Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Page 3 of 6

Form 4400-237 (R 12/18)

Section 2. Property Information Property Name FID No. (if known) WID006116529 Havton Area Remediation Project - OU3/Lower BRRTS No. (if known) Parcel Identification Number NA 02-08-281506 Street Address City State ZIP Code WI New Holstein 53061 County Municipality where the Property is located Property is composed of: Property Size Acres Single tax Multiple tax • City () Town () Village of New Holstein Ο Calumet parcel parcels 1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly. ( No Yes Date requested by: Reason: 2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program? • No. Include the fee that is required for your request in Section 3, 4 or 5. Yes. Do not include a separate fee. This request will be billed separately through the VPLE Program. Fill out the information in Section 3, 4 or 5 which corresponds with the type of request: Section 3. Technical Assistance or Post-Closure Modifications; Section 4. Liability Clarification; or Section 5. Specialized Agreement. Section 3. Request for Technical Assistance or Post-Closure Modification Select the type of technical assistance requested: [Numbers in brackets are for WI DNR Use] No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - Include a fee of \$350. Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event. Review of Site Investigation Work Plan - NR 716.09, [135] - Include a fee of \$700. Review of Site Investigation Report - NR 716.15, [137] - Include a fee of \$1050. Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - Include a fee of \$1050. Review of a Remedial Action Options Report - NR 722.13, [143] - Include a fee of \$1050. Review of a Remedial Action Design Report - NR 724.09, [148] - Include a fee of \$1050. Review of a Remedial Action Documentation Report - NR 724.15, [152] - Include a fee of \$350 Review of a Long-term Monitoring Plan - NR 724.17, [25] - Include a fee of \$425. Review of an Operation and Maintenance Plan - NR 724.13, [192] - Include a fee of \$425. Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226) Schedule a Technical Assistance Meeting - Include a fee of \$700. Hazardous Waste Determination - Include a fee of \$700. Other Technical Assistance - Include a fee of \$700. Explain your request in an attachment. Post-Closure Modifications - NR 727, [181] Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. Include a fee of \$1050, and: Include a fee of \$300 for sites with residual soil contamination; and Include a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations. Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the chang to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

# Technical Assistance, Environmental LiabilityClarification or Post-Closure Modification RequestForm 4400-237 (R 12/18)Page 4 of 6

Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form.
Section 5. Request for a Specialized Agreement
Select the type of agreement needed. Include the appropriate draft agreements and supporting materials. Complete Sections 6 and 7 of this form. More information and model draft agreements are available at: <u>dnr.wi.gov/topic/Brownfields/lgu.html#tabx4</u> .
Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]
Include a fee of \$700, and the information listed below:
(1) Phase I and II Environmental Site Assessment Reports,
(2) a copy of the Property deed with the correct legal description.
Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]
↔ Include a fee of \$700, and the information listed below:
(1) Phase I and II Environmental Site Assessment Reports,
(2) a copy of the Property deed with the correct legal description.
Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]
Include a fee of \$1400, and the information listed below:
<ul><li>(1) a draft schedule for remediation; and,</li><li>(2) the name, mailing address, phone and email for each party to the agreement.</li></ul>
Section 6. Other Information Submitted
Identify all materials that are included with this request.
Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.
Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.
Phase I Environmental Site Assessment Report - Date:
Phase II Environmental Site Assessment Report - Date:
Legal Description of Property (required for all liability requests and specialized agreements)
Map of the Property (required for all liability requests and specialized agreements)
Analytical results of the following sampled media: Select all that apply and include date of collection.
Groundwater Soil Sediment Other medium - Describe:
A copy of the closure letter and submittal materials
Draft tax cancellation agreement
Draft agreement for assignment of tax foreclosure judgment
Other report(s) or information - Describe: OU3/Lower Closure Documentation Sampling Results Report
For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?
○ Yes - Date (if known):
○ No
Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at: dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf.
Section 7. Certification by the Person who completed this form
I am the person submitting this request (requester)
🔀 I prepared this request for: Tecumseh Products Company
Requester Name
I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.



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December 19, 2018

Mr. Bill Fitzpatrick Water Resources Engineer State of Wisconsin Department of Natural Resources 101 S. Webster Street Madison, WI 53703

#### Subject: Hayton Area Remediation Project (HARP) OU3/Lower Closure Documentation Sampling Results Report- Two Additional Sampling Events OU4/Upper Closure Documentation Sampling Results Report

Dear Bill:

Enclosed please find the OU3/Lower Closure Documentation Sampling Results Report – Two Additional Sampling Events and the OU4/Upper Closure Documentation Sampling Results Report. These reports present the results of the Spring 2018 and November 2018 sediment samples collected in OU3/Lower Reaches M through P and the November 2018 sediment samples collected in OU4/Upper.

The sampling results indicate the remediation actions were successful in OU3 and OU4/Upper. Starting in November 2017, three rounds of closure documentation samples have been collected in OU3/Lower Reaches M through P. Results reveal a decreasing trend observed over the sampling events and a calculated surface-area weighted average concentration (SWAC) all within "Tier 2" of the Three Tier Closure Process. The results indicate a continuous decline measuring 34% in SWAC in one year, over the 3-round sampling period.

The results in OU4/Upper have a calculated surface-area weighted average concentration (SWAC) of 0.88 mg/kg, which is below 1 mg/kg within the "Tier 1" of the Three Tier Closure Process.

Pursuant to Sec. III (I) of the Negotiated Agreement (Agreement), Tecumseh successfully completed the post-removal closure sampling of OU3/Lower (Reaches M-P) and OU4/Upper. Consistent with The Three Tier Closure Process of Exhibit D of the Agreement, these sampling results indicate no further action letters issued by the Department pursuant to Sec. (IV)(B) of the Agreement are now required.

Mr. Bill Fitzpatrick State of Wisconsin December 19, 2018 Page 2 of 2

In addition, pursuant to Sec. (IV)(B) of the Agreement, a no further action letter for OU3, Reaches K-L was to have been issued by the Department by no later than December 13, 2018. Please issue that letter forthwith.

If you have any questions, please contact me at (312) 800-5910.

Sincerely,

**OTRC** 

Chris Harvey, PE

Enclosure: OU3/Lower Closure Documentation Sampling Results Report- Two Additional Sampling Events OU4/Upper Closure Documentation Sampling Results Report

cc: Darsi Foss/WDNR - Madison S. Jason Smith/Tecumseh Products Co.- Paris,TN (electronic copy) Curtis Toll/Greenberg Traurig LLP-Philadelphia (electronic copy) Jean Greensley/USEPA - Chicago Marc Faecher/TRC- New Providence, NJ (electronic copy) Ronald Bock/TRC - Irvine (electronic copy) Stacy McAnulty/TRC- Madison (electronic copy) David Crass/Michael Best & Friedrich LLP - Madison



## OU3/Lower Closure Documentation Sampling Results Report – Two Additional Sampling Events



### Hayton Area Remediation Project December 2018



## OU3/Lower Closure Documentation Sampling Results Report – Two Additional Sampling Events

Prepared by:



230 West Monroe Street, Suite 630 Chicago, Illinois 60606

TRC Project No. 107927

December 2018

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#### LIST OF ACRONYMS AND ABBREVIATIONS

DI	Deionized Water
GPS	Global Positioning System
HARP	Hayton Area Remediation Project
IDW	Investigation Derived Waste
LPDE	Low-Density Polyethylene
OUs	Operable Units
PCB	Polychlorinated Biphenyl
PPE	Personal Protective Equipment
PRV	Post Remedial Verification
PVC	Polyvinyl Chloride
QC	Quality Control
RALs	Remedial Action Levels
SWAC	Surface-Area Weighted Average Concentration
TRC	TRC Environmental Corporation
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
TRC	TRC Environmental Corporation
WDNR	Wisconsin Department of Natural Resources

#### 1.0 INTRODUCTION

#### 1.1 Background

The Hayton Area Remediation Project (HARP) is located in Calumet County, Wisconsin, and has been divided into four operable units (OUs). An overview of HARP and the OUs is shown in Figure 1. The Site includes HARP and areas downstream of the dam at the Hayton Millpond where hazardous substances attributable to the former Tecumseh manufacturing facility may have migrated (WDNR, 2018). This report deals solely with OU3/Lower of HARP and does not address the Site as a whole.

In November 2018, WDNR, Tecumseh and TRC Environmental Corporation (TRC) executed a Negotiated Agreement (BRRTS #02-08-281506) (Agreement) to cover the remaining known response actions and containing a schedule to conduct nonemergency actions under Wis. Stats. Section 292.11(3) (WDNR, 2018). This Agreement terminated the 2004 Consent Order for HARP.

OU3/Lower was previously characterized for polychlorinated biphenols (PCBs) during multiple sampling events that preceded and followed sediment removal activities. Sediment was removed from OU3/Lower in 2011 and 2013 – 2016. In 2016, remediation of sediments and soils was completed through the end of Reach P, the terminus of OU3/Lower, except for one small overbank soil area in Reach P. The small overbank soil area in Reach P was excavated and restored in August 2017. All of the above-referenced work was performed under the oversight and approval of Wisconsin Department of Natural Resources (WDNR) and the United States Environmental Protection Agency (USEPA).

The in-channel sediment in OU3/Lower was excavated in the dry to hardpan (e.g., native clay), after flow diversion and dewatering sections of the stream. In addition, extensive bank soil areas were excavated to achieve the established Remedial Action Levels (RALs), backfilled with clean soil, and stabilized with vegetative matting and seeding to restore the bank areas and wetlands. Results from post remediation verification (PRV) samples were consistent with the implementation of a successful remediation program in OU3/Lower. In addition, extensive sediment and overbank soil removal activities have been completed in upstream OUs, and post-remediation sediment sampling results indicate a very low risk of exposure to PCBs throughout OUs 1 through OU3/Upper. No further action letters have either been received or are due pursuant to the Negotiated Agreement entered in November 2018 for all upstream OUs (1 & 2) and reaches of OU3/Upper.

In November 2017, to confirm the effectiveness of remediation activities and to evaluate closure of OU3/Lower, post-remediation soft sediment samples were collected in

OU3/Lower (Reaches M - P) and evaluated consistent with the Three-Tier Closure Process agreed to among the parties (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018). Based on these soft sediment sample results two additional soft sediment sample events were completed and evaluated consistent with the Three-Tier Closure Process. The purpose of this sampling was to provide additional data to:

- Evaluate the PCB surface-area weighted average concentration (SWAC) in surficial sediment in comparison to the November 2017 closure documentation sampling event (SWAC of 2.17 mg/kg).
- Determine if closure of OU3/Lower Reaches M-P is appropriate based on the SWAC results, risk reduction achieved, and the Three-Tier Closure Process.

The HARP Three-Tier Closure Process focuses on evaluating the risk reduction achieved by the remediation and is based on a SWAC for PCBs within the applicable OU/Reach (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018).

#### 1.2 Purpose and Scope

In December 2017, TRC submitted its "OU3 Reach M-P Remedial Documentation Report" (TRC, 2017d). The purpose of that report was to document the methods used to characterize and confirm the complete removal of soft sediments containing PCBs and the removal of bank soils with PCB concentrations above the RAL in Reaches M-P of OU3.

On May 12, 2017, TRC submitted the *OU3/L Closure Post-Remediation Closure Sampling and Analysis Plan* (OU3/Lower SAP) (TRC, 2017a), which proposed postremediation sediment sampling locations in sediment depositional areas. In a letter dated July 21, 2017, the WDNR provided conditional approval of the OU3/L SAP requesting that only soft sediment material be sampled and relocating two sediment sampling locations (S11 and S12). TRC responded to the conditional approval in a letter dated July 25, 2017, clarifying procedures and data collection and relocating the two sediment sample locations.

The first round of post-remediation closure sediment samples from OU3/Lower Reaches M - P were collected on November 6, 2017 following a 1-inch rainfall event in accordance with the methods described in the WDNR-approved OU3/Lower SAP and under the oversight of the WDNR. Results of the November 2017 closure sediment sampling were evaluated in accordance with the methods and closure criteria described in the OU3/L SAP. The results were reported to the WDNR in the "OU3/Lower Closure Documentation Sampling Results Report" (TRC, 2018). The calculated SWAC for OU3/Lower Reaches M – P fell within the "Tier 2" level (between 1 and 3 mg/kg). The

calculated SWAC for OU3/Lower confirmed that only low-level residual concentrations of PCBs are present and are within the "Tier 2" criteria.

In the "OU3/Lower Closure Documentation Sampling Results Report" TRC recommended OU3/Lower Reaches M - P be sampled two additional times to evaluate and document that closure of OU3/Lower is appropriate in accordance with the Three-Tier Closure Process (TRC, 2018). TRC sampled the same 8 locations that were sampled in November 2017 in accordance with the approved OU3/Lower SAP (TRC, 2017a) and the response to conditional approval (TRC, 2017b). The first round of additional sampling was performed on May 2, 2018, and June 28, 2018. The second round of additional sampling was performed on November 13, 2018. Both rounds followed significant rainfall events. All of the sediment sampling was performed pursuant to WDNR oversight.

The balance of this report presents the results of the two additional sediment sampling events; quantifies the SWAC of PCBs in these Reaches; and provides recommendations in accordance with the Three-Tier Closure Process.

The report is organized as follows:

- Section 1 describes the background, purpose and scope of the investigation
- Section 2 describes the field and analytical methods
- Section 3 presents the investigation results
- Section 4 provides conclusions and recommendations
- Section 5 lists the references

#### 2.0 FIELD AND ANALYTICAL METHODS

Field and analytical methods were completed in accordance with the methods described in the OU3/Lower SAP (TRC, 2017a) and Response to Conditional Approval (TRC, 2017b).

#### 2.1 Field Locations

During the initial round of closure documentation sampling of OU3/Lower Reaches M - P on November 6, 2017, each of the sample locations was located in the field using a high-resolution global positioning system (GPS) unit, which was pre-programmed with the approved sample location coordinates. The GPS unit was used in the field to navigate to and to get as close as practicable to the approved sample coordinates. The estimated level of accuracy was within 3 feet (+/-) based on the GPS unit (with sub-foot to sub-meter accuracy). During the sample activities, WDNR and TRC conducted a field reconnaissance of each targeted area and selected eight specific locations for sediment core collection. The core samples were collected from the thicker deposits of soft sediment that were found by probing the creek bottom at various locations, conservatively biasing the sample results for purposes of a representative SWAC. The final sample locations were precisely located using the GPS unit. The sediment sample locations are shown on Figure 2.

The subsequent sampling events (Spring 2018 and November 2018) targeted the same 8 sample locations that were sampled in November 2017. Each of those subsequent sample locations was similarly located in the field using the GPS unit, which was preprogrammed with the November 2017 sample location coordinates. The GPS unit was used in the field to navigate to the previous sample location and to get as close as practicable to the previous sample coordinates. Once the location was determined in the creek, a sediment sample was collected from the target location. The final location of each sediment sample that was collected for laboratory analysis was recorded using the GPS unit. The sediment sample locations are identified on the sediment core logs (Appendix A) and are shown on Figure 2.

In Spring 2018, the initial sediment sampling was completed on May 2, 2018. These sampling locations were accessed by wading in the creek and hiking overland. The site conditions were difficult with high water and flooding. Due to theses site conditions, TRC was not able to collect the two sample locations in Reach P. On June 28, 2018, TRC used a shallow draft row boat to access the two sediment sample locations and collect soft sediment in Reach P when site conditions had improved. The boat was operated with a battery-powered trolling motor and canoe paddles.

In November 2018, TRC accessed the soft sediment sampling locations and collected the sediment samples in OU3/Lower Reaches M - P from a shallow draft row

boat. Similarly, the boat was operated with a battery-powered trolling motor and canoe paddles.

#### 2.2 Sediment Core Collection

Sediment cores were collected using a new, clean, 4-foot long, 2-inch diameter clear Polyvinyl Chloride (PVC) tube, pre-marked in depth increments of 0.1 feet. At each sampling location, the tube was lowered through the water column until it contacted the sediment surface, and the water depth, estimated to the nearest 0.05 foot, was recorded in the field notebook. The core tube was then pushed by hand into the soft sediment until refusal was encountered and the new water level on the tube was recorded. The penetration depth (i.e., soft sediment thickness) was calculated as the difference between the two water level measurements. General notes regarding the conditions of refusal (e.g., the presence of coarse material or a hard surface) were recorded in the field notebook.

To retrieve the sediment sample, the top of the tube was capped and the core tube gently extracted from the sediment. Upon retrieval, the bottom of the sample tube was immediately capped and sealed. The recovery length at the time of retrieval (to the nearest 0.05 foot) was recorded in the field notebook. The location of the collected sediment core was recorded at the time of sampling using the GPS unit.

