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 Hayton Area Remediation Project - OU4/Upper BRRTS No. (if known) Parcel Identification Number NA 02-08-281506 City Street Address State ZIP Code WI New Holstein 53061 Municipality where the Property is located County Property is composed of: **Property Size Acres** Single tax Multiple tax Oity O Town O 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 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
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:
<ul><li>(1) Phase I and II Environmental Site Assessment Reports,</li><li>(2) a copy of the Property deed with the correct legal description.</li></ul>
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:
(1) a draft schedule for remediation; and, (2) the name, mailing address, phone and email for each party to the agreement.
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: OU4/Upper 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.



230 W. Monroe Street Suite 630 Chicago, IL 60606

312.800.5912 PHONE 312.578.0877 FAX

www.trcsolutions.com

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



# OU4/Upper Closure Documentation Sampling Results Report



Hayton Area Remediation Project December 2018



## OU4/Upper Closure Documentation Sampling Results Report

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
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 OU4/Upper 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.

OU4/Upper was previously characterized for polychlorinated biphenols (PCBs) during multiple sampling events that preceded and followed sediment and soil removal activities. Remediation of sediments and soils was completed in OU4/Upper in 2017 through a portion of Reach S, the terminus of OU4/Upper. 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).

Targeted overbank soil excavation zones were established based on an Remediation Action Level (RAL) of 5 mg/kg (TRC, 2018). The bank soil areas were excavated to achieve the established RALs, backfilled with clean soil, and stabilized with vegetative matting and seeding to restore the bank areas and wetlands.

Targeted in-channel sediment removal areas were established to advance risk reduction considering the goal of minimization of high quality wetland disruption (TRC, 2018). Sediment removal areas were selected to remove locations with elevated PCBs and to maximize net environmental benefit and cost effectiveness if the sediment zone was near a proposed staging area or would not likely cause additional wetland impacts (TRC, 2018). The targeted in-channel sediment in OU4/Upper was excavated in the dry to hardpan (e.g., native clay), after flow diversion and dewatering sections of the stream.

Results from post remediation verification (PRV) samples were consistent with the implementation of a successful remediation program in OU4/Upper. In addition, extensive sediment and overbank soil removal activities have been completed in upstream OU's, and post-remediation sediment sampling results indicate a very low risk of exposure to PCBs

throughout OUs 1 through OU3. No further action letters have either been received or are due pursuant to the Agreement for all upstream OUs.

To confirm the effectiveness of remediation activities and to evaluate closure of OU4/Upper, post-remediation soft sediment samples were collected in OU4/Upper and evaluated consistent with the Three-Tier Closure Process agreed to among the parties (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018). The purpose of this sampling was to provide additional data regarding residual PCB concentrations in soft sediment and to demonstrate that the closure of OU4/Upper is appropriate at this time pursuant to the Three-Tier Closure Process.

## 1.2 **Purpose and Scope**

In April 2018, TRC submitted its "Operable Unit 4/Upper Remedial Documentation Report" (TRC, 2018). The purpose of that report was to document the methods used to characterize and confirm the complete removal of targeted soft sediments containing PCBs and the removal of bank soils with PCB concentrations above the RAL in OU4/Upper.

On March 3, 2016, TRC submitted the *Remedial Action Scope of Work for OU4/Upper (Revision 5) and Response to Comments* (OU4/Upper Plan) (TRC, 2016), which proposed post-remediation sediment sampling locations in sediment depositional areas. In a letter dated April 8, 2016, the WDNR provided conditional approval of the OU4/U Plan.

The post-remediation closure sediment samples from OU4/Upper were collected on November 13 and 14, 2018 following heavy rain events in accordance with the methods described in the WDNR-approved OU4/Upper Plan and under the oversight of the WDNR.

The HARP Three-Tier Closure Process focuses on evaluating the risk reduction achieved by the remediation and is based on a surface-area weighted average concentration (SWAC) for PCBs within the applicable OU/Reach (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018). The calculated SWAC for OU4/Upper confirmed that only low-level residual concentrations of PCBs are present and are within the "Tier 1" criteria.

The balance of this report presents the results of the November 2018 sediment sampling; 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 OU4/Upper Plan (TRC, 2016).

## 2.1 Field Locations

During the closure documentation sampling of OU4/Upper on November 13 and 14, 2018, each of the transect 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 ten 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 least three locations across the transect (left, center and right), conservatively biasing the sample results for purposes of a representative SWAC.

Once the location was determined in the creek with the WDNR, a sediment sample was collected. The final sample locations were located using the high-resolution GPS unit. The sediment sample locations are identified on the sediment core logs (Appendix A) and are shown on Figure 2.

In November 2018, TRC accessed the soft sediment sampling locations and collected the sediment samples in OU4/Upper from a shallow draft row boat. 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 2018 sampling event, the soft sediment core sample thickness that was recovered at the ten sampling locations ranged from 3.6 to 14.4 inches. In accordance with the OU4/U Plan (TRC, 2016), the top 6 inches of sediment was removed from the core tube for sample processing. The full thickness of soft sediment was composited and sampled from sample location S01 since it had less than 6 inches of recovery. 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 OU4/Upper samples in general accordance with the OU4/Upper Plan (TRC, 2016). 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, was submitted for laboratory analysis. In addition, one duplicate sample 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 OU4/U Plan and consistent with the QUAPP (TRC, 2017), 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. 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 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 in color.

