0025 mg/L		0.0050	0.0025	1	08/06/13 11:30	08/06/13 19:50	7440-43-9	
Chromium	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7440-47-3	
Copper	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7440-50-8	
Lead	<0.015 mg/L		0.038	0.015	1	08/06/13 11:30	08/06/13 19:50	7439-92-1	
Nickel	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7440-02-0	
Selenium	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7782-49-2	
Silver	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7440-22-4	
Zinc	<0.12 mg/L		0.25	0.12	1	08/06/13 11:30	08/06/13 19:50	7440-66-6	
<b>7470 Mercury, TCLP</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 08/05/13 00:00								
Mercury	<0.10 ug/L		0.20	0.10	1	08/07/13 10:06	08/07/13 16:04	7439-97-6	
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/05/13 00:00								
1,4-Dichlorobenzene	<8.6 ug/L		50.0	8.6	1	08/07/13 12:00	08/09/13 13:07	106-46-7	
2,4-Dinitrotoluene	<8.0 ug/L		50.0	8.0	1	08/07/13 12:00	08/09/13 13:07	121-14-2	
Hexachloro-1,3-butadiene	<6.6 ug/L		100	6.6	1	08/07/13 12:00	08/09/13 13:07	87-68-3	
Hexachlorobenzene	<11.1 ug/L		50.0	11.1	1	08/07/13 12:00	08/09/13 13:07	118-74-1	
Hexachloroethane	<5.8 ug/L		50.0	5.8	1	08/07/13 12:00	08/09/13 13:07	67-72-1	
2-Methylphenol(o-Cresol)	<9.7 ug/L		50.0	9.7	1	08/07/13 12:00	08/09/13 13:07	95-48-7	
3&4-Methylphenol(m&p Cresol)	<7.7 ug/L		50.0	7.7	1	08/07/13 12:00	08/09/13 13:07		
Nitrobenzene	<13.7 ug/L		50.0	13.7	1	08/07/13 12:00	08/09/13 13:07	98-95-3	
Pentachlorophenol	<10.8 ug/L		100	10.8	1	08/07/13 12:00	08/09/13 13:07	87-86-5	
Pyridine	<14.3 ug/L		50.0	14.3	1	08/07/13 12:00	08/09/13 13:07	110-86-1	
2,4,5-Trichlorophenol	<10 ug/L		50.0	10	1	08/07/13 12:00	08/09/13 13:07	95-95-4	
2,4,6-Trichlorophenol	<10.7 ug/L		50.0	10.7	1	08/07/13 12:00	08/09/13 13:07	88-06-2	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

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**Sample: PROT B-11**      Lab ID: **4082158001**      Collected: 07/30/13 05:10      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/05/13 00:00								
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	86 %	59-130		1	08/07/13 12:00	08/09/13 13:07	4165-60-0		
2-Fluorobiphenyl (S)	83 %	60-130		1	08/07/13 12:00	08/09/13 13:07	321-60-8		
Phenol-d6 (S)	38 %	19-130		1	08/07/13 12:00	08/09/13 13:07	13127-88-3		
2,4,6-Tribromophenol (S)	90 %	34-143		1	08/07/13 12:00	08/09/13 13:07	118-79-6		
<b>8260 MSV TCLP</b>	Analytical Method: EPA 8260 Preparation Method: EPA 1311								
Benzene	<5.0 ug/L	10.0	5.0	10	08/06/13 00:00	08/09/13 11:14	71-43-2		
2-Butanone (MEK)	<27.0 ug/L	200	27.0	10	08/06/13 00:00	08/09/13 11:14	78-93-3		
Carbon tetrachloride	<3.7 ug/L	10.0	3.7	10	08/06/13 00:00	08/09/13 11:14	56-23-5		
Chlorobenzene	<3.6 ug/L	10.0	3.6	10	08/06/13 00:00	08/09/13 11:14	108-90-7		
Chloroform	<6.9 ug/L	50.0	6.9	10	08/06/13 00:00	08/09/13 11:14	67-66-3		
1,2-Dichloroethane	<4.8 ug/L	10.0	4.8	10	08/06/13 00:00	08/09/13 11:14	107-06-2		
1,1-Dichloroethene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 11:14	75-35-4		
Tetrachloroethylene	<4.7 ug/L	10.0	4.7	10	08/06/13 00:00	08/09/13 11:14	127-18-4		
Trichloroethylene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 11:14	79-01-6		
Vinyl chloride	<1.8 ug/L	10.0	1.8	10	08/06/13 00:00	08/09/13 11:14	75-01-4		
<b>Surrogates</b>									
Toluene-d8 (S)	99 %	55-137		10	08/06/13 00:00	08/09/13 11:14	2037-26-5		
4-Bromofluorobenzene (S)	95 %	43-137		10	08/06/13 00:00	08/09/13 11:14	460-00-4		
Dibromofluoromethane (S)	94 %	70-130		10	08/06/13 00:00	08/09/13 11:14	1868-53-7		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	12.8 %	0.10	0.10	1			08/12/13 16:31		
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F			1			08/06/13 15:25		
<b>Reactive Sulfide</b>	Analytical Method: SW-846 7.3.4.2								
Sulfide, Reactive	10.4J mg/kg	100		1			08/12/13 09:00		
<b>9045 pH Soil</b>	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.4 Std. Units	0.10	0.010	1			08/14/13 23:30		H6
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	PASS no units			1			08/06/13 09:48		
<b>Specific Gravity</b>	Analytical Method: SM 2710F								
Specific Gravity	1.6 no units			1			08/06/13 10:41		
<b>Phenolics, Total Recoverable</b>	Analytical Method: EPA 420.1								
Phenolics, Total Recoverable	<15.0 ug/L	50.0	15.0	1			08/15/13 15:30		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

Sample: PROT B-11 Lab ID: 4082158001 Collected: 07/30/13 05:10 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>733C S Reactive Cyanide</b>	Analytical Method: SW-846 7.3.3.2								
Cyanide, Reactive	<b>0.0070J</b> mg/kg	0.025		1			08/12/13 09:12		

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch:	MERP/3790	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury TCLP
Associated Lab Samples:	4082158001		

METHOD BLANK: 834230 Matrix: Water

Associated Lab Samples: 4082158001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.10	0.20	08/07/13 15:37	

LABORATORY CONTROL SAMPLE: 834231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	85-115	

MATRIX SPIKE SAMPLE: 834232

Parameter	Units	4081958001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.10	5	5.5	110	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 834233 834234

Parameter	Units	4082221005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Max Qual
Mercury	ug/L	<0.10	5	5	5.3	5.4	107	109	85-115	2	20	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch:	MPRP/8917	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	4082158001		

METHOD BLANK: 833948    Matrix: Water

Associated Lab Samples: 4082158001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.025	0.050	08/06/13 19:34	
Barium	mg/L	<0.25	0.50	08/06/13 19:34	
Cadmium	mg/L	<0.00050	0.0010	08/06/13 19:34	
Chromium	mg/L	<0.025	0.050	08/06/13 19:34	
Copper	mg/L	<0.025	0.050	08/06/13 19:34	
Lead	mg/L	<0.0030	0.0075	08/06/13 19:34	
Nickel	mg/L	<0.025	0.050	08/06/13 19:34	
Selenium	mg/L	<0.025	0.050	08/06/13 19:34	
Silver	mg/L	<0.025	0.050	08/06/13 19:34	
Zinc	mg/L	<0.025	0.050	08/06/13 19:34	

LABORATORY CONTROL SAMPLE: 833949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.5	0.52	103	80-120	
Barium	mg/L	.5	0.51	102	80-120	
Cadmium	mg/L	.5	0.51	103	80-120	
Chromium	mg/L	.5	0.53	105	80-120	
Copper	mg/L	.5	0.53	106	80-120	
Lead	mg/L	.5	0.54	108	80-120	
Nickel	mg/L	.5	0.56	112	80-120	
Selenium	mg/L	.5	0.55	109	80-120	
Silver	mg/L	.25	0.27	110	80-120	
Zinc	mg/L	.5	0.53	106	80-120	

MATRIX SPIKE SAMPLE: 833950

Parameter	Units	4081958001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	<0.12	2.5	2.6	103	75-125	
Barium	mg/L	<1.2	2.5	2.7	99	75-125	
Cadmium	mg/L	<0.0025	2.5	2.6	103	75-125	
Chromium	mg/L	<0.12	2.5	2.6	104	75-125	
Copper	mg/L	<0.12	2.5	2.7	106	75-125	
Lead	mg/L	<0.015	2.5	2.6	105	75-125	
Nickel	mg/L	<0.12	2.5	2.7	108	75-125	
Selenium	mg/L	<0.12	2.5	2.7	109	75-125	
Silver	mg/L	<0.12	1.2	1.4	109	75-125	
Zinc	mg/L	<0.12	2.5	2.7	105	75-125	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE  
Pace Project No.: 4082158

MATRIX SPIKE SAMPLE:		833951							
Parameter	Units	4081972001	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Arsenic	mg/L		<0.12	2.5	2.5	101	75-125		
Barium	mg/L		<1.2	2.5	2.5	98	75-125		
Cadmium	mg/L		<0.0025	2.5	2.5	100	75-125		
Chromium	mg/L		0.32	2.5	2.9	102	75-125		
Copper	mg/L		<0.12	2.5	2.7	105	75-125		
Lead	mg/L		<0.015	2.5	2.6	103	75-125		
Nickel	mg/L		<0.12	2.5	2.7	107	75-125		
Selenium	mg/L		<0.12	2.5	2.6	106	75-125		
Silver	mg/L		<0.12	1.2	1.3	106	75-125		
Zinc	mg/L		0.86	2.5	3.5	105	75-125		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		833952		833953								
Parameter	Units	4082125001	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	<0.12	2.5	2.5	2.5	2.5	99	99	75-125	0	20	
Barium	mg/L	<1.2	2.5	2.5	2.7	2.6	97	95	75-125	2	20	
Cadmium	mg/L	<0.0025	2.5	2.5	2.5	2.5	100	99	75-125	1	20	
Chromium	mg/L	<0.12	2.5	2.5	2.5	2.5	101	99	75-125	1	20	
Copper	mg/L	<0.12	2.5	2.5	2.6	2.6	103	102	75-125	1	20	
Lead	mg/L	<0.015	2.5	2.5	2.6	2.6	104	102	75-125	2	20	
Nickel	mg/L	<0.12	2.5	2.5	2.7	2.7	107	106	75-125	1	20	
Selenium	mg/L	<0.12	2.5	2.5	2.7	2.7	105	106	75-125	1	20	
Silver	mg/L	<0.12	1.2	1.2	1.3	1.3	106	105	75-125	2	20	
Zinc	mg/L	<0.12	2.5	2.5	2.7	2.6	105	103	75-125	2	20	

## REPORT OF LABORATORY ANALYSIS

## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch:	MSV/20755	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV TCLP
Associated Lab Samples:	4082158001		

METHOD BLANK: 834655                                  Matrix: Water

Associated Lab Samples: 4082158001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/09/13 08:11	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/09/13 08:11	
Benzene	ug/L	<0.50	1.0	08/09/13 08:11	
Carbon tetrachloride	ug/L	<0.37	1.0	08/09/13 08:11	
Chlorobenzene	ug/L	<0.36	1.0	08/09/13 08:11	
Chloroform	ug/L	<0.69	5.0	08/09/13 08:11	
Tetrachloroethene	ug/L	<0.47	1.0	08/09/13 08:11	
Trichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
Vinyl chloride	ug/L	<0.18	1.0	08/09/13 08:11	
4-Bromofluorobenzene (S)	%	97	43-137	08/09/13 08:11	
Dibromofluoromethane (S)	%	93	70-130	08/09/13 08:11	
Toluene-d8 (S)	%	100	55-137	08/09/13 08:11	

LABORATORY CONTROL SAMPLE &amp; LCSD: 834656                                  834657

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/L	50	57.8	58.5	116	117	70-130	1	20	
1,2-Dichloroethane	ug/L	50	52.5	53.0	105	106	70-144	1	20	
Benzene	ug/L	50	53.6	53.1	107	106	70-137	1	20	
Carbon tetrachloride	ug/L	50	50.6	50.9	101	102	70-154	0	20	
Chlorobenzene	ug/L	50	54.8	53.3	110	107	70-130	3	20	
Chloroform	ug/L	50	52.8	51.9	106	104	70-130	2	20	
Tetrachloroethene	ug/L	50	54.4	53.6	109	107	70-130	2	20	
Trichloroethene	ug/L	50	57.8	55.0	116	110	70-130	5	20	
Vinyl chloride	ug/L	50	53.1	53.4	106	107	61-143	1	20	
4-Bromofluorobenzene (S)	%				106	105	43-137			
Dibromofluoromethane (S)	%				99	103	70-130			
Toluene-d8 (S)	%				98	99	55-137			

MATRIX SPIKE SAMPLE: 834658

Parameter	Units	4082127001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<4.3	500	587	117	70-130	
1,2-Dichloroethane	ug/L	<4.8	500	516	103	70-146	
2-Butanone (MEK)	ug/L	<27.0		<27.0			
Benzene	ug/L	<5.0	500	528	106	70-137	
Carbon tetrachloride	ug/L	<3.7	500	512	102	70-154	
Chlorobenzene	ug/L	<3.6	500	537	107	70-130	
Chloroform	ug/L	<6.9	500	516	103	70-130	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

MATRIX SPIKE SAMPLE:	834658							
Parameter	Units	4082127001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Tetrachloroethene	ug/L	<4.7	500	535	107	70-130		
Trichloroethene	ug/L	<4.3	500	552	110	70-130		
Vinyl chloride	ug/L	<1.8	500	526	105	59-144		
4-Bromofluorobenzene (S)	%				107	43-137		
Dibromofluoromethane (S)	%				99	70-130		
Toluene-d8 (S)	%				98	55-137		

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## **QUALITY CONTROL DATA**

Project: 6190-77-00 WINNECONNE  
Pace Project No.: 4082158

QC Batch: OEXT/19291 Analysis Method: EPA 8082  
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCE  
Associated Lab Samples: 4082158001

METHOD BLANK: 833315 Matrix: Solid

Associated Lab Samples: 4082158001

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	08/05/13 16:59	
Decachlorobiphenyl (S)	%	93	48-130	08/05/13 16:59	
Tetrachloro-m-xylene (S)	%	77	40-130	08/05/13 16:59	

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LABORATORY CONTROL SAMPLE: 833316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	438	88	70-130	
Decachlorobiphenyl (S)	%			89	48-130	
Tetrachloro-m-xylene (S)	%			74	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 833317 833318

Parameter	Units	Result	MS	MSD	MS	MSD	% Rec	MSD % Rec	% Rec Limits	Max		
			Spike Conc.	Spike Conc.						RPD	RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<661			<661	<661						31
PCB-1221 (Aroclor 1221)	ug/kg	<661			<661	<661						31
PCB-1232 (Aroclor 1232)	ug/kg	<661			<661	<661						31
PCB-1242 (Aroclor 1242)	ug/kg	5360			6220	5940				5		31
PCB-1248 (Aroclor 1248)	ug/kg	<661			<661	<661						31
PCB-1254 (Aroclor 1254)	ug/kg	<661			<661	<661						31
PCB-1260 (Aroclor 1260)	ug/kg	<661	882	882	1060J	995J	120	113	40-149			31
Decachlorobiphenyl (S)	%						0	0	48-130			S4
Tetrachloro-m-xylene (S)	%						0	0	40-130			S4

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## **QUALITY CONTROL DATA**

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch: OEXT/19324

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 TCLP MSSV

Associated Lab Samples: 4082158001

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METHOD BLANK: 834441

## Matrix: Water

Associated Lab Samples: 4082158001

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
1,4-Dichlorobenzene	ug/L	<1.7	10.0	08/08/13 10:47	
2,4,5-Trichlorophenol	ug/L	<2.0	10.0	08/08/13 10:47	
2,4,6-Trichlorophenol	ug/L	<2.1	10.0	08/08/13 10:47	
2,4-Dinitrotoluene	ug/L	<1.6	10.0	08/08/13 10:47	
2-Methylphenol(o-Cresol)	ug/L	<1.9	10.0	08/08/13 10:47	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.5	10.0	08/08/13 10:47	
Hexachloro-1,3-butadiene	ug/L	<1.3	20.0	08/08/13 10:47	
Hexachlorobenzene	ug/L	<2.2	10.0	08/08/13 10:47	
Hexachloroethane	ug/L	<1.2	10.0	08/08/13 10:47	
Nitrobenzene	ug/L	<2.7	10.0	08/08/13 10:47	
Pentachlorophenol	ug/L	<2.2	20.0	08/08/13 10:47	
Pyridine	ug/L	<2.9	10.0	08/08/13 10:47	
2,4,6-Tribromophenol (S)	%	74	34-143	08/08/13 10:47	
2-Fluorobiphenyl (S)	%	91	60-130	08/08/13 10:47	
Nitrobenzene-d5 (S)	%	85	59-130	08/08/13 10:47	
Phenol-d6 (S)	%	32	19-130	08/08/13 10:47	

LABORATORY CONTROL SAMPLE: 834442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	33.0	66	53-130	
2,4,5-Trichlorophenol	ug/L	50	49.1	98	70-130	
2,4,6-Trichlorophenol	ug/L	50	45.7	91	70-130	
2,4-Dinitrotoluene	ug/L	50	52.0	104	69-134	
2-Methylphenol(o-Cresol)	ug/L	50	35.2	70	48-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	29.6	59	43-130	
Hexachloro-1,3-butadiene	ug/L	50	34.8	70	53-130	
Hexachlorobenzene	ug/L	50	48.3	97	59-130	
Hexachloroethane	ug/L	50	28.6	57	47-130	
Nitrobenzene	ug/L	50	49.1	98	66-130	
Pentachlorophenol	ug/L	50	37.9	76	54-130	
Pyridine	ug/L	50	6.2J	12	10-130	
2,4,6-Tribromophenol (S)	%			78	34-143	
2-Fluorobiphenyl (S)	%			95	60-130	
Nitrobenzene-d5 (S)	%			87	59-130	
Phenol-d6 (S)	%			36	19-130	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

MATRIX SPIKE SAMPLE:	834443						
Parameter	Units	4081919001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<8.6	250	182	73	50-130	
2,4,5-Trichlorophenol	ug/L	<10	250	229	91	65-130	
2,4,6-Trichlorophenol	ug/L	<10.7	250	208	83	64-130	
2,4-Dinitrotoluene	ug/L	<8.0	250	249	100	49-136	
2-Methylphenol(o-Cresol)	ug/L	<9.7	250	193	77	33-130	
3&4-Methylphenol(m&p Cresol)	ug/L	<7.7	250	173	69	35-130	
Hexachloro-1,3-butadiene	ug/L	<6.6	250	192	77	48-130	
Hexachlorobenzene	ug/L	<11.1	250	225	90	57-130	
Hexachloroethane	ug/L	<5.8	250	168	67	45-130	
Nitrobenzene	ug/L	<13.7	250	251	100	62-130	
Pentachlorophenol	ug/L	<10.8	250	204	82	10-149	
Pyridine	ug/L	<14.3	250	97.4	39	10-130	
2,4,6-Tribromophenol (S)	%				76	34-143	
2-Fluorobiphenyl (S)	%				87	60-130	
Nitrobenzene-d5 (S)	%				88	59-130	
Phenol-d6 (S)	%				37	19-130	

MATRIX SPIKE SAMPLE:	834444						
Parameter	Units	4082158001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	<8.6	250	173	69	50-130	
2,4,5-Trichlorophenol	ug/L	<10	250	240	96	65-130	
2,4,6-Trichlorophenol	ug/L	<10.7	250	216	86	64-130	
2,4-Dinitrotoluene	ug/L	<8.0	250	255	102	49-136	
2-Methylphenol(o-Cresol)	ug/L	<9.7	250	206	82	33-130	
3&4-Methylphenol(m&p Cresol)	ug/L	<7.7	250	184	74	35-130	
Hexachloro-1,3-butadiene	ug/L	<6.6	250	192	77	48-130	
Hexachlorobenzene	ug/L	<11.1	250	229	92	57-130	
Hexachloroethane	ug/L	<5.8	250	162	65	45-130	
Nitrobenzene	ug/L	<13.7	250	242	97	62-130	
Pentachlorophenol	ug/L	<10.8	250	223	89	10-149	
Pyridine	ug/L	<14.3	250	79.3	32	10-130	
2,4,6-Tribromophenol (S)	%				80	34-143	
2-Fluorobiphenyl (S)	%				90	60-130	
Nitrobenzene-d5 (S)	%				87	59-130	
Phenol-d6 (S)	%				41	19-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch: PMST/8754

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 4082158001

---

SAMPLE DUPLICATE: 837918

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4082166004	13.4	15.4	14	10

## REPORT OF LABORATORY ANALYSIS

## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch:	WET/15844	Analysis Method:	EPA 1010
QC Batch Method:	EPA 1010	Analysis Description:	1010 Flash Point, Closed Cup
Associated Lab Samples:	4082158001		

---

LABORATORY CONTROL SAMPLE: 833913

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		83.0			

---

SAMPLE DUPLICATE: 834345

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	4082272001	>210	>210		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch: WET/42814 Analysis Method: SW-846 7.3.4.2

QC Batch Method: SW-846 7.3.4.2 Analysis Description: Reactive Sulfide

Associated Lab Samples: 4082158001

METHOD BLANK: 1234378 Matrix: Solid

Associated Lab Samples: 4082158001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	0.0J	100	08/12/13 09:00	

LABORATORY CONTROL SAMPLE: 1234379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	183	92	77-110	

MATRIX SPIKE SAMPLE: 1234380

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	ND	500	427	85	67-116	

SAMPLE DUPLICATE: 1234381

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	0.0J		30	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch: WET/15940 Analysis Method: EPA 9045

QC Batch Method: EPA 9045 Analysis Description: 9045 pH

Associated Lab Samples: 4082158001

---

SAMPLE DUPLICATE: 839426

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.4	8.2	2	5	H6

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch: WET/15841

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 4082158001

---

SAMPLE DUPLICATE: 833806

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	PASS	PASS			

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE  
Pace Project No.: 4082158

---

QC Batch: WET/15843 Analysis Method: SM 2710F  
QC Batch Method: SM 2710F Analysis Description: Spec.Gravity  
Associated Lab Samples: 4082158001

---

SAMPLE DUPLICATE: 833859

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity	no units	4082160001	1.5	1.6	5	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch:	WETA/15777	Analysis Method:	EPA 420.1
QC Batch Method:	EPA 420.1	Analysis Description:	420.1 Phenolics
Associated Lab Samples:	4082158001		

METHOD BLANK: 1502529	Matrix: Water
-----------------------	---------------

Associated Lab Samples: 4082158001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	50.0	08/15/13 15:30	

LABORATORY CONTROL SAMPLE & LCSD:	1502530	1502531	
-----------------------------------	---------	---------	--

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Phenolics, Total Recoverable	ug/L	1000	922	1010	92	101	90-110	9	20	

MATRIX SPIKE SAMPLE:	1502532		
----------------------	---------	--	--

Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	1000	913	91	90-110	

MATRIX SPIKE SAMPLE:	1502533		
----------------------	---------	--	--

Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	41.8J	1000	1090	104	90-110	

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## QUALITY CONTROL DATA

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

QC Batch:	WETA/25754	Analysis Method:	SW-846 7.3.3.2
QC Batch Method:	SW-846 7.3.3.2	Analysis Description:	733C Reactive Cyanide
Associated Lab Samples:	4082158001		

METHOD BLANK: 1234788	Matrix: Solid
-----------------------	---------------

Associated Lab Samples: 4082158001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	0.0J	0.025	08/12/13 09:06	

LABORATORY CONTROL SAMPLE: 1234789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	.5	0.51	101	71-123	

MATRIX SPIKE SAMPLE: 1234790

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	ND	.5	0.51	100	57-132	

SAMPLE DUPLICATE: 1234791

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.0070J		23	

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## QUALIFIERS

Project: 6190-77-00 WINNECONNE

Pace Project No.: 4082158

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-K Pace Analytical Services - Kansas City

PASI-M Pace Analytical Services - Minneapolis

### BATCH QUALIFIERS

Batch: WETA/15777

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

### ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-77-00 WINNECONNE  
Pace Project No.: 4082158

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082158001	PROT B-11	EPA 3541	OEXT/19291	EPA 8082	GCSV/9977
4082158001	PROT B-11	EPA 3010	MPRP/8917	EPA 6010	ICP/7890
4082158001	PROT B-11	EPA 7470	MERP/3790	EPA 7470	MERC/4768
4082158001	PROT B-11	EPA 3510	OEXT/19324	EPA 8270	MSSV/5875
4082158001	PROT B-11	EPA 1311	TCLP/3052	EPA 8260	MSV/20755
4082158001	PROT B-11	ASTM D2974-87	PMST/8754		
4082158001	PROT B-11	EPA 1010	WET/15844		
4082158001	PROT B-11	SW-846 7.3.4.2	WET/42814		
4082158001	PROT B-11	EPA 9045	WET/15940		
4082158001	PROT B-11	EPA 9095	WET/15841		
4082158001	PROT B-11	SM 2710F	WET/15843		
4082158001	PROT B-11	EPA 420.1	WETA/15777		
4082158001	PROT B-11	SW-846 7.3.3.2	WETA/25754		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

**Company Name:** Himalayan Consultants  
**Branch/Location:** Michelle Reed  
**Project Contact:** Michelle Reed  
**Phone:** 218 500066  
**Project Number:** 0190-17-00  
**Project State:** WI  
**Sampled By (Print):** Michelle Reed  
**Sampled By (Sign):**   
**PO #:** 

**Data Package Options**  
 EPA Level III  
 EPA Level IV  
 NOT needed on your sample

Regulatory

Program:



## Sample Condition Upon Receipt

Client Name: Himalayan Project # 4082158

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Other CS Logistic

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: (20) /Corr:  Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 8/27/13

Initials: MLV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5. Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>S</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER: <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed Lab Std #/ID of preservative Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**Client Notification/ Resolution:**

If checked, see attached form for additional comments

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

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

Project Manager Review: \_\_\_\_\_

MAT for DM

Date: 8-2-13

**ATTACHMENT E**

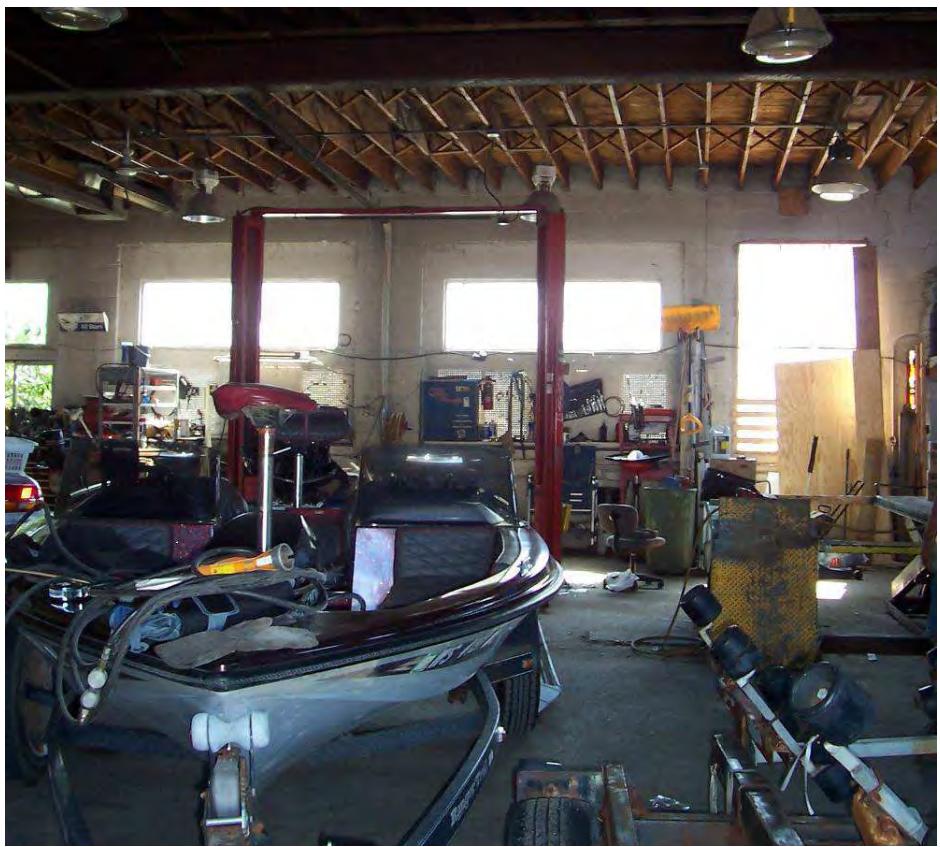
**SITE PHOTOGRAPHS**



Site #11: Location of boring B-11-1 (PVC riser).