After the sample was collected, each of the core tubes was cut down to a transportable length (approximately 1.5 feet, or to just above the standing water surface), and re-capped. The core tubes were then placed on ice in a cooler, kept in an upright position, and transported to the TRC Madison office for sample processing.

#### 2.3 Sample Processing and Laboratory Analysis

The WDNR was invited to observe the processing of all collected samples. Standing water in the core tubes above the sediment surface was removed using a suction pump equipped with low-density polyethylene (LDPE) tubing. New, clean tubing was used to remove water from each sample core. After removing the standing water, the core tubes were cut lengthwise and the sediment core was split to allow for visual logging and sample preparation. A detailed visual description of each core was prepared in accordance with the Unified Soil Classification System (USCS). Sediment core logs are included in Appendix A.

During the November 2017 sampling event, the soft sediment core sample thickness that was recovered at the eight sampling locations ranged from 7.2 to 14.4 inches. During the Spring 2018 sampling event, the soft sediment core sample thickness that was recovered at the eight sampling locations ranged from 8.4 to 16.6 inches. During the

November 2018 sampling event, the soft sediment core sample thickness that was recovered at the eight sampling locations ranged from 6.6 to 11.4 inches.

In accordance with the OU3/Lower SAP (TRC, 2017a), the top 6 inches of sediment was removed from the core tube for sample processing. The soft sediment was placed in a stainless-steel bowl and thoroughly homogenized. The homogenized sediment was placed in a 4-ounce clear, glass laboratory sample container, placed on ice, and transported to Pace Analytical Services, Inc., for PCB analysis (EPA 8082).

#### 2.4 Quality Assurance/Quality Control

Quality assurance and quality control samples were collected during sample processing of the OU3/Lower samples in general accordance with the OU3/L SAP (TRC, 2017a). An equipment blank consisting of analyte-free water was collected and submitted to the laboratory to check for procedural contamination that may cause sample contamination. Equipment blanks are collected following the decontamination of non-dedicated sampling equipment. One equipment blank, consisting of rinsate water from a stainless-steel mixing bowl, from each sampling event was submitted for laboratory analysis. In addition, one duplicate sample from each sampling event was submitted for laboratory analysis.

All non-dedicated, non-disposable field equipment was decontaminated as described in Subsection 2.5.

#### 2.5 Equipment Decontamination

For the sediment sampling in the field, TRC used dedicated and disposable sampling equipment and supplies.

For sample processing, TRC used non-dedicated and non-disposable equipment, including stainless-steel bowls and spatula. In accordance with the OU3/Lower SAP and consistent with the QUAPP (TRC, 2017c), all non-dedicated and non-disposable sampling equipment was decontaminated prior to its initial use, between sample processing, and at the end of sample processing using the following steps:

- Wash the equipment in a non-phosphate detergent and potable water solution.
- Triple-rinse with deionized (DI) water.
- Air dry the equipment on a clean plastic sheet.

Investigation derived waste (IDW) was containerized in plastic bags, and managed as described in Subsection 2.6.

#### 2.6 Investigation Derived Waste (IDW) Management

IDW was properly managed or disposed. Excess sediment generated during sampling activities was placed in a sealed 5-gallon bucket, labeled with the material contents and generation date and transported to the Millpond building for storage until the next construction season. The excess sediment will be disposed of with the sediment removed during the next construction season.

All surface water that was drained from the sediment core tubes and all decontamination fluids generated during sample processing was contained in sealed 5-gallon buckets at the Millpond building for storage. The wastewater will be disposed of with IDW generated during the next construction activities.

Used personal protective equipment (PPE), disposable sampling equipment (e.g., used core tubes and tubing), IDW and general uncontaminated debris or waste materials produced during the field work were collected in sealed plastic bags, and transported to the TRC office dumpster. This waste was disposed of by a commercial disposal contractor.

#### 3.0 INVESTIGATION RESULTS

#### 3.1 Sediment Type and Distribution

Each of the sediment cores was described according to the USCS and detailed core logs were prepared. The sediment core logs for the Spring 2018 and November 2018 sediment sampling events are included in Appendix A. The sediment encountered during this investigation was primarily soft organic silt with varying amounts of fine sand and fibrous plant material, with occasional zones of clayey silt or silty lean clay. The sediments were typically soft to very soft, wet, and dark gray or brown in color.

Table 1 summarizes the physical field measurements (water depth and soft sediment thickness) collected during the sediment sampling events. The water depths measured at the sampling locations varied from 0.30 to 2.40 feet (1.1 to 2.2 feet in November 2018). Soft sediment was encountered at all eight (8) of the WDNR-selected sample locations, with soft sediment thicknesses ranging from 0.7 to 1.8 feet in Spring 2018 and from 0.8 to 1.5 feet in November 2018. The soft sediment core lengths recovered at the eight sampling locations ranged from 8.4 to 16.6 inches in Spring 2018 and from 6.6 to 11.4 inches in November 2018; all of the cores recovered 6 inches or more of soft sediment.

#### 3.2 Individual Sediment Sample Analytical Results

Table 2 presents a summary of the laboratory analytical results for each individual sediment sample for each sediment sampling event. Laboratory data sheets for the Spring 2018 and November 2018 sediment sampling events are included in Appendix B. Figure 2 shows the sample locations and total PCB concentration associated with each sample. The eight individual sample results for the three sampling events ranged between 0.234 and 5.01 mg/kg. Four sample results were below 1 mg/kg, and seven of the eight sample results were below 2 mg/kg. Five of the sample results were lower than their Spring 2018 results, and seven of the sample results were lower than their November 2017 sample results. These results clearly indicate a downward trend. The distribution of results confirms low level residual PCBs with no identified "hot spots". The core sampling method did not "dilute" any sample results or otherwise bias the results toward closure. At all sample locations, only soft, fine-grained organic-rich sediments were sampled and analyzed. The analytical results and SWAC evaluation are discussed further in Subsection 3.3.

One equipment blank was collected from each sampling event from the sample processing equipment during the processing of the OU3/Lower sediment samples. No

PCBs were detected in the equipment blank, indicating proper equipment decontamination procedures in the field.

One duplicate sample (OU3-IC-S8-L) was collected from the OU3/Lower sediment sample Spring 2018 sampling event. The field duplicate sample relative percent difference (RPD) of 7.5% was within the Quality Control (QC) target limit of 50%.

One duplicate sample (OU3-IC-S11-R) was collected from the OU3/Lower sediment sample November 2018 sampling event. The field duplicate sample RPD of 69.7% was above the QC target limit of 50%. Given the variable nature of sediment matrices, the low concentrations associated with this sample and the duplicate, the data is considered accurate and usable.

#### 3.3 Surface-Area Weighted Average Concentration (SWAC)

SWAC is a method of computing an area-weighted concentration to evaluate risk and exposure associated with a particular constituent of concern. The SWAC approach has been used to evaluate the risks posed by sediment in the stream channel and to confirm closure for OU1, OU2 and upstream portions of OU3/Upper. The methodology for the calculation is presented in the OU3/Lower SAP (TRC, 2017a).

Using the actual stream widths (as requested by WDNR), the SWAC calculated for the OU3/Lower Reaches M - P was 2.17 mg/kg in November 2017, 1.73 in Spring 2018, and 1.43 in November 2018, which clearly demonstrates a decreasing trend in the SWAC. The SWAC calculations are shown on Figure 2.

The OU3/Lower Reaches M – P SWAC sampling was performed a year after remedy completion, and after storm events and/or spring runoff that would "rework the stream bed" as proposed by TRC (TRC, 2018). The Spring 2018 sampling event was collected after the 2018 spring snow melt runoff, which is not reflected in the rainfall record (NOAA, 2018). The November 2018 sampling event was collected after fall rains, which is reflected in the rainfall record (NOAA, 2018). As a result, the surficial sediment concentrations reflect the effects of mixing and re-deposition during and after high flow events. Further, only soft, organic-rich fine-grained sediments were sampled at these locations, which tend to absorb PCBs and as such reflect "worst case" concentrations. Therefore, the SWAC results are biased high and reflect a worst-case or conservative condition.

#### 4.0 CONCLUSIONS AND RECOMMENDATIONS

#### 4.1 Conclusions

In summary, significant risk reduction has been achieved and to the extent practicable within OU3/Lower. In addition, extensive habitat restoration, preservation and enhancement both in-channel and along the bank areas is successful and complete.

The OU3/Lower Reaches M - P SWAC results are characterized by low-level residual concentrations of PCBs in the bioactive sediment layer. The results also confirm that the low-level residual concentrations of PCBs are within the Tier 2 of the Three-Tier Closure Process criteria (closer to 1 mg/kg) and are trending down (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018).

A SWAC in this Tier 2 range indicates a very low risk of exposure to PCBs in the bioactive sediment layer throughout OU3. The SWAC confirms that significant risk reduction has been achieved by the remedial activities completed in OU3 and verifies a declining trend in the SWAC in the three sampling events from November 2017 through November 2018 (from 2.17 mg/kg to 1.43 mg/kg). Furthermore, the samples collected for the SWAC analysis contained only fine-grained, organic-rich silt and were sampled following significant events sufficient to rework the depositional bed. These results and the record demonstrate that:

- The removal of PCB-impacted sediments and overbank material was successfully completed in OU3/Lower, in accordance with the WDNR and USEPA approved Scopes of Work and Addenda.
- PRV sample results demonstrated successful removal to project RALs.
- Habitat restoration of OU3 was completed with successful vegetative stabilization of the floodplain and bank areas. The restored and recovered environment has significantly improved the natural habitat, indicating that the overall system is recovering.
- The OU3 remedial action has been conducted to the extent practicable, as the term is defined in 292.11(3), Wis. Stats and NR 700.03(45), Wis. Admin. Code and as referenced in the project Consent Order.
- OU1 (closed), OU2 (closed), and OU3/Upper Reaches H, I, and J (closed) and K and L (pending closure letter from WDNR) do not serve as on-going sources to OU3/Lower Reaches M P.

- OU3 does not serve as an on-going source of concern to the downstream reaches of Pine Creek. No "hot spots" or areas of uncharacteristically high PCB concentrations were identified during the closure documentation sampling. The closure documentation sampling confirms the thoroughness of the removal actions in the subject Reaches and upstream.
- Given the above, additional natural recovery will occur over time.
- No discrete locations require additional investigation, since only low-level residual PCB concentrations are evident throughout OU3/Lower.
- Additional removal within OU3/Lower Reaches M P is not necessary and furthermore would not provide a net environmental benefit (i.e., the trade-off between a small reduction in PCB concentrations as compared to the loss of restored habitat). As stated in the Consent Order, habitat preservation and enhancement is a performance standard that requires the protection and enhancement of listed species, and the protection and restoration of critical freshwater habitats.

#### 4.2 Recommendations

The results of the additional closure documentation sampling address the agencies' stated concerns and support the finding that closure of OU3/Lower Reaches M - P is appropriate. Based on these results (trending down over three sampling events) and field observations, TRC recommends OU3/Lower Reaches M - P be closed in accordance with the Tier 2 criteria. Pursuant to Sec. III (I) of the Agreement, Tecumseh successfully completed the post-removal closure sampling of OU3 Lower Reaches M – P (WDNR, 2018). Consistent with The Three Tier Closure Process of Exhibit D of the Agreement, results indicate a no further action letter issued by the Department pursuant to Sec. (IV)(B) of the Agreement is now required (WDNR, 2018).

#### 5.0 REFERENCES

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- WDNR. Tecumseh Products and TRC. 2018. Negotiated Agreement; BRRTS #02-08-281506.

TABLES

Table 1
Physical Field Measurements - OU3/Lower Reaches M - P

			NOVEMB	ER 6, 2017		MAY	2, 2018		JUNE 2	28, 2018		NOVEMB	ER 13, 2018
SAMPLE LOCATION	IN-CHANNEL AREA <sup>(1)</sup>	WATER DEPTH (ft)	SEDIMENT THICKNES S	CORE RECOVERY (inches, at processing)	WATER DEPTH (ft)	SEDIMENT THICKNES S	CORE RECOVERY (inches, at processing)	WATER DEPTH (ft)	SEDIMENT THICKNES S	CORE RECOVERY (inches, at processing)	WATER DEPTH (ft)	SEDIMENT THICKNES S	CORE RECOVERY (inches, at processing)
S05	Right	0.3	1.9	7.2	2.7	1.2	9.0	_(3)	_(3)	_(3)	1.8	1.1	8.4
S06	Left	1.0	2.8	9.6	2.6	1.8	9.6	_(3)	_(3)	_(3)	2.2	1.2	10.2
S07	Left	0.5	1.8	8.4	2.0	1.2	8.4	_(3)	_(3)	_(3)	1.1	1.4	8.4
S08	Left	0.7	2.4	14.4	2.3	1.6	12.6	_(3)	_(3)	_(3)	1.4	1.2	7.2
S09	Left	1.6	2.4	9.6	3.3	0.7	8.4	_(3)	_(3)	_(3)	1.3	1.4	6.6
S10	Left	1.2	2.7	9.6	3.0	1.7	13.2	_(3)	_(3)	_(3)	1.8	1.5	11.4
S11	Right	2.4	4.0	12.0	- (2)	- (2)	_ (2)	3.37	1.5	12.0	2.1	1.3	8.4
S12	Left	2.4	3.4	12.0	- (2)	- (2)	_ (2)	2.61	0.7	16.6	1.7	0.8	7.2

Footnotes:

<sup>(1)</sup> General area of creek cross-section where the sediment core was collected, relative to downstream flow direction (i.e., looking downstream).

(2) Samples were unable to be collected at these points in May due to high water levels. Second sampling event in July was scheduled to collect missed samples.

<sup>(3)</sup> These samples were not collected in June because they had already been collected in May.

 Table 2

 Summary of Sediment Analytical Results - OU3/Lower Reaches M - P

SAMPLE LOCATION	SAMPLE ID	SAMPLE DATE	TOTAL PCB CONCENTRATION (mg/kg)	SAMPLE ID	SAMPLE DATE	TOTAL PCB CONCENTRATION (mg/kg)	SAMPLE ID	SAMPLE DATE	TOTAL PCB CONCENTRATION (mg/kg)
S05	OU3-IC-S5-R	11/6/2017	1.610	OU3-IC-S5-R	5/2/2018	1.210	OU3-IC-S5-R	11/13/2018	0.626
S06	OU3-IC-S6-L	11/6/2017	1.180	OU3-IC-S6-L	5/2/2018	1.060	OU3-IC-S6-L	11/13/2018	0.877
S07	OU3-IC-S7-L	11/6/2017	2.050	OU3-IC-S7-L	5/2/2018	0.983	OU3-IC-S7-L	11/13/2018	1.490
S08	OU3-IC-S8-L	11/6/2017	2.180	OU3-IC-S8-L	5/2/2018	3.210	OU3-IC-S8-L	11/13/2018	1.940
S09	OU3-IC-S9-L	11/6/2017	2.810	OU3-IC-S9-L	5/2/2018	1.740	OU3-IC-S9-L	11/13/2018	5.010
S10	OU3-IC-S10-L	11/6/2017	1.930	OU3-IC-S10-L	5/2/2018	2.660	OU3-IC-S10-L	11/13/2018	0.706
S11	OU3-IC-S11-R	11/6/2017	2.490	OU3-IC-S11-R	6/28/2018	2.230	OU3-IC-S11-R	11/13/2018	0.234
S12	OU3-IC-S12-L	11/6/2017	3.040	OU3-IC-S12-L	6/28/2018	1.030	OU3-IC-S12-L	11/13/2018	1.740

FIGURES







#### **LEGEND**

 $\boldsymbol{\mathbf{x}}$ 



SWAC ANALYSIS AREA

LABEL FORMAT

SAMPLE ID NOVEMBER 2017 PCB RESULT [mg/kg] MAY, JULY 2018 PCB RESULT [mg/kg] NOVEMBER 2018 PCB RESULT [mg/kg]

#### **NOTES**

- 1. BASE MAP IMAGERY PROVIDED BY CALUMET COUNTY PLANNING, ZONING, & LAND INFORMATION DEPARTMENT, 2014.
- 2. AREAS USED FOR SWAC CALCULATION ARE BASED ON VISUAL INTERPRETATION OF THE WATER SURFACE IN THE RIVER, THESE MEASUREMENTS ARE APPROXIMATE.