Table 1 summarizes the physical field measurements (water depth and soft sediment thickness) collected during the November 2018 sediment sampling event. The water depths measured at the sampling locations varied from 0.6 to 3.7 feet. Soft sediment was encountered at all ten of the selected sample locations, with soft sediment thicknesses ranging from 0.7 to 2.6 feet. The soft sediment core lengths recovered at the ten sampling locations ranged from 3.6 to 14.4 inches; all of the cores except for sample location S01 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. Laboratory data sheets are included in Appendix B. Figure 2 shows the sample locations and total PCB concentration associated with each sample. The sample results ranged between 0.344 mg/kg and 1.77 mg/kg. Six of the sample results were below 1 mg/kg and all the sample results were below 2 mg/kg. 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 the sample processing equipment during the processing of the OU4/Upper sediment samples. No PCBs were detected in the equipment blank, indicating proper equipment decontamination procedures in the field.

One duplicate sample (OU4-IC-S04-L) was collected from the OU4/Upper sediment samples. The field duplicate sample relative percent difference (RPD) of 12.2% was within the Quality Control (QC) target limits of 50%.

## 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 OU3. The methodology for the calculation is presented in the OU4/Upper Plan (TRC, 2016).

Using the actual stream widths (as requested by WDNR), the SWAC calculated for the OU4/Upper was 0.88 mg/kg in November 2018 and is below the Tier 1 criterion of 1.0 mg/kg. The SWAC calculations are shown on Figure 2.

The OU4/Upper SWAC sampling was performed a year after remedy completion, and after storm events and/or spring runoff that would rework the stream bed. The November 2018 sampling event was collected after fall rain events, 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 OU4/Upper. In addition, extensive habitat restoration, preservation and enhancement both in-channel and along the bank areas is successful.

The OU4/Upper 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 Tier 1 of the Three-Tier Closure Process criteria (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018).

A SWAC in this Tier 1 range indicates a very low risk of exposure to PCBs in the bioactive sediment layer throughout OU4/Upper and warrants closure, without further remedial actions. The SWAC confirms that significant risk reduction has been achieved by the remedial activities completed in HARP OU1 through OU4/Upper. Furthermore, the samples collected for the SWAC analysis contained only fine-grained, organic-rich silt and were sampled following significant rain 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 OU4/Upper, 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 OU4/Upper was implemented with successful vegetative stabilization of the floodplain and bank areas.
- The OU4/Upper 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 Reaches H, I, and J (closed) and K through P (pending closure request) do not serve as on-going sources to OU4/Upper.
- OU4/Upper 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 OU4/Upper.
- Additional removal within OU4/Upper 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).

## 4.2 Recommendations

The results of the closure documentation sampling support the finding that closure of OU4/Upper is appropriate. Based on these results and field observations, TRC recommends OU4/Upper be closed in accordance with the Tier 1 criteria. Pursuant to Sec. III (I) of the Agreement, Tecumseh successfully completed the post-removal closure sampling of OU4/Upper (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

- NOAA. 2018. National Oceanic and Atmospheric Administration. National Climatic Data Center. Data Station ID: GHCND:USC00471568 (Chilton, WI). http://www.ncdc.noaa.gov/cdo-web/datasets. December 2018.
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- TRC. 2016. Remedial Action Scope of Work for OU4/Upper (Revision 5) and Response to Comments. HARP. March 3, 2016.
- TRC. 2017. Quality Assurance Project Plan. Hayton Area Remediation Project, Operable Unit 3/Lower and Operable Unit 4. Chilton, Calumet County, Wisconsin. Revision 3. TRC Environmental Corporation. October 2017.
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- WDNR, Tecumseh Products, and TRC. 2004. Consent Order No. 2004-COEE-010; Facility ID No. WID006116529.
- WDNR 2012. Letter from WDNR to TRC, *Hayton Area Remediation Project Path to Closure*. August 2, 2012.
- WDNR. 2016. Letter from WDNR to TRC. *Conditional Approval Remedial Action Scope of Work for OU4/Upper. HARP.* April 8, 2016.
- WDNR, Tecumseh Products and TRC. 2018. Negotiated Agreement; BRRTS #02-08-281506.

TABLES

		NOVEMBER 13-14, 2018								
SAMPLE LOCATION	IN- CHANNEL AREA <sup>(1)</sup>	WATER DEPTH (ft)	SEDIMENT THICKNESS (ft)	CORE RECOVERY (inches, at processing)						
S01	Left	3.1	0.7	3.6						
S02	Left	2.7	1.1	8.4						
S03	Left	2.0	1.4	10.8						
S04	Left	1.1	2.2	9.6						
S05	Left	1.5	1.6	11.4						
S06	Left	0.6	2.5	12.6						
S07	Right	1.3	2.6	14.4						
S08	Right	1.8	1.3	10.2						
S09	Right	1.5	1.2	10.8						
S10	Right	3.7	0.7	9.6						

 Table 1

 Physical Field Measurements - OU4/Upper Reaches Q - S

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).