Site #11: Location of boring B-11-3.



Site #11: Interior view of boat / vehicle repair area.



Site #11: Interior view of boat / vehicle repair area.

## **APPENDIX F**

### **HOMETOWN FAMILY HAIR CARE [SITE #12]**

## **1.0 SITE DESCRIPTION**

Hometown Family Hair Care (115-119 E. Main Street) is located near the southwest quadrant of the intersection of E. Main Street (STH 116) and 2nd Avenue [hereafter referred to as the site] (see Figure 3.1, Attachment A). The site is part of the northeast  $\frac{1}{4}$  of the northwest  $\frac{1}{4}$  of Section 21, Township 19 North, Range 15 East, in the Village of Winneconne, Winnebago County, Wisconsin. According to the Winnebago County GIS Parcel Profiler Site, the site is currently owned by PDK Properties LLC [Ref. 1].

Based on Himalayan's inspection of the site on July 30, 2013, the site is utilized as a pet supply / pet training / groomer, and as a single-apartment building (see Photographs, Attachment E). During the site visit, Himalayan observed a coal chute in the basement of the building.

The predominant land surface at the site is an gravel covered parking lot on the southeast side of the property.

The land use surrounding the site is generally commercial and residential properties.

## **2.0 SITE HISTORY**

In August 2012, Himalayan performed a Phase 1 Hazardous Materials Assessment (HMA) of the project corridor and identified the site at 119 E. Main Street as one of the sites with hazardous material concerns [Ref. 2]. Based on the information obtained from the Phase 1 HMA, the site has been utilized by various commercial businesses for over 100 years including a grocery store and auto repair facility.

According to Sanborn maps reviewed, the site was depicted as a general store in 1893, a vacant building in 1898, Winneconne Creamery with a coal storage area in 1904, as a grocery in 1913, and as a store with attached garage in 1929. According to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) storage tank records, no tanks are registered to the site [Ref. 3].

Based on the age of the building (at least 1893), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

## **3.0 PURPOSE AND PROPOSED ACQUISITION/CONSTRUCTION**

The purpose of this Phase 2 HMI was to identify the potential presence and nature of contamination at the site. The Phase 2 HMI was performed in general accordance with FDM Procedure 21-35-10 (revised, December 2011) [Ref. 4], and the Wisconsin Department of Natural Resources (WDNR) rules and regulations.

Based on the proposed design plans, the maximum depths of excavation at and adjacent to the site are anticipated to be about 2 feet bgs for roadway construction, 8 feet bgs for water / sewer lines, and about 5 feet bgs for lighting / signal bases. Up to 12 feet of R/W (strip) acquisition is anticipated at this site, which includes relocation of the existing building.

## **4.0 SOILS AND GROUNDWATER CHARACTERIZATION**

On July 31, 2013, Horizon Construction and Exploration (Horizon), under a contract with Himalayan, advanced two soil borings (B-12-1 and B-12-2) at the site (see Figure 3.1, Attachment A). The general boring locations were in the areas accessible based on building coverage and utilities. Borings were advanced to a depth of 20 feet bgs. Boring B-12-1 is located in the area of a former coal storage area, while B-12-2 is located near the adjacent auto/boat repair facility at 105-113 E. Main Street.

Each of the borings was converted to temporary groundwater monitoring wells (MW-12-1 and MW-12-2) to facilitate groundwater sampling. The wells were constructed in general compliance with WDNR guidelines for temporary monitoring wells [Ref. 5]. The wells consisted of a 10-foot section of slotted 1-inch polyvinyl chloride (PVC) pipe attached to unslotted PVC riser pipe extending to the surface. Refer to Well Construction Forms in Attachment C for additional details on temporary well construction.

After completion of sampling, all boreholes/wells were abandoned by filling them with granular bentonite, in accordance with Wis. Adm. Code NR 141. The Borehole Abandonment Forms for each borehole/well are presented in Attachment B.

### **4.1 Soil Sampling**

Based on field observations, two soil samples from each boring were collected and submitted for laboratory analysis.

The soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and the eight Resource Conservation and Recovery Act (RCRA) metals [arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury].

### **4.2 Groundwater Sampling**

Himalayan performed groundwater sampling at the site on the same day as the boring activities. A sample was obtained from temporary monitoring well W-12-1 and was analyzed for VOCs and

RCRA metals. Temporary monitoring well W-12-2 had insufficient groundwater recharge for sample collection.

## 5.0 SUBSURFACE CONDITIONS

### 5.1 Soil Conditions

Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to a depth of approximately 2 feet bgs. The fill materials consisted mainly of black sandy silt, with trace small and large gravel.

Native red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal depths of 20 feet bgs.

Refer to soil boring logs in Attachment B for more detailed descriptions of the soils encountered at each boring location.

Continuous soil samples were obtained from the borings and field-screened for the presence of volatile organic vapors using a photoionization detector (PID). The field screening results for the collected 34 soil samples were all zero and are summarized in Table 1. A strong solvent odor was noted in borehole samples collected from B-12-2, at depths greater than 14 feet bgs (see Attachment B). Note that asphalt was being overlain on STH 116 at the time of Himalayan's field work; therefore, it is possible that background calibration may have been elevated on the PID.

FIELD SCREENING RESULTS			
Phase 2 Hazardous Materials Investigation			
Hometown Family Hair Care (119 E. Main Street)			
Winneconne, Winnebago County			
Project ID: 6190-17-00			
Boring ID	B-12-1	B-12-2	
Date	7/31/13	7/31/13	
Depth (feet)	0-2	0.0	0.0
	2-4	0.0	0.0
	4-6	0.0	0.0
	6-8	0.0	0.0
	8-10	0.0	0.0
	10-12	0.0	0.0
	12-14	0.0	0.0
	14-16	0.0	1139
	16-18	0.0	4648
	18-20	0.0	1003
Notes: Results provided in instrument units (IU).			

## **5.2 Groundwater Conditions**

Saturated soil conditions were observed in borings B-12-1 and B-12-2 at approximately 2 feet bgs. Temporary monitoring wells (W-12-1 and W-12-2) were installed in each boring. Groundwater was encountered at approximately 13.7 feet bgs in W-12-1. Temporary monitoring well W-12-2 had insufficient groundwater recharge for sample collection. It should be noted that groundwater depths can vary throughout the year, depending on several factors including seasonal variations in precipitation, infiltration, and surface water runoff.

Refer to the soil boring logs in Attachment B for additional information regarding groundwater conditions encountered at each boring location.

## **6.0 ANALYTICAL RESULTS**

### **6.1 Soil Samples**

Laboratory analyses were performed on two soil samples selected from each borehole, at various depths ranging from 2 to 18 feet bgs.

GRO was detected in B-12-2 16-18' (401 mg/kg) above the NR 720 RCL [Ref. 6]. DRO was detected in B-12-2 16-18' (44.5 mg/kg) and is below the NR 720 RCL.

VOCs were detected in three of the soil samples. Trichloroethene (70.1 J to 1,410,000 µg/kg) were both detected in B-12-1 2-4', B-12-2 2-4' and B-12-2 16-18'. No NR 720 RCL has been established for this VOC. A "J" denotes a concentration flagged by the laboratory as an estimated concentration.

Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic (2.0 J to 5.2 mg/kg) was detected above the NR 720 RCL in each of the four samples. Chromium (17.0 to 24.8 mg/kg) was detected in each of the soil samples. Concentrations in all four samples were detected above the NR 720 RCL for hexavalent chromium only.

Lead (4.3 to 13.0 mg/kg) was detected in each of the soil samples. No concentrations exceeded the NR 720 RCL.

Barium (61.1 to 103 mg/kg), cadmium (0.23 J to 0.34 J mg/kg), and mercury (0.0073 J to 0.086 mg/kg) were also detected in several of the samples. Each of these detected metals are below their respective NR 720 RCLs or no standard has been established. Additionally, selenium and silver were not detected in any of the samples analyzed.

Eleven PAHs were detected in the soil samples. Benzo(a)pyrene was detected in B-12-2 2-4' (22.0 µg/kg) above its Interim RCL and below the Interim RCL in B-12-1 2-4' (3.9 J µg/kg) [Ref. 7]. The remaining ten PAHs were detected below any Interim RCLS. Benzo(b)fluoranthene (13.3 J to 28.9 µg/kg) was detected in all four samples, benzo(k)fluoranthene was detected in B-12-1 2-4' (4.9 J µg/kg) and B-12-2 2-4' (23.1 µg/kg), phenanthrene was detected in B-12-2 2-4' (33.8 µg/kg) and B-12-2 16-18' (16.5 J µg/kg), 1-Methylnaphthalene (5.5 J µg/kg) was detected in B-12-2 16-18'. Boring B-12-2 2-4' also contained concentrations of anthracene (11.0 J µg/kg), benzo(a)anthracene (25.1 µg/kg), benzo(g,h,i)perylene (10.6 J µg/kg), chrysene (28.7 µg/kg), fluoranthene (52.8 µg/kg), and pyrene (45.3 µg/kg).

Table 2 presents the summary of soil quality results. Also, refer to Figure 3.2, Attachment A for sample locations and analytical results.

**TABLE 2**  
**SOIL QUALITY RESULTS**  
**Phase 2 Hazardous Materials Investigation**  
**Hometown Family Hair Care (119 E. Main Street), Winneconne, Winnebago County**  
**Project ID: 6190-17-00**

Sample I.D.	B-12-1		B-12-2		NR 720 RCL / Interim RCL
Depth (feet)	2-4	8-10	2-4	16-18	
Collection Date	7/31/2013		7/31/2013		
<b>GRO (mg/kg)</b>	<3.1	<3.3	<3.1	<b>401</b>	250*
<b>DRO (mg/kg)</b>	<0.80	<0.78	<0.87	44.5	250*
<b>PAHs (µg/kg)</b>					
Anthracene	<9.8	<9.7	11.0 J	<9.6	3,000,000
Benzo(a)anthracene	<9.8	<9.7	25.1	<9.6	88
Benzo(a)pyrene	3.9 J	<3.5	<b>22.0</b>	<3.4	8.8
Benzo(b)fluoranthene	15.6 J	13.7 J	28.9	13.3 J	88
Benzo(g,h,i)perylene	<9.8	<9.7	10.6 J	<9.6	1,800
Benzo(k)fluoranthene	4.9 J	<3.4	23.1	<3.4	880
Chrysene	<9.8	<9.7	28.7	<9.6	8,800
Fluoranthene	<9.8	<9.7	52.8	<9.6	500,000
1-Methylnaphthalene	<3.4	<3.4	<3.7	5.5 J	23,000
Phenanthrene	<9.8	<9.7	33.8	16.5 J	1,800
Pyrene	<9.8	<9.7	45.3	<9.6	500,000
<b>VOCs (µg/kg)</b>					
Tetrachloroethene	<26.3	<26.6	<26.9	<5,260**	NSE
Trichloroethene	78.2	<26.6	70.1 J	1,410,000	NSE
<b>TCLP (mg/L)</b>					
Tetrachloroethene	NA	NA	NA	127	---
Trichloroethene	NA	NA	NA	12,000	---
<b>RCRA Metals (mg/kg)</b>					
Arsenic	<b>5.2</b>	<b>3.6</b>	<b>2.0 J</b>	<b>5.2</b>	0.039
Barium	89.2	62.4	103	61.1	NSE
Cadmium	0.29 J	0.23 J	0.34 J	0.23 J	8
Chromium	<b>24.8</b>	<b>17.5</b>	<b>17.0</b>	<b>17.4</b>	14
Lead	7.0	4.9	13.0	4.3	50
Mercury	0.020	0.011	0.086	0.0073 J	NSE

Notes:  
Analytes detected above the method detection limit (MDL) in at least one sample are included in the Table  
GRO= Gasoline Range Organics; DRO= Diesel Range Organics; VOC= Volatile Organic Compounds; TCLP= Toxicity characteristic leaching procedure  
RCRA = Resource Conservation and Recovery Act; **Bold** results indicate concentrations exceeding NR 720 or Interim RCLs  
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit  
\* = RCLs (mg/kg) based on permeability of soils per NR 720 for groundwater protection  
\*\*= Tetrachloroethene not detected above the method detection limit; however, it was detected in the TCLP sample

Refer to Attachment D for complete laboratory report for each sample.

## 6.2 Groundwater Samples

Based on the laboratory analytical results of the groundwater sample collected from temporary well MW-12-1, four VOCs were detected in the sample. Trichloroethene (13.4 µg/L) was detected above the NR 140 ES. Cis-1,2-dichloroethene (2.6 µg/L), trans-1,2-dichloroethene (7.3 µg/L), and methyl tert butyl ether (1.7 µg/L) were detected below the NR 140 PALs in the sample [Ref. 8].

Barium (273 µg/L) was the only RCRA metal detected in the groundwater sample, and is below its NR 140 PAL.

Also refer to Figure 3.3 in Attachment A for the well locations and Attachment D for the laboratory results.

Sample I.D.	MW-12-1	NR 140 ES (µg/L)	NR 140 PAL (µg/L)
Collection Date	7/31/13		
<b>VOCs (µg/L)</b>			
cis-1,2-dichloroethene	2.6	70	7
trans-1,2-dichloroethene	7.3	100	20
Methyl tert butyl ether	1.7	60	12
Trichloroethene	<b>13.4</b>	5	0.5
<b>RCRA Metals (µg/L)</b>			
Barium	273	2,000	400
Notes: Analytes detected above the method detection limit (MDL) in at least one sample are included in the Table VOCs = Volatile Organic Compounds RCRA = Resource Conservation and Recovery Act µg/L = micrograms per liter = parts per billion (ppb) Italics results indicate concentrations exceeding NR 140 PAL Bold results indicate concentrations exceeding NR 140 ES ES = Enforcement Standard per NR 140; PAL = Preventative Action Limit			

### 6.3 Waste Characterization Sample

A composite soil sample (Proto B-12) was collected from the site for landfill acceptance criteria (Protocol B) to provide waste characterization for potential off-site disposal and/or treatment of contaminated soils at a landfill.

Based on the laboratory analytical results, no sulfide, PCBs, and TCLP Semi-Volatiles were detected in the sample. The general chemistry results for the sample included: mercury 0.00038 mg/L, trichloroethene 0.150 mg/L, flashpoint >210 deg. F, pH 8.6, specific gravity 1.7, and reactive cyanide 0.0050 J mg/kg. No free liquids were encountered in the sample.

Table 4 presents the summary of soil quality results for the composite sample. See Attachment D for complete laboratory report.

TABLE 4		
LABORATORY ANALYTICAL RESULTS - Protocol B		
Phase 2 Hazardous Materials Investigation		
Hometown Family Hair Care (119 E. Main Street), Winneconne, Winnebago County		
Project ID: 6190-17-00		
Analyte	Sample Results	Units
Sample I.D. : Proto B-12		
<b>General Chemistry</b>		
% of Solids	85.8	%
Cyanide (total)	0.0050 J	mg/kg
Flashpoint	>210	°F
pH	8.6	pH Units
Specific Gravity	1.7	N/A
Free liquids	Pass	N/A
Sulfide	0.0 J	mg/kg
<b>TCLP Metals</b>		
Arsenic	<0.12	mg/L
Barium	<1.2	mg/L
Cadmium	<0.0025	mg/L
Chromium	<0.12	mg/L
Copper	<0.12	mg/L
Lead	<0.015	mg/L
Mercury	0.00038	mg/L
Nickel	<0.12	mg/L
Selenium	<0.12	mg/L
Silver	<0.12	mg/L
Zinc	<0.12	mg/L
<b>PCBs</b>		
PCB-1016	<0.0291	mg/kg
PCB-1221	<0.0291	mg/kg
PCB-1232	<0.0291	mg/kg
PCB-1242	<0.0291	mg/kg
PCB-1248	<0.0291	mg/kg
PCB-1254	<0.0291	mg/kg
PCB-1260	<0.0291	mg/kg
<b>TCLP VOCs</b>		
Benzene	<0.005	mg/L
Methyl Ethyl Ketone	<0.027	mg/L
Carbon Tetrachloride	<0.0037	mg/L
Chlorobenzene	<0.0036	mg/L
Chloroform	<0.0069	mg/L
1,2-Dichloroethane	<0.0048	mg/L
1,1-Dichloroethene	<0.0043	mg/L
Tetrachloroethene	<0.0047	mg/L
Trichloroethene	0.150	mg/L
Vinyl Chloride	<0.0018	mg/L

<b>TABLE 4 (Continued)</b> <b>LABORATORY ANALYTICAL RESULTS – Protocol B</b> <b>Phase 2 Hazardous Materials Investigation</b> <b>Creative Tile and Marble (29-31 W. Main Street), Winneconne, Winnebago County</b> <b>Project ID: 6190-17-00</b>		
Analyte	Sample Results	Units
<b>Sample I.D. Proto B-8</b>		
<b>TCLP Semi-VOCs</b>		
1,4-Dichlorobenzene	<0.0086	mg/L
2,4-Dinitrotoluene	<0.0080	mg/L
Hexachloro-1,3-butadiene	<0.0066	mg/L
Hexachlorobenzene	<0.0111	mg/L
Hexachloroethane	<0.0058	mg/L
2-Methylphenol (o-Cresol)	<0.0097	
3&4-Methylphenol (m&p Cresol)	<0.0077	mg/L
Nitrobenzene	<0.0137	mg/L
Pentachlorophenol	<0.0108	mg/L
Pyridine	<0.0143	mg/L
2,4,5-Trichlorophenol	<0.010	mg/L
2,4,6-Trichlorophenol	<0.0107	mg/L
Notes: VOCs = Volatile Organic Compounds mg/kg = milligrams per kilogram = parts per million (ppm) mg/L = milligrams per liter = parts per million (ppm) TCLP = Toxicity Characteristic Leaching Procedure		

## 7.0 FINDINGS

- Based on field observations, the shallow subsurface soils at the site consisted of fill materials from the ground surface to a depth of approximately 2 feet bgs. The fill materials consisted mainly of black sandy silt, with trace small and large gravel. Native red clay tills with trace amounts of fine gravel were encountered below the fill materials to the terminal depths of 20 feet bgs. Groundwater was encountered in only one temporary well, B-12-1, at a depth of 13.7 feet bgs.
- A strong solvent odor was noted in borehole samples collected from B-12-2, at depths greater than 14 feet bgs.
- GRO was detected in B-12-2 16-18' above the NR 720 RCL. DRO was detected in B-12-2 16-18' and is below the NR 720 RCL.
- Trichloroethene (70.1 J to 1,410,000 µg/kg) was detected in B-12-1 2-4', B-12-2 2-4' and B-12-2 16-18'. No NR 720 RCL has been established for this VOC.

- Six of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, and mercury) were detected in the soil samples. Arsenic was detected above the NR 720 RCL in each of the four samples. Chromium was detected in each of the soil samples and the concentrations in all four samples were detected above the NR 720 RCL for hexavalent chromium only. No other metals were detected above their respective NR 720 RCLs or no RCLs have been established for the detected compounds.
- Eleven PAHs were detected in the soil samples. Benzo(a)pyrene was detected in B-12-2 2-4' above its Interim RCL. No other PAHs were detected above their respective Interim RCLs.
- Four VOCs were detected in the groundwater sample (MW-12-1). Trichloroethene was detected above the NR 140 ES. Cis-1,2-dichloroethene, trans-1,2-dichloroethene, and methyl tert butyl ether were detected below the NR 140 PALs in the sample.
- Barium was the only RCRA metal detected in the groundwater sample, and is below its NR 140 PAL.
- Based on the waste characterization sample, no sulfide, PCBs, and TCLP Semi-Volatiles were detected in the sample. The general chemistry results for the sample included: mercury 0.00038 mg/L, trichloroethene 0.150 mg/L, flashpoint >210 deg. F, pH 8.6, specific gravity 1.7, and reactive cyanide 0.0050 J mg/kg. No free liquids were encountered in the sample.
- Based on the age of the building (at least 1893), potential asbestos containing materials (ACM) and lead based paint (LBP) may be present in the building on site.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

- Based on the results of Himalayan's Phase 2 HMI, evidence of hazardous substance release (chlorinated solvent impacts) was documented at the site. Therefore, Himalayan recommends that a Phase 3 hazardous materials investigation (FDM Procedure: 21-35-15) be considered for the site to fully characterize and define the lateral and vertical extent of soil and groundwater contamination and assist in determining the value of the parcel for acquisition purposes, prior to the total take of the site.
- The impacts discovered at the site should be reported to the WDNR in order to satisfy the notification requirements per hazardous substance spills law, Section 292.11(2).
- Pre-demolition asbestos and lead surveys should be performed to evaluate whether ACMs or LBP are present in the structure. All demolition activities should be performed in accordance with local, state, and federal regulations.

## **9.0 REFERENCES**

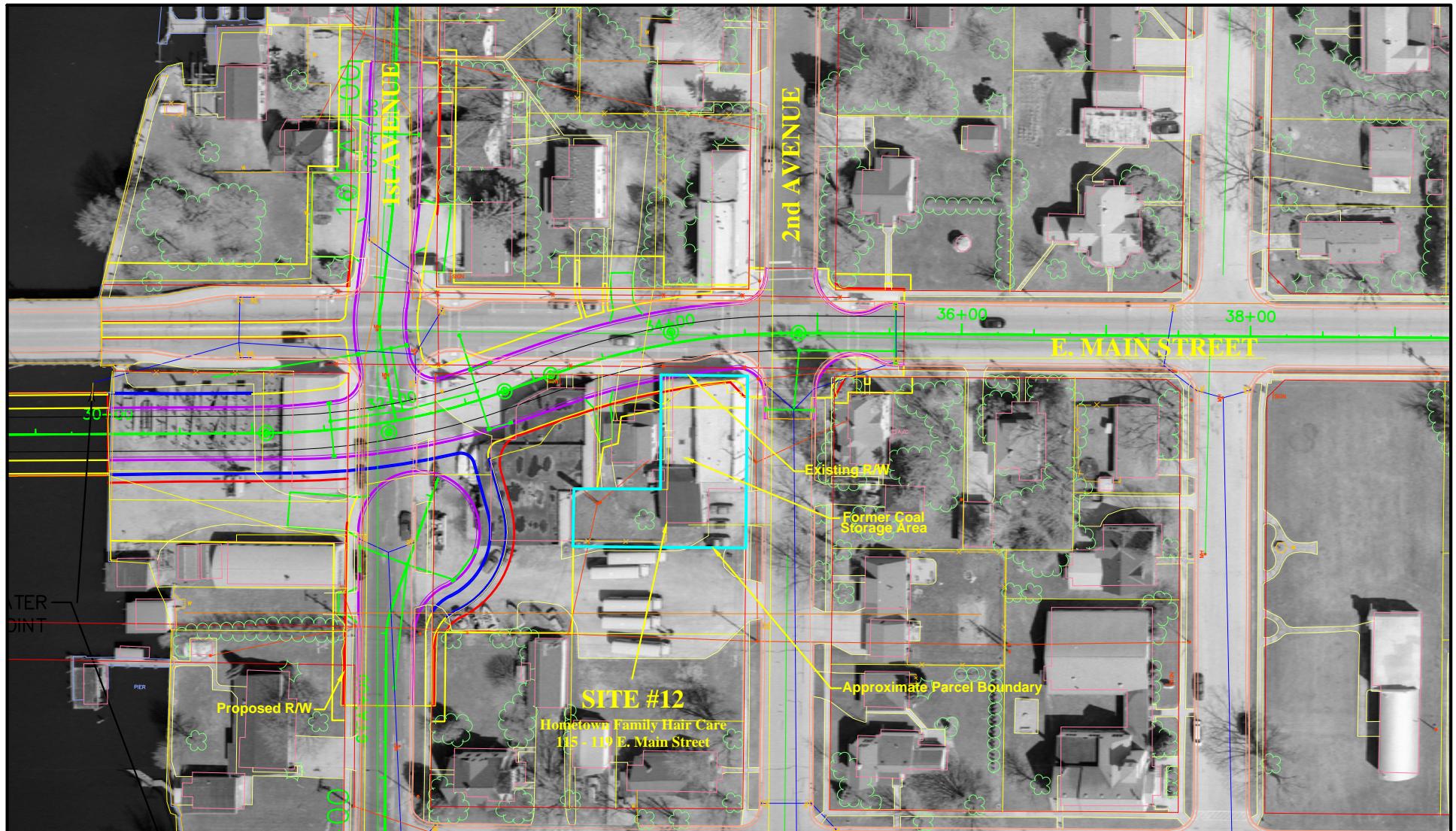
1. Winnebago County GIS Website. WINGS Property Profiler.  
[http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis\\_menu.cgi](http://wcgis.co.winnebago.wi.us/cgi-bin/wings/doc/gis_menu.cgi)
2. Himalayan Consultants, LLC, (August 2012). Phase I Hazardous Material Assessment, WisDOT Project ID 1030-20-00, STH 116 Corridor Study (2nd Street - 2nd Avenue), Winneconne, Winnebago County, Wisconsin.
3. Wisconsin Department of Agriculture, Trade and Consumer Protection - Storage Tank Database –[http://apps.commerce.state.wi.us/ER\\_Tanks/ER-EN-TankSearch.htm](http://apps.commerce.state.wi.us/ER_Tanks/ER-EN-TankSearch.htm)
4. Wisconsin Department of Transportation (December 2011). Facilities Development Manual, Procedures 21-35-10 and 21-35-30.
5. Wisconsin Department Natural Resources (March 2011). Wisconsin Administrative Code NR 141, Groundwater Monitoring Well Requirements.
6. Wisconsin Department Natural Resources (September 2007). Wisconsin Administrative Code NR 720, Soil Cleanup Standards.
7. Wisconsin Department Natural Resources (April 1997). Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, Publication RR-519-97.
8. Wisconsin Department Natural Resources (January 2012). Wisconsin Administrative Code NR 140, Groundwater Quality.