FILE NO .:

197927-9300-034C.mxd

APPENDIX A



C		R	C			В	ORIN	ig no. (	DU3	S-05	May	2018
Facility/Proie	ct Nam	ne:				Date Drilling Started	:	Date Drilling	Comple	eted:	Proiec	t Number:
Havton		a Ren	nediation F	Project Clos	sure Documentation	5/2/18		5/2	2/18		1	07927 0000
Drilling Firm:			Junio	Drilling Met	hod:	Surface Elev. (ft)	TOC E	levation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)
TRC F	nviro	nmen	tal Corp.		Push tube					9.0	5-7	2
Boring Locat	ion: P	ine Cre	ek, Reach M			Personnel			Drillin	g Equip	ment:	-
State Plane	N: 7	735427	7.73 E: 246	68793.42		Logged By - M. We Driller - M. Westove	estover er			2" P	VC C	ore Tube
Civil Town/C	ity/or V	/illage:	County:		State:	Water Level Observa	ations:					
New H	lolste	ein	Ca	lumet	Wisconsin	While Drilling: After Drilling:	Date/ Date/	Time Time			Depti Depti	h (ft bgs) h (ft bgs)
SAMPLE												
NUMBER AND TYPE RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLOG	GIC ION			nscs	GRAPHIC LOG	С	OMMENTS
cs		2 - 4 - 8 - 10 - 12 - 14 -	SAND	Y LEAN CL core at 9 i	AY (CL), plastic, gray nches.	rown, wet, soft, oo s or fine fibers).			OL		U' to 6° analytic	interval collected for al sample.
Signature:					Firm: TRC 708 F	Environmental Corp Heartland Trail. Suite	e 3000	Madison. V	VI 53	717	Fax	(608) 826-3600 (608) 826-3941



BORING NO.	OU3 S-06	May 2018

							_					Page 1 of 1			
Facilit	y/Proje	ct Name	e:				Date Drilling Started	l:	Date Drilling	Comple	eted:	Project Number:			
Facility/Project Name:         Hayton Area Remediation Project Closure Do         Drilling Firm:       Drilling Method:         TRC Environmental Corp.       Push         Boring Location:       Pine Creek, Reach M         State Plane       N: 735709.02       E: 2468320.06         Civil Town/City/or Village:       County:       State:         New Holstein       Calumet       State:         SAMPLE       VILL       VILL         WALL       SUPARA       VILL         WALL       SUPARA       VILL         WALL       VILL       VILL         VILL       VILL					oject Closi	ure Documentation	5/2/18		5/2	2/18		107927.0000			
Drilling	g Firm:				Drilling Methe	od:	Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (i	in bgs) Borehole Dia. (in)			
TF	RC Er	nviron	ment	al Corp.		Push tube				9.6 2					
Boring State Civil T	Plane <sup>-</sup> own/Ci lew H	ion: Pii N: 7: ity/or Vil	ne Cree 35709. Ilage: N	ek, Reach M 02 E: 2468 County: Calu	320.06 Imet	20.06 Personnel Logged By - M. Westover Driller - M. Westover State: Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time						ment: VC Core Tube Depth (ft bgs) Depth (ft bgs)			
SAM	IPLE			_			5					1 ( 3 )			
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLOG DESCRIPTI	IC ON			USCS	GRAPHIC LOG	COMMENTS			
CS				ORGAN decaying through End of c	IC SILT (O g grasses. s above, m but.	L), trace fine sand, no nore cohesive, no dec	caying grass, fine	wn, w	et,	OL		0" to 6" interval collected for analytical sample.			
Signal	turo:					Eirm: TDO						(608) 936 3600			
oigna						708 H	eartland Trail, Suite	). e 3000	) Madison, V	VI 53	717	Fax (608) 826-3941			



	2							В	ORI	NG NO. (	DU3	S-07	Мау	2018
Facility/	Projec	t Nam	e.				Date Drilling St	arted.		Date Drilling	Comple	ted.	Page 1	of 1 t Number:
Цол	vton	Aroo	Dom	odiation D	raiact Cla	ouro Documentation	5/2/	Q		5/2	/10		10,000	
Drilling	Firm <sup>.</sup>	Alea	Rem			thod:	Surface Elev (	0 ft)	TOC	U/Z Elevation (ft)	/ Total	Denth (	in bas)	Borebole Dia (in)
TD	- En	wiron	mont	al Corp	Drining we	Duch tubo		<sup>()</sup>	1001		TOLA		in bys)	2
Boring I	ocatio	on Pi	ne Cree	al COLP.		Fusiliube	Personnel				Drillin	0.4 a Equin	ment <sup>.</sup>	2
							Logged By - N	1. Wes	stover		Drinn			<b>T</b> 1
State P	Plane	N: 7	35826.	44 E: 2467	7842.15	State:	Driller - M. We	estove	r			2" P	VC C	ore lube
	wii/Cii	ly/OF VI	llage.	County.		State.	While Drilling:	JSEIVa	Date	/Time			Depth	h (ft bgs)
Ne	w H	olstei	in	Cal	umet	Wisconsin	After Drilling:		Date	/Time			Depth	h (ft bgs)
AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	ORGAN	IIC SILT (	LITHOLO DESCRIP <b>OL),</b> trace fine sand,	OGIC TION decaying leave	es an	d twi	gs,	USCS	GRAPHIC LOG	C 0" to 5.4 analytic	OMMENTS 4" interval collected fc al sample.
cs			2	non-coł	nesive, we	et.					OL	مر م مر م مر مر م مر م مر م مر م		
			6	SILTY L appears	EAN CLA s reworke	<b>∖Y (CL)</b> , slightly plast d.	ic, grayish brow	n, m	ottle	d,	CL			
			8-											
				End of	core at 8.	4 Inches.								
			-	-										
			12-											
			- 14 — -	-										
Signatu	re <sup>.</sup>		I	1		Firm: TD		~~~~			I	I	I	(608) 826 3600
gnatu						708	Heartland Trail,	Suite	3000	Madison, V	VI 53	717	Fax	(608) 826-3941



C		R	·			В	BORII	NG NO. (	DU3	S-08	May	<b>2018</b>
Facility/Proie	ect Nam	e:				Date Drilling Started	: I	Comnle	eted:	Proiect	or 1 Number:	
Havtor		Rem	ediation P	roject Clo	sure Documentation	5/2/18		5/2	/18		10	7927 0000
Drilling Firm					thod:	Surface Elev (ft)	TOC F	J/∠ Elevation (ft)	Total	Depth (i	n bas)	Borehole Dia
	nviror	ment	al Corp		Push tube					12 6		2.5.1010 Did.
Boring Locat	ion: Pi	ine Cree	ek. Reach N			Personnel			Drillin	a Equip	ment:	2
State Plane	N: 7	36162	18 E: 246	7383.78		Logged By - M. We Driller - M. Westove	estover er			2" P	VC Co	ore Tube
Civil Town/C	ity/or V	illage:	County:		State:	Water Level Observ	ations:		1	_ •		
New H	lolste	in	Cal	umet	Wisconsin	While Drilling: After Drilling:	Date/ Date/	/Time /Time			Depth Depth	(ft bgs) (ft bgs)
SAMPLE	_				1							
NUMBER AND TYPE RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLOG	GIC ION			USCS	GRAPHIC LOG	CC	OMMENTS
CS			Same a within o SILTY I End of	as above, organic silt _EAN CLA core at 12	some fine mm-scale la  <b>Y (CL)</b> , plastic, gray, s <b>:.6 inches</b> .	ayers of gray fine	silty s	and	OL			
		_										
Signature:					Firm: TRC I 708 H	Environmental Corp leartland Trail, Suite	). e 3000	Madison, V	VI 53 <sup>.</sup>	717	( Fax (	(608) 826-30 (608) 826-39



BORING NO	OU3 S-09	May 2018
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							-	· ·				Page 1	of 1		
Facilit	y/Proje	ct Name	:				Date Drilling Started	:	Date Drilling	Completed: Project Number:					
Ha	ayton	Area	Rem	ediation Pr	oject Clos	ure Documentation	5/2/18		5/2	2/18		1	07927.0000		
Drilling	g Firm:				Drilling Meth	od:	Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)		
	RC Er	nviron	ment	al Corp.		Push tube					7.8		2		
Boring	) Locati	i <b>on</b> : Pir	e Cree	ek, Reach O			Personnel Logged By - M. We	estover		Drillin	ig Equip	ment:			
State	Plane	N: 73	6516.	70 E: 2466	982.64	T.	Driller - M. Westov	er			2" P	VC C	ore Tube		
Civil T	own/Ci	ty/or Vil	age:	County:		State:	Water Level Observ While Drillina:	ations: Date	e/Time			Dept	h (ft bqs)		
N	lew H	lolstei	n	Calı	umet	Wisconsin	After Drilling:	Date	e/Time			Dept	h (ft bgs)		
SAM	IPLE														
VUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	<b>JEPTH IN INCHES</b>			LITHOLOG DESCRIPT	GIC ION	SCS	SRAPHIC LOG	С	OMMENTS				
cs				ORGAN brown, s	EAN CLA	/L), trace fine sand, o nesive, wet, soft. (CL), slightly plastic inches.	, brownish gray, s	s root	'S,	OL		0" to 4. analytic	8" interval collected for al sample.		
Į															
Signat	ture:					Firm: TRC 708 F	Environmental Corp leartland Trail, Suite	). e 3000	) Madison, V	NI 53	717	Fax	(608) 826-3600 (608) 826-3941		



							BORING NO. OU3 S-10 May 2018							
Facilit	//Droic	ct Nor					Date Drilling Storted	Comple	atod.	Page 1 of 1				
i aunit) ⊔∽		Aroc	Dom	ediation D	roject Cla	sure Documentation	antation 5/2/18 5/			0/19		10,90		
Drilling	ayıon Firm	Alea				thod:	Surface Elev (ft)	TOC	3/2 Elevation (ft)	Total	Depth (i	n bas)	Borehole Dia (in	
AT.	, ?C. Fr	י_vir	ıment	al Corp		Push tube					13.8		20.0.1010 Did. (II	
Borina	Locati	ion: P	ine Cree	ek, Reach O			Personnel			Drillin	ig Equip	ment:	2	
04- <i>1</i>	- I - I	NI	200050	74 5.040			Logged By - M. We	estover					oro Tub-	
State	riane	N: 7	Joy50. Illage	71 E: 2466	0453.53	State <sup>.</sup>	Uriller - M. Westov	er ations:			ZP	VUU		
				county.			While Drilling:	Date	e/Time			Dept	h (ft bgs)	
New Holstein Calumet Wis					umet	Wisconsin	After Drilling:	Date	e/Time			Dept	h (ft bgs)	
SAM	PLE	-												
			ES											
	ر (%	INTS	NC <sup>L</sup>			LITHOLOG	SIC				0G	С	OMMENTS	
ᄠᆔ	/ER)	COL	Z			DESCRIPT	ION				IC Γ	5		
D T)	cov	MC	PTH							S	APF			
NA	RE	BLC	DE							NSI	GR			
				ORGAN	IIC SILT (	<b>OL),</b> trace fine sand, b	rown, wet. Upper	r 0.5 i	nch		·	0" to 6" analytic	interval collected t	
			-	non-coł	nesive, the	en slightly cohesive w	ith occasional fine	e roots	s, sulfur		ر کر ا			
			-								الحر ا			
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			_								7.7			
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			-	-							[· , , , ,			
			-	0.5 inch	n peaty ma	aterial, dark brown fro	m 5.5" to 6".				ر کر			
			6-	Wood fi	ragments	in OL below peat.					ر کر			
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			14	End of o	core at 13	5.8 inches.								
			-	-										
Sianet	ure.					Firm: TDO	Environmental Com						(608) 826-36	
-ignal						708 -	leartland Trail, Suite	,. ∋ 3000	Madison, V	NI 53	717	Fax	(608) 826-39	



Facility/Project Name: Havton Area Remediation Project Closure Documentatio								BORING NO. OU3 S-11R June 2018							
								Date Drilling Started	Date Drilling	Comple	eted <sup>.</sup>	Page 1 of 1 Project Number:			
							mentation	6/28/18		6/2		otou.			
Drilling Firm: Drilling Method:							nemation	Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)	
TRC Environmental Corp. Piston Co							ore					15.6		2.75	
Boring Location: Pine Creek, Reach P								Personnel			Drillin	ng Equip	ment:	2.10	
Otata Diana N. 202002.47 E. 0400040.00								Logged By - M. W	estover			07	E" Die	ton Coro	
Civil T	Civil Town/City/or Village: County: State:							Water Level Observ	/er /ations:			2.1	5 FIS	lon Cole	
				oounty.		01010.		While Drilling:	Date	e/Time		n (ft bgs)			
N	lew H	loiste	In	Cali	umet	Wis	sconsin	After Drilling:	Date	e/Time		1	Depth	n (ft bgs)	
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEFTH IN INCHES	ORGAN fibers (c	<b>IIC SILT (i</b> grasses), d	[ OL), trace f dark grayis	LITHOLOG DESCRIPT	BIC ION on-cohesive, dec o odor, wet.	aying	plant	CSC CL	С. С	C	OMMENTS	
			8	SILTY L	EAN CLA	<b>\Y (CL),</b> tra	ce fine sand	d, plastic, gray, si	tiff.						
				Field		Ginahaa					CL				
			16	End of	core at 15	ο.6 inches.									
Signa	ture:	·					Firm: TRC 708 F	Environmental Corp leartland Trail, Suit	o. e 3000	) Madison, V	VI 53	717	Fax	(608) 826-3600 (608) 826-3941	



	2			-			BORIN	IG NO	D. OU3 S	-12L	. (A)	June	e 2018
Facilit		at Nam	~									Page 1	1 of 1
Facilit	y/Proje		e: Demo			De sur setetion	Date Drilling Started: Date Drilling				eted:	Project Number:	
Drillin	ayton	Area	Rem	ediation Pi		thod.	0/28/18 Surface Elev. (ft)	TOC	0/20	5/18 Total	Denth (	in bas)	Borehole Dia (in
Т		nviron	ment	al Corn	Drining wie	Push tuhe		1001		1 otdi	78		2
Boring	Locat	ion: Pi	ne Cree	ek, Reach P			Personnel			Drillin	g Equip	ment:	2
Ctoto	Diana	NI. 7	27200	70 5. 0460			Logged By - M. We	estover			2" 5		oro Tubo
Civil T	own/C	itv/or Vi	37289. Ilage:	72 E: 240: County:	0009.39	State:	Water Level Observ	er ations:			2 F		
				0-1			While Drilling:	Date	/Time			Dept	th (ft bgs)
		loistei	In	Cal	umet	vvisconsin	After Drilling:	Date	/Time			Dept	ih (ft bgs)
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLO DESCRIP	GIC FION	GRAPHIC LOG	COMMENTS				
			2	ORGAN brown.	IIC SILT (	<b>OL),</b> trace fine sand,	non-cohesive, darl	k gray	ish	OL		"A" cor closer original vs. bac perpen Analytii from th	re collected slightly to mid-channel than I core (middle of boat changed of boat; boat idicular to flow). cal sample collected his core.
			4   6	SILTY L	EAN CLA	₩ (CL), trace fine sar	nd, plastic, gray, st	iff.		CL			
			8	End of	core at 7.	8 inches.					<u> </u>		
			- 12 -										
			14 —										
			16— - -										
			18— - - -										
Signa	ture:					Firm: TRC 708	Environmental Corp Heartland Trail, Suite	o. e 3000	Madison, V	VI 53	717	Fax	(608) 826-360 ( 608) 826-394


BORING NO. (	OU3 S-12L	June 2018
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													Page ´	1 of 1
Facility	/Proje	ct Name	e:			_		Date Drilling Starte	d:	Date Drilling	eted:	Project Number:		
На	yton	Area	Rem	ediation Pr	oject Clos	sure Docume	ntation	6/28/18		6/28	3/18		1	07927.0000
Drilling	Firm:				Drilling Meth	hod:		Surface Elev. (ft)	TOCI	=levation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)
I R Boring			menta	al Corp.		Piston Core		 Personnel			Drillin		ment.	2.75
State I	Plane	N: 7	37285.	86 E: 2465	5666.16			Logged By - M. W Driller - M. Westov	estover /er		Driilli	2.7	5" Pis	ton Core
Civil To	own/Ci ew H	ty/or Vil olstei	lage: n	County:	umet	State: Wisco	nsin	Water Level Obser While Drilling: After Drilling:	vations: Date Date	/Time /Time			Dept Dept	h (ft bgs) h (ft bgs)
SAM	PLE			00				7 iter 21111.g.	Duito				Dopt	(
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LI <sup>T</sup> DE	THOLOGI SCRIPTIC	C DN			nscs	GRAPHIC LOG	C	COMMENTS
			_	ORGAN	IIC SILT (C	<b>)L)</b> , non-cohe	esive, gray	vish brown, loos	e.		0	· 7 ·		
			- - 2 -	SILTY L appears	EAN CLA	<b>Y (CL),</b> non-p I (disturbed n	lastic, bro ative mate	wnish gray, sof erial).	t, soup	yy,	OL			
			4								CL			
			- - 8- - - - - - - - - - -	SILTY L	EAN CLA	Y (CL), tew til ay.	ne to coar	se sand, cohes	ive, sli	gntiy	CL			
			-	End of	core at 10	8 inches						Γ/X		
			- 12 -											
			- 14 -											
			- 16 -											
			- 18 — - -											
Signatu	ure:					Fir	<sup>rm:</sup> TRC E 708 He	nvironmental Cor artland Trail, Suit	o. e 3000	Madison, V	VI 53	717	Fax	(608) 826-3600 (608) 826-3941