SAMPLE LOCATION	SAMPLE ID	SAMPLE DATE	TOTAL PCB CONCENTRATION (mg/kg)
S01	OU4-IC-S01-L	11/13/2018	0.621
S02	OU4-IC-S02-L	11/13/2018	1.210
S03	OU4-IC-S03-L	11/14/2018	1.770
S04	OU4-IC-S04-L	11/14/2018	1.610
S05	OU4-IC-S05-L	11/14/2018	1.030
S06	OU4-IC-S06-L	11/14/2018	0.457
S07	OU4-IC-S07-R	11/14/2018	0.344
S08	OU4-IC-S08-R	11/14/2018	0.470
S09	OU4-IC-S09-R	11/14/2018	0.459
S10	OU4-IC-S10-R	11/14/2018	0.774

Table 2 Summary of Sediment Analytical Results - OU4/Upper Reaches Q - S

FIGURES







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	5	73	24,332	1.77	43320						
-3-	<b>S4</b>	A4	27,931	1.61	44970						
	S5	A5	17,774	1.03	18307						
	<b>S6</b>	A6	24,830	0.457	11347						
	S7	A7	23,490	0.344	8080						
	<b>S8</b>	A8	28,159	0.47	13235						
5	<b>S</b> 9	A9	0.459	6195							
	S10	A10	0.774	16899							
		TOTAL AREA:	SUM, A*C:	195,525							
	SEE NOTE	2	11-2018 SWAC = 195525/222351 = 0.88								
<u>LE</u>	GEND										

SAMPLE ID NOVEMBER 2018 PCB RESULT [mg/kg]

SEDIMENT SAMPLING/TRANSECT LOCATION LABEL FORMAT

SWAC SEDIMENT ANALYSIS AREA

## <u>NOTES</u>

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

	DRAWN BY:	j. papez	SCALE:	1: 3,600		HARP OU4/UPPER	CALUMET	COUNTY, WI
708 Heartland Trail Suite 3000 Madison, WI 53717	CHECKED BY:	b. wachholz	0	1 " = 300 '	300	OU4/UPPER CLOSUBE DOCUMENT	ATION	
Phone: 608.826.3600 Fax: 608.826.3941	APPROVED BY:	c. harvey	DATE PR	INTED:		NOVEMBER 2018	8	
www.trcsolutions.com	DATE:	DECEMBER 2018				PROJ. NO. DWG. NAME 107927-9300 197927-9300-035A.mxd		FIGURE 2

APPENDIX A



BORING	NO. OU4	S-01L	Nov 2018
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														Page 1 of 1		
Facilit	y/Proje	ct Name	e:					Date Drilling Started	Date Drilling	Comple	eted:	Project Number:				
Ha	ayton	Area	Rem	ediation Pr	oject Clos	ure Docum	nentation	11/13/18	1	11/1	3/18		1	07927.0000		
Drilling	g Firm:				Drilling Meth	nod:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (i	in bgs)	Borehole Dia. (in)		
TF	RC Er	viron	ment	al Corp.		Push tube	Э					3.6		2		
Boring	J Locati	on: Pi	ne Cree	ek, Reach Q				Personnel			Drillin	g Equip	ment:			
State	Plane	N· 7	37670	07 F <sup>.</sup> 2465	5197.08			Logged By - M. We Driller - M. Westow	estover er/R W	achholz		2" P		ore Tube		
Civil T	own/Ci	tv/or Vi	llage:	County:	107.00	State:		Water Level Observ	ations:			2 1	100			
								While Drilling:	Date	/Time			Dept	h (ft bgs)		
N	lew H	olstei	n	Calu	umet	Wise	consin	After Drilling:	Date	/Time			Dept	h (ft bgs)		
												0				
ш	37 (*	-ND	N			D	ESCRIPTIC	DN				LO(	C	OMMENTS		
ΥPI	VEF	00 /	∐ H			_						HIC				
ND ND		No-	EPT								scs	RAP				
ЪЯ	RE	В	ä								) ĭ	Ū	0.1. 0.1			
			-		IIC SILT (O	)L), and plate	ant material,	trace very fine s	sand,			لر کم	0 to 3.6 analytic	o interval collected for cal sample.		
					105176, 510	рру.						، کر . لر . کر				
			-									لرجم [				
cs			-	1							0	الجمر				
			2-	1								کر · کر • کر •				
			-	-								کم کر				
			-	-								ارم <sup>.</sup> کر				
			-			-						7.7				
			4-	End of o	core at 3.6	inches.										
			<sup>-</sup>	Original	S01 locati	ion had no	recovery or	n R and L banks	; 0.3 f	t clay						
				recover	y in center	. woveu (	ลาเรษต์ เป็นไป									
			-	At alterr	nate S01 tr	ransect, co	llected analy	ytical sample fro	m L b	ank vs.			Recove	ery (feet):		
			-	center d	lue to less	plant mate	erial present	(more sedimen	t).				C: 0.3	ne		
			6-	1									R. NO			
			-	-												
			-	-												
			-													
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			-	1												
			-	-												
			-													
			10-													
			-													
			-													
			-	1												
			14													
			1.4													
			-													
			-	1												
			-	-												
Signe	turo:					I	Firm: TDO -							(608) 826 2600		
Jyna	ure.						708 He	nvironmental Corp artland Trail Suite	). ∋ 3000	Madison \	NI 53	717	Fa×	(608) 826-3941		
							100110							(		