## **ATTACHMENTS**

- Attachment A. Figures  
Figure 3.1. Site Overview Map  
Figure 3.2. Soil Quality Map  
Figure 3.3. Groundwater Quality Map
- Attachment B. Soil Boring Logs and Borehole Abandonment Forms
- Attachment C. Well Construction Forms
- Attachment D. Laboratory Analytical Reports – Soil, Groundwater, and Waste Characterization
- Attachment E. Site Photographs

## **ATTACHMENT A**

### **FIGURES**

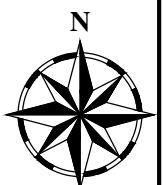


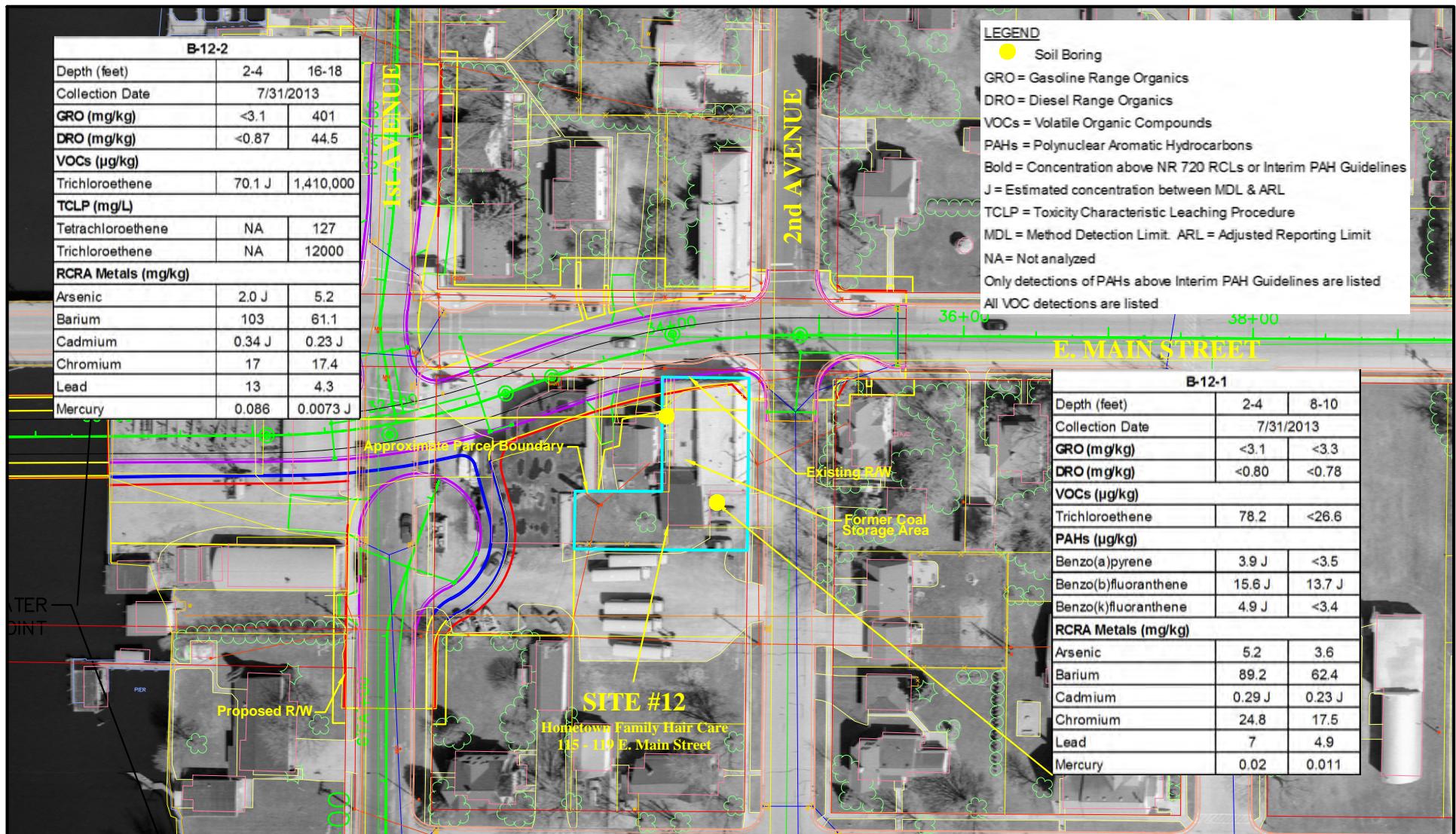
**FIGURE 3.1: SITE OVERVIEW MAP**



**HIMALAYAN CONSULTANTS, LLC**  
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Fax: (262) 502-0077

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin





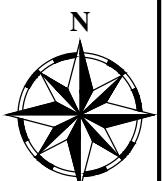
**FIGURE 3.2: SOIL QUALITY MAP**

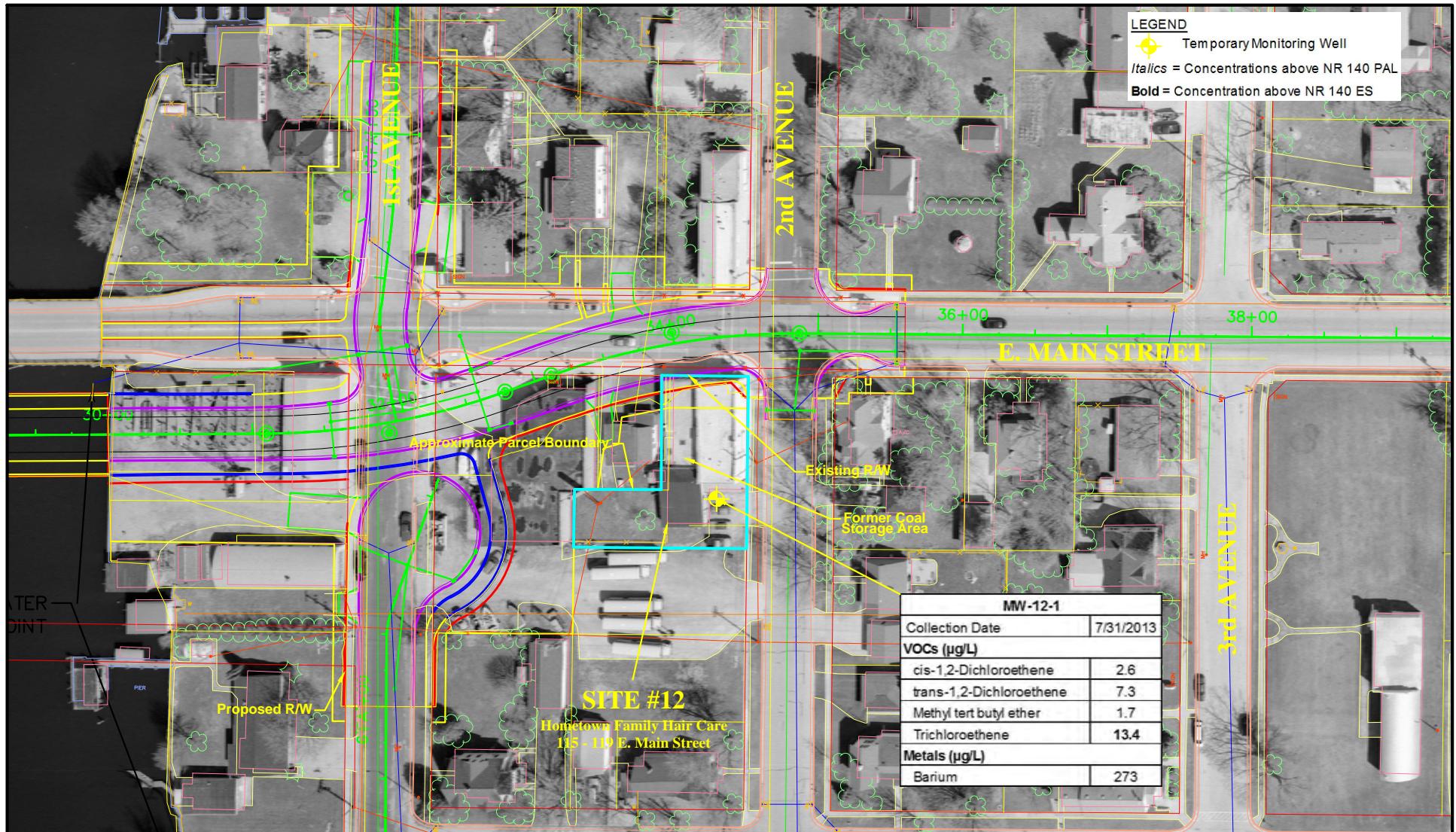


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Winneconne, Winnebago County, Wisconsin



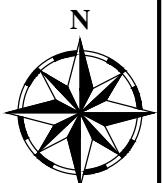


**FIGURE 3.3: GROUNDWATER QUALITY MAP**



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Winneconne, Winnebago County, Wisconsin



## **ATTACHMENT B**

### **SOIL BORING LOGS AND BOREHOLE ABANDONMENT FORMS**



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #12

Boring No. B-12-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE		VISUAL CLASSIFICATION and Remarks			SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-V Value	Depth (ft.)	q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 60"		D M	M	0	Dark brown medium grain sand with some small and large gravel (fill)					
						Red medium grain sand with some small and large gravel (fill)					
						Black sandy silt (fill)					0
					2	Red medium plasticity clay with trace small and large gravel					0
						Lab Sample (2' - 4')					0
					4						0
					6	Red medium plasticity clay with trace small and large gravel					0
					8						0
						Lab Sample (8' - 10')					0
2	GP 60"		M		10	Red medium plasticity clay with trace small and large gravel					0
WATER LEVEL OBSERVATIONS						GENERAL NOTES					
While Drilling _____						Start <u>7/31/13</u> Complete <u>7/31/13</u>					
Upon Completion of Drilling <u>13.7 feet</u>						Crew Chief <u>AS</u> Rig <u>DT-66</u>					
Time After Drilling _____						Drilling Method: <u>Geoprobe</u>					
Depth to Water _____											
Depth to Cave-in _____											

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI  
Location Site #12

Boring No. B-12-1  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60"		M		12							0
					14							0
					16	Red medium plasticity clay with trace small and large gravel						0
			M		18	Brownish gray medium plasticity clay with trace small and large gravel						0
			M		20	Gray medium plasticity clay with trace small and large gravel						0
4	GP 60"		M		20	End of Boring = 20.0 Feet						0
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>			
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #12</b>			
Common Well Name <b>B-12-1</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.		
Grid Location ____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W. <b>NE</b> 1/4 of <b>NE</b> 1/4 of Sec. <b>21</b> ; T. <b>19</b> N; R. <b>15</b> <input checked="" type="checkbox"/> E			Street Address of Well <b>117 E. Main Street</b>			
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>			
Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> S. <input type="checkbox"/> C. <input type="checkbox"/> N. Zone			Present Well Owner	Original Owner		
Reason For Abandonment <b>Temporary well</b>			Street Address or Route of Owner			
			City, State, Zip Code			
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>						
Original Construction Date <b>7/31/13</b>			<b>(4) PUMP, LINER, SCREEN, CASING &amp; SEALING MATERIAL</b>			
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole		If a Well Construction Report is available, please attach.		Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable		
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>			Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable			
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable			
Total Well Depth (ft.) <b>20.0</b> (From groundsurface) Casing Diameter (in.) _____			Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Casing Depth (ft.) _____			Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Lower Drillhole Diameter (in.) _____			Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Depth to Water (Feet) <b>13.7</b> Feet			Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>			
(5) Material Used To Fill Well/Drillhole <b>3/8" Chipped Bentonite</b>			Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips	For monitoring wells and monitoring well boreholes or <input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grou <input type="checkbox"/> Bentonite - Sand Slurry		
			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	
			<b>Surface</b>	<b>20</b>	<b>25 lbs</b>	

(6) Comments \_\_\_\_\_

(7) Name of Person or Firm Doing Sealing Work		Date of Abandonment
<b>Horizon</b>		<b>7/31/13</b>
Signature of Person Doing Work		Date Signed
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>
City, State, Zip Code <b>Grafton, WI 53024</b>		

<b>FOR DNR OR COUNTY USE ONLY</b>	
Date Received	Noted By
Comments	



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

Location Site #12

Boring No. B-12-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 1 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Reco.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
1	GP 54"		D		0	Brown sandy silt with trace small and large gravel (fill)						
			M		2	Dark brown to black sandy silt with trace small and large gravel (fill)						0
			M		4	Red medium plasticity clay with trace small and large gravel						0
			M		6	Lab Sample (2' - 4')						
2	GP 60"		M		8	Red medium plasticity clay with trace small and large gravel						0
			M		10	Red medium plasticity clay with trace small and large gravel						0
WATER LEVEL OBSERVATIONS							GENERAL NOTES					
While Drilling							Start	7/31/13	Complete	7/31/13		
Upon Completion of Drilling	<u>Dry</u>						Crew Chief	AS	Rig	DT-66		
Time After Drilling							Drilling Method:	<u>Geoprobe</u>				
Depth to Water												
Depth to Cave-in												

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.



Himalayan Consultants, LLC

# LOG OF TEST BORING

Project STH 116 - Winneconne Bridge P2  
Winnebago County, WI

Location Site #12

Boring No. B-12-2  
Surface Elevation \_\_\_\_\_  
Job No. \_\_\_\_\_  
Sheet 2 of 2

W156 N11357 Pilgrim Rd, Germantown, WI 53022 Tel: (262) 502-0066 Fax: (262) 502-0077

No.	SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					PID ppm
	Type	Recov.	Moist.	N-value	Depth (ft.)		q <sub>est</sub> (q <sub>u</sub> ) tsf	W %	LL	PL	DD pcf	
3	GP 60"		M		12							0
					14							0
					16	Strong solvent odor (14' - 15')						
			M		18	Red medium plasticity clay with trace small and large gravel						1139
					20	Strong solvent odor						
			M		22	Brown medium plasticity clay with trace small and large gravel						4648
					24	Strong solvent odor Lab Sample (16' - 18')						
4	GP 60"				20	End of Boring = 20.0 Feet						1003
					22							
					24							

NOTE: Soil stratification lines represent approximate boundaries between soil types and transitions may be gradual.

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295 and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

<b>(1) GENERAL INFORMATION</b>			<b>(2) FACILITY / OWNER NAME</b>		
WI Unique Well No.	DNR Well ID No.	County	Facility Name <b>Site #12</b>		
Common Well Name <b>B-12-2</b> Gov't Lot (If applicable)			Facility ID	License/Permit/Monitoring No.	
Grid Location NE 1/4 of NE 1/4 of Sec. <b>21</b> ; T. <b>19</b> N; R. <b>15</b> <input checked="" type="checkbox"/> E ft. <input type="checkbox"/> N. <input type="checkbox"/> S., ft. <input type="checkbox"/> E. <input type="checkbox"/> W.			Street Address of Well <b>117 E. Main Street</b>		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>			City, Village or Town <b>Winneconne</b>		
Lat. _____ Long. _____ or St. Plane _____ ft. N. ft. E. <input type="checkbox"/> S. <input type="checkbox"/> C. <input type="checkbox"/> N. Zone			Present Well Owner   Original Owner		
Reason For Abandonment <b>No longer needed</b>			Street Address or Route of Owner		
			City, State, Zip Code		
<b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>					
Original Construction Date <b>7/31/13</b>			Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole			If a Well Construction Report is available, please attach.		
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <b>Direct Push</b>			Was casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock			Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>Gravity</b>		
Total Well Depth (ft.) <b>20.0</b> Casing Diameter (in.) _____ (From groundsurface) Casing Depth (ft.) _____			Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite-Sand Slurry " " <input checked="" type="checkbox"/> Bentonite Chips		
Lower Drillhole Diameter (in.) _____ Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet			For monitoring wells and monitoring well boreholes only <input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grout <input type="checkbox"/> Bentonite - Sand Slurry		
Depth to Water (Feet) <b>Dry</b> Feet					
<b>(5)</b> Material Used To Fill Well/Drillhole			From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume
<b>3/8" Chipped Bentonite</b>			<b>Surface</b>	<b>20</b>	<b>25 lbs</b>
<b>(6) Comments</b> _____					
<b>(7) Name of Person or Firm Doing Sealing Work</b>			<b>Date of Abandonment</b>		
<b>Horizon</b>			<b>7/31/13</b>		
Signature of Person Doing Work		Date Signed			
Street or Route <b>1402 7th Avenue</b>		Telephone Number <b>262-377-9060</b>			
Comments					
<b>FOR DNR OR COUNTY USE ONLY</b>					
Date Received		Noted By			
Comments					

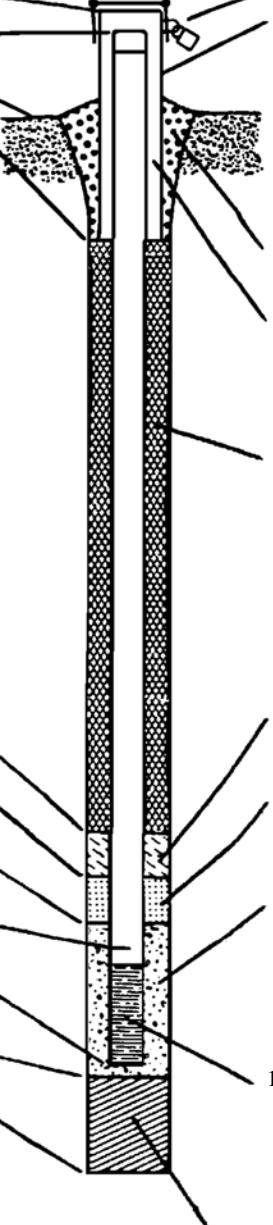
**ATTACHMENT C**

**WELL CONSTRUCTION FORMS**

Remediation/Redevelopment

Other

Facility/Project Name <b>STH 116 - Winneconne Bridge P2</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-12-1</b>
Facility License, Permit or Monitoring Number		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E	Wis. Unique Well Number   DNR Well Number
Facility ID		Date Well Installed <b>7/30/13</b>	
Type of Well		Section Location of Waste/Source <b>NE 1/4 of NE 1/4 of Sec. 21 T. 19 N.R 15 E.W.</b>	
Well Code _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known	Gov. Lot #
Distance from Waste/ Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>		
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. Well casing, top elevation	ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft.	
C. Land surface elevation	ft. MSL	c. Material: Steel <input type="checkbox"/> 0 4 Other <input checked="" type="checkbox"/> --	
D. Surface seal, bottom	ft MSL or _____ ft.	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____	
12. USCS classification of soil near screen:			
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>			
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input type="checkbox"/> 4 1 <b>Geoprobe</b> Other <input checked="" type="checkbox"/> --			
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9			
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____			
17. Source of Water (attach analysis if required): _____			
E. Bentonite seal, top	ft. MSL or _____ ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/> --	
F. Fine sand, top	ft. MSL or _____ ft.	7. Fine sand Material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
G. Filter pack, top	ft. MSL or _____ ft.	8. Filter pack material: Manufacturer, product name and mesh size a. _____ b. Volume added _____ ft <sup>3</sup>	
H. Screen joint, top	ft. MSL or <b>10</b> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/> --	
I. Well bottom	ft. MSL or <b>20</b> ft.	10. Screen material: <b>PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/> --	
J. Filter pack, bottom	ft. MSL or _____ ft.	b. Manufacturer <b>Monoflex</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10.0</b> ft.	
K. Borehole bottom	ft. MSL or <b>20</b> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/> --	
L. Borehole diameter	in.		
M. O.D. well casing	in.		
N. I.D. well casing	in.		



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

Signature

Firm **Himalayan Consultants, LLC**

**W156 N11357 Pilgrim Road, Germantown, WI 53022**  
**Tel. (262) 502-0066, Fax (262) 502-0077**

## **ATTACHMENT D**

### **LABORATORY ANALYTICAL REPORTS - SOIL, GROUNDWATER, AND WASTE CHARACTERIZATION**

## **SOIL ANALYTICAL**

August 16, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082166001	B-12-1 (2-4)	Solid	07/31/13 12:05	08/02/13 09:45
4082166002	B-12-1 (8-10)	Solid	07/31/13 12:15	08/02/13 09:45
4082166003	B-12-2 (2-4)	Solid	07/31/13 12:30	08/02/13 09:45
4082166004	B-12-2 (16-18)	Solid	07/31/13 12:45	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082166

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082166001	B-12-1 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	AH	1	PASI-G
4082166002	B-12-1 (8-10)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	AH	1	PASI-G
4082166003	B-12-2 (2-4)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		ASTM D2974-87	AH	1	PASI-G
4082166004	B-12-2 (16-18)	WI MOD DRO	CAC	1	PASI-G
		WI MOD GRO	LCF	1	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	HNW	65	PASI-G
		EPA 8260	LAP	13	PASI-G
		ASTM D2974-87	AH	1	PASI-G

## REPORT OF LABORATORY ANALYSIS

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**HITS ONLY**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Lab Sample ID	Client Sample ID	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>4082166001</b>	<b>B-12-1 (2-4)</b>						
EPA 6010	Arsenic		5.2 mg/kg		2.3	08/07/13 15:09	
EPA 6010	Barium		89.2 mg/kg		0.57	08/07/13 15:09	
EPA 6010	Cadmium		0.29J mg/kg		0.57	08/07/13 15:09	
EPA 6010	Chromium		24.8 mg/kg		0.57	08/07/13 15:09	
EPA 6010	Lead		7.0 mg/kg		1.0	08/09/13 11:53	
EPA 7471	Mercury		0.020 mg/kg		0.0074	08/16/13 10:27	
EPA 8270 by SIM	Benzo(a)pyrene		3.9J ug/kg		19.5	08/14/13 18:18	
EPA 8270 by SIM	Benzo(b)fluoranthene		15.6J ug/kg		19.5	08/14/13 18:18	
EPA 8270 by SIM	Benzo(k)fluoranthene		4.9J ug/kg		19.5	08/14/13 18:18	
EPA 8260	Trichloroethene		78.2 ug/kg		73.9	08/06/13 20:56	
ASTM D2974-87	Percent Moisture		14.6 %		0.10	08/12/13 16:31	
<b>4082166002</b>	<b>B-12-1 (8-10)</b>						
EPA 6010	Arsenic		3.6 mg/kg		2.0	08/07/13 15:11	
EPA 6010	Barium		62.4 mg/kg		0.51	08/07/13 15:11	
EPA 6010	Cadmium		0.23J mg/kg		0.51	08/07/13 15:11	
EPA 6010	Chromium		17.5 mg/kg		0.51	08/07/13 15:11	
EPA 6010	Lead		4.9 mg/kg		1.1	08/09/13 11:55	
EPA 7471	Mercury		0.011 mg/kg		0.0064	08/16/13 10:29	
EPA 8270 by SIM	Benzo(b)fluoranthene		13.7J ug/kg		19.4	08/14/13 18:36	
ASTM D2974-87	Percent Moisture		14.1 %		0.10	08/12/13 16:31	
<b>4082166003</b>	<b>B-12-2 (2-4)</b>						
EPA 6010	Arsenic		2.0J mg/kg		2.4	08/07/13 15:14	
EPA 6010	Barium		103 mg/kg		0.61	08/07/13 15:14	
EPA 6010	Cadmium		0.34J mg/kg		0.61	08/07/13 15:14	
EPA 6010	Chromium		17.0 mg/kg		0.61	08/07/13 15:14	
EPA 6010	Lead		13.0 mg/kg		1.1	08/09/13 11:57	
EPA 7471	Mercury		0.086 mg/kg		0.0079	08/16/13 10:36	
EPA 8270 by SIM	Anthracene		11.0J ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Benzo(a)anthracene		25.1 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Benzo(a)pyrene		22.0 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Benzo(b)fluoranthene		28.9 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Benzo(g,h,i)perylene		10.6J ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Benzo(k)fluoranthene		23.1 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Chrysene		28.7 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Fluoranthene		52.8 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Phenanthrene		33.8 ug/kg		20.8	08/14/13 18:53	
EPA 8270 by SIM	Pyrene		45.3 ug/kg		20.8	08/14/13 18:53	
EPA 8260	Trichloroethene		70.1J ug/kg		80.6	08/06/13 21:42	
ASTM D2974-87	Percent Moisture		20.0 %		0.10	08/12/13 16:31	
<b>4082166004</b>	<b>B-12-2 (16-18)</b>						
WI MOD DRO	Diesel Range Organics		44.5 mg/kg		2.0	08/06/13 12:05	T4
WI MOD GRO	Gasoline Range Organics		401 mg/kg		24.8	08/05/13 20:36	
EPA 6010	Arsenic		5.2 mg/kg		2.1	08/07/13 15:16	
EPA 6010	Barium		61.1 mg/kg		0.52	08/07/13 15:16	
EPA 6010	Cadmium		0.23J mg/kg		0.52	08/07/13 15:16	
EPA 6010	Chromium		17.4 mg/kg		0.52	08/07/13 15:16	