# BORING NO. OU3 S-05R Nov 2018

												Page	1 of 1	
Facilit	y/Proje	ct Name	e:				Date Drilling Started:         Date Drilling Completed:         Project Number:						ct Number:	
Ha	ayton	Area	Rem	ediation Pro	oject Closi	are Documentation	11/13/1	8	11/1	3/18		1	07927.0000	
Drilling	g Firm:				Drilling Methe	od:	Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)	
TF	RC Er	viron	ment	al Corp.		Push tube					8.4		2	
Boring State Civil T	l Locati Plane own/Ci	on: Pir N: 73 ty/or Vil olstei	ne Cree 35426. lage: n	ek, Reach M 54 E: 2468 County: Calu	798.37 Imet	State: Wisconsin	Personnel Logged By - M. V Driller - M. West Water Level Obse While Drilling: After Drilling:	Westover over/B. W ervations: Date Date	/achholz e/Time e/Time	Drillin	Drilling Equipment: 2" PVC Core Tube Depth (ft bgs) Depth (ft bgs)			
SAM	IPI F			00.00			7	Batt	.,			200	(	
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLO DESCRIP	GIC TION			nscs	GRAPHIC LOG	C	COMMENTS	
CS				ORGANI gray, up non-plas	C SILT (O per 0.2 ft r tic, soft.	L), trace very fine s ion-cohesive, loose	and, 10YR 3/1 ve	ery dark sive,		OL		0 to 6 analyti	Interval collected for cal sample.	
Signat	ture:					Firm: TRC 708	Environmental Co Heartland Trail, Su	orp. uite 3000	) Madison, \	NI 53	717	Fax	(608) 826-3600 ( (608) 826-3941	



<b>BORING NO</b>	OU3 S-06L	Nov 2018
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			-					Page					Page 1	1 of 1
Facilit	y/Proje	ct Name	e:				Date Drilling Started: Date Drilling Completed: Project Num					t Number:		
Ha	ayton	Area	Rem	ediation Pr	oject Clos	ure Docun	nentation	11/13/1	8	11/	13/18		1	07927.0000
Drilling	g Firm:				Drilling Meth	od:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)
TF	RC Er	nviron	menta	al Corp.		Push tub	е					8.4		2
Boring	g Locati	on: Pii	ne Cree	k, Reach M				Personnel Logaed Bv - M	Nestover		Drillin	g Equip	ment:	
State	Plane	N: 73	35704.	75 E: 2468	322.82	Т		Driller - M. West	over/B. W	/achholz		2" P	VC C	ore Tube
Civil T	own/Ci	ty/or Vil	lage:	County:		State:		Water Level Obse	ervations:	/Time			Dent	h (ft bas)
N	lew H	olstei	n	Calu	umet	Wis	consin	After Drilling:	Date	e/Time			Dept	h (ft bgs)
SAN	SAMPLE													
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			Ľ	LITHOLOG	IC DN			uscs	GRAPHIC LOG	С	OMMENTS
S (INCHES) WIRHOLD HARF HAT LUNWI 108240.454 JULAST JULAST JULAST SUN IZITZIO				ORGAN gray, no Same a white sh End of c	IC SILT (O n-cohesive s above, b iells. core at 8.4	L), trace v e, loose.	cohesive, no	d, 10YR 3/1 ve	with sr	nall	OL		0 to 6 i analytic 0.15 ft air gap ft.	nterval collected for cal sample. ered level to 0.85 feet fell out bottom and lef . New "surface" at 0.
באר בי <b>ו</b>														
Signa	ture:						Firm: TRC E 708 He	nvironmental Co eartland Trail, Su	orp. iite 3000	) Madison,	WI 53	717	Fax	(608) 826-3600 (608) 826-394



													Page <sup>2</sup>	1 of 1
Facili	ty/Proje	ct Name	e:					Date Drilling Starte	d:	Date Drilling	Comple	ct Number:		
Н	ayton	Area	Rem	ediation Pr	oject Closi	ure Docur	nentation	11/13/18		11/	13/18		1	07927.0000
Drillin	g Firm:				Drilling Meth	od:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)
Т	RC Er	nviron	ment	al Corp.		Push tub	e					8.4		2
Borin	g Locat	ion: Pi	ne Cree	ek, Reach N				Personnel	estover		Drillin	g Equip	ment:	
State	Plane	N: 7	35823.	47 E: 2467	848.65			Driller - M. Westo	ver/B. W	achholz		2" P	vc c	ore Tube
Civil	Town/Ci	ty/or Vi	llage:	County:		State:		Water Level Obser	vations:	/ <del>**</del> `			-	
	New H	lolstei	n	Calu	ımet	Wis	sconsin	After Drilling:	Date Date	/Time			Dept Dept	n (π bgs) h (ft bgs)
SAN	/PLE						-						17	,
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			[	LITHOLOGI DESCRIPTIC	C DN			NSCS	GRAPHIC LOG	C	COMMENTS
				ORGAN gray, no decomp fine san SILTY L	IC SILT (O n-cohesive osing woo d). EAN CLAY	L), trace v e, becomi d (2x4?), (CL), pla	very fine san ng more coh increasing sa stic, 10YR 5	d, 10YR 3/1 ver esive with dept and near base ( /1 gray, stiff.	y dark h, chui few to	nk of little	OL CL		0 to 4.3 analytic	B interval collected for cal sample.
											·	·		
Signa	ature:						Firm: TRC E	nvironmental Cor	p. e 3000	Madison	W/I 53	717	Fax	(608) 826-3600 (608) 826-3941
ν.							100110		.5 5500		00			



<b>BORING NO.</b>	<b>OU3 S-08L</b>	Nov 2018
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													Page 1 of 1		
Facilit	y/Proje	ct Name	e:					Date Drilling Starte	d:	Date Drilling	Comple	Completed: Project Number:			
H	ayton	Area	Rem	ediation Pr	oject Clos	ure Docum	nentation	11/13/18	-	11/	13/18		1	07927.0000	
Drillin	g Firm:				Drilling Meth	od:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	n bgs)	Borehole Dia. (in)	
TF	RC Er	viron	ment	al Corp.		Push tube	e					7.2		2	
Boring	g Locati	on: Pir	ne Cree	ek, Reach N				Personnel Logged Bv - M. W	estover		Drillin	g Equip	ment:		
State	Plane	N: 73	36156.	96 E: 2467	386.00			Driller - M. Westo	ver/B. W	achholz		2" P	VC C	ore Tube	
Civil 7	own/Ci	ty/or Vil	lage:	County:		State:		Water Level Obser	vations:	/Time			Dent	h (ft bas)	
	lew H	olstei	n	Calu	umet	Wis	consin	After Drilling:	Date	/Time			Dept	h (ft bgs)	
SAM	1PLE					1									
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			l D	LITHOLOGI DESCRIPTIC	C DN			USCS	GRAPHIC LOG	С	OMMENTS	
0G (INCHES) WPHOTO HARP_HAYTONWI_169240.GPJ_107927.0000_12/12/18				ORGAN gray, up soft.	IC SILT (O per 0.4 ft r	L), trace v non-cohesi	ery fine san	d, 10YR 3/1 ver hen cohesive, n	y dark	stic,	OL		0 to 6 i analytic	nterval collected for cal sample.	
	4													(608) 000 0000	
	ure.						708 He	artland Trail, Suit	р. te 3000	Madison,	WI 53	717	Fax	(608) 826-3941	



<b>BORING NO</b>	D. OU3 S-09L	Nov 2018
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													Page 1 o	f 1
Facility	//Projec	ct Name	e:					Date Drilling Started:	:	Date Drilling	Comple	ted:	Project N	umber:
Ha	ayton	Area	Rem	ediation Pr	oject Closu	ure Documen	tation	11/13/18		11/1	3/18		107	927.0000
Drilling	Firm:				Drilling Metho	od:		Surface Elev. (ft)	TOCE	Elevation (ft)	Total	Depth (	in bgs)   Bo	orehole Dia. (in)
	RC Er	iviron	ment	al Corp.		Push tube					D	6.6		2
Boring	Locati	on: Pir	ne Cree	ек, Reach O				Personnel Logged By - M. We	estover		Drillin	g Equip	ment:	
State	Plane	N: 73	36513.	11 E: 2466	6981.67	L		Driller - M. Westove	er/B. W	achholz		2" P	VC Cor	e Tube
Civil T	own/Cit	ty/or Vil	lage:	County:		State:		Water Level Observa	ations:	/Time			Denth (f	it bas)
_ N	ew H	olstei	n	Calı	umet	Wiscon	nsin	After Drilling:	Date	/Time			Depth (f	t bgs)
SAM	PLE													
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LIT DES	HOLOGI SCRIPTIC	C DN			USCS	GRAPHIC LOG	со	MMENTS
CS				ORGAN gray, ro at 0.4 fe	EAN CLAY	L), trace very nout, non-coh stly organic s ((CL), gray. inches.	fine sandesive, be	d, 10YR 3/1 very coming mixed w	/ dark /ith gr	ay clay	OL		0 to 4.8 int analytical s	erval collected for sample.
I			  12											
			- - 14 — - -											
Signat	ure:					Firm	<sup>n:</sup> TRC Ei 708 He	nvironmental Corp artland Trail, Suite	9 3000	Madison, V	VI 53	717	6) Fax (6	08) 826-3600 08) 826-3941



	2						BORING NO. OU3 S-10L Nov 2018							
Facility	v/Proie	ct Nam	e:					Date Drilling Started	:	Date Drilling	Comple	eted:	ot 1 Number:	
H	,∴.ojo avt∩n	Area	Rem	ediation Pr	roiect Clo	sure Documer	ntation	11/13/18	-	11/1	3/18		10,000	7927 0000
Drilling	g Firm:	/ \\ <del>C</del> d	ROH		Drilling Me	ethod:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (i	in bgs)	Borehole Dia. (in)
TF	RC Fr	nviror	ment	al Corp.		Push tube						11.4	5-7	2
Boring	J Locati	ion: Pi	ne Cree	ek, Reach O				Personnel			Drillin	g Equip	ment:	_
State	Diana	NI: 7	26047	02 E. 2466	2467 72			Logged By - M. We	estover	(aabbal=		ם "כ		ara Tuba
Civil T	own/Ci	itv/or Vi	30947. Ilage:	63 E: 2400	0407.73	State <sup>.</sup>		Water Level Observ	er/B. W	achnoiz		2 F		
			lage.	oounty.				While Drilling:	Date	e/Time			Depth	ı (ft bgs)
N	iew H	loiste	n	Calı	umet	Wisco	nsın	After Drilling:	Date	e/Time	1		Depth	ı (ft bgs)
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	OPCAN			HOLOGI SCRIPTIC	IC ON	darl		nscs	GRAPHIC LOG	C	
CS				gray, no	on-cohesi	becoming dar	ker (almo	ost black).			OL		analytica	al sample.
			8	End of	SILT (ML /1 very da	L), high organic ark gray. 1.4 inches.	c content,	few to little fine	sand		ML			
Signat	ture:					Fin	<sup>m:</sup> TRC E 708 He	invironmental Corp eartland Trail, Suite	) e 3000	) Madison, V	WI 53	717	Fax	(608) 826-3600 (608) 826-3941



							BC	RIN	g no. o	U3 S	-11R	Nov	2018
Facility/Pr	oiect	t Nam	e.				Date Drilling Started		Date Drilling	Comple	eted:	Page 1 Project	of 1 Number:
Havt	on /	Δrea	Rem	ediation P	roiect Clos	sure Documentation	11/13/18	•	11/1	3/18		10,000	7927 0000
Drilling Fir	m:	Alca	Rem	culation i	Drilling Met	hod:	Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bqs)	Borehole Dia. (
TRC	En	viror	ment	al Corp		Push tube					84	Nov 2018 Page 1 of 1 Project Number: 107927.00 in bgs) Borehole Di 2 ment: 'VC Core Tube Depth (ft bgs) Depth (ft bgs) COMMEN' O to 6 interval collecte analytical sample. DUP-01 collected.	2
Boring Lo	catio	n: Pi	ne Cree	ek, Reach P			Personnel			Drillin	g Equip	ment:	
State Dia		NI: 7	27200		2047 69		Logged By - M. We	stover	laabbal=		2" □		ara Tuba
Civil Town	n/Citv	v/or Vi	37200. Ilage:	County:	0047.00	State:	Water Level Observa	ations:	rachnoiz		2 Г		
		,,		,-			While Drilling:	Date	e/Time			Depth	(ft bgs)
	/ HC	DISte	In	Cal	umet	VVISCONSIN	After Drilling:	Date	e/Time			Depth	(ft bgs)
NUMBER AND TYPE RECOVERY (%)		BLOW COUNTS	DEPTH IN INCHES	<b>ORGAN</b> gray, no	<b>IIC SILT ((</b> on-cohesiv	LITHOLO DESCRIPT <b>DL)</b> , trace very fine sa /e.	GIC FION and, 10YR 3/1 very	/ dark	ς	nscs	GRAPHIC LOG	C to 6 in analytica	OMMENTS
28			2	Same a few fine	as above, l e sand, de	becoming cohesive a caying plant material	it 0.3 feet, non-plas , soft.	stic, t	race to	OL	,	DUP-01	collected.
			8	End of	core at 8.4	1 inches.						-	
			- - 12- -										
			- 14 — - -										
- Signature:	:		·			Firm: TRC 708	Environmental Corp Heartland Trail, Suite	9 3000	) Madison, \	VI 53	717	Fax	(608) 826-36 (608) 826-39



	2						BC	Dring No. (	DU3 S	6-12L	. Nov	/ 2018
Eacilit	/Droic	ot Nor-	0.				Data Drilling Start-	Data Drillin	a Commi	atadi	Page 1	1 of 1
racility	y/roje		e. Der-	adiatian D						elea:		
Drilling	ayton Firm	Area	ĸem	equation Pl		thod.	Surface Flev (ft)	TOC Flevation (ft)	Total	Denth (	in has)	Borehole Dia (in)
TE	, ?C ⊏r	wiron	mont	al Corp		Push tuha			TUId	7 0		201010101010101010101010101010101010101
Boring	Locati	on: Pi	ne Cree	ek, Reach P			Personnel		Drillin	r.∠ Ig Eauin	ment:	۷
-							Logged By - M. We	estover		.g _qu.p		. <del>.</del> .
State	Plane	N: 7	37280.	.64 E: 2465	5670.51	State	Driller - M. Westove	er/B. Wachholz		2" P		ore Tube
	Own/Ci	ty/OF VI	llage.	County.		State.	While Drilling:	Date/Time			Dept	h (ft bgs)
N	ew H	olste	in	Cal	umet	Wisconsin	After Drilling:	Date/Time			Dept	h (ft bgs)
SAM	PLE											
	_		ES									
	(%)	NTS	NCH			LITHOLOG	SIC			90	C	OMMENTS
						DESCRIPT	ION			IC L		
	200	M NC	ТН						S	APH		
ANE	RE(	BLG	DEF						USC	GR/		
			-	ORGAN	IIC SILT (	OL), trace very fine sa	nd, 10YR 3/1 very	/ dark			0 to 3.6 analytic	6 interval collected for cal sample.
			-	gray, no	on-cohesiv	ve.				ر کر ا	a. ary th	
			-	-						م مربع مربع	ļ	
			-	1						r . , , , ,		
			2-	1						بمر کم		
			-	-						<i>مر</i> . ۲	1	
			-							7.7	1	
s			-								1	
			4-	3/1 verv	SILIY LE	<b>:AN CLAY (CL),</b> plastic v_reworked	c, 10YR 5/1 gray a	and 10YR		XX		
			-		, dant gra	y, rowontou.				$X_{V}$		
			-	-						X	1	
				_					CL			
			6-	_						X		
										X	1	
			_							$ \lambda $		
				End of	core at 7.	2 inches.				<u> </u>	1	
			8-	]								
			-	1								
			-	1								
			-	-								
			10-	1								
			-	-								
			-	-								
			-	-								
			12-	-								
			-	-								
			-	-								
			-	-								
			14	-								
			-	-								
			_									
Signat	ure:					Firm: TRC	Environmental Corp				-	(608) 826-3600
						708 H	leartland Trail, Suite	3000 Madison,	WI 53	717	Fax	(608) 826-3941