SOIL CORE LOG (INCHES) W/PHOTO HARP\_HAYTONWI\_169240.GPJ 107927.0000 12/12/18

	2							В	ORIN	ig no. O	U4 S	5-02L	Nov	2018
Facilit	v/Proie	ct Nam	e:					Date Drilling Starter	d:	Date Drilling	Comple	eted:	Page 1 Proiect	of 1 t Number:
Ha	avton	Area	Rem	ediation P	roiect Clos	ure Docur	nentation	11/13/18		11/1	3/18		1(	07927.0000
Drilling	g Firm:				Drilling Meth	nod:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (i	n bgs)	Borehole Dia. (in)
TF	RC Er	nviron	menta	al Corp.		Push tub	e					8.4		2
Boring	g Locati	ion: Pi	ne Cree	ek, Reach Q				Personnel	laatavar		Drillin	g Equipi	ment:	
State	Plane	N: 7	38043.	06 E: 2464	4956.56			Driller - M. Westov	ver/B. W	/achholz		2" P	VC C	ore Tube
Civil T	own/Ci	ity/or Vi	llage:	County:		State:		Water Level Observ While Drilling:	vations: Date	e/Time			Depth	n (ft bas)
N	lew H	lolste	in	Cal	umet	Wis	sconsin	After Drilling:	Date	e/Time	1	1	Depth	n (ft bgs)
AND TYPE AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	<b>ORGAN</b> gray, no	<b>IIC SILT (C</b> on-cohesiv	I DL), trace v e, loose.	LITHOLOG DESCRIPT very fine sa	BIC ION nd, 10YR 3/1 ver	y dark	ς	nscs	GRAPHIC LOG	C to 6 in analytic	OMMENTS
CS			- 2 - 4 -								OL		Recove L: 0.7 C: 0.5	ry (feet):
			6 — - 8 — -	End of	core at 8.4	inches.							R. 0.03	
			- - 10 - -											
			- 12— -											
											1			
Signat	ture:						Firm: TRC 708 F	Environmental Corp leartland Trail, Suit	p. e 3000	) Madison, V	VI 53 <sup>.</sup>	717	Fax	(608) 826-3600 (608) 826-3941