**REPORT OF LABORATORY ANALYSIS**

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## HITS ONLY

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082166

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
<b>4082166004</b>	<b>B-12-2 (16-18)</b>						
EPA 6010	Lead	4.3	mg/kg	1.1	08/09/13 12:00		
EPA 7471	Mercury	0.0073J	mg/kg	0.0076	08/16/13 10:38		
EPA 8270 by SIM	Benzo(b)fluoranthene	13.3J	ug/kg	19.2	08/14/13 17:26		
EPA 8270 by SIM	1-Methylnaphthalene	5.5J	ug/kg	19.2	08/14/13 17:26		
EPA 8270 by SIM	Phenanthrene	16.5J	ug/kg	19.2	08/14/13 17:26		
EPA 8260	Trichloroethene	1410000	ug/kg	14600	08/07/13 10:38		
EPA 8260	Tetrachloroethene	127	ug/L	125	08/15/13 11:17	M1	
EPA 8260	Trichloroethene	12000	ug/L	125	08/15/13 11:17	M1	
ASTM D2974-87	Percent Moisture	13.4	%	0.10	08/12/13 16:32		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Sample: B-12-1 (2-4) Lab ID: 4082166001 Collected: 07/31/13 12:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.80 mg/kg		2.0	0.80	1	08/05/13 09:46	08/09/13 11:24		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.1 mg/kg		3.1	3.1	1	08/05/13 12:35	08/05/13 15:28		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.2 mg/kg		2.3	0.62	1	08/06/13 15:20	08/07/13 15:09	7440-38-2	
Barium	89.2 mg/kg		0.57	0.10	1	08/06/13 15:20	08/07/13 15:09	7440-39-3	
Cadmium	0.29J mg/kg		0.57	0.058	1	08/06/13 15:20	08/07/13 15:09	7440-43-9	
Chromium	24.8 mg/kg		0.57	0.14	1	08/06/13 15:20	08/07/13 15:09	7440-47-3	
Lead	7.0 mg/kg		1.0	0.29	1	08/08/13 15:00	08/09/13 11:53	7439-92-1	
Selenium	<0.68 mg/kg		2.3	0.68	1	08/06/13 15:20	08/07/13 15:09	7782-49-2	
Silver	<0.25 mg/kg		1.1	0.25	1	08/06/13 15:20	08/07/13 15:09	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.020 mg/kg		0.0074	0.0037	1	08/15/13 09:33	08/16/13 10:27	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	83-32-9	
Acenaphthylene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	208-96-8	
Anthracene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	120-12-7	
Benzo(a)anthracene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	56-55-3	
Benzo(a)pyrene	3.9J ug/kg		19.5	3.5	1	08/13/13 12:00	08/14/13 18:18	50-32-8	
Benzo(b)fluoranthene	15.6J ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	205-99-2	
Benzo(g,h,i)perylene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	191-24-2	
Benzo(k)fluoranthene	4.9J ug/kg		19.5	3.4	1	08/13/13 12:00	08/14/13 18:18	207-08-9	
Chrysene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	218-01-9	
Dibenz(a,h)anthracene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	53-70-3	
Fluoranthene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	206-44-0	
Fluorene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	86-73-7	
Indeno(1,2,3-cd)pyrene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	193-39-5	
1-Methylnaphthalene	<3.4 ug/kg		19.5	3.4	1	08/13/13 12:00	08/14/13 18:18	90-12-0	
2-Methylnaphthalene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	91-57-6	
Naphthalene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	91-20-3	
Phenanthrene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	85-01-8	
Pyrene	<9.8 ug/kg		19.5	9.8	1	08/13/13 12:00	08/14/13 18:18	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	43 %		40-130		1	08/13/13 12:00	08/14/13 18:18	321-60-8	
Terphenyl-d14 (S)	50 %		40-130		1	08/13/13 12:00	08/14/13 18:18	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	630-20-6	W
1,1,1-Trichloroethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-1 (2-4) Lab ID: 4082166001 Collected: 07/31/13 12:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	79-00-5		W
1,1-Dichloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-34-3		W
1,1-Dichloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-35-4		W
1,1-Dichloropropene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	563-58-6		W
1,2,3-Trichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	87-61-6		W
1,2,3-Trichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	96-18-4		W
1,2,4-Trichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	120-82-1		W
1,2,4-Trimethylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	95-63-6		W
1,2-Dibromo-3-chloropropane	<52.5 ug/kg	263	52.5	1	08/05/13 11:05	08/06/13 20:56	96-12-8		W
1,2-Dibromoethane (EDB)	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	106-93-4		W
1,2-Dichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	95-50-1		W
1,2-Dichloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	107-06-2		W
1,2-Dichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	78-87-5		W
1,3,5-Trimethylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	108-67-8		W
1,3-Dichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	541-73-1		W
1,3-Dichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	142-28-9		W
1,4-Dichlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	106-46-7		W
2,2-Dichloropropane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	594-20-7		W
2-Butanone (MEK)	<124 ug/kg	263	124	1	08/05/13 11:05	08/06/13 20:56	78-93-3		W
2-Chlorotoluene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	95-49-8		W
4-Chlorotoluene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	106-43-4		W
Benzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	71-43-2		W
Bromobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	108-86-1		W
Bromochloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	74-97-5		W
Bromodichloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-27-4		W
Bromoform	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-25-2		W
Bromomethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	74-83-9		W
Carbon tetrachloride	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	56-23-5		W
Chlorobenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	108-90-7		W
Chloroethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-00-3		W
Chloroform	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	67-66-3		W
Chloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	74-87-3		W
Dibromochloromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	124-48-1		W
Dibromomethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	74-95-3		W
Dichlorodifluoromethane	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-71-8		W
Diisopropyl ether	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	108-20-3		W
Ethylbenzene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	100-41-4		W
Hexachloro-1,3-butadiene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	87-68-3		W
Isopropylbenzene (Cumene)	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	98-82-8		W
Methyl-tert-butyl ether	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	1634-04-4		W
Methylene Chloride	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-09-2		W
Naphthalene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	91-20-3		W
Styrene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	100-42-5		W
Tetrachloroethene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	127-18-4		W
Toluene	<26.3 ug/kg	63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-1 (2-4) Lab ID: 4082166001 Collected: 07/31/13 12:05 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	78.2 ug/kg		73.9	30.8	1	08/05/13 11:05	08/06/13 20:56	79-01-6	
Trichlorofluoromethane	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-69-4	W
Vinyl chloride	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	75-01-4	W
cis-1,2-Dichloroethene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	156-59-2	W
cis-1,3-Dichloropropene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	10061-01-5	W
m&p-Xylene	<26.3 ug/kg		126	52.6	1	08/05/13 11:05	08/06/13 20:56	179601-23-1	W
n-Butylbenzene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	104-51-8	W
n-Propylbenzene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	103-65-1	W
o-Xylene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	95-47-6	W
p-Isopropyltoluene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	99-87-6	W
sec-Butylbenzene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	135-98-8	W
tert-Butylbenzene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	98-06-6	W
trans-1,2-Dichloroethene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	156-60-5	W
trans-1,3-Dichloropropene	<26.3 ug/kg		63.2	26.3	1	08/05/13 11:05	08/06/13 20:56	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	98 %		57-130		1	08/05/13 11:05	08/06/13 20:56	1868-53-7	
Toluene-d8 (S)	105 %		54-133		1	08/05/13 11:05	08/06/13 20:56	2037-26-5	
4-Bromofluorobenzene (S)	93 %		49-130		1	08/05/13 11:05	08/06/13 20:56	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	14.6 %		0.10	0.10	1			08/12/13 16:31	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Sample: B-12-1 (8-10) Lab ID: 4082166002 Collected: 07/31/13 12:15 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.78 mg/kg		1.9	0.78	1	08/05/13 09:46	08/09/13 11:30		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.3 mg/kg		3.3	3.3	1	08/05/13 12:35	08/05/13 22:44		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.6 mg/kg		2.0	0.55	1	08/06/13 15:20	08/07/13 15:11	7440-38-2	
Barium	62.4 mg/kg		0.51	0.088	1	08/06/13 15:20	08/07/13 15:11	7440-39-3	
Cadmium	0.23J mg/kg		0.51	0.051	1	08/06/13 15:20	08/07/13 15:11	7440-43-9	
Chromium	17.5 mg/kg		0.51	0.13	1	08/06/13 15:20	08/07/13 15:11	7440-47-3	
Lead	4.9 mg/kg		1.1	0.32	1	08/08/13 15:00	08/09/13 11:55	7439-92-1	
Selenium	<0.60 mg/kg		2.0	0.60	1	08/06/13 15:20	08/07/13 15:11	7782-49-2	
Silver	<0.22 mg/kg		1.0	0.22	1	08/06/13 15:20	08/07/13 15:11	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.011 mg/kg		0.0064	0.0032	1	08/15/13 09:33	08/16/13 10:29	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	83-32-9	
Acenaphthylene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	208-96-8	
Anthracene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	120-12-7	
Benzo(a)anthracene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	56-55-3	
Benzo(a)pyrene	<3.5 ug/kg		19.4	3.5	1	08/13/13 12:00	08/14/13 18:36	50-32-8	
Benzo(b)fluoranthene	13.7J ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	205-99-2	
Benzo(g,h,i)perylene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	191-24-2	
Benzo(k)fluoranthene	<3.4 ug/kg		19.4	3.4	1	08/13/13 12:00	08/14/13 18:36	207-08-9	
Chrysene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	218-01-9	
Dibenz(a,h)anthracene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	53-70-3	
Fluoranthene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	206-44-0	
Fluorene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	86-73-7	
Indeno(1,2,3-cd)pyrene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	193-39-5	
1-Methylnaphthalene	<3.4 ug/kg		19.4	3.4	1	08/13/13 12:00	08/14/13 18:36	90-12-0	
2-Methylnaphthalene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	91-57-6	
Naphthalene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	91-20-3	
Phenanthrene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	85-01-8	
Pyrene	<9.7 ug/kg		19.4	9.7	1	08/13/13 12:00	08/14/13 18:36	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	55 %		40-130		1	08/13/13 12:00	08/14/13 18:36	321-60-8	
Terphenyl-d14 (S)	63 %		40-130		1	08/13/13 12:00	08/14/13 18:36	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	630-20-6	W
1,1,1-Trichloroethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.6 ug/kg		63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-1 (8-10) Lab ID: 4082166002 Collected: 07/31/13 12:15 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	79-00-5		W
1,1-Dichloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-34-3		W
1,1-Dichloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-35-4		W
1,1-Dichloropropene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	563-58-6		W
1,2,3-Trichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	87-61-6		W
1,2,3-Trichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	96-18-4		W
1,2,4-Trichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	120-82-1		W
1,2,4-Trimethylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	95-63-6		W
1,2-Dibromo-3-chloropropane	<53.0 ug/kg	266	53.0	1	08/05/13 11:05	08/06/13 21:19	96-12-8		W
1,2-Dibromoethane (EDB)	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	106-93-4		W
1,2-Dichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	95-50-1		W
1,2-Dichloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	107-06-2		W
1,2-Dichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	78-87-5		W
1,3,5-Trimethylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	108-67-8		W
1,3-Dichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	541-73-1		W
1,3-Dichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	142-28-9		W
1,4-Dichlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	106-46-7		W
2,2-Dichloropropane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	594-20-7		W
2-Butanone (MEK)	<126 ug/kg	266	126	1	08/05/13 11:05	08/06/13 21:19	78-93-3		W
2-Chlorotoluene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	95-49-8		W
4-Chlorotoluene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	106-43-4		W
Benzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	71-43-2		W
Bromobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	108-86-1		W
Bromochloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	74-97-5		W
Bromodichloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-27-4		W
Bromoform	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-25-2		W
Bromomethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	74-83-9		W
Carbon tetrachloride	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	56-23-5		W
Chlorobenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	108-90-7		W
Chloroethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-00-3		W
Chloroform	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	67-66-3		W
Chloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	74-87-3		W
Dibromochloromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	124-48-1		W
Dibromomethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	74-95-3		W
Dichlorodifluoromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-71-8		W
Diisopropyl ether	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	108-20-3		W
Ethylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	100-41-4		W
Hexachloro-1,3-butadiene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	87-68-3		W
Isopropylbenzene (Cumene)	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	98-82-8		W
Methyl-tert-butyl ether	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	1634-04-4		W
Methylene Chloride	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-09-2		W
Naphthalene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	91-20-3		W
Styrene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	100-42-5		W
Tetrachloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	127-18-4		W
Toluene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-1 (8-10) Lab ID: 4082166002 Collected: 07/31/13 12:15 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	79-01-6	W	
Trichlorofluoromethane	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-69-4	W	
Vinyl chloride	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	75-01-4	W	
cis-1,2-Dichloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	156-59-2	W	
cis-1,3-Dichloropropene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	10061-01-5	W	
m&p-Xylene	<53.2 ug/kg	128	53.2	1	08/05/13 11:05	08/06/13 21:19	179601-23-1	W	
n-Butylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	104-51-8	W	
n-Propylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	103-65-1	W	
o-Xylene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	95-47-6	W	
p-Isopropyltoluene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	99-87-6	W	
sec-Butylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	135-98-8	W	
tert-Butylbenzene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	98-06-6	W	
trans-1,2-Dichloroethene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	156-60-5	W	
trans-1,3-Dichloropropene	<26.6 ug/kg	63.8	26.6	1	08/05/13 11:05	08/06/13 21:19	10061-02-6	W	
<b>Surrogates</b>									
Dibromofluoromethane (S)	93 %	57-130		1	08/05/13 11:05	08/06/13 21:19	1868-53-7		
Toluene-d8 (S)	98 %	54-133		1	08/05/13 11:05	08/06/13 21:19	2037-26-5		
4-Bromofluorobenzene (S)	88 %	49-130		1	08/05/13 11:05	08/06/13 21:19	460-00-4		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	14.1 %		0.10	0.10	1		08/12/13 16:31		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Sample: B-12-2 (2-4) Lab ID: 4082166003 Collected: 07/31/13 12:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	<0.87 mg/kg		2.2	0.87	1	08/05/13 09:23	08/06/13 11:59		
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	<3.1 mg/kg		3.1	3.1	1	08/05/13 12:35	08/06/13 01:19		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.0J mg/kg		2.4	0.66	1	08/06/13 15:20	08/07/13 15:14	7440-38-2	
Barium	103 mg/kg		0.61	0.11	1	08/06/13 15:20	08/07/13 15:14	7440-39-3	
Cadmium	0.34J mg/kg		0.61	0.062	1	08/06/13 15:20	08/07/13 15:14	7440-43-9	
Chromium	17.0 mg/kg		0.61	0.15	1	08/06/13 15:20	08/07/13 15:14	7440-47-3	
Lead	13.0 mg/kg		1.1	0.32	1	08/08/13 15:00	08/09/13 11:57	7439-92-1	
Selenium	<0.72 mg/kg		2.4	0.72	1	08/06/13 15:20	08/07/13 15:14	7782-49-2	
Silver	<0.26 mg/kg		1.2	0.26	1	08/06/13 15:20	08/07/13 15:14	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.086 mg/kg		0.0079	0.0039	1	08/15/13 09:33	08/16/13 10:36	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	83-32-9	
Acenaphthylene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	208-96-8	
Anthracene	11.0J ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	120-12-7	
Benzo(a)anthracene	25.1 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	56-55-3	
Benzo(a)pyrene	22.0 ug/kg		20.8	3.7	1	08/13/13 12:00	08/14/13 18:53	50-32-8	
Benzo(b)fluoranthene	28.9 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	205-99-2	
Benzo(g,h,i)perylene	10.6J ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	191-24-2	
Benzo(k)fluoranthene	23.1 ug/kg		20.8	3.7	1	08/13/13 12:00	08/14/13 18:53	207-08-9	
Chrysene	28.7 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	218-01-9	
Dibenz(a,h)anthracene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	53-70-3	
Fluoranthene	52.8 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	206-44-0	
Fluorene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	86-73-7	
Indeno(1,2,3-cd)pyrene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	193-39-5	
1-Methylnaphthalene	<3.7 ug/kg		20.8	3.7	1	08/13/13 12:00	08/14/13 18:53	90-12-0	
2-Methylnaphthalene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	91-57-6	
Naphthalene	<10.4 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	91-20-3	
Phenanthrene	33.8 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	85-01-8	
Pyrene	45.3 ug/kg		20.8	10.4	1	08/13/13 12:00	08/14/13 18:53	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	66 %	40-130		1	08/13/13 12:00	08/14/13 18:53	321-60-8		
Terphenyl-d14 (S)	85 %	40-130		1	08/13/13 12:00	08/14/13 18:53	1718-51-0		
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	630-20-6	W
1,1,1-Trichloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	71-55-6	W
1,1,2,2-Tetrachloroethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	79-34-5	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-2 (2-4) Lab ID: 4082166003 Collected: 07/31/13 12:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	79-00-5		W
1,1-Dichloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-34-3		W
1,1-Dichloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-35-4		W
1,1-Dichloropropene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	563-58-6		W
1,2,3-Trichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	87-61-6		W
1,2,3-Trichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	96-18-4		W
1,2,4-Trichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	120-82-1		W
1,2,4-Trimethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	95-63-6		W
1,2-Dibromo-3-chloropropane	<53.6 ug/kg	269	53.6	1	08/05/13 11:05	08/06/13 21:42	96-12-8		W
1,2-Dibromoethane (EDB)	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	106-93-4		W
1,2-Dichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	95-50-1		W
1,2-Dichloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	107-06-2		W
1,2-Dichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	78-87-5		W
1,3,5-Trimethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	108-67-8		W
1,3-Dichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	541-73-1		W
1,3-Dichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	142-28-9		W
1,4-Dichlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	106-46-7		W
2,2-Dichloropropane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	594-20-7		W
2-Butanone (MEK)	<127 ug/kg	269	127	1	08/05/13 11:05	08/06/13 21:42	78-93-3		W
2-Chlorotoluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	95-49-8		W
4-Chlorotoluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	106-43-4		W
Benzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	71-43-2		W
Bromobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	108-86-1		W
Bromochloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	74-97-5		W
Bromodichloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-27-4		W
Bromoform	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-25-2		W
Bromomethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	74-83-9		W
Carbon tetrachloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	56-23-5		W
Chlorobenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	108-90-7		W
Chloroethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-00-3		W
Chloroform	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	67-66-3		W
Chloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	74-87-3		W
Dibromochloromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	124-48-1		W
Dibromomethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	74-95-3		W
Dichlorodifluoromethane	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-71-8		W
Diisopropyl ether	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	108-20-3		W
Ethylbenzene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	100-41-4		W
Hexachloro-1,3-butadiene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	87-68-3		W
Isopropylbenzene (Cumene)	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	98-82-8		W
Methyl-tert-butyl ether	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	1634-04-4		W
Methylene Chloride	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-09-2		W
Naphthalene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	91-20-3		W
Styrene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	100-42-5		W
Tetrachloroethene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	127-18-4		W
Toluene	<26.9 ug/kg	64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-2 (2-4) Lab ID: 4082166003 Collected: 07/31/13 12:30 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	70.1J ug/kg		80.6	33.6	1	08/05/13 11:05	08/06/13 21:42	79-01-6	
Trichlorofluoromethane	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-69-4	W
Vinyl chloride	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	75-01-4	W
cis-1,2-Dichloroethene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	156-59-2	W
cis-1,3-Dichloropropene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	10061-01-5	W
m&p-Xylene	<53.8 ug/kg		129	53.8	1	08/05/13 11:05	08/06/13 21:42	179601-23-1	W
n-Butylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	104-51-8	W
n-Propylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	103-65-1	W
o-Xylene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	95-47-6	W
p-Isopropyltoluene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	99-87-6	W
sec-Butylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	135-98-8	W
tert-Butylbenzene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	98-06-6	W
trans-1,2-Dichloroethene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	156-60-5	W
trans-1,3-Dichloropropene	<26.9 ug/kg		64.5	26.9	1	08/05/13 11:05	08/06/13 21:42	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	94 %		57-130		1	08/05/13 11:05	08/06/13 21:42	1868-53-7	
Toluene-d8 (S)	101 %		54-133		1	08/05/13 11:05	08/06/13 21:42	2037-26-5	
4-Bromofluorobenzene (S)	91 %		49-130		1	08/05/13 11:05	08/06/13 21:42	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	20.0 %		0.10	0.10	1			08/12/13 16:31	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Sample: B-12-2 (16-18) Lab ID: 4082166004 Collected: 07/31/13 12:45 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIDRO GCS</b>	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	44.5 mg/kg		2.0	0.80	1	08/05/13 09:23	08/06/13 12:05		T4
<b>WIGRO GCV</b>	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	401 mg/kg		24.8	24.8	8	08/05/13 12:35	08/05/13 20:36		
<b>6010 MET ICP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.2 mg/kg		2.1	0.56	1	08/06/13 15:20	08/07/13 15:16	7440-38-2	
Barium	61.1 mg/kg		0.52	0.090	1	08/06/13 15:20	08/07/13 15:16	7440-39-3	
Cadmium	0.23J mg/kg		0.52	0.053	1	08/06/13 15:20	08/07/13 15:16	7440-43-9	
Chromium	17.4 mg/kg		0.52	0.13	1	08/06/13 15:20	08/07/13 15:16	7440-47-3	
Lead	4.3 mg/kg		1.1	0.33	1	08/08/13 15:00	08/09/13 12:00	7439-92-1	
Selenium	<0.61 mg/kg		2.1	0.61	1	08/06/13 15:20	08/07/13 15:16	7782-49-2	
Silver	<0.22 mg/kg		1.0	0.22	1	08/06/13 15:20	08/07/13 15:16	7440-22-4	
<b>7471 Mercury</b>	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.0073J mg/kg		0.0076	0.0038	1	08/15/13 09:33	08/16/13 10:38	7439-97-6	
<b>8270 MSSV PAH by SIM</b>	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	83-32-9	
Acenaphthylene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	208-96-8	
Anthracene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	120-12-7	
Benzo(a)anthracene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	56-55-3	
Benzo(a)pyrene	<3.4 ug/kg		19.2	3.4	1	08/13/13 12:00	08/14/13 17:26	50-32-8	
Benzo(b)fluoranthene	13.3J ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	205-99-2	
Benzo(g,h,i)perylene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	191-24-2	
Benzo(k)fluoranthene	<3.4 ug/kg		19.2	3.4	1	08/13/13 12:00	08/14/13 17:26	207-08-9	
Chrysene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	218-01-9	
Dibenz(a,h)anthracene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	53-70-3	
Fluoranthene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	206-44-0	
Fluorene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	86-73-7	
Indeno(1,2,3-cd)pyrene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	193-39-5	
1-Methylnaphthalene	5.5J ug/kg		19.2	3.4	1	08/13/13 12:00	08/14/13 17:26	90-12-0	
2-Methylnaphthalene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	91-57-6	
Naphthalene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	91-20-3	
Phenanthrene	16.5J ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	85-01-8	
Pyrene	<9.6 ug/kg		19.2	9.6	1	08/13/13 12:00	08/14/13 17:26	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	72 %		40-130		1	08/13/13 12:00	08/14/13 17:26	321-60-8	
Terphenyl-d14 (S)	76 %		40-130		1	08/13/13 12:00	08/14/13 17:26	1718-51-0	
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	630-20-6	W
1,1,1-Trichloroethane	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	71-55-6	W
1,1,2,2-Tetrachloroethane	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	79-34-5	W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-2 (16-18) Lab ID: 4082166004 Collected: 07/31/13 12:45 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,2-Trichloroethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	79-00-5		W
1,1-Dichloroethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-34-3		W
1,1-Dichloroethene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-35-4		W
1,1-Dichloropropene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	563-58-6		W
1,2,3-Trichlorobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	87-61-6		W
1,2,3-Trichloropropane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	96-18-4		W
1,2,4-Trichlorobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	120-82-1		W
1,2,4-Trimethylbenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	95-63-6		W
1,2-Dibromo-3-chloropropane	<10500 ug/kg	52600	10500	200	08/06/13 11:13	08/07/13 10:38	96-12-8		W
1,2-Dibromoethane (EDB)	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	106-93-4		W
1,2-Dichlorobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	95-50-1		W
1,2-Dichloroethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	107-06-2		W
1,2-Dichloropropane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	78-87-5		W
1,3,5-Trimethylbenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	108-67-8		W
1,3-Dichlorobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	541-73-1		W
1,3-Dichloropropane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	142-28-9		W
1,4-Dichlorobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	106-46-7		W
2,2-Dichloropropane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	594-20-7		W
2-Butanone (MEK)	<24900 ug/kg	52600	24900	200	08/06/13 11:13	08/07/13 10:38	78-93-3		W
2-Chlorotoluene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	95-49-8		W
4-Chlorotoluene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	106-43-4		W
Benzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	71-43-2		W
Bromobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	108-86-1		W
Bromochloromethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	74-97-5		W
Bromodichloromethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-27-4		W
Bromoform	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-25-2		W
Bromomethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	74-83-9		W
Carbon tetrachloride	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	56-23-5		W
Chlorobenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	108-90-7		W
Chloroethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-00-3		W
Chloroform	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	67-66-3		W
Chloromethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	74-87-3		W
Dibromochloromethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	124-48-1		W
Dibromomethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	74-95-3		W
Dichlorodifluoromethane	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-71-8		W
Diisopropyl ether	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	108-20-3		W
Ethylbenzene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	100-41-4		W
Hexachloro-1,3-butadiene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	87-68-3		W
Isopropylbenzene (Cumene)	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	98-82-8		W
Methyl-tert-butyl ether	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	1634-04-4		W
Methylene Chloride	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-09-2		W
Naphthalene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	91-20-3		W
Styrene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	100-42-5		W
Tetrachloroethene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	127-18-4		W
Toluene	<5260 ug/kg	12600	5260	200	08/06/13 11:13	08/07/13 10:38	108-88-3		W

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

Sample: B-12-2 (16-18) Lab ID: 4082166004 Collected: 07/31/13 12:45 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Trichloroethene	1410000 ug/kg		14600	6070	200	08/06/13 11:13	08/07/13 10:38	79-01-6	
Trichlorofluoromethane	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-69-4	W
Vinyl chloride	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	75-01-4	W
cis-1,2-Dichloroethene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	156-59-2	W
cis-1,3-Dichloropropene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	10061-01-5	W
m&p-Xylene	<10500 ug/kg		25300	10500	200	08/06/13 11:13	08/07/13 10:38	179601-23-1	W
n-Butylbenzene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	104-51-8	W
n-Propylbenzene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	103-65-1	W
o-Xylene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	95-47-6	W
p-Isopropyltoluene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	99-87-6	W
sec-Butylbenzene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	135-98-8	W
tert-Butylbenzene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	98-06-6	W
trans-1,2-Dichloroethene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	156-60-5	W
trans-1,3-Dichloropropene	<5260 ug/kg		12600	5260	200	08/06/13 11:13	08/07/13 10:38	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	0 %		57-130		200	08/06/13 11:13	08/07/13 10:38	1868-53-7	S4
Toluene-d8 (S)	0 %		54-133		200	08/06/13 11:13	08/07/13 10:38	2037-26-5	S4
4-Bromofluorobenzene (S)	0 %		49-130		200	08/06/13 11:13	08/07/13 10:38	460-00-4	S4
<b>8260 MSV TCLP</b>	Analytical Method: EPA 8260 Preparation Method: EPA 1311								
1,1-Dichloroethene	<53.3 ug/L		125	53.3	125	08/13/13 00:00	08/15/13 11:17	75-35-4	
1,2-Dichloroethane	<59.5 ug/L		125	59.5	125	08/13/13 00:00	08/15/13 11:17	107-06-2	
2-Butanone (MEK)	<337 ug/L		2500	337	125	08/13/13 00:00	08/15/13 11:17	78-93-3	
Benzene	<62.5 ug/L		125	62.5	125	08/13/13 00:00	08/15/13 11:17	71-43-2	
Carbon tetrachloride	<45.6 ug/L		125	45.6	125	08/13/13 00:00	08/15/13 11:17	56-23-5	
Chlorobenzene	<44.8 ug/L		125	44.8	125	08/13/13 00:00	08/15/13 11:17	108-90-7	
Chloroform	<86.1 ug/L		625	86.1	125	08/13/13 00:00	08/15/13 11:17	67-66-3	
Tetrachloroethene	127 ug/L		125	59.0	125	08/13/13 00:00	08/15/13 11:17	127-18-4	M1
Trichloroethene	12000 ug/L		125	53.6	125	08/13/13 00:00	08/15/13 11:17	79-01-6	M1
Vinyl chloride	<23.1 ug/L		125	23.1	125	08/13/13 00:00	08/15/13 11:17	75-01-4	
<b>Surrogates</b>									
Toluene-d8 (S)	99 %		55-137		125	08/13/13 00:00	08/15/13 11:17	2037-26-5	
4-Bromofluorobenzene (S)	98 %		43-137		125	08/13/13 00:00	08/15/13 11:17	460-00-4	
Dibromofluoromethane (S)	100 %		70-130		125	08/13/13 00:00	08/15/13 11:17	1868-53-7	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	13.4 %		0.10	0.10	1			08/12/13 16:32	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch:	GCV/10702	Analysis Method:	WI MOD GRO
QC Batch Method:	TPH GRO/PVOC WI ext.	Analysis Description:	WIGRO Solid GCV
Associated Lab Samples:	4082166001, 4082166002, 4082166003, 4082166004		