APPENDIX B

LABORATORY REPORTS



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

May 11, 2018

Chris Harvey TRC Environmental 230 W. Monroe St Suite 630 Chicago, IL 60606

# RE: Project: 107927.0000.100.9300 HARP OU3 Pace Project No.: 40168642

Dear Chris Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Laurie Woelfel

Laurie Woelfel laurie.woelfel@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Tanner Hess, TRC Ted O'Connell, TRC - Madison Jesse Papez, TRC - Madison Peggy Popp, TRC - Madison James Robinson, TRC Environmental Ben Wachholz, TRC Meredith Westover, TRC Environmental





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

#### CERTIFICATIONS

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

#### **Green Bay Certification IDs**

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



## SAMPLE SUMMARY

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40168642001	OU3-IC-S5-R	Solid	05/03/18 12:05	05/05/18 07:35
40168642002	OU3-IC-S6-L	Solid	05/03/18 12:10	05/05/18 07:35
40168642003	OU3-IC-S7-L	Solid	05/03/18 12:15	05/05/18 07:35
40168642004	OU3-IC-S8-L	Solid	05/03/18 12:20	05/05/18 07:35
40168642005	OU3-IC-S9-L	Solid	05/03/18 12:25	05/05/18 07:35
40168642006	OU3-IC-S10-L	Solid	05/03/18 12:30	05/05/18 07:35
40168642007	OU3-IC-DUP01	Solid	05/03/18 00:00	05/05/18 07:35
40168642008	OU3-FB01	Water	05/03/18 12:45	05/05/18 07:35



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

### SAMPLE ANALYTE COUNT

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40168642001	OU3-IC-S5-R	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642002	OU3-IC-S6-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642003	OU3-IC-S7-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642004	OU3-IC-S8-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642005	OU3-IC-S9-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642006	OU3-IC-S10-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642007	OU3-IC-DUP01	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40168642008	OU3-FB01	EPA 8082	BLM	10	PASI-G



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-S5-R
 Lab ID:
 40168642001
 Collected:
 05/03/18 12:05
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<127	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	12674-11-2	
PCB-1221 (Aroclor 1221)	<127	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	11104-28-2	
PCB-1232 (Aroclor 1232)	<127	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	11141-16-5	
PCB-1242 (Aroclor 1242)	<127	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	53469-21-9	
PCB-1248 (Aroclor 1248)	<127	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	12672-29-6	
PCB-1254 (Aroclor 1254)	951	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	11097-69-1	
PCB-1260 (Aroclor 1260)	256	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	11096-82-5	
PCB, Total	1210	ug/kg	255	127	2	05/07/18 15:40	05/09/18 05:16	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	56-98		2	05/07/18 15:40	05/09/18 05:16	877-09-8	
Decachlorobiphenyl (S)	81	%	49-104		2	05/07/18 15:40	05/09/18 05:16	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	60.7	%	0.10	0.10	1		05/10/18 18:17		



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-S6-L
 Lab ID:
 40168642002
 Collected:
 05/03/18 12:10
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ation Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<118	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	12674-11-2	
PCB-1221 (Aroclor 1221)	<118	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	11104-28-2	
PCB-1232 (Aroclor 1232)	<118	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	11141-16-5	
PCB-1242 (Aroclor 1242)	<118	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	53469-21-9	
PCB-1248 (Aroclor 1248)	<118	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	12672-29-6	
PCB-1254 (Aroclor 1254)	842	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	11097-69-1	
PCB-1260 (Aroclor 1260)	223J	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	11096-82-5	
PCB, Total	1060	ug/kg	236	118	2	05/07/18 15:40	05/09/18 05:38	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	56-98		2	05/07/18 15:40	05/09/18 05:38	877-09-8	
Decachlorobiphenyl (S)	78	%	49-104		2	05/07/18 15:40	05/09/18 05:38	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	57.7	%	0.10	0.10	1		05/10/18 18:17		



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-S7-L
 Lab ID:
 40168642003
 Collected:
 05/03/18 12:15
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<49.8	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	12674-11-2	
PCB-1221 (Aroclor 1221)	<49.8	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	11104-28-2	
PCB-1232 (Aroclor 1232)	<49.8	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	11141-16-5	
PCB-1242 (Aroclor 1242)	<49.8	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	53469-21-9	
PCB-1248 (Aroclor 1248)	<49.8	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	12672-29-6	
PCB-1254 (Aroclor 1254)	793	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	11097-69-1	
PCB-1260 (Aroclor 1260)	190	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	11096-82-5	
PCB, Total	983	ug/kg	99.5	49.8	1	05/07/18 15:40	05/09/18 05:59	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	56-98		1	05/07/18 15:40	05/09/18 05:59	877-09-8	
Decachlorobiphenyl (S)	81	%	49-104		1	05/07/18 15:40	05/09/18 05:59	2051-24-3	
Percent Moisture	Analytical	Method: AS	FM D2974-87						
Percent Moisture	49.8	%	0.10	0.10	1		05/10/18 18:17		



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-S8-L
 Lab ID:
 40168642004
 Collected:
 05/03/18 12:20
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ation Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<176	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	12674-11-2	
PCB-1221 (Aroclor 1221)	<176	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	11104-28-2	
PCB-1232 (Aroclor 1232)	<176	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	11141-16-5	
PCB-1242 (Aroclor 1242)	<176	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	53469-21-9	
PCB-1248 (Aroclor 1248)	<176	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	12672-29-6	
PCB-1254 (Aroclor 1254)	2560	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	11097-69-1	
PCB-1260 (Aroclor 1260)	648	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	11096-82-5	
PCB, Total	3210	ug/kg	353	176	3	05/07/18 15:40	05/09/18 06:21	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	56-98		3	05/07/18 15:40	05/09/18 06:21	877-09-8	
Decachlorobiphenyl (S)	74	%	49-104		3	05/07/18 15:40	05/09/18 06:21	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	57.5	%	0.10	0.10	1		05/10/18 18:17		



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-S9-L
 Lab ID:
 40168642005
 Collected:
 05/03/18 12:25
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ation Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<139	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	12674-11-2	
PCB-1221 (Aroclor 1221)	<139	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	11104-28-2	
PCB-1232 (Aroclor 1232)	<139	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	11141-16-5	
PCB-1242 (Aroclor 1242)	<139	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	53469-21-9	
PCB-1248 (Aroclor 1248)	<139	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	12672-29-6	
PCB-1254 (Aroclor 1254)	1380	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	11097-69-1	
PCB-1260 (Aroclor 1260)	357	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	11096-82-5	
PCB, Total	1740	ug/kg	277	139	2	05/07/18 15:40	05/09/18 06:43	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	56-98		2	05/07/18 15:40	05/09/18 06:43	877-09-8	
Decachlorobiphenyl (S)	71	%	49-104		2	05/07/18 15:40	05/09/18 06:43	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	63.9	%	0.10	0.10	1		05/10/18 18:18		



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-S10-L
 Lab ID:
 40168642006
 Collected:
 05/03/18 12:30
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ation Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<250	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	12674-11-2	
PCB-1221 (Aroclor 1221)	<250	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	11104-28-2	
PCB-1232 (Aroclor 1232)	<250	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	11141-16-5	
PCB-1242 (Aroclor 1242)	<250	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	53469-21-9	
PCB-1248 (Aroclor 1248)	<250	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	12672-29-6	
PCB-1254 (Aroclor 1254)	2130	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	11097-69-1	
PCB-1260 (Aroclor 1260)	530	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	11096-82-5	
PCB, Total	2660	ug/kg	500	250	3	05/07/18 15:40	05/09/18 07:05	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	56-98		3	05/07/18 15:40	05/09/18 07:05	877-09-8	
Decachlorobiphenyl (S)	71	%	49-104		3	05/07/18 15:40	05/09/18 07:05	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	70.0	%	0.10	0.10	1		05/10/18 18:18		



Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

 Sample:
 OU3-IC-DUP01
 Lab ID:
 40168642007
 Collected:
 05/03/18 00:00
 Received:
 05/05/18 07:35
 Matrix:
 Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ation Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<174	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	12674-11-2	
PCB-1221 (Aroclor 1221)	<174	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	11104-28-2	
PCB-1232 (Aroclor 1232)	<174	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	11141-16-5	
PCB-1242 (Aroclor 1242)	<174	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	53469-21-9	
PCB-1248 (Aroclor 1248)	<174	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	12672-29-6	
PCB-1254 (Aroclor 1254)	2760	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	11097-69-1	
PCB-1260 (Aroclor 1260)	700	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	11096-82-5	
PCB, Total	3460	ug/kg	348	174	3	05/07/18 15:40	05/09/18 07:27	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	56-98		3	05/07/18 15:40	05/09/18 07:27	877-09-8	
Decachlorobiphenyl (S)	69	%	49-104		3	05/07/18 15:40	05/09/18 07:27	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	56.9	%	0.10	0.10	1		05/10/18 18:18		



#### Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

Sample: OU3-FB01	Lab ID:	40168642008	Collecte	d: 05/03/18	3 12:45	Received: 05/	05/18 07:35 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EPA 8	082 Prepa	ration Metho	od: EP/	A 3510			
PCB-1016 (Aroclor 1016)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	12674-11-2	
PCB-1221 (Aroclor 1221)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	11104-28-2	
PCB-1232 (Aroclor 1232)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	11141-16-5	
PCB-1242 (Aroclor 1242)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	53469-21-9	
PCB-1248 (Aroclor 1248)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	12672-29-6	
PCB-1254 (Aroclor 1254)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	11097-69-1	
PCB-1260 (Aroclor 1260)	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	11096-82-5	
PCB, Total	<0.24	ug/L	0.48	0.24	1	05/07/18 08:15	05/09/18 00:55	1336-36-3	
Surrogates		Ū							
Tetrachloro-m-xylene (S)	84	%	44-121		1	05/07/18 08:15	05/09/18 00:55	877-09-8	
Decachlorobiphenyl (S)	67	%	10-119		1	05/07/18 08:15	05/09/18 00:55	2051-24-3	



#### **QUALITY CONTROL DATA**

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

QC Batch: 288117

QC Batch Method: EPA 3541 Associated Lab Samples:

Analysis Method: Analysis Description: 8082 GCS PCB

EPA 8082

40168642001, 40168642002, 40168642003, 40168642004, 40168642005, 40168642006, 40168642007

METHOD BLANK: 1685829 Matrix: Solid Associated Lab Samples: 40168642001, 40168642002, 40168642003, 40168642004, 40168642005, 40168642006, 40168642007

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	05/09/18 02:00	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	05/09/18 02:00	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	05/09/18 02:00	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	05/09/18 02:00	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	05/09/18 02:00	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	05/09/18 02:00	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	05/09/18 02:00	
Decachlorobiphenyl (S)	%	86	49-104	05/09/18 02:00	
Tetrachloro-m-xylene (S)	%	89	56-98	05/09/18 02:00	

LABORATORY CONTROL SAMPLE:	1685830					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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	427	85	61-105	
Decachlorobiphenyl (S)	%			86	49-104	
Tetrachloro-m-xylene (S)	%			93	56-98	

MATRIX SPIKE & MATRIX SP		TE: 16858	31		1685832							
Parameter	4 Units	0168642001 Result	MS Spike Conc	MSD Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	RPD	Max RPD	Qual
					100001		/01100					Quai
PCB-1016 (Aroclor 1016)	ug/kg	<127			<127	<127					20	
PCB-1221 (Aroclor 1221)	ug/kg	<127			<127	<127					20	
PCB-1232 (Aroclor 1232)	ug/kg	<127			<127	<127					20	
PCB-1242 (Aroclor 1242)	ug/kg	<127			<127	<127					20	
PCB-1248 (Aroclor 1248)	ug/kg	<127			<127	<127					20	
PCB-1254 (Aroclor 1254)	ug/kg	951			1420	1410				1	20	
PCB-1260 (Aroclor 1260)	ug/kg	256	1270	1270	1380	1340	88	85	35-125	3	20	
Decachlorobiphenyl (S)	%						82	78	49-104			
Tetrachloro-m-xylene (S)	%						89	84	56-98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### **QUALITY CONTROL DATA**

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 4016864	2				
QC Batch: 288010	)	Analysis Meth	nod: EF	PA 8082	
QC Batch Method: EPA 35	10	Analysis Des	cription: 80	82 GCS PCB	
Associated Lab Samples:	40168642008				
METHOD BLANK: 1685318		Matrix:	Water		
Associated Lab Samples:	10168642008				
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.12	0.25	05/08/18 22:22	
PCB-1221 (Aroclor 1221)	ug/L	<0.12	0.25	05/08/18 22:22	
PCB-1232 (Aroclor 1232)	ug/L	<0.12	0.25	05/08/18 22:22	
PCB-1242 (Aroclor 1242)	ug/L	<0.12	0.25	05/08/18 22:22	
PCB-1248 (Aroclor 1248)	ug/L	<0.12	0.25	05/08/18 22:22	
PCB-1254 (Aroclor 1254)	ug/L	<0.12	0.25	05/08/18 22:22	
PCB-1260 (Aroclor 1260)	ug/L	<0.12	0.25	05/08/18 22:22	
Decachlorobiphenyl (S)	%	69	10-119	05/08/18 22:22	
Tetrachloro-m-xylene (S)	%	82	44-121	05/08/18 22:22	

LABORATORY CONTROL SAMPLE &	LCSD: 1685319	)	16	85320						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L		<0.12	<0.12					20	
PCB-1221 (Aroclor 1221)	ug/L		<0.12	<0.12					20	
PCB-1232 (Aroclor 1232)	ug/L		<0.12	<0.12					20	
PCB-1242 (Aroclor 1242)	ug/L		<0.12	<0.12					20	
PCB-1248 (Aroclor 1248)	ug/L		<0.12	<0.12					20	
PCB-1254 (Aroclor 1254)	ug/L		<0.12	<0.12					20	
PCB-1260 (Aroclor 1260)	ug/L	2.5	2.2	2.1	86	82	63-116	5	20	
Decachlorobiphenyl (S)	%				73	63	10-119			
Tetrachloro-m-xylene (S)	%				85	85	44-121			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## **QUALITY CONTROL DATA**

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

QC Batch:	28853	2		Analysis Met	hod:	ASTM D2974-87	
QC Batch Method:	ASTM	D2974-87		Analysis Des	scription:	Dry Weight/Percent Moisture	
Associated Lab Samp	les:	40168642001,	40168642002, 4	0168642003, 4	0168642004,	40168642005, 40168642006, 40168642007	

SAMFLE DUFLICATE. 1000010		40168859001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	7.9	7.8	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### QUALIFIERS

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

#### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

#### BATCH QUALIFIERS

Batch: 288089

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



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 107927.0000.100.9300 HARP OU3

Pace Project No.: 40168642

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40168642001	OU3-IC-S5-R	EPA 3541	288117	EPA 8082	288119
40168642002	OU3-IC-S6-L	EPA 3541	288117	EPA 8082	288119
40168642003	OU3-IC-S7-L	EPA 3541	288117	EPA 8082	288119
40168642004	OU3-IC-S8-L	EPA 3541	288117	EPA 8082	288119
40168642005	OU3-IC-S9-L	EPA 3541	288117	EPA 8082	288119
40168642006	OU3-IC-S10-L	EPA 3541	288117	EPA 8082	288119
40168642007	OU3-IC-DUP01	EPA 3541	288117	EPA 8082	288119
40168642008	OU3-FB01	EPA 3510	288010	EPA 8082	288089
40168642001	OU3-IC-S5-R	ASTM D2974-87	288532		
40168642002	OU3-IC-S6-L	ASTM D2974-87	288532		
40168642003	OU3-IC-S7-L	ASTM D2974-87	288532		
40168642004	OU3-IC-S8-L	ASTM D2974-87	288532		
40168642005	OU3-IC-S9-L	ASTM D2974-87	288532		
40168642006	OU3-IC-S10-L	ASTM D2974-87	288532		
40168642007	OU3-IC-DUP01	ASTM D2974-87	288532		

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Project Contact:     Mi, McS.Str. V.C.       Project Contact:     Mi, McS.Str. V.C.       Project Minimer:     D/P 27-DDD, IRD 9200       Sampled By (Print):     N. Westbard       Project Minimer:     Project Minimer       Project Minimer     Project Minimer       Proj	12 of
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(>6mm) : □Yes □No pN/A *If yes look in headspace of