## SEDIMENT CORE LOG

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Page 1 of 1       Page 1 of 1       Page 1 of 1       Hayton Area Remediation Project Closure Documentation       Date Driling Statest:       Date Driling Statest:       Date Driling Statest:       TRC Remediation Project Closure Documentation       TRC Environmental Corp.       Push tube       Parameter       Differ Statest:       Differ Statest:       Differ Statest:       Differ Statest:       Colspan="2">Differ Statest:       Differ Statest:       Differ Statest:       Differ Statest:       Differ Statest:       Differ Statest:       Differ Statest:       Cold Tom/Colver Village:       Differ Statest:		2			j.			BC	ORIN	g no. o	U4 S	6-03L	. Nov	/ 2018	
Carding operations     Carding denote     Carding d	Facilit	v/Projec	rt Nam	۵.				Date Drilling Started		Date Drilling	Comple	ated.	Page 7	1 of 1 Number:	
Diffing Firm:     Diffing Memory     Diffing Memory     Surface Env (n)     Tool Environmental Corp.     Push tube       10.8     2       TRC Environmental Corp.     Push tube       10.8     2       Bordy Location - Trob Cetek, Read O     Personel     Differ - Memory     Differ - Memory     Differ - Memory     2* PVC Core Tube       Coll Towodby/re Village:     Control     Control     State:     Wate Lovel Observation:     2* PVC Core Tube       New Holstein     Calumet     Wisconsin     After Driling:     Date Time     Depth (it tog)       SAMPLE     g     g     g     g     g     g     g       Same as above, but becoming mixed with silty lean clay, silty clay     oil of force at 10.8 inches.     oil of force at 10.8 inches.     oil of force at 10.8 inches.       No clay observed in sample from R bank.     12-     14-     14-     14-	H	avton	Area	e. Reme	- diation P	roject Clos	sure Documentation	11/14/18				2/18		107927 0000	
TRC Environmental Corp.     Push tube       10.8     2       Boring Laudion:     Pine Credit, Reach Q     Personal     Diffier Stavprover     Diffier St	Drillin	g Firm:	71100	Rome		Drilling Met	thod:	Surface Elev. (ft)	TOCI	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)	
Boring Location:         Prescreet         Deling Equipment:         Deling Equipment:         Deling Equipment:         Deling Equipment:         2" PVC Core Tube           State Plane:         N: 738325.75         E: 246495.47         Bate         Wate Level Cosewations:         Deling Equipment:         2" PVC Core Tube           New Holstein         Catumet         Wisconsin         Wate Level Cosewations:         Deling Equipment:         2" PVC Core Tube           SwampLE         Catumet         Wisconsin         Wate Level Cosewations:         Deling Equipment:         Deling Equipment:         0           SwampLE         Catumet         Wisconsin         Wate Level Cosewations:         Deling Equipment:         Deling Equipment:         0           SwampLE         Group         Group         Catumet         UITHOLOGIC         Deling Equipment:         Deling Equipment:         Deling Equipment:           Update         Group         Group         Group         Deling Equipment:         CoMMENT:           SwampLing         Group         Group         Deling Equipment:         CoMMENT:         CoMMENT:           SwampLing         Group         Group         Group         CoMMENT:         CoMMENT:           SwampLing         Group         Group         Group         Gr	TF	RC Er	viron	menta	al Corp.		Push tube					10.8		2	
State Plane N: 73328.75 E: 246495.47     Logger by -M. Westworff. Watchindz     2" PVC Core Tube       New Holstein     Calumet     State:     Water Level Observations: White Duling:     Date: Time     Depth (ft bps)       SAMPLE     If     Same     Calumet     Usconsin     Atter Duling:     Date: Time     Depth (ft bps)       Same as above, but becoming mixed with silty lean clay, silty clay     OL     Process with depth.     Process with depth.       CS     A     A     A     A     A       CS     B     B     Context transferred and bark.     Context transferred and bark.       CS     B     B     Context transferred and bark.     Context transferred and bark.	Boring	g Locati	on: Pi	ne Cree	k, Reach Q			Personnel			Drillin	ig Equip	ment:	I	
Coll Two/Childree Claumet Visconsin	State	Plane	N: 7	38326.7	75 E: 2464	4945.47		Logged By - M. We Driller - M. Westove	estover er/B. W	achholz		2" F	VC C	ore Tube	
New Holstein     Calumet     Wisconsin     Atter Drilling     Date/Time     Depth (ft bgs)       SMMPLE     Image: Some set of the set of	Civil 7	own/Ci	ty/or Vi	llage:	County:		State:	Water Level Observer While Drilling:	ations: Date	/Time			Dept	h (ft bgs)	
under term     underterm     underterm     underterm	N	lew H	olstei	in	Cal	umet	Wisconsin	After Drilling:	Date	/Time			Dept	h (ft bgs)	
CS ORGANIC SILT (OL), with decaying leaves and bark, trace fine sand, 10YR 3/1 very dark gray, non-cohesive, loose.  C O C O C O C O C O C C O C C C C C C	NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLOG DESCRIPTI	SIC ON			USCS	GRAPHIC LOG	C	OMMENTS	
	CS				ORGAN sand, 1 Same a content	NC SILT ( OYR 3/1 v as above, increases	<b>DL)</b> , with decaying leavery dark gray, non-collected by the second seco	ves and bark, trac hesive, loose.	silty	clay	OL		0 to 6 i analytic L: 0.9 C: 0.7 R: 0.5	nterval collected for cal sample. ery (feet): 5	

	E LOG (INCHES) W/PHOTO HARP_HAYTONWI_169240.GPJ 107927.0000 12/12/18		Same as above, but becoming mixed with silty lean clay, silty clay content increases with depth.  End of core at 10.8 inches. No clay observed in sample from R bank.			
Firm:TRC Environmental Corp.(608) 826-3Signature:708 Heartland Trail, Suite 3000 Madison, WI 53717Fax (608) 826-3	SOIL CORE	Signature:	Firm: TRC Environmental Corp. 708 Heartland Trail, Suite 3000 Madison,	WI 537	17	(608) 826-3600 Fax (608) 826-3941



C						BC	RING	NO. O	U4 S	6-04L	Nov	2018
Facility/Proie	ct Nam	e.				Date Drilling Started		ate Drilling	Comple	eted:	Project	ot 1 Number
	Araa	Dom	odiation D	roloct Cla	ouro Documentation			1 1 / 1	1/10	.cu.	10,000	
rilling Firm	Area	Rem				Surface Fley (ff)		(1/1 vation (ft)	H/ Ið	Denth (	I ( I (	Borehole Dia (i
	nviror	mont	al Corp		Push tuha				, otal	0 A	593)	201011010 Dia. (I
oring Locati	ion: Pi	ne Cree	ek, Reach R			Personnel	-		Drillin	g Equip	ment:	۷.
	N -	00000	40 E 040	1005 00		Logged By - M. We	stover					ara Tuka
tate Plane	N: 7	38623.	13 E: 2464	1835.03	State <sup>.</sup>	Uriller - M. Westove	er/B. Wacl	nholz		2 P		equit end
	ity/Or Vi	ilage.	County.		State.	While Drilling:	Date/Ti	me			Depth	ı (ft bgs)
New H	lolste	in	Cal	umet	Wisconsin	After Drilling:	Date/Ti	me			Depth	i (ft bgs)
RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LITHOLOG DESCRIPT	GIC ION			USCS	GRAPHIC LOG	C	OMMENTS
3			End of Sample of core	core at 9. from R b is dark br	<b>6 inches.</b> ank has only 0.3 feet ( own peaty material wit	DL as at L bank sa h few white shells	ample;	rest	OL		Duplicat Recover L: 0.8 C: 0.45 R: 0.8	e sample collecte ry (feet):
Signature:					Firm: TRC	Environmental Corp.		A - 11		74-7		(608) 826-36