METHOD BLANK:	833488	Matrix:	Solid
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Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<2.5	2.5	08/05/13 14:11	
a,a,a-Trifluorotoluene (S)	%	99	80-120	08/05/13 14:11	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833489 833490

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	10	9.8	9.8	98	98	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				101	102	80-120			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch:	MERP/3806	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	4082166001, 4082166002, 4082166003, 4082166004		

METHOD BLANK: 839475	Matrix: Solid
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Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.0033	0.0067	08/16/13 09:46	

LABORATORY CONTROL SAMPLE: 839476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.17	0.17	100	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 839477 839478

Parameter	Units	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
Mercury	mg/kg	0.068	.19	.19	0.25	0.26	95	101	85-115	5	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch: MPRP/8918 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

METHOD BLANK: 834148 Matrix: Solid

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.54	2.0	08/07/13 14:35	
Barium	mg/kg	<0.087	0.50	08/07/13 14:35	
Cadmium	mg/kg	<0.051	0.50	08/07/13 14:35	
Chromium	mg/kg	0.13J	0.50	08/07/13 14:35	
Selenium	mg/kg	<0.59	2.0	08/07/13 14:35	
Silver	mg/kg	<0.21	1.0	08/07/13 14:35	

LABORATORY CONTROL SAMPLE: 834149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	51.3	103	80-120	
Barium	mg/kg	50	52.9	106	80-120	
Cadmium	mg/kg	50	50.7	101	80-120	
Chromium	mg/kg	50	52.3	105	80-120	
Selenium	mg/kg	50	51.7	103	80-120	
Silver	mg/kg	25	25.4	101	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 834150 834151

Parameter	Units	4082162001 Result	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	Max	
			Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	Qual
Arsenic	mg/kg	3.6	53.4	53.1	52.8	52.2	91	90	75-125	1	20
Barium	mg/kg	23.3	53.4	53.1	76.5	79.5	95	101	75-125	4	20
Cadmium	mg/kg	0.20J	53.4	53.1	50.1	49.5	94	93	75-125	1	20
Chromium	mg/kg	10.8	53.4	53.1	59.7	59.3	87	87	75-125	1	20
Selenium	mg/kg	<0.63	53.4	53.1	48.6	48.6	90	91	75-125	0	20
Silver	mg/kg	<0.23	26.7	26.6	25.4	24.9	94	93	75-125	2	20

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch: MPRP/8935 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

METHOD BLANK: 835593 Matrix: Solid

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Lead	mg/kg	<0.29	1.0	08/09/13 11:17	

LABORATORY CONTROL SAMPLE: 835594

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Lead	mg/kg	50	48.9	98	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 835595 835596

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		4082162001	Spike	Conc.	Result	Result	% Rec	% Rec	% Rec	Limits	RPD	RPD	Qual
Lead	mg/kg	4.1	53.1	53	47.3	46.1	81	79	75-125	3	20		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch: MSV/20741 Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List

Associated Lab Samples: 4082166001, 4082166002, 4082166003

METHOD BLANK: 833920 Matrix: Solid

Associated Lab Samples: 4082166001, 4082166002, 4082166003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,1-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	08/06/13 12:28	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
1,3-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
2,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 12:28	
2-Butanone (MEK)	ug/kg	<118	250	08/06/13 12:28	
2-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
Benzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromodichloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromoform	ug/kg	<25.0	60.0	08/06/13 12:28	
Bromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Carbon tetrachloride	ug/kg	<25.0	60.0	08/06/13 12:28	
Chlorobenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloroform	ug/kg	<25.0	60.0	08/06/13 12:28	
Chloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromochloromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dibromomethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Diisopropyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Ethylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	08/06/13 12:28	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

METHOD BLANK: 833920

Matrix: Solid

Associated Lab Samples: 4082166001, 4082166002, 4082166003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	08/06/13 12:28	
m&p-Xylene	ug/kg	<50.0	120	08/06/13 12:28	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	08/06/13 12:28	
Methylene Chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
n-Propylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Naphthalene	ug/kg	<25.0	60.0	08/06/13 12:28	
o-Xylene	ug/kg	<25.0	60.0	08/06/13 12:28	
p-Isopropyltoluene	ug/kg	<25.0	60.0	08/06/13 12:28	
sec-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Styrene	ug/kg	<25.0	60.0	08/06/13 12:28	
tert-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 12:28	
Tetrachloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Toluene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichloroethene	ug/kg	<25.0	60.0	08/06/13 12:28	
Trichlorofluoromethane	ug/kg	<25.0	60.0	08/06/13 12:28	
Vinyl chloride	ug/kg	<25.0	60.0	08/06/13 12:28	
4-Bromofluorobenzene (S)	%	95	49-130	08/06/13 12:28	
Dibromofluoromethane (S)	%	100	57-130	08/06/13 12:28	
Toluene-d8 (S)	%	104	54-133	08/06/13 12:28	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833921

833922

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2440	2470	98	99	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2680	2930	107	117	70-130	9	20	
1,1,2-Trichloroethane	ug/kg	2500	2780	2860	111	114	70-130	3	20	
1,1-Dichloroethane	ug/kg	2500	2630	2640	105	106	70-130	0	20	
1,1-Dichloroethene	ug/kg	2500	2460	2460	98	98	64-130	0	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2400	2700	96	108	68-130	12	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2170	2540	87	102	50-150	16	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2580	2710	103	108	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	2500	2610	2630	104	105	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2320	2400	93	96	70-130	4	20	
1,2-Dichloropropane	ug/kg	2500	2870	2940	115	117	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	2500	2660	2640	106	106	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	2500	2520	2580	101	103	70-130	2	20	
Benzene	ug/kg	2500	2750	2890	110	115	70-130	5	20	
Bromodichloromethane	ug/kg	2500	2600	2590	104	103	70-130	1	20	
Bromoform	ug/kg	2500	2390	2490	95	100	63-130	4	20	
Bromomethane	ug/kg	2500	1970	2040	79	82	41-142	4	20	
Carbon tetrachloride	ug/kg	2500	2480	2550	99	102	70-130	3	20	
Chlorobenzene	ug/kg	2500	2600	2620	104	105	70-130	1	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

LABORATORY CONTROL SAMPLE & LCSD:		833922								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroethane	ug/kg	2500	1670	1750	67	70	57-130	5	20	
Chloroform	ug/kg	2500	2540	2650	102	106	70-130	4	20	
Chloromethane	ug/kg	2500	1790	1840	71	73	57-130	3	20	
cis-1,2-Dichloroethene	ug/kg	2500	2760	2870	110	115	70-130	4	20	
cis-1,3-Dichloropropene	ug/kg	2500	2570	2640	103	105	70-130	2	20	
Dibromochloromethane	ug/kg	2500	2470	2510	99	100	70-130	2	20	
Dichlorodifluoromethane	ug/kg	2500	1000	1060	40	42	31-150	5	20	
Ethylbenzene	ug/kg	2500	2550	2590	102	104	65-137	2	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2580	2620	103	105	70-130	1	20	
m&p-Xylene	ug/kg	5000	5310	5480	106	110	64-139	3	20	
Methyl-tert-butyl ether	ug/kg	2500	2540	2720	101	109	69-130	7	20	
Methylene Chloride	ug/kg	2500	2650	2660	106	106	70-130	0	20	
o-Xylene	ug/kg	2500	2500	2590	100	104	63-135	4	20	
Styrene	ug/kg	2500	2650	2730	106	109	69-130	3	20	
Tetrachloroethene	ug/kg	2500	2580	2680	103	107	70-130	4	20	
Toluene	ug/kg	2500	2730	2720	109	109	70-130	0	20	
trans-1,2-Dichloroethene	ug/kg	2500	2720	2830	109	113	70-130	4	20	
trans-1,3-Dichloropropene	ug/kg	2500	2350	2460	94	98	70-130	4	20	
Trichloroethene	ug/kg	2500	2600	2560	104	103	70-130	2	20	
Trichlorofluoromethane	ug/kg	2500	1980	2100	79	84	50-150	6	20	
Vinyl chloride	ug/kg	2500	2020	2070	81	83	57-130	3	20	
4-Bromofluorobenzene (S)	%				93	93	49-130			
Dibromofluoromethane (S)	%				96	104	57-130			
Toluene-d8 (S)	%				100	102	54-133			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch:	MSV/20743	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
Associated Lab Samples:	4082166004		

METHOD BLANK: 833927                                  Matrix: Solid

Associated Lab Samples: 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,1-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,1-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,1-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2-Dibromo-3-chloropropane	ug/kg	<49.8	250	08/06/13 11:58	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2-Dichloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
1,3-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 11:58	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
2,2-Dichloropropane	ug/kg	<25.0	60.0	08/06/13 11:58	
2-Butanone (MEK)	ug/kg	<118	250	08/06/13 11:58	
2-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 11:58	
4-Chlorotoluene	ug/kg	<25.0	60.0	08/06/13 11:58	
Benzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Bromobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Bromochloromethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Bromodichloromethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Bromoform	ug/kg	<25.0	60.0	08/06/13 11:58	
Bromomethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Carbon tetrachloride	ug/kg	<25.0	60.0	08/06/13 11:58	
Chlorobenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Chloroethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Chloroform	ug/kg	<25.0	60.0	08/06/13 11:58	
Chloromethane	ug/kg	<25.0	60.0	08/06/13 11:58	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 11:58	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 11:58	
Dibromochloromethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Dibromomethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Diisopropyl ether	ug/kg	<25.0	60.0	08/06/13 11:58	
Ethylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Hexachloro-1,3-butadiene	ug/kg	<25.0	60.0	08/06/13 11:58	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

METHOD BLANK: 833927

Matrix: Solid

Associated Lab Samples: 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	08/06/13 11:58	
m&p-Xylene	ug/kg	<50.0	120	08/06/13 11:58	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	08/06/13 11:58	
Methylene Chloride	ug/kg	<25.0	60.0	08/06/13 11:58	
n-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
n-Propylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Naphthalene	ug/kg	<25.0	60.0	08/06/13 11:58	
o-Xylene	ug/kg	<25.0	60.0	08/06/13 11:58	
p-Isopropyltoluene	ug/kg	<25.0	60.0	08/06/13 11:58	
sec-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Styrene	ug/kg	<25.0	60.0	08/06/13 11:58	
tert-Butylbenzene	ug/kg	<25.0	60.0	08/06/13 11:58	
Tetrachloroethene	ug/kg	<25.0	60.0	08/06/13 11:58	
Toluene	ug/kg	<25.0	60.0	08/06/13 11:58	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	08/06/13 11:58	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	08/06/13 11:58	
Trichloroethene	ug/kg	<25.0	60.0	08/06/13 11:58	
Trichlorofluoromethane	ug/kg	<25.0	60.0	08/06/13 11:58	
Vinyl chloride	ug/kg	<25.0	60.0	08/06/13 11:58	
4-Bromofluorobenzene (S)	%	97	49-130	08/06/13 11:58	
Dibromofluoromethane (S)	%	103	57-130	08/06/13 11:58	
Toluene-d8 (S)	%	98	54-133	08/06/13 11:58	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833928

833929

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2670	2350	107	94	70-130	13	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2870	2260	115	91	70-130	23	20 R1	
1,1,2-Trichloroethane	ug/kg	2500	2660	2210	106	88	70-130	18	20	
1,1-Dichloroethane	ug/kg	2500	2570	2270	103	91	70-130	12	20	
1,1-Dichloroethene	ug/kg	2500	2670	2360	107	94	64-130	12	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2720	2200	109	88	68-130	21	20 R1	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2670	1870	107	75	50-150	35	20 R1	
1,2-Dibromoethane (EDB)	ug/kg	2500	2640	2160	105	87	70-130	20	20	
1,2-Dichlorobenzene	ug/kg	2500	2730	2150	109	86	70-130	24	20 R1	
1,2-Dichloroethane	ug/kg	2500	2650	2240	106	90	70-130	17	20	
1,2-Dichloropropane	ug/kg	2500	2560	2310	102	92	70-130	10	20	
1,3-Dichlorobenzene	ug/kg	2500	2670	2220	107	89	70-130	18	20	
1,4-Dichlorobenzene	ug/kg	2500	2640	2160	106	86	70-130	20	20	
Benzene	ug/kg	2500	2680	2230	107	89	70-130	18	20	
Bromodichloromethane	ug/kg	2500	2640	2250	106	90	70-130	16	20	
Bromoform	ug/kg	2500	2950	2310	118	93	63-130	24	20 R1	
Bromomethane	ug/kg	2500	2380	2170	95	87	41-142	9	20	
Carbon tetrachloride	ug/kg	2500	2560	2170	103	87	70-130	17	20	
Chlorobenzene	ug/kg	2500	2580	2190	103	88	70-130	16	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

LABORATORY CONTROL SAMPLE & LCSD:		833928								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroethane	ug/kg	2500	2210	2080	88	83	57-130	6	20	
Chloroform	ug/kg	2500	2510	2200	101	88	70-130	13	20	
Chloromethane	ug/kg	2500	2490	2370	99	95	57-130	5	20	
cis-1,2-Dichloroethene	ug/kg	2500	2510	2150	100	86	70-130	15	20	
cis-1,3-Dichloropropene	ug/kg	2500	2760	2310	110	92	70-130	18	20	
Dibromochloromethane	ug/kg	2500	2600	2110	104	84	70-130	21	20	R1
Dichlorodifluoromethane	ug/kg	2500	2340	2230	94	89	31-150	5	20	
Ethylbenzene	ug/kg	2500	2690	2250	108	90	65-137	18	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2680	2230	107	89	70-130	18	20	
m&p-Xylene	ug/kg	5000	5230	4400	105	88	64-139	17	20	
Methyl-tert-butyl ether	ug/kg	2500	2670	2230	107	89	69-130	18	20	
Methylene Chloride	ug/kg	2500	2640	2240	106	90	70-130	16	20	
o-Xylene	ug/kg	2500	2690	2210	108	88	63-135	20	20	
Styrene	ug/kg	2500	2740	2260	110	90	69-130	19	20	
Tetrachloroethene	ug/kg	2500	2600	2180	104	87	70-130	18	20	
Toluene	ug/kg	2500	2600	2170	104	87	70-130	18	20	
trans-1,2-Dichloroethene	ug/kg	2500	2640	2360	106	94	70-130	11	20	
trans-1,3-Dichloropropene	ug/kg	2500	2880	2290	115	92	70-130	23	20	R1
Trichloroethene	ug/kg	2500	2520	2130	101	85	70-130	17	20	
Trichlorofluoromethane	ug/kg	2500	2690	2420	108	97	50-150	11	20	
Vinyl chloride	ug/kg	2500	2550	2300	102	92	57-130	10	20	
4-Bromofluorobenzene (S)	%				102	100	49-130			
Dibromofluoromethane (S)	%					95	99	57-130		
Toluene-d8 (S)	%					97	97	54-133		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch:	MSV/20851	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV TCLP
Associated Lab Samples:	4082166004		

METHOD BLANK: 838881	Matrix: Water
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Associated Lab Samples: 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.43	1.0	08/15/13 07:44	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/15/13 07:44	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/15/13 07:44	
Benzene	ug/L	<0.50	1.0	08/15/13 07:44	
Carbon tetrachloride	ug/L	<0.37	1.0	08/15/13 07:44	
Chlorobenzene	ug/L	<0.36	1.0	08/15/13 07:44	
Chloroform	ug/L	<0.69	5.0	08/15/13 07:44	
Tetrachloroethene	ug/L	<0.47	1.0	08/15/13 07:44	
Trichloroethene	ug/L	<0.43	1.0	08/15/13 07:44	
Vinyl chloride	ug/L	<0.18	1.0	08/15/13 07:44	
4-Bromofluorobenzene (S)	%	98	43-137	08/15/13 07:44	
Dibromofluoromethane (S)	%	98	70-130	08/15/13 07:44	
Toluene-d8 (S)	%	100	55-137	08/15/13 07:44	

LABORATORY CONTROL SAMPLE & LCSD: 838882	838883
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Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/L	50	54.1	55.1	108	110	70-130	2	20	
1,2-Dichloroethane	ug/L	50	55.1	53.6	110	107	70-144	3	20	
Benzene	ug/L	50	51.9	52.0	104	104	70-137	0	20	
Carbon tetrachloride	ug/L	50	59.1	59.6	118	119	70-154	1	20	
Chlorobenzene	ug/L	50	54.5	53.5	109	107	70-130	2	20	
Chloroform	ug/L	50	53.8	53.7	108	107	70-130	0	20	
Tetrachloroethene	ug/L	50	56.5	55.1	113	110	70-130	3	20	
Trichloroethene	ug/L	50	56.8	56.4	114	113	70-130	1	20	
Vinyl chloride	ug/L	50	52.4	53.5	105	107	61-143	2	20	
4-Bromofluorobenzene (S)	%				107	105	43-137			
Dibromofluoromethane (S)	%				100	99	70-130			
Toluene-d8 (S)	%				101	98	55-137			

MATRIX SPIKE SAMPLE: 838884	
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Parameter	Units	4082166004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<53.3	6250	8010	128	70-130	
1,2-Dichloroethane	ug/L	<59.5	6250	7870	126	70-146	
2-Butanone (MEK)	ug/L	<337		<337			
Benzene	ug/L	<62.5	6250	7580	121	70-137	
Carbon tetrachloride	ug/L	<45.6	6250	8890	142	70-154	
Chlorobenzene	ug/L	<44.8	6250	7990	128	70-130	
Chloroform	ug/L	<86.1	6250	7860	126	70-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

MATRIX SPIKE SAMPLE: 838884

Parameter	Units	4082166004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	127	6250	8530	135	70-130	M1
Trichloroethene	ug/L	12000	6250	20900	143	70-130	M1
Vinyl chloride	ug/L	<23.1	6250	7530	120	59-144	
4-Bromofluorobenzene (S)	%				106	43-137	
Dibromofluoromethane (S)	%				100	70-130	
Toluene-d8 (S)	%				99	55-137	

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

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QC Batch: OEXT/19426

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3546

Analysis Description: 8270/3546 MSSV PAH by SIM

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

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METHOD BLANK: 838808

## Matrix: Solid

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
1-Methylnaphthalene	ug/kg	<2.9	16.7	08/14/13 14:32	
2-Methylnaphthalene	ug/kg	<8.3	16.7	08/14/13 14:32	
Acenaphthene	ug/kg	<8.3	16.7	08/14/13 14:32	
Acenaphthylene	ug/kg	<8.3	16.7	08/14/13 14:32	
Anthracene	ug/kg	<8.3	16.7	08/14/13 14:32	
Benzo(a)anthracene	ug/kg	<8.3	16.7	08/14/13 14:32	
Benzo(a)pyrene	ug/kg	<3.0	16.7	08/14/13 14:32	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	08/14/13 14:32	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	08/14/13 14:32	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	08/14/13 14:32	
Chrysene	ug/kg	<8.3	16.7	08/14/13 14:32	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	08/14/13 14:32	
Fluoranthene	ug/kg	<8.3	16.7	08/14/13 14:32	
Fluorene	ug/kg	<8.3	16.7	08/14/13 14:32	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	08/14/13 14:32	
Naphthalene	ug/kg	<8.3	16.7	08/14/13 14:32	
Phenanthrene	ug/kg	<8.3	16.7	08/14/13 14:32	
Pyrene	ug/kg	<8.3	16.7	08/14/13 14:32	
2-Fluorobiphenyl (S)	%	69	40-130	08/14/13 14:32	
Terphenyl-d14 (S)	%	84	40-130	08/14/13 14:32	

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LABORATORY CONTROL SAMPLE: 838809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	255	76	47-130	
2-Methylnaphthalene	ug/kg	333	237	71	48-130	
Acenaphthene	ug/kg	333	241	72	55-130	
Acenaphthylene	ug/kg	333	249	75	55-130	
Anthracene	ug/kg	333	266	80	66-130	
Benzo(a)anthracene	ug/kg	333	249	75	55-130	
Benzo(a)pyrene	ug/kg	333	274	82	56-130	
Benzo(b)fluoranthene	ug/kg	333	263	79	53-130	
Benzo(g,h,i)perylene	ug/kg	333	260	78	51-130	
Benzo(k)fluoranthene	ug/kg	333	240	72	52-130	
Chrysene	ug/kg	333	265	80	58-130	
Dibenz(a,h)anthracene	ug/kg	333	253	76	55-130	
Fluoranthene	ug/kg	333	262	79	62-130	
Fluorene	ug/kg	333	249	75	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	255	77	54-130	
Naphthalene	ug/kg	333	218	65	41-130	
Phenanthrene	ug/kg	333	249	75	60-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

LABORATORY CONTROL SAMPLE: 838809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	262	79	51-130	
2-Fluorobiphenyl (S)	%			72	40-130	
Terphenyl-d14 (S)	%			84	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 838810 838811

Parameter	Units	4082166004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	5.5J	384	384	324	316	83	81	42-130	2	32	
2-Methylnaphthalene	ug/kg	<9.6	384	384	301	290	76	74	34-130	4	35	
Acenaphthene	ug/kg	<9.6	384	384	308	291	80	76	31-130	6	35	
Acenaphthylene	ug/kg	<9.6	384	384	317	298	82	77	32-130	6	25	
Anthracene	ug/kg	<9.6	384	384	309	308	80	80	39-131	0	38	
Benz(a)anthracene	ug/kg	<9.6	384	384	321	294	83	76	29-130	9	30	
Benz(a)pyrene	ug/kg	<3.4	384	384	364	344	95	90	35-130	6	33	
Benz(b)fluoranthene	ug/kg	13.3J	384	384	299	282	74	70	21-142	6	44	
Benz(g,h,i)perylene	ug/kg	<9.6	384	384	324	298	84	77	12-134	8	33	
Benz(k)fluoranthene	ug/kg	<3.4	384	384	340	310	88	81	35-130	9	37	
Chrysene	ug/kg	<9.6	384	384	330	309	85	79	37-130	7	38	
Dibenz(a,h)anthracene	ug/kg	<9.6	384	384	325	298	84	78	23-130	9	27	
Fluoranthene	ug/kg	<9.6	384	384	328	316	85	81	29-137	4	50	
Fluorene	ug/kg	<9.6	384	384	314	276	82	72	32-130	13	32	
Indeno(1,2,3-cd)pyrene	ug/kg	<9.6	384	384	317	290	82	75	17-134	9	28	
Naphthalene	ug/kg	<9.6	384	384	278	274	71	70	24-130	1	40	
Phenanthrene	ug/kg	16.5J	384	384	340	324	84	80	27-135	5	46	
Pyrene	ug/kg	<9.6	384	384	341	319	88	82	24-130	7	49	
2-Fluorobiphenyl (S)	%						77	73	40-130			
Terphenyl-d14 (S)	%						84	78	40-130			

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch: OEXT/19292 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4082166003, 4082166004

METHOD BLANK: 833319 Matrix: Solid

Associated Lab Samples: 4082166003, 4082166004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	08/06/13 10:19	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833320 833321

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	28.5	31.8	71	79	70-120	11	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch: OEXT/19293 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 4082166001, 4082166002

METHOD BLANK: 833322 Matrix: Solid

Associated Lab Samples: 4082166001, 4082166002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	08/09/13 09:38	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833323 833324

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	33.0	35.5	82	89	70-120	7	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

QC Batch: PMST/8754 Analysis Method: ASTM D2974-87

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

Associated Lab Samples: 4082166001, 4082166002, 4082166003, 4082166004

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SAMPLE DUPLICATE: 837918

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.4	15.4	14	10	

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082166

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### BATCH QUALIFIERS

Batch: MSV/20744

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

Batch: MSV/20746

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

### 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.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

T4 Result reported for hydrocarbons within the method-specific range that do not match pattern of laboratory standard.