F-GB-C-046-Rev.02 (29Mar2018) Sample Preservation Receipt Form

Pace Analitical"	Doci Sample Conditi	ument Name:	Document Revised: 25Apr2018
		cument No	lequing Authority
1241 Bellevue Street, Green Bay, WI 54302	F-GB	-C-031-Rev.07	Pace Green Bay Quality Office
Sample C	Condition Upd	on Receipt Form (S	CUR)
Client Name: TRC		Project #:	0#.40168642
Courier: CS Logistics Fed Ex Speede			
Client Pace Other		/vailco	
Tracking #: 170 588 2-1		401	L68642
Custody Seal on Cooler/Box Present: ves	no Seals intac	t: T ves T no	
Custody Seal on Samples Present:  ves 7 r	o Seals intact	t: 🔽 yes 🔽 no	
Packing Material: 7 Bubble Wrap 7 Bubbl	e Bags 🔽 Nor	e Cother	ſ
Cooler Temperature SR - N/A	Type of Ice: Wet	Blue Dry None	Samples on ice, cooling process has begun
Temp Blank Present:	Biological		
Temp should be above freezing to $6^{\circ}$ C. Biota Samples may be received at $\leq 0^{\circ}$ C.	Biological	rissue is Frozen: 1 yes	Person examining conter Date:
Chain of Custody Present:	ZYes DNO DN/A	1.	
Chain of Custody Filled Out:	Øyes □No □N/A	2.	
Chain of Custody Relinquished:		3.	
Sampler Name & Signature on COC:		4.	
Samples Arrived within Hold Time:	ØYes □No	5.	
- VOA Samples frozen upon receipt	∕ □Yes □No	Date/Time:	
Short Hold Time Analysis (<72hr):	DYes DNo	6.	
Rush Turn Around Time Requested:		7.	
Sufficient Volume:		8.	
For Analysis: Øyes □No MS/MSD:			
Correct Containers Used:	Yes DNo	9.	
-Pace Containers Used:			
-Pace IR Containers Used:			
Containers Intact:	Yes □No	10.	
Filtered volume received for Dissolved tests	Yes No N/A	11.	
Sample Labels match COC:	Yes INO IN/A	12.	
-Includes date/time/ID/Analysis Matrix:	itu		
Frip Blank Present:	∃Yes ØNo □,N/A	13.	ни, алим раз на стали стали стали стали. р <sub>ан</sub>
Frip Blank Custody Seals Present			
Pace Trip Blank Lot # (if purchased):	(		
Person Contacted	Doto /	If checked,	see attached form for additional comments
Comments/ Resolution:	Date/1		
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Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

July 11, 2018

Chris Harvey TRC Environmental 230 W. Monroe St Suite 630 Chicago, IL 60606

# RE: Project: 107927.0000.100.9300 HARP Pace Project No.: 40171904

Dear Chris Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on July 03, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Laurie Woelfel

Laurie Woelfel laurie.woelfel@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Tanner Hess, TRC Ted O'Connell, TRC - Madison Jesse Papez, TRC - Madison Peggy Popp, TRC - Madison James Robinson, TRC Environmental Ben Wachholz, TRC Meredith Westover, TRC Environmental





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

#### CERTIFICATIONS

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

#### **Green Bay Certification IDs**

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



# SAMPLE SUMMARY

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40171904001	OU3-IC-S11-R	Solid	06/29/18 11:15	07/03/18 09:05
40171904002	OU3-IC-S12-L	Solid	06/29/18 11:30	07/03/18 09:05



# SAMPLE ANALYTE COUNT

 Project:
 107927.0000.100.9300 HARP

 Pace Project No.:
 40171904

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40171904001	OU3-IC-S11-R	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40171904002	OU3-IC-S12-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

 Sample:
 OU3-IC-S11-R
 Lab ID:
 40171904001
 Collected:
 06/29/18 11:15
 Received:
 07/03/18 09:05
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepa	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<144	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	12674-11-2	
PCB-1221 (Aroclor 1221)	<144	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	11104-28-2	
PCB-1232 (Aroclor 1232)	<144	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	11141-16-5	
PCB-1242 (Aroclor 1242)	<144	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	53469-21-9	
PCB-1248 (Aroclor 1248)	<144	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	12672-29-6	
PCB-1254 (Aroclor 1254)	2230	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	11097-69-1	
PCB-1260 (Aroclor 1260)	<144	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	11096-82-5	
PCB, Total	2230	ug/kg	288	144	2	07/10/18 13:16	07/11/18 08:42	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	56-98		2	07/10/18 13:16	07/11/18 08:42	877-09-8	
Decachlorobiphenyl (S)	83	%	49-104		2	07/10/18 13:16	07/11/18 08:42	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	65.3	%	0.10	0.10	1		07/09/18 11:29		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

 Sample:
 OU3-IC-S12-L
 Lab ID:
 40171904002
 Collected:
 06/29/18 11:30
 Received:
 07/03/18 09:05
 Matrix:
 Solid

 Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.
 Image: Collected in the second s

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepa	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<62.6	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<62.6	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	11104-28-2	
PCB-1232 (Aroclor 1232)	<62.6	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<62.6	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	53469-21-9	
PCB-1248 (Aroclor 1248)	<62.6	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	12672-29-6	
PCB-1254 (Aroclor 1254)	821	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	11097-69-1	
PCB-1260 (Aroclor 1260)	209	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	11096-82-5	
PCB, Total	1030	ug/kg	125	62.6	1	07/10/18 13:16	07/11/18 09:01	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	56-98		1	07/10/18 13:16	07/11/18 09:01	877-09-8	
Decachlorobiphenyl (S)	81	%	49-104		1	07/10/18 13:16	07/11/18 09:01	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	60.1	%	0.10	0.10	1		07/09/18 11:30		


Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171	904				
QC Batch: 2941	08	Analysis Met	hod: Ef	PA 8082	
QC Batch Method: EPA	3541	Analysis Des	cription: 80	82 GCS PCB	
Associated Lab Samples:	40171904001, 40171904002				
METHOD BLANK: 17195	94	Matrix:	Solid		
Associated Lab Samples:	40171904001, 40171904002				
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	07/11/18 06:3	1
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	07/11/18 06:3 <sup>2</sup>	1
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	07/11/18 06:3	1
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	07/11/18 06:37	1
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	07/11/18 06:3	1
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	07/11/18 06:3	1
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	07/11/18 06:3	1
Decachlorobiphenyl (S)	%	89	49-104	07/11/18 06:3	1
Tetrachloro-m-xylene (S)	%	82	56-98	07/11/18 06:3	1
LABORATORY CONTROL	SAMPLE: 1719595				
		Spike	LUS	LUS	% Rec

		Opino	200	200	/01100	
Parameter	Units	Conc.	Result	% 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	411	82	61-105	
Decachlorobiphenyl (S)	%			88	49-104	
Tetrachloro-m-xylene (S)	%			84	56-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1719596 1719597											
Derometer	4	0171910001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	Max	Qual
Parameter		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits		Quai
PCB-1016 (Aroclor 1016)	ug/kg	<0.031 mg/kg			<31.1	<31.1				20	
PCB-1221 (Aroclor 1221)	ug/kg	<0.031 mg/kg			<31.1	<31.1				20	
PCB-1232 (Aroclor 1232)	ug/kg	<0.031 mg/kg			<31.1	<31.1				20	
PCB-1242 (Aroclor 1242)	ug/kg	<0.031 mg/kg			<31.1	<31.1				20	
PCB-1248 (Aroclor 1248)	ug/kg	<0.031 mg/kg			<31.1	<31.1				20	
PCB-1254 (Aroclor 1254)	ug/kg	<0.031 mg/kg			<31.1	<31.1				20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1719596 1719597												
			MS	MSD								
		40171910001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
PCB-1260 (Aroclor 1260)	ug/kg	<0.031 mg/kg	623	623	516	515	83	83	35-125	0	20	
Decachlorobiphenyl (S)	%						87	86	49-104			
Tetrachloro-m-xylene (S)	%						88	91	56-98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

QC Batch:	293924	Analysis Method:		ASTM D2974-87	
QC Batch Method:	ASTM D2974-87	Analysis Description	on:	Dry Weight/Percent Moisture	
Associated Lab Samp	eles: 40171904001, 40171904002				
SAMPLE DUPLICATE	: 1718916				
	4	40171798011	Dup	Max	

Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	19.6	19.6	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### QUALIFIERS

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

#### LABORATORIES

PASI-G Pace Analytical Services - Green Bay



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40171904

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40171904001 40171904002	OU3-IC-S11-R OU3-IC-S12-L	EPA 3541 EPA 3541	294108 294108	EPA 8082 EPA 8082	294109 294109
40171904001 40171904002	0U3-IC-S11-R 0U3-IC-S12-L	ASTM D2974-87 ASTM D2974-87	293924 293924		

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Company Nan	ne: TRC			ſ			* . * *	â	A	MNLE	42-607-170	0 WI: 920-469-2436	17		of 1
Branch/Locati	ion: Madiss				Pace	Ana	llytical	٠ <i>١</i>	$\langle l \rangle$		/		40	1190	ч Ч
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Project Numb	er: 107927. Davo 141	0 934		one B=	HCL C=	H2SO4	*Preservation D=HNO3 E	Codes =DI Water	F=Methar	iol G=N	laOH	Mail To Company:	1	Th	
Project Name:	HARP		H≃So	odium Bisu	Ifate Solut	ion	I=Sodium Thi	osulfate	J=Other			Mail To Address:	H H	1-	
Project State:	WF WF		FILTE (YES	ERED? S/NO)	Y/N	MA							110	ion som	
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	Level III Don your sample B = (billable) C =	Biota Charcoal	DW = Drinki GW = Groun	ing Water nd Water	/365	2						Invoice To Phone:			
		Soil Sludge COLLE	WW = Waste WP = Wipe	e Water	Analy	A						CLIENT COMMENTS	LAB C (Lab	OMMENTS Use Only)	Profile #
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Client Name: TRC Sample Preservation Receipt Form Pace Analytical Services, L 1241 Bellevue Street, Suit Green Bay, WI 543													es, LLC Suite 9 54302																					
	All co	ontain	ers ne	eding	pres	ervati	on ha	ve be	en ch	ecked Lab	and n Lot# c	oted b	• below: baper:	□Yes	□No	<b>WA</b>	Lab	Std #	#ID of	prese	rvation	n (if pl		isted):	• )				Initial comp	when leted:		Date/ Time:		Page
				Glass	5						Plast	ic					Vi	als				Jars		G	ener	al	* (>6mm) *	≤2	Act pH ≥9	≥12	2	ljusted	Volume	
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN	voA Vials	H2SO4 pH	NaOH+Zn	ИаОН рН	HNO3 pH	pH after ac	(mL)	
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AG1H	1 lit	er am	ber g	lass H	CL			B	P2N	500	mL pla	astic H	INO3			D	59T	40 m	nL aml	ber Na	a Thio			W	GFU	4 oz	clear	jar un	pres					
AG4S	125	mL ai	mber	glass I	H2SO	4		B	P2Z	500	mL pla	astic N	laOH,	Znact		Ve	69U	40 m	nL clea	ar vial	unpre	es		W	PFU	4 oz	plasti	c jar u	npres					
AG4U	120	mL ai	mber	glass (	unpre	es		BI	23U	250	mL pla	astic u	Inpres				59H	40 m	nL clea	ar vial	HCL				057	120	- 1-	o eti - *	10 TL:	مصالحة			1	
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BG3U	250	mL cl	ear gl	ass ur	npres	ŕ		B	P3S	250	mL pla	astic H	12504												GN		- 245							
Page <u>1</u> of												, 																						

	Doc	ument Name	T	
Pace Analytical"	Sample Condit	ion Upon Receipt (SCUR)	Document Revise	d: 25Apr2018
	Do	cument No.:	Issuing Au	hority:
1241 Dellevue Street, Green Bay, WI 5430	∠l ⊦-GB	-c-031-Kev.07	Pace Green Bay	Juality Office
Sample	Condition Up	on Receipt Form (S	CUR)	
CHARLEN TRC		Project #:		
		/ <b>W</b>	<b>U#:401</b>	71904
	ee TUPS T	Waltco		
Track 1764268		40	171904	
Custody Seel on Cooler/Pay Present	Carla inter	Name - Barrow		
Custody Seal on Samples Present: Ves	no Seals intac	t: yes no		
Packing Material: Bubble Wrap	ble Bags	ne Other	/	
Thermometer Used <u>SR - NIA</u>	Type of Ice We	Blue Dry None	Samples on ice, coolin	process has begun
Cooler Temperature Uncorr: PATICorr:	-			,
Temp Blank Present: 🔽 yes 🗹 no	Biological	Tissue is Frozen: Tye	s no Persor	examining contents:
Temp should be above freezing to 6°C. Biota Samples may be received at < 0°C.			Date: Initials:	112110/1
Chain of Custody Present:	Yes No N/	1.	I	- FE
Chain of Custody Filled Out:		2. Pagett		713/18/11
Chain of Custody Relinquished:		3.		<u> 11 51 647 (</u>
Sampler Name & Signature on COC:		4.		199 <u> Annol - Constanti - Manual</u>
Samples Arrived within Hold Time:	Dyres 🗆 No	5.		
- VOA Samples frozen upon receipt	□Yes □No	Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes INo/	6.		
Rush Turn Around Time Requested:	□Yes ⊡No	7.		
Sufficient Volume:		8.		
For Analysis: Dres DNo MS/MSD				
Correct Containers Used:	Brok DNO	9.		
-Pace Containers Used:				
-Pace IR Containers Used:				
Containers Intact:	Tres INo	10.		
Filtered volume received for Dissolved tests		11.	1975	****
Sample Labels match COC:		12.	********	
-Includes date/time/ID/Analysis Matrix:	5			
Trip Blank Present:	□Yes □No <b>□Ø</b> /A	13.	· · · · · · · · · · · · · · · · · · ·	
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Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

November 29, 2018

Meredith Westover TRC Environmental 708 Heartland Trail Madison, WI 53717

RE: Project: 107927.0000.100.9300 HARP Pace Project No.: 40179962

Dear Meredith Westover:

Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Laurie Woelfel

Laurie Woelfel laurie.woelfel@pacelabs.com (920)469-2436 Project Manager

Enclosures





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

#### CERTIFICATIONS

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

#### **Green Bay Certification IDs**

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



# SAMPLE SUMMARY

#### Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40179962001	OU3-IC-S05-R	Solid	11/16/18 14:00	11/20/18 09:15
40179962002	OU3-IC-S06-L	Solid	11/16/18 14:10	11/20/18 09:15
40179962003	OU3-IC-S07-L	Solid	11/16/18 14:20	11/20/18 09:15
40179962004	OU3-IC-S08-L	Solid	11/16/18 14:30	11/20/18 09:15
40179962005	OU3-IC-S09-L	Solid	11/16/18 14:40	11/20/18 09:15
40179962006	OU3-IC-S10-L	Solid	11/16/18 14:50	11/20/18 09:15
40179962007	OU3-IC-S11-R	Solid	11/16/18 15:00	11/20/18 09:15
40179962008	OU3-IC-S12-L	Solid	11/16/18 15:10	11/20/18 09:15
40179962009	OU3-IC-DUP01	Solid	11/16/18 00:00	11/20/18 09:15
40179962010	OU3-FB01	Water	11/16/18 15:30	11/20/18 09:15



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

## SAMPLE ANALYTE COUNT

Project: 107927.0000.100.9300 HARP

Pace Project No.:	40179962
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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40179962001	OU3-IC-S05-R	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962002	OU3-IC-S06-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962003	OU3-IC-S07-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962004	OU3-IC-S08-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962005	OU3-IC-S09-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962006	OU3-IC-S10-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962007	OU3-IC-S11-R	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962008	OU3-IC-S12-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962009	OU3-IC-DUP01	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179962010	OU3-FB01	EPA 8082	BDS	10	PASI-G