## SEDIMENT CORE LOG

## BORING NO. OU4 S-05C Nov 2018

													Page 1	of 1
Facility	//Proje	ct Name	e:					Date Drilling Started	Date Drilling	Comple	eted:	Project Number:		
Ha	ayton	Area	Rem	ediation Pr	oject Closi	ure Documenta	tion	11/14/18 11			4/18		1	07927.0000
Drilling	Firm:				Drilling Methe	bd:		Surface Elev. (ft)	TOCE	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)
TR	RC Er	nviron	ment	al Corp.		Push tube						11.4		2
Boring State Civil To	Locati Plane own/Ci	ion: Pi N: 7: ity/or Vi	ne Cree 38729. Ilage:	ek, Reach R 68 E: 2464 County:	287.71	State:		Personnel Logged By - M. Westover Driller - M. Westover/B. Wachholz Water Level Observations: While Drilling: Date/Time				ng Equip 2" F	vment: VCC Depti	ore Tube
N	ew H	lolstei	n	Calu	ımet	Wisconsi	in	After Drilling:	Date	/Time			Dept	h (ft bgs)
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	ORGAN	IC SILT (O	LITH DESC L), trace fine sa	OLOGI RIPTIC	C DN YR 3/1 very darł	<u>k</u> grav	,	nscs	GRAPHIC LOG	C 0 to 6 ir	
CS				Same as soft.	s above, b s above, b from R ba e sample f	ecoming more of the set of the se	cohesiv y startir for ana	/e at 0.5 feet, no	n-pla	, stic, 55 feet;	OL		Recove L: 0.9 R: 1.1	sal sample. sry (feet): 5
Signat	ure:					Firm:	TRC Er 708 He	nvironmental Corp artland Trail, Suite	9 3000	Madison, V	VI 53	717	Fax	(608) 826-3600 (608) 826-3941



BORING	NO.	OU4	S-06L	Nov	2018
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										-		Page 1 of 1	
Facilit	y/Proje	ct Name	):				Date Drilling Started	:	Date Drilling	Comple	eted:	Project Number:	
Ha	ayton	Area	Rem	ediation Pr	oject Closi	ure Documentation	11/14/18		11/1	4/18		107927.0000	
Drilling	g Firm:				Drilling Metho	od:	Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs) Borehole Dia. (in)	
TF	RC Er	nviron	ment	al Corp.		Push tube					12.6	2	
Boring	g Locati	ion: Pir	ne Cree	ek, Reach R			Personnel	stover		Drilling Equipment:			
State	Plane	N: 73	8792.	09 E: 2463	818.94		Driller - M. Westove	er/B. W	/achholz		2" P	VC Core Tube	
Civil T	own/Ci	ty/or Vil	lage:	County:		State:	Water Level Observ	ations:	/Time			Dopth (ft bac)	
N	New Holstein         Calumet         Wisconsin         After Drilling:         Date/Time											Depth (ft bgs)	
SAM	IPLE												
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	ORGAN	IC SILT (O	LITHOLOG DESCRIPTI	IC ON DYR 3/1 very darl		4	nscs	GRAPHIC LOG	COMMENTS	
CS				Same as pieces of End of c Center s	s above, b f decaying	ecoming cohesive, no ywood.	on-plastic, soft, o	ccasi	onal	OL		Recovery (feet): L: 1.05 C: 0.85 R: 0.8	
Signat	ture:					Firm: TRC F	Environmental Corp					(608) 826-3600	
						708 H	eartland Trail, Suite	e 3000	) Madison, V	VI 53	717	Fax (608) 826-3941	



BORING NO. OU4	S-07R Nov 2018
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												Page	1 of 1	
Facilit	y/Proje	ct Name	e:				Date Drilling Started:		Date Drilling	Comple	eted:	Projec	ct Number:	
Ha	ayton	Area	Rem	ediation Pr	oject Clos	ure Documentation	11/14/18		11/1	4/18		1	07927.0000	
Drilling	g Firm:				Drilling Met	hod:	Surface Elev. (ft)	TOCI	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)	
TF	KC Er		menta			Push tube				14.4 2				
Boring	j Locati	ion: Pli	ne Cree	ek, Reach R			Logged By - M. We	stover		Drilling Equipment:				
State	Plane	N: 7	38742.	81 E: 2463	3581.89	0	Driller - M. Westove	er/B. W	achholz		2" P	VC C	Core Tube	
Civil T	own/Ci	ty/or Vi	llage:	County:		State:	water Level Observa	ations: Date	/Time			Dept	th (ft bgs)	
N	lew H	lolstei	n	Calı	umet	Wisconsin	After Drilling:	Date	/Time			Dept	th (ft bgs)	
SAN	IPLE	-												
			ES											
	(%)	NTS	NCH			LITHOLOG	SIC				00	C	COMMENTS	
жé	ĒŖ		Z			DESCRIPT	ION							
D T)	C0 V	MO	РТН							S	APF			
AN	RE	BL(	DE							N	GR			
				ORGAN	IIC SILT (C	<b>DL),</b> trace fine sand, 1	0YR 3/1 very dark	k gray	',		· / ·	0 to 6 i analyti	interval collected for cal sample.	
				non-cor	iesive, 100	se, nue decaying pla	in libers and roots	<b>.</b>			م . کم			
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											بحربا			
											بحر ا			
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											7.	Recov	ery (feet):	
			-								بمر بم	C: 0.7		
			6-								بمربح الم			
			-								7.			
cs			-							OL	بر کر	1		
			-	_							7.			
			8-	Same a	s above, ł	becomes more cohes	ive, non-plastic, so	oft, fe	wer		بر تم			
			-	recoyni	zabie hiali	i paris.					7.7			
			-								بر بر			
			-								بر جمر			
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			14 —	Gravial	ty clay in l	ase of tube					بحربا			
			-	End of	core at 14	.4 inches.					<u> </u>			
			-	No clay	observed	at L or C samples; C	sample only uppe	er 0.3	feet is					
			-	non-coh	iesive.									
Signa	ture:					Firm: TDO	Environmental Carra						(608) 826-3600	
Gigilia						708	leartland Trail, Suite	9 3000	Madison, V	NI 53	717	Fax	(608) 826-3941	
							,		, -					