W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082166

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082166001	B-12-1 (2-4)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082166002	B-12-1 (8-10)	WI MOD DRO	OEXT/19293	WI MOD DRO	GCSV/9982
4082166003	B-12-2 (2-4)	WI MOD DRO	OEXT/19292	WI MOD DRO	GCSV/9981
4082166004	B-12-2 (16-18)	WI MOD DRO	OEXT/19292	WI MOD DRO	GCSV/9981
4082166001	B-12-1 (2-4)	TPH GRO/PVOC WI ext.	GCV/10702	WI MOD GRO	GCV/10703
4082166002	B-12-1 (8-10)	TPH GRO/PVOC WI ext.	GCV/10702	WI MOD GRO	GCV/10703
4082166003	B-12-2 (2-4)	TPH GRO/PVOC WI ext.	GCV/10702	WI MOD GRO	GCV/10703
4082166004	B-12-2 (16-18)	TPH GRO/PVOC WI ext.	GCV/10702	WI MOD GRO	GCV/10703
4082166001	B-12-1 (2-4)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082166001	B-12-1 (2-4)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082166002	B-12-1 (8-10)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082166002	B-12-1 (8-10)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082166003	B-12-2 (2-4)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082166003	B-12-2 (2-4)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082166004	B-12-2 (16-18)	EPA 3050	MPRP/8918	EPA 6010	ICP/7893
4082166004	B-12-2 (16-18)	EPA 3050	MPRP/8935	EPA 6010	ICP/7904
4082166001	B-12-1 (2-4)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082166002	B-12-1 (8-10)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082166003	B-12-2 (2-4)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082166004	B-12-2 (16-18)	EPA 7471	MERP/3806	EPA 7471	MERC/4807
4082166001	B-12-1 (2-4)	EPA 3546	OEXT/19426	EPA 8270 by SIM	MSSV/5895
4082166002	B-12-1 (8-10)	EPA 3546	OEXT/19426	EPA 8270 by SIM	MSSV/5895
4082166003	B-12-2 (2-4)	EPA 3546	OEXT/19426	EPA 8270 by SIM	MSSV/5895
4082166004	B-12-2 (16-18)	EPA 3546	OEXT/19426	EPA 8270 by SIM	MSSV/5895
4082166001	B-12-1 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082166002	B-12-1 (8-10)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082166003	B-12-2 (2-4)	EPA 5035/5030B	MSV/20741	EPA 8260	MSV/20744
4082166004	B-12-2 (16-18)	EPA 5035/5030B	MSV/20743	EPA 8260	MSV/20746
4082166004	B-12-2 (16-18)	EPA 1311	TCLP/3062	EPA 8260	MSV/20851
4082166001	B-12-1 (2-4)	ASTM D2974-87	PMST/8754		
4082166002	B-12-1 (8-10)	ASTM D2974-87	PMST/8754		
4082166003	B-12-2 (2-4)	ASTM D2974-87	PMST/8754		
4082166004	B-12-2 (16-18)	ASTM D2974-87	PMST/8754		

**REPORT OF LABORATORY ANALYSIS**

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## Sample Condition Upon Receipt

Client Name: Himalayan

Project # 4082166

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Other CS Logistic

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 NA Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20 /Corr:  Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Person examining contents:  
Date: 8/21/13  
Initials: MV

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>004 1-40mL F no ID/Date/time</u> <u>Matched by packaging: 8/21/13 MV</u>
-Includes date/time/ID/Analysis Matrix:	<u>S</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤ 2; NaOH+ZnAct ≥ 9, NaOH ≥ 12). exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed Lab Std #ID of preservative Date/ Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

If checked, see attached form for additional comments

### Client Notification/ Resolution:

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

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

Project Manager Review: Cat for DM

Date: 8/21/13

## **GROUNDWATER ANALYTICAL**

August 13, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082168

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082168

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83006001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082168001	MW-12-1	Water	07/31/13 13:40	08/02/13 09:45
4082168002	TRIP BLANK	Water	07/31/13 00:00	08/02/13 09:45

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082168

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082168001	MW-12-1	EPA 6010	DLB	7	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8260	HNW	65	PASI-G
4082168002	TRIP BLANK	EPA 8260	HNW	65	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082168

Sample: MW-12-1	Lab ID: 4082168001	Collected: 07/31/13 13:40	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	<4.2 ug/L		20.0	4.2	1	08/05/13 15:35	08/06/13 12:19	7440-38-2	
Barium, Dissolved	273 ug/L		5.0	1.1	1	08/05/13 15:35	08/06/13 12:19	7440-39-3	
Cadmium, Dissolved	<0.48 ug/L		5.0	0.48	1	08/05/13 15:35	08/06/13 12:19	7440-43-9	
Chromium, Dissolved	<1.4 ug/L		5.0	1.4	1	08/05/13 15:35	08/06/13 12:19	7440-47-3	
Lead, Dissolved	<2.7 ug/L		7.5	2.7	1	08/05/13 15:35	08/06/13 12:19	7439-92-1	
Selenium, Dissolved	<5.2 ug/L		20.0	5.2	1	08/05/13 15:35	08/06/13 12:19	7782-49-2	
Silver, Dissolved	<1.7 ug/L		10.0	1.7	1	08/05/13 15:35	08/06/13 12:19	7440-22-4	
<b>7470 Mercury, Dissolved</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	<0.10 ug/L		0.20	0.10	1	08/08/13 15:00	08/09/13 12:28	7439-97-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/06/13 05:21	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/06/13 05:21	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/06/13 05:21	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/06/13 05:21	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/06/13 05:21	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/06/13 05:21	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/06/13 05:21	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/06/13 05:21	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/06/13 05:21	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/06/13 05:21	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/06/13 05:21	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/06/13 05:21	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 05:21	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/06/13 05:21	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/06/13 05:21	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 05:21	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/06/13 05:21	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/06/13 05:21	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/06/13 05:21	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/06/13 05:21	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/06/13 05:21	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/06/13 05:21	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/06/13 05:21	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/06/13 05:21	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/06/13 05:21	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/06/13 05:21	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/06/13 05:21	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/06/13 05:21	75-35-4	
cis-1,2-Dichloroethene	2.6 ug/L		1.0	0.42	1		08/06/13 05:21	156-59-2	
trans-1,2-Dichloroethene	7.3 ug/L		1.0	0.37	1		08/06/13 05:21	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/06/13 05:21	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/06/13 05:21	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/06/13 05:21	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/06/13 05:21	563-58-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082168

Sample: MW-12-1	Lab ID: 4082168001	Collected: 07/31/13 13:40	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/06/13 05:21	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/06/13 05:21	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/06/13 05:21	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 05:21	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/06/13 05:21	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/06/13 05:21	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/06/13 05:21	99-87-6	
Methylene Chloride	<0.36 ug/L		1.0	0.36	1		08/06/13 05:21	75-09-2	
Methyl-tert-butyl ether	1.7 ug/L		1.0	0.49	1		08/06/13 05:21	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/06/13 05:21	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/06/13 05:21	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/06/13 05:21	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/06/13 05:21	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/06/13 05:21	79-34-5	
Tetrachloroethene	<0.47 ug/L		1.0	0.47	1		08/06/13 05:21	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/06/13 05:21	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/06/13 05:21	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 05:21	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/06/13 05:21	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/06/13 05:21	79-00-5	
Trichloroethene	13.4 ug/L		1.0	0.43	1		08/06/13 05:21	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/06/13 05:21	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/06/13 05:21	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/06/13 05:21	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/06/13 05:21	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/06/13 05:21	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/06/13 05:21	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/06/13 05:21	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92 %		43-137		1		08/06/13 05:21	460-00-4	
Dibromofluoromethane (S)	94 %		70-130		1		08/06/13 05:21	1868-53-7	
Toluene-d8 (S)	99 %		55-137		1		08/06/13 05:21	2037-26-5	

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

Sample: TRIP BLANK	Lab ID: 4082168002	Collected: 07/31/13 00:00	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50 ug/L		1.0	0.50	1		08/07/13 17:01	71-43-2	
Bromobenzene	<0.48 ug/L		1.0	0.48	1		08/07/13 17:01	108-86-1	
Bromochloromethane	<0.49 ug/L		1.0	0.49	1		08/07/13 17:01	74-97-5	
Bromodichloromethane	<0.45 ug/L		1.0	0.45	1		08/07/13 17:01	75-27-4	
Bromoform	<0.23 ug/L		1.0	0.23	1		08/07/13 17:01	75-25-2	
Bromomethane	<0.43 ug/L		5.0	0.43	1		08/07/13 17:01	74-83-9	
2-Butanone (MEK)	<2.7 ug/L		20.0	2.7	1		08/07/13 17:01	78-93-3	
n-Butylbenzene	<0.40 ug/L		1.0	0.40	1		08/07/13 17:01	104-51-8	
sec-Butylbenzene	<0.60 ug/L		5.0	0.60	1		08/07/13 17:01	135-98-8	
tert-Butylbenzene	<0.42 ug/L		1.0	0.42	1		08/07/13 17:01	98-06-6	
Carbon tetrachloride	<0.37 ug/L		1.0	0.37	1		08/07/13 17:01	56-23-5	
Chlorobenzene	<0.36 ug/L		1.0	0.36	1		08/07/13 17:01	108-90-7	
Chloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 17:01	75-00-3	
Chloroform	<0.69 ug/L		5.0	0.69	1		08/07/13 17:01	67-66-3	
Chloromethane	<0.39 ug/L		1.0	0.39	1		08/07/13 17:01	74-87-3	
2-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 17:01	95-49-8	
4-Chlorotoluene	<0.48 ug/L		1.0	0.48	1		08/07/13 17:01	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5 ug/L		5.0	1.5	1		08/07/13 17:01	96-12-8	
Dibromochloromethane	<1.9 ug/L		5.0	1.9	1		08/07/13 17:01	124-48-1	
1,2-Dibromoethane (EDB)	<0.38 ug/L		1.0	0.38	1		08/07/13 17:01	106-93-4	
Dibromomethane	<0.48 ug/L		1.0	0.48	1		08/07/13 17:01	74-95-3	
1,2-Dichlorobenzene	<0.44 ug/L		1.0	0.44	1		08/07/13 17:01	95-50-1	
1,3-Dichlorobenzene	<0.45 ug/L		1.0	0.45	1		08/07/13 17:01	541-73-1	
1,4-Dichlorobenzene	<0.43 ug/L		1.0	0.43	1		08/07/13 17:01	106-46-7	
Dichlorodifluoromethane	<0.40 ug/L		1.0	0.40	1		08/07/13 17:01	75-71-8	
1,1-Dichloroethane	<0.28 ug/L		1.0	0.28	1		08/07/13 17:01	75-34-3	
1,2-Dichloroethane	<0.48 ug/L		1.0	0.48	1		08/07/13 17:01	107-06-2	
1,1-Dichloroethene	<0.43 ug/L		1.0	0.43	1		08/07/13 17:01	75-35-4	
cis-1,2-Dichloroethene	<0.42 ug/L		1.0	0.42	1		08/07/13 17:01	156-59-2	
trans-1,2-Dichloroethene	<0.37 ug/L		1.0	0.37	1		08/07/13 17:01	156-60-5	
1,2-Dichloropropane	<0.50 ug/L		1.0	0.50	1		08/07/13 17:01	78-87-5	
1,3-Dichloropropane	<0.46 ug/L		1.0	0.46	1		08/07/13 17:01	142-28-9	
2,2-Dichloropropane	<0.37 ug/L		1.0	0.37	1		08/07/13 17:01	594-20-7	
1,1-Dichloropropene	<0.51 ug/L		1.0	0.51	1		08/07/13 17:01	563-58-6	
cis-1,3-Dichloropropene	<0.29 ug/L		1.0	0.29	1		08/07/13 17:01	10061-01-5	
trans-1,3-Dichloropropene	<0.26 ug/L		1.0	0.26	1		08/07/13 17:01	10061-02-6	
Diisopropyl ether	<0.50 ug/L		1.0	0.50	1		08/07/13 17:01	108-20-3	
Ethylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 17:01	100-41-4	
Hexachloro-1,3-butadiene	<1.3 ug/L		5.0	1.3	1		08/07/13 17:01	87-68-3	
Isopropylbenzene (Cumene)	<0.34 ug/L		1.0	0.34	1		08/07/13 17:01	98-82-8	
p-Isopropyltoluene	<0.40 ug/L		1.0	0.40	1		08/07/13 17:01	99-87-6	
Methylene Chloride	0.42J ug/L		1.0	0.36	1		08/07/13 17:01	75-09-2	
Methyl-tert-butyl ether	<0.49 ug/L		1.0	0.49	1		08/07/13 17:01	1634-04-4	
Naphthalene	<2.5 ug/L		5.0	2.5	1		08/07/13 17:01	91-20-3	
n-Propylbenzene	<0.50 ug/L		1.0	0.50	1		08/07/13 17:01	103-65-1	
Styrene	<0.35 ug/L		1.0	0.35	1		08/07/13 17:01	100-42-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082168

Sample: TRIP BLANK	Lab ID: 4082168002	Collected: 07/31/13 00:00	Received: 08/02/13 09:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	<0.45 ug/L		1.0	0.45	1		08/07/13 17:01	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38 ug/L		1.0	0.38	1		08/07/13 17:01	79-34-5	
Tetrachloroethylene	<0.47 ug/L		1.0	0.47	1		08/07/13 17:01	127-18-4	
Toluene	<0.44 ug/L		1.0	0.44	1		08/07/13 17:01	108-88-3	
1,2,3-Trichlorobenzene	<0.77 ug/L		5.0	0.77	1		08/07/13 17:01	87-61-6	
1,2,4-Trichlorobenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 17:01	120-82-1	
1,1,1-Trichloroethane	<0.44 ug/L		1.0	0.44	1		08/07/13 17:01	71-55-6	
1,1,2-Trichloroethane	<0.39 ug/L		1.0	0.39	1		08/07/13 17:01	79-00-5	
Trichloroethylene	<0.43 ug/L		1.0	0.43	1		08/07/13 17:01	79-01-6	
Trichlorofluoromethane	<0.48 ug/L		1.0	0.48	1		08/07/13 17:01	75-69-4	
1,2,3-Trichloropropane	<0.47 ug/L		1.0	0.47	1		08/07/13 17:01	96-18-4	
1,2,4-Trimethylbenzene	<0.57 ug/L		5.0	0.57	1		08/07/13 17:01	95-63-6	
1,3,5-Trimethylbenzene	<2.5 ug/L		5.0	2.5	1		08/07/13 17:01	108-67-8	
Vinyl chloride	<0.18 ug/L		1.0	0.18	1		08/07/13 17:01	75-01-4	
m&p-Xylene	<0.82 ug/L		2.0	0.82	1		08/07/13 17:01	179601-23-1	
o-Xylene	<0.50 ug/L		1.0	0.50	1		08/07/13 17:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90 %		43-137		1		08/07/13 17:01	460-00-4	
Dibromofluoromethane (S)	100 %		70-130		1		08/07/13 17:01	1868-53-7	
Toluene-d8 (S)	95 %		55-137		1		08/07/13 17:01	2037-26-5	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

QC Batch:	MERP/3796	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury Dissolved
Associated Lab Samples:	4082168001		

METHOD BLANK: 836072 Matrix: Water

Associated Lab Samples: 4082168001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.10	0.20	08/09/13 11:59	

LABORATORY CONTROL SAMPLE: 836073

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	104	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 836074 836075

Parameter	Units	4082163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.10	5	5	5.2	5.3	102	106	85-115	3	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

QC Batch:	MPRP/8911	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET Dissolved
Associated Lab Samples:	4082168001		

METHOD BLANK: 833607 Matrix: Water

Associated Lab Samples: 4082168001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<4.2	20.0	08/06/13 11:44	
Barium, Dissolved	ug/L	<1.1	5.0	08/06/13 11:44	
Cadmium, Dissolved	ug/L	<0.48	5.0	08/06/13 11:44	
Chromium, Dissolved	ug/L	<1.4	5.0	08/06/13 11:44	
Lead, Dissolved	ug/L	<2.7	7.5	08/06/13 11:44	
Selenium, Dissolved	ug/L	<5.2	20.0	08/06/13 11:44	
Silver, Dissolved	ug/L	<1.7	10.0	08/06/13 11:44	

LABORATORY CONTROL SAMPLE: 833608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	483	97	80-120	
Barium, Dissolved	ug/L	500	490	98	80-120	
Cadmium, Dissolved	ug/L	500	479	96	80-120	
Chromium, Dissolved	ug/L	500	495	99	80-120	
Lead, Dissolved	ug/L	500	490	98	80-120	
Selenium, Dissolved	ug/L	500	492	98	80-120	
Silver, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 833609 833610

Parameter	Units	MS Spike		MSD Spike		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		4082163001	Result	Conc.	Conc.								
Arsenic, Dissolved	ug/L	<4.2	500	500	498	511	99	101	75-125	2	20		
Barium, Dissolved	ug/L	161	500	500	643	654	96	99	75-125	2	20		
Cadmium, Dissolved	ug/L	<0.48	500	500	492	501	98	100	75-125	2	20		
Chromium, Dissolved	ug/L	<1.4	500	500	495	503	99	100	75-125	1	20		
Lead, Dissolved	ug/L	3.2J	500	500	493	497	98	99	75-125	1	20		
Selenium, Dissolved	ug/L	<5.2	500	500	513	526	103	105	75-125	3	20		
Silver, Dissolved	ug/L	<1.7	250	250	256	260	102	104	75-125	2	20		

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

QC Batch: MSV/20715

QC Batch Method: EPA 8260

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METHIOD BLANK: 822051

Matrix Water

Associated Lab Samples: 4083168001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/05/13 06:39	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/05/13 06:39	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/05/13 06:39	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/05/13 06:39	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/05/13 06:39	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/05/13 06:39	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/05/13 06:39	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/05/13 06:39	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/05/13 06:39	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/05/13 06:39	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/05/13 06:39	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/05/13 06:39	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/05/13 06:39	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/05/13 06:39	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/05/13 06:39	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/05/13 06:39	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/05/13 06:39	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/05/13 06:39	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/05/13 06:39	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/05/13 06:39	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/05/13 06:39	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/05/13 06:39	
2-Chlorotoluene	ug/L	<0.48	1.0	08/05/13 06:39	
4-Chlorotoluene	ug/L	<0.48	1.0	08/05/13 06:39	
Benzene	ug/L	<0.50	1.0	08/05/13 06:39	
Bromobenzene	ug/L	<0.48	1.0	08/05/13 06:39	
Bromochloromethane	ug/L	<0.49	1.0	08/05/13 06:39	
Bromodichloromethane	ug/L	<0.45	1.0	08/05/13 06:39	
Bromoform	ug/L	<0.23	1.0	08/05/13 06:39	
Bromomethane	ug/L	<0.43	5.0	08/05/13 06:39	
Carbon tetrachloride	ug/L	<0.37	1.0	08/05/13 06:39	
Chlorobenzene	ug/L	<0.36	1.0	08/05/13 06:39	
Chloroethane	ug/L	<0.44	1.0	08/05/13 06:39	
Chloroform	ug/L	<0.69	5.0	08/05/13 06:39	
Chloromethane	ug/L	<0.39	1.0	08/05/13 06:39	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/05/13 06:39	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/05/13 06:39	
Dibromochloromethane	ug/L	<1.9	5.0	08/05/13 06:39	
Dibromomethane	ug/L	<0.48	1.0	08/05/13 06:39	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/05/13 06:39	
Diisopropyl ether	ug/L	<0.50	1.0	08/05/13 06:39	
Ethylbenzene	ug/L	<0.50	1.0	08/05/13 06:39	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/05/13 06:39	

## **REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

METHOD BLANK: 832951

Matrix: Water

Associated Lab Samples: 4082168001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/05/13 06:39	
m&p-Xylene	ug/L	<0.82	2.0	08/05/13 06:39	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/05/13 06:39	
Methylene Chloride	ug/L	<0.36	1.0	08/05/13 06:39	
n-Butylbenzene	ug/L	<0.40	1.0	08/05/13 06:39	
n-Propylbenzene	ug/L	<0.50	1.0	08/05/13 06:39	
Naphthalene	ug/L	<2.5	5.0	08/05/13 06:39	
o-Xylene	ug/L	<0.50	1.0	08/05/13 06:39	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/05/13 06:39	
sec-Butylbenzene	ug/L	<0.60	5.0	08/05/13 06:39	
Styrene	ug/L	<0.35	1.0	08/05/13 06:39	
tert-Butylbenzene	ug/L	<0.42	1.0	08/05/13 06:39	
Tetrachloroethene	ug/L	<0.47	1.0	08/05/13 06:39	
Toluene	ug/L	<0.44	1.0	08/05/13 06:39	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/05/13 06:39	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/05/13 06:39	
Trichloroethene	ug/L	<0.43	1.0	08/05/13 06:39	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/05/13 06:39	
Vinyl chloride	ug/L	<0.18	1.0	08/05/13 06:39	
4-Bromofluorobenzene (S)	%	94	43-137	08/05/13 06:39	
Dibromofluoromethane (S)	%	89	70-130	08/05/13 06:39	
Toluene-d8 (S)	%	99	55-137	08/05/13 06:39	

LABORATORY CONTROL SAMPLE &amp; LCSD: 832952

832953

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.8	49.2	96	98	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	51.8	52.5	104	105	70-130	1	20	
1,1,2-Trichloroethane	ug/L	50	49.2	51.4	98	103	70-130	4	20	
1,1-Dichloroethane	ug/L	50	51.6	53.9	103	108	70-146	4	20	
1,1-Dichloroethene	ug/L	50	53.8	55.1	108	110	70-130	2	20	
1,2,4-Trichlorobenzene	ug/L	50	53.6	55.4	107	111	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	50	44.7	44.7	89	89	46-150	0	20	
1,2-Dibromoethane (EDB)	ug/L	50	51.1	52.3	102	105	70-130	2	20	
1,2-Dichlorobenzene	ug/L	50	52.3	53.1	105	106	70-130	1	20	
1,2-Dichloroethane	ug/L	50	47.9	49.9	96	100	70-144	4	20	
1,2-Dichloropropane	ug/L	50	53.4	55.9	107	112	70-136	4	20	
1,3-Dichlorobenzene	ug/L	50	52.7	53.6	105	107	70-130	2	20	
1,4-Dichlorobenzene	ug/L	50	52.5	52.5	105	105	70-130	0	20	
Benzene	ug/L	50	50.9	51.8	102	104	70-137	2	20	
Bromodichloromethane	ug/L	50	50.1	53.1	100	106	70-133	6	20	
Bromoform	ug/L	50	47.5	49.6	95	99	59-130	4	20	
Bromomethane	ug/L	50	37.9	42.8	76	86	41-148	12	20	
Carbon tetrachloride	ug/L	50	46.1	48.7	92	97	70-154	6	20	
Chlorobenzene	ug/L	50	51.9	53.3	104	107	70-130	3	20	

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**QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

LABORATORY CONTROL SAMPLE & LCSD:		832953									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroethane	ug/L	50	53.4	54.4	107	109	70-139	2	20		
Chloroform	ug/L	50	48.8	50.2	98	100	70-130	3	20		
Chloromethane	ug/L	50	49.7	50.5	99	101	45-154	2	20		
cis-1,2-Dichloroethene	ug/L	50	49.0	51.5	98	103	70-130	5	20		
cis-1,3-Dichloropropene	ug/L	50	47.1	49.3	94	99	70-136	5	20		
Dibromochloromethane	ug/L	50	47.2	49.2	94	98	70-130	4	20		
Dichlorodifluoromethane	ug/L	50	43.7	44.4	87	89	20-157	1	20		
Ethylbenzene	ug/L	50	53.3	54.3	107	109	70-130	2	20		
Isopropylbenzene (Cumene)	ug/L	50	54.8	56.2	110	112	70-130	2	20		
m&p-Xylene	ug/L	100	108	109	108	109	70-130	2	20		
Methyl-tert-butyl ether	ug/L	50	48.3	49.7	97	99	59-141	3	20		
Methylene Chloride	ug/L	50	52.3	52.8	105	106	70-130	1	20		
o-Xylene	ug/L	50	54.8	56.1	110	112	70-130	2	20		
Styrene	ug/L	50	53.8	54.9	108	110	70-130	2	20		
Tetrachloroethene	ug/L	50	50.8	52.8	102	106	70-130	4	20		
Toluene	ug/L	50	51.7	52.9	103	106	70-130	2	20		
trans-1,2-Dichloroethene	ug/L	50	52.6	54.3	105	109	70-130	3	20		
trans-1,3-Dichloropropene	ug/L	50	46.5	48.6	93	97	55-135	4	20		
Trichloroethene	ug/L	50	52.7	53.6	105	107	70-130	2	20		
Trichlorofluoromethane	ug/L	50	56.1	57.3	112	115	50-150	2	20		
Vinyl chloride	ug/L	50	55.4	56.6	111	113	61-143	2	20		
4-Bromofluorobenzene (S)	%				102	101	43-137				
Dibromofluoromethane (S)	%				99	98	70-130				
Toluene-d8 (S)	%				99	100	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		832954 832955										
Parameter	Units	4082203002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.44	50	50	49.9	48.0	100	96	70-136	4	20	
1,1,2-Tetrachloroethane	ug/L	<0.38	50	50	52.8	50.0	106	100	70-130	5	20	
1,1,2-Trichloroethane	ug/L	<0.39	50	50	51.4	49.4	103	99	70-130	4	20	
1,1-Dichloroethane	ug/L	<0.28	50	50	54.5	51.9	109	104	70-146	5	20	
1,1-Dichloroethene	ug/L	<0.43	50	50	56.4	54.0	113	108	70-130	4	20	
1,2,4-Trichlorobenzene	ug/L	<2.5	50	50	56.2	52.8	112	106	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	50	50	43.3	43.4	87	87	46-150	0	20	
1,2-Dibromoethane (EDB)	ug/L	<0.38	50	50	53.1	49.2	106	98	70-130	8	20	
1,2-Dichlorobenzene	ug/L	<0.44	50	50	53.4	51.2	106	102	70-130	4	20	
1,2-Dichloroethane	ug/L	<0.48	50	50	49.3	47.8	99	96	70-146	3	20	
1,2-Dichloropropane	ug/L	<0.50	50	50	55.3	53.3	111	107	70-136	4	20	
1,3-Dichlorobenzene	ug/L	<0.45	50	50	54.1	51.0	108	102	70-130	6	20	
1,4-Dichlorobenzene	ug/L	<0.43	50	50	53.3	51.0	107	102	70-130	4	20	
Benzene	ug/L	<0.50	50	50	53.5	50.4	107	101	70-137	6	20	
Bromodichloromethane	ug/L	<0.45	50	50	54.0	50.9	108	102	70-133	6	20	
Bromoform	ug/L	<0.23	50	50	48.7	46.7	97	93	57-130	4	20	
Bromomethane	ug/L	<0.43	50	50	43.6	43.0	87	86	41-148	1	20	
Carbon tetrachloride	ug/L	<0.37	50	50	48.6	47.1	97	94	70-154	3	20	

**REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

Parameter	Units	4082203002		MS		MSD		MS		MSD		% Rec	Limits	Max	
		Result	Conc.	Spike	Conc.	Result	MSD	Result	% Rec	MSD	% Rec			RPD	RPD
Chlorobenzene	ug/L	<0.36	50	50	54.5	51.2	109	102	70-130	6	20				
Chloroethane	ug/L	<0.44	50	50	54.7	53.4	109	107	70-140	2	20				
Chloroform	ug/L	<0.69	50	50	50.9	48.5	102	97	70-130	5	20				
Chloromethane	ug/L	<0.39	50	50	52.5	49.7	105	99	45-154	6	20				
cis-1,2-Dichloroethene	ug/L	<0.42	50	50	51.7	50.2	103	100	70-130	3	20				
cis-1,3-Dichloropropene	ug/L	<0.29	50	50	49.9	47.0	100	94	70-136	6	20				
Dibromochloromethane	ug/L	<1.9	50	50	49.0	46.6	98	93	70-130	5	20				
Dichlorodifluoromethane	ug/L	<0.40	50	50	43.8	42.2	88	84	10-157	4	20				
Ethylbenzene	ug/L	<0.50	50	50	55.5	51.5	111	103	70-130	8	20				
Isopropylbenzene (Cumene)	ug/L	<0.34	50	50	57.3	53.5	115	107	70-130	7	20				
m&p-Xylene	ug/L	<0.82	100	100	111	105	111	105	70-130	6	20				
Methyl-tert-butyl ether	ug/L	<0.49	50	50	49.6	47.5	99	95	59-141	4	20				
Methylene Chloride	ug/L	<0.36	50	50	54.7	52.4	109	105	70-130	4	20				
o-Xylene	ug/L	<0.50	50	50	56.7	53.8	113	108	70-130	5	20				
Styrene	ug/L	<0.35	50	50	55.8	52.8	112	106	35-164	5	20				
Tetrachloroethene	ug/L	<0.47	50	50	53.9	50.2	107	100	70-130	7	20				
Toluene	ug/L	<0.44	50	50	54.4	51.1	109	102	70-130	6	20				
trans-1,2-Dichloroethene	ug/L	<0.37	50	50	55.8	53.4	112	107	70-130	4	20				
trans-1,3-Dichloropropene	ug/L	<0.26	50	50	49.1	45.8	98	92	55-137	7	20				
Trichloroethene	ug/L	<0.43	50	50	54.9	52.5	110	105	70-130	4	20				
Trichlorofluoromethane	ug/L	<0.48	50	50	58.6	55.7	117	111	50-150	5	20				
Vinyl chloride	ug/L	<0.18	50	50	56.9	54.8	114	110	59-144	4	20				
4-Bromofluorobenzene (S)	%						103	101	43-137						
Dibromofluoromethane (S)	%							98	97	70-130					
Toluene-d8 (S)	%							100	100	55-137					