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S05-R
 Lab ID:
 40179962001
 Collected:
 11/16/18 14:00
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepa	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<64.2	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	12674-11-2	
PCB-1221 (Aroclor 1221)	<64.2	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	11104-28-2	
PCB-1232 (Aroclor 1232)	<64.2	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	11141-16-5	
PCB-1242 (Aroclor 1242)	<64.2	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	53469-21-9	
PCB-1248 (Aroclor 1248)	<64.2	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	12672-29-6	
PCB-1254 (Aroclor 1254)	510	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	11097-69-1	
PCB-1260 (Aroclor 1260)	117J	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	11096-82-5	
PCB, Total	626	ug/kg	128	64.2	1	11/26/18 14:06	11/27/18 16:17	1336-36-3	
Tetrachloro-m-xylene (S)	78	%	56-98		1	11/26/18 14:06	11/27/18 16:17	877-09-8	
Decachlorobiphenyl (S)	70	%	49-104		1	11/26/18 14:06	11/27/18 16:17	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	61.1	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S06-L
 Lab ID:
 40179962002
 Collected:
 11/16/18 14:10
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepai	ation Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<89.0	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	12674-11-2	
PCB-1221 (Aroclor 1221)	<89.0	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	11104-28-2	
PCB-1232 (Aroclor 1232)	<89.0	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	11141-16-5	
PCB-1242 (Aroclor 1242)	<89.0	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	53469-21-9	
PCB-1248 (Aroclor 1248)	<89.0	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	12672-29-6	
PCB-1254 (Aroclor 1254)	721	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	11097-69-1	
PCB-1260 (Aroclor 1260)	156J	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	11096-82-5	
PCB, Total	877	ug/kg	178	89.0	1	11/26/18 14:06	11/27/18 16:39	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	81	%	56-98		1	11/26/18 14:06	11/27/18 16:39	877-09-8	
Decachlorobiphenyl (S)	70	%	49-104		1	11/26/18 14:06	11/27/18 16:39	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	71.9	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S07-L
 Lab ID:
 40179962003
 Collected:
 11/16/18 14:20
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepa	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<67.0	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<67.0	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	11104-28-2	
PCB-1232 (Aroclor 1232)	<67.0	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<67.0	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	53469-21-9	
PCB-1248 (Aroclor 1248)	<67.0	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	12672-29-6	
PCB-1254 (Aroclor 1254)	1220	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	11097-69-1	
PCB-1260 (Aroclor 1260)	263	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	11096-82-5	
PCB, Total	1490	ug/kg	134	67.0	1	11/26/18 14:06	11/27/18 17:01	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	71	%	56-98		1	11/26/18 14:06	11/27/18 17:01	877-09-8	
Decachlorobiphenyl (S)	66	%	49-104		1	11/26/18 14:06	11/27/18 17:01	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	62.7	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S08-L
 Lab ID:
 40179962004
 Collected:
 11/16/18 14:30
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepai	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<65.5	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	12674-11-2	
PCB-1221 (Aroclor 1221)	<65.5	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	11104-28-2	
PCB-1232 (Aroclor 1232)	<65.5	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	11141-16-5	
PCB-1242 (Aroclor 1242)	<65.5	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	53469-21-9	
PCB-1248 (Aroclor 1248)	<65.5	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	12672-29-6	
PCB-1254 (Aroclor 1254)	1600	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	11097-69-1	
PCB-1260 (Aroclor 1260)	342	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	11096-82-5	
PCB, Total	1940	ug/kg	131	65.5	1	11/26/18 14:06	11/27/18 17:23	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	56-98		1	11/26/18 14:06	11/27/18 17:23	877-09-8	
Decachlorobiphenyl (S)	69	%	49-104		1	11/26/18 14:06	11/27/18 17:23	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	61.8	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S09-L
 Lab ID:
 40179962005
 Collected:
 11/16/18 14:40
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepai	ration Metho	od: EP	PA 3541			
PCB-1016 (Aroclor 1016)	<338	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	12674-11-2	
PCB-1221 (Aroclor 1221)	<338	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	11104-28-2	
PCB-1232 (Aroclor 1232)	<338	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	11141-16-5	
PCB-1242 (Aroclor 1242)	<338	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	53469-21-9	
PCB-1248 (Aroclor 1248)	<338	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	12672-29-6	
PCB-1254 (Aroclor 1254)	4110	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	11097-69-1	
PCB-1260 (Aroclor 1260)	903	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	11096-82-5	
PCB, Total	5010	ug/kg	676	338	5	11/26/18 14:06	11/27/18 17:44	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	56-98		5	11/26/18 14:06	11/27/18 17:44	877-09-8	
Decachlorobiphenyl (S)	73	%	49-104		5	11/26/18 14:06	11/27/18 17:44	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	63.0	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S10-L
 Lab ID:
 40179962006
 Collected:
 11/16/18 14:50
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<76.6	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	12674-11-2	
PCB-1221 (Aroclor 1221)	<76.6	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	11104-28-2	
PCB-1232 (Aroclor 1232)	<76.6	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	11141-16-5	
PCB-1242 (Aroclor 1242)	<76.6	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	53469-21-9	
PCB-1248 (Aroclor 1248)	<76.6	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	12672-29-6	
PCB-1254 (Aroclor 1254)	581	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	11097-69-1	
PCB-1260 (Aroclor 1260)	126J	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	11096-82-5	
PCB, Total	706	ug/kg	153	76.6	1	11/26/18 14:06	11/27/18 18:06	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	73	%	56-98		1	11/26/18 14:06	11/27/18 18:06	877-09-8	
Decachlorobiphenyl (S)	63	%	49-104		1	11/26/18 14:06	11/27/18 18:06	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	67.4	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S11-R
 Lab ID:
 40179962007
 Collected:
 11/16/18
 15:00
 Received:
 11/20/18
 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<77.6	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	12674-11-2	
PCB-1221 (Aroclor 1221)	<77.6	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	11104-28-2	
PCB-1232 (Aroclor 1232)	<77.6	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	11141-16-5	
PCB-1242 (Aroclor 1242)	<77.6	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	53469-21-9	
PCB-1248 (Aroclor 1248)	<77.6	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	12672-29-6	
PCB-1254 (Aroclor 1254)	234	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	11097-69-1	
PCB-1260 (Aroclor 1260)	<77.6	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	11096-82-5	
PCB, Total	234	ug/kg	155	77.6	1	11/26/18 14:06	11/27/18 18:28	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	56-98		1	11/26/18 14:06	11/27/18 18:28	877-09-8	
Decachlorobiphenyl (S)	70	%	49-104		1	11/26/18 14:06	11/27/18 18:28	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	67.8	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-S12-L
 Lab ID:
 40179962008
 Collected:
 11/16/18 15:10
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepar	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<74.4	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	12674-11-2	
PCB-1221 (Aroclor 1221)	<74.4	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	11104-28-2	
PCB-1232 (Aroclor 1232)	<74.4	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	11141-16-5	
PCB-1242 (Aroclor 1242)	472	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	53469-21-9	
PCB-1248 (Aroclor 1248)	<74.4	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	12672-29-6	
PCB-1254 (Aroclor 1254)	981	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	11097-69-1	
PCB-1260 (Aroclor 1260)	291	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	11096-82-5	
PCB, Total	1740	ug/kg	149	74.4	1	11/26/18 14:06	11/27/18 18:50	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	77	%	56-98		1	11/26/18 14:06	11/27/18 18:50	877-09-8	
Decachlorobiphenyl (S)	67	%	49-104		1	11/26/18 14:06	11/27/18 18:50	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	66.4	%	0.10	0.10	1		11/27/18 10:45		



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

 Sample:
 OU3-IC-DUP01
 Lab ID:
 40179962009
 Collected:
 11/16/18 00:00
 Received:
 11/20/18 09:15
 Matrix:
 Solid

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

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepai	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<62.1	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	12674-11-2	
PCB-1221 (Aroclor 1221)	<62.1	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	11104-28-2	
PCB-1232 (Aroclor 1232)	<62.1	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	11141-16-5	
PCB-1242 (Aroclor 1242)	<62.1	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	53469-21-9	
PCB-1248 (Aroclor 1248)	<62.1	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	12672-29-6	
PCB-1254 (Aroclor 1254)	113J	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	11097-69-1	
PCB-1260 (Aroclor 1260)	<62.1	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	11096-82-5	
PCB, Total	113J	ug/kg	124	62.1	1	11/26/18 14:06	11/27/18 19:12	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	72	%	56-98		1	11/26/18 14:06	11/27/18 19:12	877-09-8	
Decachlorobiphenyl (S)	63	%	49-104		1	11/26/18 14:06	11/27/18 19:12	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	59.7	%	0.10	0.10	1		11/27/18 10:45		



#### Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

Sample: OU3-FB01	Lab ID: 40179962010		Collected: 11/16/18 15:30		Received: 11/20/18 09:15 Ma		atrix: Water		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EPA 8	082 Prepar	ation Meth	od: EPA	3510			
PCB-1016 (Aroclor 1016)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	12674-11-2	
PCB-1221 (Aroclor 1221)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	11104-28-2	
PCB-1232 (Aroclor 1232)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	11141-16-5	
PCB-1242 (Aroclor 1242)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	53469-21-9	
PCB-1248 (Aroclor 1248)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	12672-29-6	
PCB-1254 (Aroclor 1254)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	11097-69-1	
PCB-1260 (Aroclor 1260)	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	11096-82-5	
PCB, Total	<0.25	ug/L	0.50	0.25	1	11/27/18 08:15	11/28/18 10:59	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	91	%	44-121		1	11/27/18 08:15	11/28/18 10:59	877-09-8	
Decachlorobiphenyl (S)	53	%	10-119		1	11/27/18 08:15	11/28/18 10:59	2051-24-3	



Project:	10792	7.0000.100.93	300 HARP										
Pace Project No.:	40179	962											
QC Batch:	3075	57		Analys	sis Method	1: E	PA 8082						
QC Batch Method:	EPA	3541		Analys	sis Descrip	otion: 8	082 GCS P	СВ					
Associated Lab Sar	nples:	4017996200 4017996200	01, 40179962002 08, 40179962009	, 40179962	2003, 4017	79962004, 4	1017996200	5, 40179	9962006, 4	0179962007	,		
METHOD BLANK:	17978	36		Ν	Matrix: So	lid							
Associated Lab Sar	nples:	4017996200 4017996200	01, 40179962002 08, 40179962009	, 40179962	2003, 4017	79962004, <i>4</i>	1017996200	5, 40179	9962006, 4	0179962007	,		
				Blank	k F	Reporting							
Paran	neter		Units	Resu	lt	Limit	Analyz	zed	Qualifie	ers			
PCB-1016 (Aroclor	1016)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
PCB-1221 (Aroclor	1221)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
PCB-1232 (Aroclor	1232)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
PCB-1242 (Aroclor	1242)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
PCB-1248 (Aroclor	1248)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
PCB-1254 (Aroclor	1254)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
PCB-1260 (Aroclor	1260)		ug/kg		<25.0	50.0	) 11/27/18	11:13					
Decachlorobiphenyl	l (S)		%		79	49-104	11/27/18	11:13					
Tetrachloro-m-xylen	ie (S)		%		82	56-98	3 11/27/18	11:13					
LABORATORY CO	NTROL	SAMPLE: 1	1797837										
				Spike	LC	S	LCS	%	Rec				
Paran	neter		Units	Conc.	Res	ult	% Rec	Lin	nits	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	)	379	76		61-105				
Decachioropiphenyi	(S)		%				80		49-104				
retrachioro-m-xylen	ie (5)		70				02		20-90				
MATRIX SPIKE & M	IATRIX	SPIKE DUPL	ICATE: 17978	38		1797839							
				MS	MSD								
_			40179875006	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Red	c % Re	c Limits	RPD	RPD	Qual
PCB-1016 (Aroclor	1016)	ug/kg	< 0.029			<29.3	<29.3					20	
PCB-1221 (Aroclor	1221)	ug/kg	<0.029			<29.3	<29.3					20	
PCB-1232 (Aroclor	1232)	ug/kg	< 0.029			<29.3	<29.3					20	
PCB-1242 (Aroclor	1242)	ug/kg	<0.029			<29.3	<29.3					20	
PCB-1248 (Aroclor	1248)	ug/kg	0.12			130	137				6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

mg/kg

# **REPORT OF LABORATORY ANALYSIS**

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Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

MATRIX SPIKE & MATRIX SPI	KE DUPLIC	CATE: 17978	38		1797839							
		10170075000	MS	MSD					04 <b>D</b>			
		40179875006	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
PCB-1254 (Aroclor 1254)	ug/kg	<0.029 mg/kg			<29.3	<29.3					20	
PCB-1260 (Aroclor 1260)	ug/kg	<0.029 mg/kg	585	585	424	440	73	75	35-125	4	20	
Decachlorobiphenyl (S)	%						74	77	49-104			
Tetrachloro-m-xylene (S)	%						82	86	56-98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

QC Batch:	307615		Analysis Meth	nod: EF	PA 8082	
QC Batch Method:	EPA 3510		Analysis Deso	cription: 80	82 GCS PCB	
Associated Lab Sam	ples: 40179962010					
METHOD BLANK:	1798044		Matrix:	Water		
Associated Lab Sam	ples: 40179962010					
			Blank	Reporting		
Param	eter	Units	Result	Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1	016)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1221 (Aroclor 1	221)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1232 (Aroclor 1	232)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1242 (Aroclor 1	242)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1248 (Aroclor 1	248)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1254 (Aroclor 1	254)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1260 (Aroclor 1	260)	ug/L	<0.12	0.25	11/28/18 08:20	
Decachlorobiphenyl	(S)	%	73	10-119	11/28/18 08:20	
Tetrachloro-m-xylene	e (S)	%	87	44-121	11/28/18 08:20	

LABORATORY CONTROL SAMPLE & LC	SD: 1798045		17	98046						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L		<0.12	<0.12					20	
PCB-1221 (Aroclor 1221)	ug/L		<0.12	<0.12					20	
PCB-1232 (Aroclor 1232)	ug/L		<0.12	<0.12					20	
PCB-1242 (Aroclor 1242)	ug/L		<0.12	<0.12					20	
PCB-1248 (Aroclor 1248)	ug/L		<0.12	<0.12					20	
PCB-1254 (Aroclor 1254)	ug/L		<0.12	<0.12					20	
PCB-1260 (Aroclor 1260)	ug/L	2.5	2.1	2.1	84	86	63-116	1	20	
Decachlorobiphenyl (S)	%				59	70	10-119			
Tetrachloro-m-xylene (S)	%				91	88	44-121			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

#### **REPORT OF LABORATORY ANALYSIS**

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Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

QC Batch:	307652	Analysis Method:	ASTM D2974-87	
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture	
Associated Lab Samp	les: 40179962001, 4017996 40179962008, 4017996	32002, 40179962003, 4017996 32009	2004, 40179962005, 40179962006, 401	79962007,
SAMPLE DUPLICATE	: 1798242			
		40180072005 Du	ip Max	

Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	4.5	4.6	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### QUALIFIERS

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

**RPD - Relative Percent Difference** 

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

#### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

#### BATCH QUALIFIERS

Batch: 307703

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



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 107927.0000.100.9300 HARP

Pace Project No.: 40179962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40179962001	OU3-IC-S05-R	EPA 3541	307557	EPA 8082	307578
40179962002	OU3-IC-S06-L	EPA 3541	307557	EPA 8082	307578
40179962003	OU3-IC-S07-L	EPA 3541	307557	EPA 8082	307578
40179962004	OU3-IC-S08-L	EPA 3541	307557	EPA 8082	307578
40179962005	OU3-IC-S09-L	EPA 3541	307557	EPA 8082	307578
40179962006	OU3-IC-S10-L	EPA 3541	307557	EPA 8082	307578
40179962007	OU3-IC-S11-R	EPA 3541	307557	EPA 8082	307578
40179962008	OU3-IC-S12-L	EPA 3541	307557	EPA 8082	307578
40179962009	OU3-IC-DUP01	EPA 3541	307557	EPA 8082	307578
40179962010	OU3-FB01	EPA 3510	307615	EPA 8082	307703
40179962001	OU3-IC-S05-R	ASTM D2974-87	307652		
40179962002	OU3-IC-S06-L	ASTM D2974-87	307652		
40179962003	OU3-IC-S07-L	ASTM D2974-87	307652		
40179962004	OU3-IC-S08-L	ASTM D2974-87	307652		
40179962005	OU3-IC-S09-L	ASTM D2974-87	307652		
40179962006	OU3-IC-S10-L	ASTM D2974-87	307652		
40179962007	OU3-IC-S11-R	ASTM D2974-87	307652		
40179962008	OU3-IC-S12-L	ASTM D2974-87	307652		
40179962009	OU3-IC-DUP01	ASTM D2974-87	307652		