BORI	NG NO. OU4 S-08R Nov 2018	
	Page 1 of 1	

													Page 1	1 01 1
Facilit	y/Proje	ct Name	e:					Date Drilling Started: Date Drilling				eted:	t Number:	
Н	ayton	Area	Rem	ediation Pr	oject Clos	ure Docur	nentation	11/14/18 11/1			4/18		107927.0000	
Drillin	g Firm:				Drilling Meth	iod:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (i	in bgs)	Borehole Dia. (in)
TF	RC Er	viron	ment	al Corp.		Push tub	e		10.			10.2		2
Boring	g Locati	on: Pir	ne Cree	ek, Reach R				Personnel			Drillin	g Equip	ment:	
State	Plane	N· 7?	39200	94 E 2/63	258 88			Logged By - M. V	Vestover	/achholz		2" P	VCC	ore Tube
Civil	Town/Ci	tv/or Vil	lage:	County:	200.00	State:		Water Level Obse	rvations:			2 1		
								While Drilling:	Date	e/Time			Dept	h (ft bgs)
	lew H	olstei	n	Calı	umet	Wis	sconsin	After Drilling:	Date	e/Time			Dept	h (ft bgs)
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	<b>ORGAN</b> decayin	<b>IC SILT (O</b> g twigs, ba	[ <b>L),</b> trace f ark, and pl	LITHOLOGI DESCRIPTIC ine sand, 10 ant fibers, no	IC DN IYR 3/1 very da on-cohesive, lo	irk gray ose.	y,	nscs	GRAPHIC LOG	C 0 to 6 i analytic	COMMENTS
200 12/12/18 B			2  4       -	Same a (rework	s above, b ed)	ecomes n	nixed with gr	ay clay at 0.65	feet		OL		Recove L: 0.5 C: 0.6 R: 0.8	ery (feet): 5 5 5
27.00			-		EAN CLAY	<b>r (CL)</b> , gra	ay.				СІ			
107{			10 —	-										
NCHES) W/PHOTO HARP_HAYTONWI_169240.GPJ				End of ( Both R 0.3 feet similar t	core at 10. and C have , then becc o C.	<b>2 inches.</b> e same so oming san	oft sediment dy with som	recovery; C no e coarse sand a	n-cohe at base	esive to e. L				
00			-											
<b></b>	•													
Signa	ture:						Firm: TRC E	nvironmental Co	rp.		A/1 = 2	747	<b>F</b>	(608) 826-3600
sc							708 He	eartiand Trail, Sui	ite 3000	v iviadison, V	VI 53	/1/	гах	(000) 020-3941



BORING NO.	OU4 S-09R	Nov 2018
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													Page	1 of 1
Facilit	y/Proje	ct Nam	e:					Date Drilling Started: Date Drilling				eted:	Project Number:	
Ha	ayton	Area	Rem	ediation Pr	oject Clos	ure Docur	mentation	11/14/18 11/					107927.0000	
Drilling	g Firm:				Drilling Meth	od:		Surface Elev. (ft)	TOCI	⊢levation (ft)	Total	Depth (	ın bgs)	Borehole Dia. (in)
			ment	al Corp.		Push tub	be	 Porsonnel			Drillim	10.8	mont	2
State Civil T	State Plane     N: 739891.73     E: 2462854.32       Civil Town/City/or Village:     County:     State:							Logged By - M. We Driller - M. Westov Water Level Observ	estover er/B. W rations:	achholz		2" P		Core Tube
	New Holstein         Calumet         Wisconsin         After Drilling:         Date/Time											Dept	h (ft bgs)	
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES	ORGAN		I) trace (	LITHOLOGI DESCRIPTIC	C DN YR 3/1 verv dar	k grav	1	nscs	GRAPHIC LOG	0 to 6	
				ORGAN non-coh	IC SILT (O hesive, loos s above, b	L), trace t se, decay ecoming 8 inches. janic silt b	fine sand, 10 ing plant mat	YR 3/1 very dar erial throughout	k gray	7, 0.65 5 feet.	OL		0 to 6 analyti L: 0.6 C: 0.7 R: 0.9	ery (feet): 5
Signa	ture:						Firm: TDO 5	nvironmentel Oc						(608) 826-3600
							708 He	eartland Trail, Suite	,. e 3000	Madison,	NI 53	717	Fax	(608) 826-3941