## REPORT OF LABORATORY ANALYSIS

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

## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

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QC Batch: MSV/20720

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV

Associated Lab Samples: 4082168002

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METHOD BLANK: 833245

## Matrix: Water

Associated Lab Samples: 4082168002

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	08/07/13 06:07	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	08/07/13 06:07	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	08/07/13 06:07	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	08/07/13 06:07	
1,1-Dichloroethane	ug/L	<0.28	1.0	08/07/13 06:07	
1,1-Dichloroethene	ug/L	<0.43	1.0	08/07/13 06:07	
1,1-Dichloropropene	ug/L	<0.51	1.0	08/07/13 06:07	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	08/07/13 06:07	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	08/07/13 06:07	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	08/07/13 06:07	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	08/07/13 06:07	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	08/07/13 06:07	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	08/07/13 06:07	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	08/07/13 06:07	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/07/13 06:07	
1,2-Dichloropropane	ug/L	<0.50	1.0	08/07/13 06:07	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	08/07/13 06:07	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	08/07/13 06:07	
1,3-Dichloropropane	ug/L	<0.46	1.0	08/07/13 06:07	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	08/07/13 06:07	
2,2-Dichloropropane	ug/L	<0.37	1.0	08/07/13 06:07	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/07/13 06:07	
2-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:07	
4-Chlorotoluene	ug/L	<0.48	1.0	08/07/13 06:07	
Benzene	ug/L	<0.50	1.0	08/07/13 06:07	
Bromobenzene	ug/L	<0.48	1.0	08/07/13 06:07	
Bromochloromethane	ug/L	<0.49	1.0	08/07/13 06:07	
Bromodichloromethane	ug/L	<0.45	1.0	08/07/13 06:07	
Bromoform	ug/L	<0.23	1.0	08/07/13 06:07	
Bromomethane	ug/L	<0.43	5.0	08/07/13 06:07	
Carbon tetrachloride	ug/L	<0.37	1.0	08/07/13 06:07	
Chlorobenzene	ug/L	<0.36	1.0	08/07/13 06:07	
Chloroethane	ug/L	<0.44	1.0	08/07/13 06:07	
Chloroform	ug/L	<0.69	5.0	08/07/13 06:07	
Chloromethane	ug/L	<0.39	1.0	08/07/13 06:07	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	08/07/13 06:07	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	08/07/13 06:07	
Dibromochloromethane	ug/L	<1.9	5.0	08/07/13 06:07	
Dibromomethane	ug/L	<0.48	1.0	08/07/13 06:07	
Dichlorodifluoromethane	ug/L	<0.40	1.0	08/07/13 06:07	
Diisopropyl ether	ug/L	<0.50	1.0	08/07/13 06:07	
Ethylbenzene	ug/L	<0.50	1.0	08/07/13 06:07	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	08/07/13 06:07	

## **REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

METHOD BLANK: 833245

Matrix: Water

Associated Lab Samples: 4082168002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	08/07/13 06:07	
m&p-Xylene	ug/L	<0.82	2.0	08/07/13 06:07	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	08/07/13 06:07	
Methylene Chloride	ug/L	<0.36	1.0	08/07/13 06:07	
n-Butylbenzene	ug/L	<0.40	1.0	08/07/13 06:07	
n-Propylbenzene	ug/L	<0.50	1.0	08/07/13 06:07	
Naphthalene	ug/L	<2.5	5.0	08/07/13 06:07	
o-Xylene	ug/L	<0.50	1.0	08/07/13 06:07	
p-Isopropyltoluene	ug/L	<0.40	1.0	08/07/13 06:07	
sec-Butylbenzene	ug/L	<0.60	5.0	08/07/13 06:07	
Styrene	ug/L	<0.35	1.0	08/07/13 06:07	
tert-Butylbenzene	ug/L	<0.42	1.0	08/07/13 06:07	
Tetrachloroethene	ug/L	<0.47	1.0	08/07/13 06:07	
Toluene	ug/L	<0.44	1.0	08/07/13 06:07	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	08/07/13 06:07	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	08/07/13 06:07	
Trichloroethene	ug/L	<0.43	1.0	08/07/13 06:07	
Trichlorofluoromethane	ug/L	<0.48	1.0	08/07/13 06:07	
Vinyl chloride	ug/L	<0.18	1.0	08/07/13 06:07	
4-Bromofluorobenzene (S)	%	90	43-137	08/07/13 06:07	
Dibromofluoromethane (S)	%	98	70-130	08/07/13 06:07	
Toluene-d8 (S)	%	94	55-137	08/07/13 06:07	

LABORATORY CONTROL SAMPLE &amp; LCSD: 833246

833247

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.5	48.9	95	98	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	46.9	49.0	94	98	70-130	4	20	
1,1,2-Trichloroethane	ug/L	50	50.3	51.4	101	103	70-130	2	20	
1,1-Dichloroethane	ug/L	50	50.3	52.3	101	105	70-146	4	20	
1,1-Dichloroethene	ug/L	50	49.6	52.2	99	104	70-130	5	20	
1,2,4-Trichlorobenzene	ug/L	50	47.7	50.7	95	101	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	50	40.9	42.9	82	86	46-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	50	49.7	51.5	99	103	70-130	4	20	
1,2-Dichlorobenzene	ug/L	50	49.9	51.7	100	103	70-130	3	20	
1,2-Dichloroethane	ug/L	50	52.3	54.0	105	108	70-144	3	20	
1,2-Dichloropropane	ug/L	50	53.9	54.1	108	108	70-136	0	20	
1,3-Dichlorobenzene	ug/L	50	47.2	48.6	94	97	70-130	3	20	
1,4-Dichlorobenzene	ug/L	50	47.4	48.9	95	98	70-130	3	20	
Benzene	ug/L	50	51.6	53.8	103	108	70-137	4	20	
Bromodichloromethane	ug/L	50	53.0	54.2	106	108	70-133	2	20	
Bromoform	ug/L	50	48.9	49.7	98	99	59-130	1	20	
Bromomethane	ug/L	50	40.0	43.6	80	87	41-148	9	20	
Carbon tetrachloride	ug/L	50	49.0	50.3	98	101	70-154	3	20	
Chlorobenzene	ug/L	50	52.0	52.3	104	105	70-130	1	20	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

LABORATORY CONTROL SAMPLE & LCSD:		833246									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroethane	ug/L	50	51.2	52.6	102	105	70-139	3	20		
Chloroform	ug/L	50	49.8	50.7	100	101	70-130	2	20		
Chloromethane	ug/L	50	43.1	44.7	86	89	45-154	4	20		
cis-1,2-Dichloroethene	ug/L	50	49.6	50.9	99	102	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	50	44.5	45.5	89	91	70-136	2	20		
Dibromochloromethane	ug/L	50	47.8	49.2	96	98	70-130	3	20		
Dichlorodifluoromethane	ug/L	50	29.7	30.6	59	61	20-157	3	20		
Ethylbenzene	ug/L	50	52.4	54.0	105	108	70-130	3	20		
Isopropylbenzene (Cumene)	ug/L	50	48.5	49.7	97	99	70-130	3	20		
m&p-Xylene	ug/L	100	108	110	108	110	70-130	2	20		
Methyl-tert-butyl ether	ug/L	50	33.4	34.7	67	69	59-141	4	20		
Methylene Chloride	ug/L	50	52.1	53.8	104	108	70-130	3	20		
o-Xylene	ug/L	50	49.5	51.1	99	102	70-130	3	20		
Styrene	ug/L	50	49.4	50.3	99	101	70-130	2	20		
Tetrachloroethene	ug/L	50	47.8	49.7	96	99	70-130	4	20		
Toluene	ug/L	50	51.6	52.5	103	105	70-130	2	20		
trans-1,2-Dichloroethene	ug/L	50	50.6	52.7	101	105	70-130	4	20		
trans-1,3-Dichloropropene	ug/L	50	42.1	44.4	84	89	55-135	5	20		
Trichloroethene	ug/L	50	55.0	55.9	110	112	70-130	2	20		
Trichlorofluoromethane	ug/L	50	47.9	49.6	96	99	50-150	3	20		
Vinyl chloride	ug/L	50	46.7	48.9	93	98	61-143	5	20		
4-Bromofluorobenzene (S)	%				101	101	43-137				
Dibromofluoromethane (S)	%				99	98	70-130				
Toluene-d8 (S)	%				96	94	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		833254										
Parameter	Units	4082224003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<44.3	50	50	46.8	50.3	94	101	70-136	7	20	
1,1,2-Tetrachloroethane	ug/L	<38.4	50	50	47.2	48.6	94	97	70-130	3	20	
1,1,2-Trichloroethane	ug/L	<39.0	50	50	42.7	45.9	85	92	70-130	7	20	
1,1-Dichloroethane	ug/L	<28.5	50	50	48.0	51.1	96	102	70-146	6	20	
1,1-Dichloroethene	ug/L	<42.7	50	50	52.8	54.9	106	110	70-130	4	20	
1,2,4-Trichlorobenzene	ug/L	<250	50	50	50.7	54.2	101	108	70-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	<150	50	50	44.1	47.6	88	95	46-150	8	20	
1,2-Dibromoethane (EDB)	ug/L	<38.1	50	50	44.8	47.1	90	94	70-130	5	20	
1,2-Dichlorobenzene	ug/L	<43.9	50	50	46.5	50.1	93	100	70-130	8	20	
1,2-Dichloroethane	ug/L	<47.6	50	50	48.5	50.2	97	100	70-146	3	20	
1,2-Dichloropropane	ug/L	<49.8	50	50	49.1	52.0	98	104	70-136	6	20	
1,3-Dichlorobenzene	ug/L	<45.1	50	50	47.0	49.5	94	99	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<43.4	50	50	44.6	46.7	89	93	70-130	4	20	
Benzene	ug/L	<50.0	50	50	49.0	50.5	98	101	70-137	3	20	
Bromodichloromethane	ug/L	<45.3	50	50	52.2	54.6	104	109	70-133	5	20	
Bromoform	ug/L	<23.3	50	50	43.2	44.2	86	88	57-130	2	20	
Bromomethane	ug/L	<43.0	50	50	45.2	47.6	90	95	41-148	5	20	
Carbon tetrachloride	ug/L	<36.5	50	50	50.3	51.9	101	104	70-154	3	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

Parameter	Units	4082224003		MS Spike		MSD Spike		MS Result		MSD Result		MS % Rec		MSD % Rec		% Rec		Max	
		Result	Conc.	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	RPD	RPD	Limits	Qual	RPD	RPD	Max
Chlorobenzene	ug/L	<35.8	50	50	46.5	48.3	93	97	70-130	4	20								
Chloroethane	ug/L	<44.4	50	50	52.5	54.6	105	109	70-140	4	20								
Chloroform	ug/L	<68.9	50	50	53.7	55.6	47	51	70-130	3	20 M1								
Chloromethane	ug/L	<38.8	50	50	51.7	56.3	103	113	45-154	9	20								
cis-1,2-Dichloroethene	ug/L	<41.9	50	50	47.4	47.9	95	96	70-130	1	20								
cis-1,3-Dichloropropene	ug/L	<29.0	50	50	46.7	48.8	93	98	70-136	4	20								
Dibromochloromethane	ug/L	<190	50	50	43.3	45.6	87	91	70-130	5	20								
Dichlorodifluoromethane	ug/L	<40.1	50	50	54.0	55.8	108	112	10-157	3	20								
Ethylbenzene	ug/L	<50.0	50	50	48.4	50.4	97	101	70-130	4	20								
Isopropylbenzene (Cumene)	ug/L	<34.1	50	50	44.8	46.7	90	93	70-130	4	20								
m&p-Xylene	ug/L	<81.7	100	100	98.2	103	98	103	70-130	5	20								
Methyl-tert-butyl ether	ug/L	62.8J	50	50	92.5	101	59	75	59-141	8	20								
Methylene Chloride	ug/L	<35.9	50	50	48.9	52.1	98	104	70-130	6	20								
o-Xylene	ug/L	<50.0	50	50	45.4	47.4	91	95	70-130	4	20								
Styrene	ug/L	<35.0	50	50	44.6	46.7	89	93	35-164	5	20								
Tetrachloroethene	ug/L	<47.2	50	50	42.0	44.0	84	88	70-130	5	20								
Toluene	ug/L	<43.9	50	50	43.0	46.0	86	92	70-130	7	20								
trans-1,2-Dichloroethene	ug/L	<37.1	50	50	49.6	51.5	99	103	70-130	4	20								
trans-1,3-Dichloropropene	ug/L	<26.2	50	50	37.8	40.5	76	81	55-137	7	20								
Trichloroethene	ug/L	<42.9	50	50	50.2	52.6	100	105	70-130	5	20								
Trichlorofluoromethane	ug/L	<47.7	50	50	54.7	55.5	109	111	50-150	2	20								
Vinyl chloride	ug/L	<18.5	50	50	54.5	56.6	109	113	59-144	4	20								
4-Bromofluorobenzene (S)	%							96	96	43-137									
Dibromofluoromethane (S)	%							99	98	70-130									
Toluene-d8 (S)	%							84	87	55-137									

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082168

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### 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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082168

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082168001	MW-12-1	EPA 3010	MPRP/8911	EPA 6010	ICP/7880
4082168001	MW-12-1	EPA 7470	MERP/3796	EPA 7470	MERC/4781
4082168001	MW-12-1	EPA 8260		MSV/20715	
4082168002	TRIP BLANK	EPA 8260		MSV/20720	

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

**Company Name:** Himalayan Consultants  
**Branch/Location:** Michelle Reed  
**Project Contact:** 242-5020064  
**Phone:** 6190-17-00  
**Project Number:** NINNE DONNE  
**Project State:** VI  
**Sampled By (Print):** Michelle Reed  
**Sampled By (Sign):**   
**PO #:**  Regulatory Program:

**Data Package Options**

EPA Level III

EPA Level IV

On your sample

NOT needed on your sample

**MS/MSD**

**Matrix Codes**

A = Air

B = Biota

C = Charcoal

D = Drinking Water

GW = Ground Water

SW = Surface Water

WW = Waste Water

WP = Wipe

SI = Sludge

W = Water

DW = Drinking Water

GW = Ground Water

SW = Surface Water

WW = Waste Water

WP = Wipe

SI = Sludge

W = Water

DW = Drinking Water

GW = Ground Water

SW = Surface Water

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WP = Wipe

SI = Sludge

W = Water

DW = Drinking Water

GW = Ground Water

SW = Surface Water

WW = Waste Water

WP = Wipe

PaceAnalytical™

Sample Condition Upon Receipt

Client Name: Himalayan Project # 408Q168

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other CS Logistic

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: 20 /Corr: 20 Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:  
Date: 8-2-13  
Initials: MV

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, Coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>299</u>		

Client Notification/ Resolution:

If checked, see attached form for additional comments

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

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

Project Manager Review: MAT for DM

Date: 8-2-13

## **WASTE CHARACTERIZATION ANALYTICAL**

August 19, 2013

Michelle Peed  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
P.O. Box 693  
Germantown, WI 53022

RE: Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082159

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com  
Project Manager

Enclosures

cc: Matt Hilse, Himalayan Consultants, LLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082159

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### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
 A2LA Certification #: 2926.01  
 Alaska Certification #: UST-078  
 Alaska Certification #MN00064  
 Arizona Certification #: AZ-0014  
 Arkansas Certification #: 88-0680  
 California Certification #: 01155CA  
 Colorado Certification #Pace  
 Connecticut Certification #: PH-0256  
 EPA Region 8 Certification #: Pace  
 Florida/NELAP Certification #: E87605  
 Georgia Certification #: 959  
 Hawaii Certification #Pace  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Kansas Certification #: E-10167  
 Louisiana Certification #: 03086  
 Louisiana Certification #: LA080009  
 Maine Certification #: 2007029  
 Maryland Certification #: 322  
 Michigan DEQ Certification #: 9909  
 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
 Montana Certification #: MT CERT0092  
 Nebraska Certification #: Pace  
 Nevada Certification #: MN\_00064  
 New Jersey Certification #: MN-002  
 New York Certification #: 11647  
 North Carolina Certification #: 530  
 North Dakota Certification #: R-036  
 Ohio VAP Certification #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Certification #: MN200001  
 Oregon Certification #: MN300001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification  
 Tennessee Certification #: 02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Virginia/DCLS Certification #: 002521  
 Virginia/VELAP Certification #: 460163  
 Washington Certification #: C754  
 West Virginia Certification #: 382  
 Wisconsin Certification #: 999407970

### **Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302  
 Florida/NELAP Certification #: E87948  
 Illinois Certification #: 200050  
 Kentucky Certification #: 82  
 Louisiana Certification #: 04168  
 Minnesota Certification #: 055-999-334

New York Certification #: 11888  
 North Dakota Certification #: R-150  
 South Carolina Certification #: 83006001  
 US Dept of Agriculture #: S-76505  
 Wisconsin Certification #: 405132750

### **Kansas Certification IDs**

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

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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4082159001	PROT B-12	Solid	07/31/13 12:50	08/02/13 09:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 6190-17-00 WINNECONNE  
 Pace Project No.: 4082159

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4082159001	PROT B-12	EPA 8082	BLM	10	PASI-G
		EPA 6010	DLB	10	PASI-G
		EPA 7470	CMS	1	PASI-G
		EPA 8270	RJN	16	PASI-G
		EPA 8260	HNW	13	PASI-G
		ASTM D2974-87	AH	1	PASI-G
		EPA 1010	DEY	1	PASI-G
		SW-846 7.3.4.2	AJM	1	PASI-K
		EPA 9045	KMS	1	PASI-G
		EPA 9095	HKV	1	PASI-G
		SM 2710F	HKV	1	PASI-G
		EPA 420.1	KEO	1	PASI-M
		SW-846 7.3.3.2	AJM	1	PASI-K

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

Sample: PROT B-12 Lab ID: 4082159001 Collected: 07/31/13 12:50 Received: 08/02/13 09:45 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB</b>	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	12674-11-2	
PCB-1221 (Aroclor 1221)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	53469-21-9	
PCB-1248 (Aroclor 1248)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	12672-29-6	
PCB-1254 (Aroclor 1254)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	11097-69-1	
PCB-1260 (Aroclor 1260)	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	11096-82-5	
PCB, Total	<29.1 ug/kg		58.3	29.1	1	08/05/13 12:00	08/05/13 23:18	1336-36-3	
<b>Surrogates</b>									
Tetrachloro-m-xylene (S)	89 %		40-130		1	08/05/13 12:00	08/05/13 23:18	877-09-8	
Decachlorobiphenyl (S)	91 %		48-130		1	08/05/13 12:00	08/05/13 23:18	2051-24-3	
<b>6010 MET ICP, TCLP</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
Arsenic	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7440-38-2	
Barium	<1.2 mg/L		2.5	1.2	1	08/07/13 10:45	08/07/13 16:41	7440-39-3	
Cadmium	<0.0025 mg/L		0.0050	0.0025	1	08/07/13 10:45	08/07/13 16:41	7440-43-9	
Chromium	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7440-47-3	
Copper	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7440-50-8	
Lead	<0.015 mg/L		0.038	0.015	1	08/07/13 10:45	08/07/13 16:41	7439-92-1	
Nickel	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7440-02-0	
Selenium	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7782-49-2	
Silver	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7440-22-4	
Zinc	<0.12 mg/L		0.25	0.12	1	08/07/13 10:45	08/07/13 16:41	7440-66-6	
<b>7470 Mercury, TCLP</b>	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
Mercury	0.38 ug/L		0.20	0.10	1	08/12/13 11:15	08/12/13 14:58	7439-97-6	
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
1,4-Dichlorobenzene	<8.6 ug/L		50.0	8.6	1	08/12/13 12:00	08/15/13 23:04	106-46-7	
2,4-Dinitrotoluene	<8.0 ug/L		50.0	8.0	1	08/12/13 12:00	08/15/13 23:04	121-14-2	
Hexachloro-1,3-butadiene	<6.6 ug/L		100	6.6	1	08/12/13 12:00	08/15/13 23:04	87-68-3	
Hexachlorobenzene	<11.1 ug/L		50.0	11.1	1	08/12/13 12:00	08/15/13 23:04	118-74-1	
Hexachloroethane	<5.8 ug/L		50.0	5.8	1	08/12/13 12:00	08/15/13 23:04	67-72-1	
2-Methylphenol(o-Cresol)	<9.7 ug/L		50.0	9.7	1	08/12/13 12:00	08/15/13 23:04	95-48-7	
3&4-Methylphenol(m&p Cresol)	<7.7 ug/L		50.0	7.7	1	08/12/13 12:00	08/15/13 23:04		
Nitrobenzene	<13.7 ug/L		50.0	13.7	1	08/12/13 12:00	08/15/13 23:04	98-95-3	
Pentachlorophenol	<10.8 ug/L		100	10.8	1	08/12/13 12:00	08/15/13 23:04	87-86-5	
Pyridine	<14.3 ug/L		50.0	14.3	1	08/12/13 12:00	08/15/13 23:04	110-86-1	
2,4,5-Trichlorophenol	<10 ug/L		50.0	10	1	08/12/13 12:00	08/15/13 23:04	95-95-4	
2,4,6-Trichlorophenol	<10.7 ug/L		50.0	10.7	1	08/12/13 12:00	08/15/13 23:04	88-06-2	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

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**Sample: PROT B-12      Lab ID: 4082159001      Collected: 07/31/13 12:50      Received: 08/02/13 09:45      Matrix: Solid**


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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV TCLP Sep Funnel</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 08/06/13 00:00								
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	83 %	59-130		1	08/12/13 12:00	08/15/13 23:04	4165-60-0		
2-Fluorobiphenyl (S)	83 %	60-130		1	08/12/13 12:00	08/15/13 23:04	321-60-8		
Phenol-d6 (S)	33 %	19-130		1	08/12/13 12:00	08/15/13 23:04	13127-88-3		
2,4,6-Tribromophenol (S)	83 %	34-143		1	08/12/13 12:00	08/15/13 23:04	118-79-6		
<b>8260 MSV TCLP</b>	Analytical Method: EPA 8260 Preparation Method: EPA 1311								
Benzene	<5.0 ug/L	10.0	5.0	10	08/06/13 00:00	08/09/13 11:37	71-43-2		
2-Butanone (MEK)	<27.0 ug/L	200	27.0	10	08/06/13 00:00	08/09/13 11:37	78-93-3		
Carbon tetrachloride	<3.7 ug/L	10.0	3.7	10	08/06/13 00:00	08/09/13 11:37	56-23-5		
Chlorobenzene	<3.6 ug/L	10.0	3.6	10	08/06/13 00:00	08/09/13 11:37	108-90-7		
Chloroform	<6.9 ug/L	50.0	6.9	10	08/06/13 00:00	08/09/13 11:37	67-66-3		
1,2-Dichloroethane	<4.8 ug/L	10.0	4.8	10	08/06/13 00:00	08/09/13 11:37	107-06-2		
1,1-Dichloroethene	<4.3 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 11:37	75-35-4		
Tetrachloroethylene	<4.7 ug/L	10.0	4.7	10	08/06/13 00:00	08/09/13 11:37	127-18-4		
Trichloroethylene	150 ug/L	10.0	4.3	10	08/06/13 00:00	08/09/13 11:37	79-01-6		
Vinyl chloride	<1.8 ug/L	10.0	1.8	10	08/06/13 00:00	08/09/13 11:37	75-01-4		
<b>Surrogates</b>									
Toluene-d8 (S)	99 %	55-137		10	08/06/13 00:00	08/09/13 11:37	2037-26-5		
4-Bromofluorobenzene (S)	94 %	43-137		10	08/06/13 00:00	08/09/13 11:37	460-00-4		
Dibromofluoromethane (S)	94 %	70-130		10	08/06/13 00:00	08/09/13 11:37	1868-53-7		
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	14.2 %	0.10	0.10	1			08/12/13 16:31		
<b>1010 Flashpoint,Closed Cup</b>	Analytical Method: EPA 1010								
Flashpoint	>210 deg F			1			08/07/13 14:42		
<b>Reactive Sulfide</b>	Analytical Method: SW-846 7.3.4.2								
Sulfide, Reactive	0.0J mg/kg	100		1			08/12/13 09:00		
<b>9045 pH Soil</b>	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.6 Std. Units	0.10	0.010	1			08/14/13 23:30		H6
<b>9095 Paint Filter Liquid Test</b>	Analytical Method: EPA 9095								
Free Liquids	PASS no units			1			08/06/13 09:54		
<b>Specific Gravity</b>	Analytical Method: SM 2710F								
Specific Gravity	1.7 no units			1			08/06/13 10:46		
<b>Phenolics, Total Recoverable</b>	Analytical Method: EPA 420.1								
Phenolics, Total Recoverable	<15.0 ug/L	50.0	15.0	1			08/15/13 15:30		

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## ANALYTICAL RESULTS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

Sample: PROT B-12      Lab ID: 4082159001      Collected: 07/31/13 12:50      Received: 08/02/13 09:45      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>733C S Reactive Cyanide</b>	Analytical Method: SW-846 7.3.3.2								
Cyanide, Reactive	<b>0.0050J</b>	mg/kg	0.025		1		08/12/13 09:12		

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch:	MERP/3798	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury TCLP
Associated Lab Samples:	4082159001		

METHOD BLANK: 837733	Matrix: Water
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Associated Lab Samples: 4082159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.10	0.20	08/12/13 14:53	

LABORATORY CONTROL SAMPLE: 837734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	85-115	

MATRIX SPIKE SAMPLE: 837735

Parameter	Units	4082092001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.3	106	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 837736 837737

Parameter	Units	4082159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.38	5	5	5.6	5.5	104	103	85-115	1	20	

MATRIX SPIKE SAMPLE: 837738

Parameter	Units	4082217001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.38	5	5.3	98	85-115	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch:	MPRP/8926	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	4082159001		

METHOD BLANK: 834575	Matrix: Water
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Associated Lab Samples: 4082159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.025	0.050	08/07/13 16:37	
Barium	mg/L	<0.25	0.50	08/07/13 16:37	
Cadmium	mg/L	<0.00050	0.0010	08/07/13 16:37	
Chromium	mg/L	<0.025	0.050	08/07/13 16:37	
Copper	mg/L	<0.025	0.050	08/07/13 16:37	
Lead	mg/L	<0.0030	0.0075	08/07/13 16:37	
Nickel	mg/L	<0.025	0.050	08/07/13 16:37	
Selenium	mg/L	<0.025	0.050	08/07/13 16:37	
Silver	mg/L	<0.025	0.050	08/07/13 16:37	
Zinc	mg/L	<0.025	0.050	08/07/13 16:37	

LABORATORY CONTROL SAMPLE: 834576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.5	0.50	99	80-120	
Barium	mg/L	.5	0.52	103	80-120	
Cadmium	mg/L	.5	0.50	99	80-120	
Chromium	mg/L	.5	0.51	102	80-120	
Copper	mg/L	.5	0.51	102	80-120	
Lead	mg/L	.5	0.50	100	80-120	
Nickel	mg/L	.5	0.51	103	80-120	
Selenium	mg/L	.5	0.51	101	80-120	
Silver	mg/L	.25	0.25	101	80-120	
Zinc	mg/L	.5	0.51	102	80-120	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 834577      834578