(Please Print Clearly)			UPRER MIDWEST R	EGION	Page 1 of m
Company Name: TPC		a	MN: 012-607-1700	WI: 920-469-2436	1 of 1
Branch/Location: Madison WI		Nytical *			40179962 à
Project Contact: H. Westares			PX	Quote #:	٩.
Phone: 608 358 5035	CHAIN	OF CUSTO	DY	Mail To Contact:	TRE
Project Number: 107927, 000 100 9	300 A=None B=HCL C=H2SO4	*Preservation Codes D=HNO3 E=DI Water F=Metha		Mail To Company:	
Project Name: HARP	H=Sodium Bisulfate Solution	I=Sodium Thiosulfate J=Other		Mail To Address:	tabaling CITE
Project State:	FILTERED? Y/N NA				Madison WI
Sampled By (Print): H. Wes haves	PRESERVATION Pick A			Invoice To Contact:	
Sampled By (Sign):				Invoice To Company:	TRL
PO #: Re	gulatory g ogram: g			Invoice To Address:	
Data Package Options MS/MSD	Matrix Codes				Windson, CT
EPA Level III (billable) C = C	ota DW = Drinking Water harcoal GW = Ground Water			Invoice To Phone:	
your sample SI = SI	bil WW = Waste Water			CLIENT	LAB COMMENTS Profile #
PACE LAB # CLIENT FIELD ID	DATE TIME MATRIX			COMMENTS	(Lab Use Only)
003-505-Pl Dig		· · · · · · · · · · · · · · · · · · ·			
013-506-19- NYW					
003-S06-L					
001 003-IC-S05-R	116/18 1400 SED X				
002 003-IC-SOG-L	1410 1 7				
003 003-IC=S07-L	1420 X			α το πολιτικό το μεταγραφικό το το πολιτικό το πολιτικό το πολιτικό το πολιτικό το πολιτικό το πολιτικό το πολ	
004 003-DC-S08-L	1430 X				
005 003-IC-SO9-L	1440 X				
006 OU3-IC-SIO-L	1450 X				######################################
007 013-TC-SII-R	1500 X				
008 013-IC-S12-L	1510 1				
009 003-IC-DUPO1					
010 003-FB01	V 1530 QUL V				
Rush Turnaround Time Requested - Prelims	Relinquished By: (to Cushor)	Date/Time:	Received By:	Date/Time:	PACE Project No.
Date Needed:	Relinguished By:	Dete/Time:	Received By:	Date/Time:	Yol7942-
Transmit Prelim Rush Results by (complete what you want):	waltco	11/20/18 0915	John Ban Pace	e 11/20/17	DQU Receipt Temp = DAT °C
Email #2:	Keinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH
Telephone:	Relinquished By:	Date/Time:	Received By:	Date/Time:	OK / Adjusted
Samples on HOLD are subject to	Relinquished By:	Date/Time:	Received By:	Date/Time:	Cooler Custody Seal Present / Nor Present
obacter buckets and release of itsplitty					Intact / Not Intact

C019a(27Jun2006)

ORIGINAL

Pace /	Analytical	Service	es, dilC
1241	Bellevue	Street,	Suïde 9

	Green	Bay,	WI	58302
				ge
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3-4- A	,			ш.

Date/

Page 1 of 2

Initial when

Client N	lame:	
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# Sample Preservation Receipt Form

Project #	40179962
Waa -Na Stura	

All containers needing preservation have been checked and noted below: 
\_Yes 
No 
N/A

TRC

			-			<del>Ninana aya</del>		T			Lat	Lot#	of pl	ł pape	)r:	-		L	ab St	d #ID	of pre	serva	tion (il	pH ac	ljuste	d):				Init cor	al whe	ən :d:		Date/ Time	/ :
		[maintenand]		Gla	SS .					A system on the most of the		Plas	tic				And the second se	١	/ials	, 			Ja	rs		Gene	eral	-6mm) *						ted	
<sup>c</sup> ace .ab #	AG1U	AG1H	464S	AG4U	AG5U	16.26			ULARIO	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	405U	Leon DGeT			MODV			טרפוו	NPELL	DAT			OA Vials (>					VO3 pH ≤2	l after adjus	Volume (mL)
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	ione	to pro										800020				i generali A					10/31														2.5/5/10
			Serva	ation c	neck:	VOA	, Col	form,	, то	С, Т	0X, 1	ΓOH, (	0&G,	WID	RO, P	heno	lics, C	ther:			Head	spac	e in V	DA Via	ls (>€	imm) :	⊡Yes	□No	JN/A	*If ves	look	in he	ade		oluma
U H S J	1 1 liter amber glass HCL 125 mL amber glass H2SO4 120 mL amber glass unpres					B B B B	P1U P2N P2Z P3U	1 5 5 2	1 liter plastic unpres 500 mL plastic HNO3 500 mL plastic NaOH, Znact 250 mL plastic unpres						DG9A40 mL amber ascorbicDG9T40 mL amber Na ThioVG9U40 mL clear vial unpresVG0U40 mL clear vial unpres						ol W W	ifu Gfu Pfu	4 oz amber jar unpres 4 oz clear jar unpres 4 oz clear jar unpres 4 oz plastic jar unpres												
U 25 ! U 2	100 mL amber glass unpresBP3C500 mL amber glass H2SO4BP3N250 mL clear glass unpresBP3S					2. 2: 2'	250 mL plastic NaOH 250 mL plastic HNO3 250 mL plastic H2SO4					VG9M 40 mL clear vial McCH VG9M 40 mL clear vial MeOH VG9D 40 mL clear vial DI					SF ZF	95T PLC	120 r ziplor	20 mL plastic Na Thiosulfate iploc bag															

GN:

F-GB-C-046-Rev.02 (29Mar2018) Sample Preservation Receipt Form

250 mL plastic H2SO4

	Do	cument Name			
Pace Analytical"	Sample Cond	ition Upon Rece	ipt (SCUR)	Docum	ent Revised: 25Apr2018
1241 Bellevue Street Groop Dev 144		ocument No.:		1	Issuing Authority
Silevice Greet, Green Bay, WI 54	1302 F-C	6B-C-031-Rev.07		Pace C	Green Bay Quality Office
Sampl	le Condition U	oon Receipt	Form (S	CUR)	
Client Name: TRC		Proje	ct #:	:   	_
	_		- W	0#:	40179962
Client E Dess	edee TUPS 🕅	Waltco			
Tracking #					
Custody Soci as 0 1 17			401	79962	
Custody Seal on Semilar D	s 🕅 no 🛛 Seals inta	ct: Tyes Th	<b>b</b>	· ·	an na semin dalah kanana "sama "sama sama sama sama sama sama s
Packing Material: Dubble Marchine	🔍 no 🛛 Seals inta	ct: 🔽 yes 🦵 n	0	1	
Thermometer liesd $SD A/A$	bble Bags 🔽 No	ne 🦵 Other			
Cooler Temperature	Type of Ice: V	t Blue Dry Nor		Samples o	n ice, cooling process has here
Temp Blank Present					biologing process has begun
Temp should be above freezing to $6^{\circ}$ C. Biota Samples may be received at $\leq 0^{\circ}$ C.	Biological	Tissue is Froze	n: 「yes	no	Person examining contents: Date: <u>11-20-18</u>
Chain of Custody Present:		1			///
Chain of Custody Filled Out: 3K 11-2	10-10 Hos RND DN/	2 No part	a cu h		1
Chain of Custody Relinquished:		2. 100 pay	e humbe		JK 11-de+
Sampler Name & Signature on COC:					
Samples Arrived within Hold Time:		- <del></del>			
- VOA Samples frozen upon receint		D.			
Short Hold Time Analysis (<72br)		Date/Time:			
Rush Turn Around Time Requests to	Lives Da(No	6.			
Sufficient Volume		7.	-		
For Analycie: Phys. D		8.			
Correct Containant Hand	:⊡Yes <b>İSK</b> No ⊡N/A				
Page Containers Used:	Qa Yes □No	9.		1	
-Face Containers Used:					
-Pace IR Containers Used:	Ves - We AVA				
Containers Intact:	Yes INo	10.			
Filtered volume received for Dissolved tests		11			
Sample Labels match COC:		11.			
-Includes date/time/ID/Analysis Matrix	. W	12.			
Trip Blank Present:					
Trip Blank Custody Seals Present		13.			
Pace Trip Blank Lot # (if purchased)	∐Yes □No BONA				
Client Notification/ Resolution:					
Person Contacted:	Date/Ti	lf	checked, see	attached	form for additional comments
comments/ Resolution:		ng.			
Project Manager Review					1
, and indian lifeliew:	<u> </u>		D	ate:	11/2015
				Entering and	110 jp
					<b>^</b> • •
					Page A Bage23

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Company Na	me: TPL					A	8 8	, @			MN: 8	12-607	-1700 つ	WI: 920-469-2436		$\sim$	~
Branch/Loca	tion: Madison WI				Pace	Ana	IYTICa	1		1			/		40'	1)996	L
Project Cont	act: H. Westares		$\neg$ (			vv vv vv. j.xc	KAMBUS-CON	,,			- 1	X		Quote #:			
Phone:	608 358 5035			C	CHA	٩IΝ	OF	Cl	JSI	ΓÓ	DX			Mail To Contact:	TRE		
Project Numl	per: 107927.000 100	9300	A=No	one B=	HCL C=	H2SO4	Preservatio D=HNO3	n Code E=DI W	15 Vater F	Methar		надн	]	Mail To Company:			
Project Name	* HARP		H=S	odium Bisu	Ifate Solut	ion	I=Sodium T	hiosulfa	ite J=	Other /			]	Mail To Address:	talia	La CT	L
Project State	: LATT	17	FILTE	RED? (NO)	Y/N	AL		T	T	t	1	TV -	Ι		0000	Madison	WI
Sampled By	(Print): Milabes bie	//	PRESER	VATION	Pick	À		+				1	1	Invoice To Contact:			<b></b>
Sampled By	(Sign):			w							1	1	<u> </u>	Invoice To Company:		TRL	
PO #:	264	Regulato Program	n:											Invoice To Address:			
Data Packa	age Options <u>MS/MSD</u>	N A = Air	Aatrix Codes	1		<u>م</u> ،									$\mathcal{W}$	indson,	CT
	A Level III (billable)	B = Biota C = Charcoal	DW ≃ Drinki GW ≈ Grour	ng Water d Water	888	a								Invoice To Phone:			
	A Level IV NOT needed on your sample	5 = Oil S = Soil SI = Sludge	SW = Sunac WW = Wast WP = Wipe	e Water Water	Vial	À								CLIENT	LAB C	OMMENTS	Profile #
PACE LAB #	CLIENT FIELD ID	DATE	OLLECTION E TIME	MATRIX										COMMENTS	(Lab	Use Only)	
	OU3-Sis-Pl-Di	<u>.</u>															
	QU3-506-19 W/W	1														ر میں	
	-043-Se6-Le																
001	003-1C-505-R	WIL	18 1400	SED		X											
002	003-IC-SOG-L		1410	1		X		Γ				I				an gan an a	
003	043-TC-SO7-L		1420			X		T		******						979-9969-9969-9969-9969-9969-9969-9969-	
004	013-DC-S08-L		1430			X			Í	*****						99999999999999999999999999999999999999	
005	0113-TC-509-L		1440			X											
006	043-TC-SID-L		1450			X				******					*******	9,000,000,000,000,000,000,000,000,000,0	
007	OU3-TC-SIL-R		1500			X									****	eepintassaa Hancintanko koksin soo kakaka kaka kaka merinta ku	
008	013-TC-SD-L-		1510			$\dot{\alpha}$								99 (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (19	****	nga manana manana manana manana manana ang akata Kamaka na an	
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010	OUZ-FBOI	$\forall \forall$	1530	alis		Ĵ.									999) - Constanting to a the second of the	<u>,</u>	n Denne and an
Rush Tu	rnaround Time Requested - Prelin	15 R.	elinquished By:	70	ο ζες	kr)	Date/7	ime:	n 0	$\alpha$	Received	l By:		Date/Time:		PACE Pro	ject No.
(Rush 1	FAT subject to approval/surcharge Date Needed:		elinovished By:	<u> </u>	0 (0)	<u>ne</u>	Dete/T	1/12 ime:	80		Received	By	L	Date/Time:		40179	942
Transmit Pre	lim Rush Results by (complete what you w	ant):	walt	<u>.</u> 0			11/2	0/18	OP1.	5	9th	Man	Pac	e 11/20/18	DQUS	Receipt Temp = L	DT oc
Email #1:		Re	elinquished By:				Date/T	ime:			Received	By:		Date/Time:		Contraction - K	
Email #2:							D-4-7					. 2%			500.400.0505.000.0005.0000.000.000	Sample Ke	ceipt pH
Fax:		FK6	anudrisuea pà;				Date/1	nne:			rxeceived	бу:		Date/ lime:		Cooler Cus	tody Seal
s	amples on HOLD are subject to	Re	elinquished By:	an a		****	Date/T	ìme:			Received	By:	******	Date/Time:	*****	Present / No	Present
spe	cial pricing and release of liability							2755000000000000000000								Intact / No	ot Intact

C019a(27Jun2006)

ORIGINAL

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

.

Page <u>1</u> of <u>2</u>

**Client Name:** 

TRC

Sample Preservation Receipt Form 40179962

Project #

	All c	ontain	ers ne	eding	pres	ervatio	on ha	ve bee	en che	cked Lab	and n Lot# c	oted t	below: baper:	□Yes	⊡No	XN/A	Lat	Std #	#ID of	prese	vatio	n (if pl	H adju	sted):					Initial comp	when pleted:		Date/ Time:	
				Glass	5	-					Plast	ic					Vi	als				Jars		G	enera	al	+ (mm3<)	R	Act pH ≥9	12	3	justed	Volume
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	NG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials	H2SO4 pH	NaOH+Zn /	NaOH pH	HNO3 pH =	pH after ad	(mL)
001		·											Γ								ł												2.5 / 5 / 10
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019																							Ista					19639				3	2.5/5/10
Excep	tions	to pre	eserva	ation c	heck:	VOA	, Coli	form,	TOC,	TOX,	тон,	0&G	, WI C	RO, F	<sup>&gt;</sup> heno	lics, C	ther:			Head	space	e in VO	DA Via	als (>6	5mm) :	□Yes	□No		*If ye	s look	in head	dspace	column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	<b>BP3N</b>	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

·				
	Docu	ment Name	Documer	t Revised: 25Apr2018
Pace Analytical	Sample Conditio	ument No		suina Authority:
1241 Bellevue Street, Green Bay, WI 54302	F-GB-	C-031-Rev.07	Pace Gre	een Bay Quality Office
Sample C	ondition Upo	n Receipt Form	(SCUR)	
· · · · · · · · · · · · · · · · · · ·		Project #:		
Client Name: TRC			WO# : 4	40179962
Courier:   CS Logistics   Fed Ex   Speeder	● FUPS KX W	/altco		
Client Pace Other:			40179962	
Tracking #: 1889096-1		- Banton .	40110306	and the second
Custody Seal on Cooler/Box Present: yes	no Seals intact:			
Packing Material: Rubble Wran D Rubble		e C Other		
Thermometer Used SR - NA	Type of Ice: Wat	Blue Dry None	IX Samples or	ice, cooling process has begun
Cooler Temperature Uncorr: ROL /Corr:	0			
Temp Blank Present: yes K no	Biological	lissue is Frozen: 🦵	yes∏no	Person examining contents:
Temp should be above freezing to $6^{\circ}$ C. Biota Samples may be received at $\leq 0^{\circ}$ C.	un men magnita Greno de Jugano de La como de			Date: <u>11-20-18</u> Initials: <u>TK</u>
Chain of Custody Present:		1.		
Chain of Custody Filled Out: OK II-201	Tres (Rino DN/A	2. No page hi	umbers .	JK 11-2012
Chain of Custody Relinquished:		3.		·
Sampler Name & Signature on COC:		4.		
Samples Arrived within Hold Time:	Xyes DNo	5.		
- VOA Samples frozen upon receipt	□Yes □No	Date/Time:	;	
Short Hold Time Analysis (<72hr):	Yes No	6.	-	
Rush Turn Around Time Requested:	□Yes XNo	7.	ļ	
Sufficient Volume:		8.		
For Analysis: 🖄 Yes 🗇 No MS/MSD:				
Correct Containers Used:	XYes INo	9.		
-Pace Containers Used:				
-Pace IR Containers Used:	TK 11-20-18		-	
Containers Intact:	XYes No	10.		
Filtered volume received for Dissolved tests		11.		
Sample Labels match COC:		12.		ġŗĸĸġĸĸġĸĸġĸĸĸġſĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸ
-Includes date/time/ID/Analysis Matrix: 5	W			
Trip Blank Present:	□Yes XNo □N/A	13.		
Trip Blank Custody Seals Present				,
Pace Trip Blank Lot # (if purchased):	`		·	
Client Notification/ Resolution:	<u> </u>	If ch	ecked, see attach	ned form for additional comments
Person Contacted:	Date/	ume:		
		*****		
				111
Project Manager Review:			Date:	··· 17.0/2
				Bara d of d