Parameter	Units	4082159001	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Result	Conc.	Result	Result	% Rec	Conc.	Limits	RPD	RPD	
Arsenic	mg/L	<0.12	2.5	2.5	2.6	2.6	102	101	75-125	1	20	
Barium	mg/L	<1.2	2.5	2.5	3.1	3.0	101	99	75-125	2	20	
Cadmium	mg/L	<0.0025	2.5	2.5	2.5	2.5	102	101	75-125	1	20	
Chromium	mg/L	<0.12	2.5	2.5	2.6	2.6	102	103	75-125	0	20	
Copper	mg/L	<0.12	2.5	2.5	2.6	2.6	103	102	75-125	1	20	
Lead	mg/L	<0.015	2.5	2.5	2.5	2.5	99	100	75-125	1	20	
Nickel	mg/L	<0.12	2.5	2.5	2.5	2.6	102	102	75-125	1	20	
Selenium	mg/L	<0.12	2.5	2.5	2.6	2.6	103	104	75-125	2	20	
Silver	mg/L	<0.12	1.2	1.2	1.3	1.3	104	103	75-125	0	20	
Zinc	mg/L	<0.12	2.5	2.5	2.7	2.6	103	103	75-125	0	20	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

MATRIX SPIKE SAMPLE:	834579						
Parameter	Units	4082217001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	<0.12	2.5	2.5	100	75-125	
Barium	mg/L	<1.2	2.5	2.7	102	75-125	
Cadmium	mg/L	<0.0025	2.5	2.5	100	75-125	
Chromium	mg/L	<0.12	2.5	2.6	103	75-125	
Copper	mg/L	<0.12	2.5	2.6	102	75-125	
Lead	mg/L	<0.015	2.5	2.5	101	75-125	
Nickel	mg/L	<0.12	2.5	2.6	103	75-125	
Selenium	mg/L	<0.12	2.5	2.6	103	75-125	
Silver	mg/L	<0.12	1.2	1.3	103	75-125	
Zinc	mg/L	<0.12	2.5	2.7	104	75-125	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch:	MSV/20755	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV TCLP
Associated Lab Samples:	4082159001		

METHOD BLANK: 834655                                  Matrix: Water

Associated Lab Samples: 4082159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
1,2-Dichloroethane	ug/L	<0.48	1.0	08/09/13 08:11	
2-Butanone (MEK)	ug/L	<2.7	20.0	08/09/13 08:11	
Benzene	ug/L	<0.50	1.0	08/09/13 08:11	
Carbon tetrachloride	ug/L	<0.37	1.0	08/09/13 08:11	
Chlorobenzene	ug/L	<0.36	1.0	08/09/13 08:11	
Chloroform	ug/L	<0.69	5.0	08/09/13 08:11	
Tetrachloroethene	ug/L	<0.47	1.0	08/09/13 08:11	
Trichloroethene	ug/L	<0.43	1.0	08/09/13 08:11	
Vinyl chloride	ug/L	<0.18	1.0	08/09/13 08:11	
4-Bromofluorobenzene (S)	%	97	43-137	08/09/13 08:11	
Dibromofluoromethane (S)	%	93	70-130	08/09/13 08:11	
Toluene-d8 (S)	%	100	55-137	08/09/13 08:11	

LABORATORY CONTROL SAMPLE &amp; LCSD: 834656                                  834657

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/L	50	57.8	58.5	116	117	70-130	1	20	
1,2-Dichloroethane	ug/L	50	52.5	53.0	105	106	70-144	1	20	
Benzene	ug/L	50	53.6	53.1	107	106	70-137	1	20	
Carbon tetrachloride	ug/L	50	50.6	50.9	101	102	70-154	0	20	
Chlorobenzene	ug/L	50	54.8	53.3	110	107	70-130	3	20	
Chloroform	ug/L	50	52.8	51.9	106	104	70-130	2	20	
Tetrachloroethene	ug/L	50	54.4	53.6	109	107	70-130	2	20	
Trichloroethene	ug/L	50	57.8	55.0	116	110	70-130	5	20	
Vinyl chloride	ug/L	50	53.1	53.4	106	107	61-143	1	20	
4-Bromofluorobenzene (S)	%				106	105	43-137			
Dibromofluoromethane (S)	%				99	103	70-130			
Toluene-d8 (S)	%				98	99	55-137			

MATRIX SPIKE SAMPLE: 834658

Parameter	Units	4082127001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	<4.3	500	587	117	70-130	
1,2-Dichloroethane	ug/L	<4.8	500	516	103	70-146	
2-Butanone (MEK)	ug/L	<27.0		<27.0			
Benzene	ug/L	<5.0	500	528	106	70-137	
Carbon tetrachloride	ug/L	<3.7	500	512	102	70-154	
Chlorobenzene	ug/L	<3.6	500	537	107	70-130	
Chloroform	ug/L	<6.9	500	516	103	70-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

MATRIX SPIKE SAMPLE:	834658							
Parameter	Units	4082127001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Tetrachloroethene	ug/L	<4.7	500	535	107	70-130		
Trichloroethene	ug/L	<4.3	500	552	110	70-130		
Vinyl chloride	ug/L	<1.8	500	526	105	59-144		
4-Bromofluorobenzene (S)	%				107	43-137		
Dibromofluoromethane (S)	%				99	70-130		
Toluene-d8 (S)	%				98	55-137		

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

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QC Batch: OEXT/19291

Analysis Method: EPA 8082

QC Batch Method: EPA 3541

Analysis Description: 8082 GCS PCE

Associated Lab Samples: 4082159001

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METHOD BLANK: 833315

## Matrix: Solid

Associated Lab Samples: 4082159001

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	08/05/13 16:59	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	08/05/13 16:59	
Decachlorobiphenyl (S)	%	93	48-130	08/05/13 16:59	
Tetrachloro-m-xylene (S)	%	77	40-130	08/05/13 16:59	

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LABORATORY CONTROL SAMPLE: 833316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	438	88	70-130	
Decachlorobiphenyl (S)	%			89	48-130	
Tetrachloro-m-xylene (S)	%			74	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 833317

833318

Parameter	Units	Result	MS	MSD	MS	MSD	% Rec	MSD	% Rec	% Rec	Max
			Spike	Spike							
PCB-1016 (Aroclor 1016)	ug/kg	<661			<661	<661					31
PCB-1221 (Aroclor 1221)	ug/kg	<661			<661	<661					31
PCB-1232 (Aroclor 1232)	ug/kg	<661			<661	<661					31
PCB-1242 (Aroclor 1242)	ug/kg	5360			6220	5940				5	31
PCB-1248 (Aroclor 1248)	ug/kg	<661			<661	<661					31
PCB-1254 (Aroclor 1254)	ug/kg	<661			<661	<661					31
PCB-1260 (Aroclor 1260)	ug/kg	<661	882	882	1060J	995J	120	113	40-149		31
Decachlorobiphenyl (S)	%						0	0	48-130		S4
Tetrachloro-m-xylene (S)	%						0	0	40-130		S4

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## **QUALITY CONTROL DATA**

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch: OEXT/19391

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 TCLP MSSV

Associated Lab Samples: 4082159001

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METHOD BLANK: 837558

## Matrix: Water

Associated Lab Samples: 4082159001

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
1,4-Dichlorobenzene	ug/L	<1.7	10.0	08/13/13 10:49	
2,4,5-Trichlorophenol	ug/L	<2.0	10.0	08/13/13 10:49	
2,4,6-Trichlorophenol	ug/L	<2.1	10.0	08/13/13 10:49	
2,4-Dinitrotoluene	ug/L	<1.6	10.0	08/13/13 10:49	
2-Methylphenol(o-Cresol)	ug/L	<1.9	10.0	08/13/13 10:49	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.5	10.0	08/13/13 10:49	
Hexachloro-1,3-butadiene	ug/L	<1.3	20.0	08/13/13 10:49	
Hexachlorobenzene	ug/L	<2.2	10.0	08/13/13 10:49	
Hexachloroethane	ug/L	<1.2	10.0	08/13/13 10:49	
Nitrobenzene	ug/L	<2.7	10.0	08/13/13 10:49	
Pentachlorophenol	ug/L	<2.2	20.0	08/13/13 10:49	
Pyridine	ug/L	<2.9	10.0	08/13/13 10:49	
2,4,6-Tribromophenol (S)	%	87	34-143	08/13/13 10:49	
2-Fluorobiphenyl (S)	%	96	60-130	08/13/13 10:49	
Nitrobenzene-d5 (S)	%	84	59-130	08/13/13 10:49	
Phenol-d6 (S)	%	39	19-130	08/13/13 10:49	

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LABORATORY CONTROL SAMPLE: 837559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	29.3	59	53-130	
2,4,5-Trichlorophenol	ug/L	50	53.9	108	70-130	
2,4,6-Trichlorophenol	ug/L	50	47.2	94	70-130	
2,4-Dinitrotoluene	ug/L	50	56.5	113	69-134	
2-Methylphenol(o-Cresol)	ug/L	50	39.9	80	48-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	37.3	75	43-130	
Hexachloro-1,3-butadiene	ug/L	50	34.1	68	53-130	
Hexachlorobenzene	ug/L	50	47.7	95	59-130	
Hexachloroethane	ug/L	50	25.5	51	47-130	
Nitrobenzene	ug/L	50	52.4	105	66-130	
Pentachlorophenol	ug/L	50	51.6	103	54-130	
Pyridine	ug/L	50	16.9	34	10-130	
2,4,6-Tribromophenol (S)	%			62	34-143	
2-Fluorobiphenyl (S)	%			62	60-130	
Nitrobenzene-d5 (S)	%			63	59-130	
Phenol-d6 (S)	%			28	19-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082159

MATRIX SPIKE SAMPLE:	837560						
Parameter	Units	4082092001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		ND	250	162J	65	50-130
2,4,5-Trichlorophenol	ug/L		ND	250	207J	83	65-130
2,4,6-Trichlorophenol	ug/L		ND	250	192J	77	64-130
2,4-Dinitrotoluene	ug/L		ND	250	244J	98	49-136
2-Methylphenol(o-Cresol)	ug/L		ND	250	270J	73	33-130
3&4-Methylphenol(m&p Cresol)	ug/L		ND	250	427J	51	35-130
Hexachloro-1,3-butadiene	ug/L		ND	250	192J	77	48-130
Hexachlorobenzene	ug/L		ND	250	228J	91	57-130
Hexachloroethane	ug/L		ND	250	125J	50	45-130
Nitrobenzene	ug/L		ND	250	245J	98	62-130
Pentachlorophenol	ug/L		ND	250	143J	57	10-149
Pyridine	ug/L		ND	250	<143	38	10-130
2,4,6-Tribromophenol (S)	%					80	34-143
2-Fluorobiphenyl (S)	%					94	60-130
Nitrobenzene-d5 (S)	%					86	59-130
Phenol-d6 (S)	%					32	19-130

MATRIX SPIKE SAMPLE:	837561						
Parameter	Units	4082324001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		<8.6	250	193	77	50-130
2,4,5-Trichlorophenol	ug/L		<10	250	262	105	65-130
2,4,6-Trichlorophenol	ug/L		<10.7	250	237	95	64-130
2,4-Dinitrotoluene	ug/L		<8.0	250	277	111	49-136
2-Methylphenol(o-Cresol)	ug/L		<9.7	250	202	81	33-130
3&4-Methylphenol(m&p Cresol)	ug/L		<7.7	250	174	70	35-130
Hexachloro-1,3-butadiene	ug/L		<6.6	250	213	85	48-130
Hexachlorobenzene	ug/L		<11.1	250	249	99	57-130
Hexachloroethane	ug/L		<5.8	250	175	70	45-130
Nitrobenzene	ug/L		<13.7	250	272	109	62-130
Pentachlorophenol	ug/L		<10.8	250	242	97	10-149
Pyridine	ug/L		<14.3	250	74.1	30	10-130
2,4,6-Tribromophenol (S)	%					90	34-143
2-Fluorobiphenyl (S)	%					95	60-130
Nitrobenzene-d5 (S)	%					95	59-130
Phenol-d6 (S)	%					37	19-130

MATRIX SPIKE SAMPLE:	837562						
Parameter	Units	4082159001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L		<8.6	250	205	82	50-130
2,4,5-Trichlorophenol	ug/L		<10	250	257	103	65-130
2,4,6-Trichlorophenol	ug/L		<10.7	250	230	92	64-130
2,4-Dinitrotoluene	ug/L		<8.0	250	264	106	49-136
2-Methylphenol(o-Cresol)	ug/L		<9.7	250	187	75	33-130

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082159

MATRIX SPIKE SAMPLE:	837562						
Parameter	Units	4082159001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
3&4-Methylphenol(m&p Cresol)	ug/L	<7.7	250	167	67	35-130	
Hexachloro-1,3-butadiene	ug/L	<6.6	250	214	86	48-130	
Hexachlorobenzene	ug/L	<11.1	250	264	105	57-130	
Hexachloroethane	ug/L	<5.8	250	194	78	45-130	
Nitrobenzene	ug/L	<13.7	250	249	100	62-130	
Pentachlorophenol	ug/L	<10.8	250	277	111	10-149	
Pyridine	ug/L	<14.3	250	79.4	32	10-130	
2,4,6-Tribromophenol (S)	%				93	34-143	
2-Fluorobiphenyl (S)	%				94	60-130	
Nitrobenzene-d5 (S)	%				93	59-130	
Phenol-d6 (S)	%				37	19-130	

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch: PMST/8754

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 4082159001

---

SAMPLE DUPLICATE: 837918

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4082166004	13.4	15.4	14	10

## REPORT OF LABORATORY ANALYSIS

## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch:	WET/15853	Analysis Method:	EPA 1010
QC Batch Method:	EPA 1010	Analysis Description:	1010 Flash Point, Closed Cup
Associated Lab Samples:	4082159001		

LABORATORY CONTROL SAMPLE: 834488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.1			

SAMPLE DUPLICATE: 835130

Parameter	Units	4082161001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch: WET/42814 Analysis Method: SW-846 7.3.4.2

QC Batch Method: SW-846 7.3.4.2 Analysis Description: Reactive Sulfide

Associated Lab Samples: 4082159001

METHOD BLANK: 1234378 Matrix: Solid

Associated Lab Samples: 4082159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	0.0J	100	08/12/13 09:00	

LABORATORY CONTROL SAMPLE: 1234379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	183	92	77-110	

MATRIX SPIKE SAMPLE: 1234380

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	ND	500	427	85	67-116	

SAMPLE DUPLICATE: 1234381

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	0.0J		30	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch: WET/15940 Analysis Method: EPA 9045

QC Batch Method: EPA 9045 Analysis Description: 9045 pH

Associated Lab Samples: 4082159001

---

SAMPLE DUPLICATE: 839426

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.4	8.2	2	5	H6

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch: WET/15841

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Associated Lab Samples: 4082159001

---

SAMPLE DUPLICATE: 833806

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids	no units	PASS	PASS			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

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QC Batch: WET/15843 Analysis Method: SM 2710F  
QC Batch Method: SM 2710F Analysis Description: Spec.Gravity  
Associated Lab Samples: 4082159001

---

SAMPLE DUPLICATE: 833859

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Gravity	no units	4082160001	1.5	1.6	5	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch:	WETA/15777	Analysis Method:	EPA 420.1
QC Batch Method:	EPA 420.1	Analysis Description:	420.1 Phenolics
Associated Lab Samples:	4082159001		

METHOD BLANK: 1502529	Matrix: Water
-----------------------	---------------

Associated Lab Samples: 4082159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	50.0	08/15/13 15:30	

LABORATORY CONTROL SAMPLE & LCSD:	1502530	1502531	
-----------------------------------	---------	---------	--

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Phenolics, Total Recoverable	ug/L	1000	922	1010	92	101	90-110	9	20	

MATRIX SPIKE SAMPLE:	1502532	1502531	
----------------------	---------	---------	--

Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	<15.0	1000	913	91	90-110	

MATRIX SPIKE SAMPLE:	1502533	1502531	
----------------------	---------	---------	--

Parameter	Units	Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	41.8J	1000	1090	104	90-110	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

QC Batch:	WETA/25754	Analysis Method:	SW-846 7.3.3.2
QC Batch Method:	SW-846 7.3.3.2	Analysis Description:	733C Reactive Cyanide
Associated Lab Samples:	4082159001		

METHOD BLANK: 1234788 Matrix: Solid

Associated Lab Samples: 4082159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	0.0J	0.025	08/12/13 09:06	

LABORATORY CONTROL SAMPLE: 1234789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	.5	0.51	101	71-123	

MATRIX SPIKE SAMPLE: 1234790

Parameter	Units	60150581001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	ND	.5	0.51	100	57-132	

SAMPLE DUPLICATE: 1234791

Parameter	Units	60150703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.0070J		23	

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 6190-17-00 WINNECONNE

Pace Project No.: 4082159

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-K Pace Analytical Services - Kansas City

PASI-M Pace Analytical Services - Minneapolis

### BATCH QUALIFIERS

Batch: MSSV/5886

[IP] Benzo(b)fluoranthene and benzo(k)fluoranthene were in the check standard but did not meet the resolution criteria in SW846 Method 8270C. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

Batch: WETA/15777

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

### ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

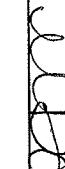
Project: 6190-17-00 WINNECONNE  
Pace Project No.: 4082159

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4082159001	PROT B-12	EPA 3541	OEXT/19291	EPA 8082	GCSV/9977
4082159001	PROT B-12	EPA 3010	MPRP/8926	EPA 6010	ICP/7897
4082159001	PROT B-12	EPA 7470	MERP/3798	EPA 7470	MERC/4787
4082159001	PROT B-12	EPA 3510	OEXT/19391	EPA 8270	MSSV/5886
4082159001	PROT B-12	EPA 1311	TCLP/3052	EPA 8260	MSV/20755
4082159001	PROT B-12	ASTM D2974-87	PMST/8754		
4082159001	PROT B-12	EPA 1010	WET/15853		
4082159001	PROT B-12	SW-846 7.3.4.2	WET/42814		
4082159001	PROT B-12	EPA 9045	WET/15940		
4082159001	PROT B-12	EPA 9095	WET/15841		
4082159001	PROT B-12	SM 2710F	WET/15843		
4082159001	PROT B-12	EPA 420.1	WETA/15777		
4082159001	PROT B-12	SW-846 7.3.3.2	WETA/25754		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Himalayan Consultants  
 Branch/Location:  
 Project Contact: Michelle Reed  
 Phone:  
 Project Number: 202 502 0066  
 Project State: WI  
 Sampled By (Print): Michelle Reed  
 Sampled By (Sign):   
 PO #:

Project Name: Winneconne  
 PO #:



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

## CHAIN OF CUSTODY

\*Preservation Codes

A=None B=HCl C=H2SO4 D=HNO3 E=D Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)

PICK LETTER  
(CODE)\*

Y/N

PICK LETTER

### Analyses Requested

PROTOCOL B

CLIENT COMMENTS  
(Lab Use Only)

LAB COMMENTS  
(Lab Use Only)

Profile #

Data Package Options  
 (Billable) EPA Level III  
 (Billable) EPA Level IV  
 NOT needed on your sample

MS/SDS  
Program:

Matrix Codes  
 A = Air  
 B = Biota  
 C = Charcoal  
 O = Oil  
 S = Soil  
 SW = Surface Water  
 WW = Waste Water  
 WF = Wipe  
 SI = Sludge

DATE

TIME

MATRIX

COLLECTION

CLIENT FIELD ID

PO#

PROT B-12

7/1/13

1250

S

X

PaceAnalytical™

**Sample Condition Upon Receipt**

Client Name: Himalayan

Project #

4082159

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Other CS Logistic

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: 20 /Corr:

Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Person examining contents:

Date: 8/27/13

Initials: MLV

Temp should be above freezing to 6°C for all sample except Biota:

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>S</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed Lab Std #/ID of preservative Date/ Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		If checked, see attached form for additional comments

Client Notification/ Resolution:

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

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

Project Manager Review:

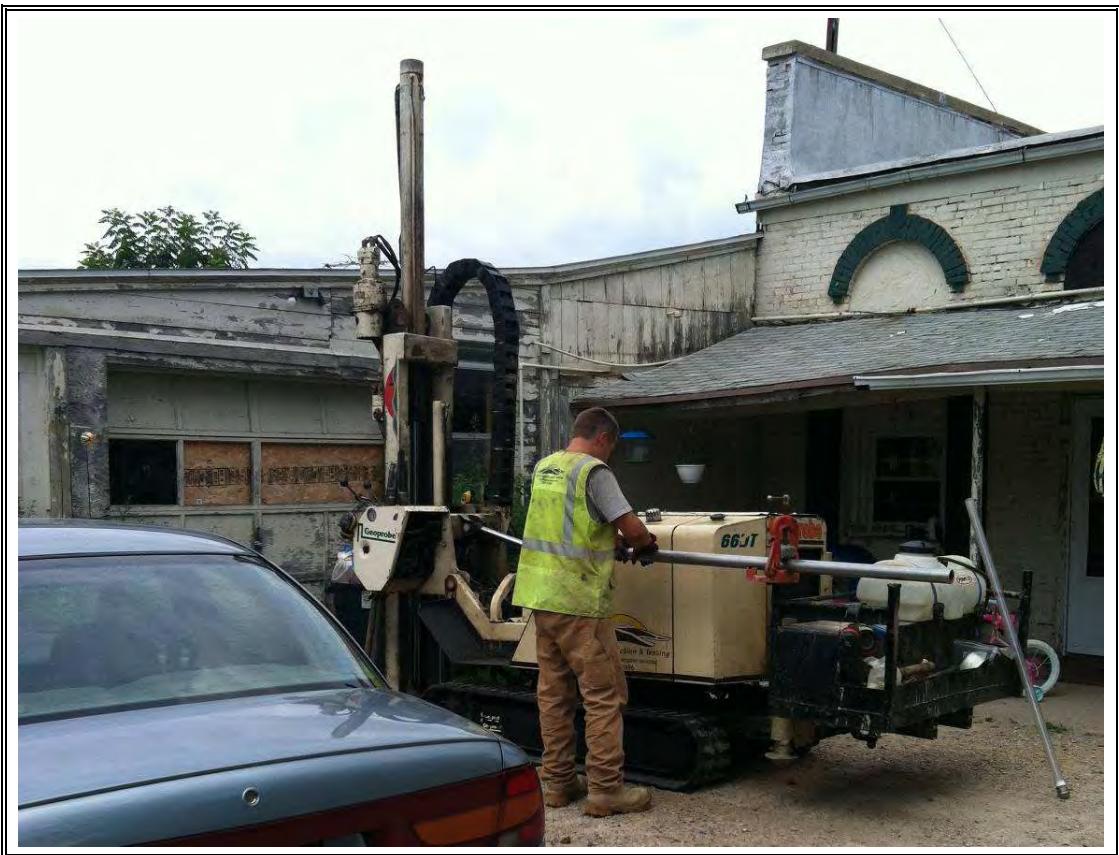
MAT for DM

Date: 8.2.13

Page 28 of 28

**ATTACHMENT E**

**SITE PHOTOGRAPHS**



Site #12: Location of boring B-12-1.



Site #12: Interior view of pet supply area.



Site #12: Interior view (basement) of former coal chute area.



Site #12: Interior view of basement

**APPENDIX G**

**INVESTIGATIVE DERIVED WASTE INFORMATION**

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**From:** <mpeed@himalayanllc.com>  
**Date:** Friday, December 06, 2013 4:19 PM  
**To:** "Holtzen, Greg" <greg.holtzen@veoliaes.com>  
**Cc:** "Stacy, Tracy" <tstacy@himalayanllc.com>; "TeBeest, Shar" <Sharlene.TeBeest@dot.wi.gov>; "Van Price, Kathie" <kathie.vanprice@dot.wi.gov>  
**Attach:** Waste Inventory Record.pdf  
**Subject:** Waste disposal for WisDOT project 6190-17-00

Greg,

Attached please find the Waste Inventory Record and soil analytical results for WisDOT Project ID 6190-17-00. The five pails are located near the rear building entrance at 105 E. Main Street, Winneconne, WI 54986. Please note that no protocol B analysis was completed for soils from Site #2 based on the past property use. Instead, the samples from Site #2 were analyzed for flashpoint and free liquids. Please let me know when the pails have been removed from the site.

Thanks very much for your time. Please contact me with any questions.

**Michelle L. Peed**  
Senior Hydrogeologist  
Himalayan Consultants, LLC  
W156 N11357 Pilgrim Road  
Germantown, WI 53022  
262.502.0066

# NON-HAZARDOUS WASTE INVENTORY RECORD

Wisconsin Department of Transportation

DT1229 11/2009

(For use with DT1208)

DTSD Regions and Offices				
Southeast	Southwest	Northwest	North Central	Northeast
<input type="checkbox"/> Milwaukee	<input type="checkbox"/> Madison	<input type="checkbox"/> Eau Claire	<input type="checkbox"/> Rhinelander	<input checked="" type="checkbox"/> Green Bay
	<input type="checkbox"/> LaCrosse	<input type="checkbox"/> Spooner	<input type="checkbox"/> WI Rapids	
WIDOT Project ID 6190-17-00				
Site Name STH 116 (2 <sup>nd</sup> Street - 2 <sup>nd</sup> Avenue), Winneconne				
County Winnebago				
Highway and Termini STH 116 (2nd Street - 2nd Avenue)				
Consultant Company Himalayan Consultants				
Consultant Contact Michelle Peed				
Contact Area Code – Telephone (262) 502-0066				
Consultant ID for this Site				
Generation Date (mm/dd/yyyy) 9/30/2013				

Phase of Investigation:  2  2.5  3  4

CONTAINER ID#	CONTAINER SIZE AND TYPE	VOLUME gallons lbs.	SOURCE tank well boring	CONTENTS soil water other Describe
#1, #2, #3, #4, #5	pail	5 gallons	boring	soil

Container Location: Attach map or provide site sketch on reverse.

Submit one copy of this form:

To each of the following:

- DOT BEES Hazardous Materials Specialist, Room 451, PO Box 7965, Madison, WI 53707-7965  
FAX: 608-264-6667  
E-mail: [sharlene.tebeest@dot.wi.gov](mailto:sharlene.tebeest@dot.wi.gov).
- Regional Environmental Coordinator or Hazmat Coordinator. For coordinator list, see link in Facilities Development Manual procedure 21-35-35.
- HazWaste Contractor. For contact list, see link in Facilities Development Manual procedure 21-35-35.  
Include required analytical results.
- As the final appendix in the report for this site.



Source: Aerial Provided by CH2M Hill

Scale: 0 50 100 200

## SOIL PAIL LOCATION



**HIMALAYAN CONSULTANTS, LLC**  
Engineers and Hydrogeologists  
W156 N11357 Pilgrim Road  
Germantown, Wisconsin 53022  
Phone: (262) 502-0066  
Fax: (262) 502-0077

Project ID: 6190-17-00  
STH 116  
2nd Street - 2nd Avenue  
Winneconne, Winnebago County, Wisconsin