BORING NO.	OU4 S-10R	Nov 2018
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												Page 1 of 1		
Facility/Pro	Facility/Project Name:						Date Drilling Started: Date Drilling					Projec	Project Number:	
Hayto	n Area	Rem	ediation Pr	oject Closı	ire Docume	entation	11/14/18	1	11/1	4/18		1	07927.0000	
Drilling Firm	n:			Drilling Metho	od:		Surface Elev. (ft)	TOC	Elevation (ft)	Total	Depth (	in bgs)	Borehole Dia. (in)	
TRCE	Environ	ment	al Corp.	L	Push tube				<u> </u>	9.6		2		
State Plan Civil Town/	ation: Pi e N: 7 City/or Vi Holste	ne Cree 40214. Ilage: In	ek, Reach S 87 E: 2462 County: Calu	823.41 Imet	State: Wisco	onsin	Personnel Logged By - M. We Driller - M. Westov Water Level Observ While Drilling: After Drilling:	achholz /Time /Time	Drillin	g Equip 2" P	Depth (ft bgs)			
SAMPLE							·						(	
NUMBER AND TYPE RECOVERY (%)	BLOW COUNTS	DEPTH IN INCHES			LI DE	ITHOLOGI ESCRIPTIC	C DN			USCS	GRAPHIC LOG	C	COMMENTS	
CS			ORGAN non-coh Same as fine grav	IC SILT (OI esive, loos s above, be /el and she cortains	L), trace finder, decaying e, decaying coordinates of the second	e sand, 10 g plant mat	YR 3/1 very dari erial throughout n-plastic, soft, tr ment over clay.	ace to	o few	OL		0 to 6 i analytic L: 0.4 C: 0.4 R: 0.8	nterval collected for cal sample.	
Signature:					irm: TRC El 708 He	nvironmental Corp	). e 3000	Madison \	WI 53	717	Fax	(608) 826-3600 (608) 826-3941		

APPENDIX B

LABORATORY REPORTS



December 05, 2018

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

## RE: Project: 107927.0000.100 9300 HARP Pace Project No.: 40179971

Dear Chris Harvey:

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

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





#### CERTIFICATIONS

Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

#### **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.: 40179971

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40179971001	OU4-IC-S06-L	Solid	11/17/18 11:00	11/20/18 09:15
40179971002	OU4-IC-S07-R	Solid	11/17/18 11:10	11/20/18 09:15
40179971003	OU4-IC-S08-R	Solid	11/17/18 11:20	11/20/18 09:15
40179971004	OU4-IC-S09-R	Solid	11/17/18 11:30	11/20/18 09:15
40179971005	OU4-IC-S10-R	Solid	11/17/18 11:40	11/20/18 09:15
40179971006	OU4-IC-S01-L	Solid	11/16/18 16:00	11/20/18 09:15
40179971007	OU4-IC-S02-L	Solid	11/16/18 16:10	11/20/18 09:15
40179971008	OU4-IC-S03-L	Solid	11/16/18 16:20	11/20/18 09:15
40179971009	OU4-IC-S04-L	Solid	11/16/18 16:30	11/20/18 09:15
40179971010	OU4-IC-S05-C	Solid	11/16/18 16:40	11/20/18 09:15
40179971011	OU4-IC-DUP01	Solid	11/16/18 00:00	11/20/18 09:15
40179971012	OU4-FB01	Water	11/17/18 12:10	11/20/18 09:15



#### SAMPLE ANALYTE COUNT

Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40179971001	OU4-IC-S06-L	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179971002	OU4-IC-S07-R	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179971003	OU4-IC-S08-R	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179971004	OU4-IC-S09-R	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40179971005	OU4-IC-S10-R	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971006	OU4-IC-S01-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971007	OU4-IC-S02-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971008	OU4-IC-S03-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971009	OU4-IC-S04-L	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971010	OU4-IC-S05-C	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971011	OU4-IC-DUP01	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40179971012	OU4-FB01	EPA 8082	BDS	10	PASI-G



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S06-L
 Lab ID:
 40179971001
 Collected:
 11/17/18 11:00
 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)	<30.4	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	12674-11-2	
PCB-1221 (Aroclor 1221)	<30.4	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	11104-28-2	
PCB-1232 (Aroclor 1232)	<30.4	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	53469-21-9	
PCB-1248 (Aroclor 1248)	<30.4	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	12672-29-6	
PCB-1254 (Aroclor 1254)	369	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	11097-69-1	
PCB-1260 (Aroclor 1260)	87.2	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	11096-82-5	
PCB, Total	457	ug/kg	60.9	30.4	1	11/26/18 14:06	11/27/18 19:33	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	56-98		1	11/26/18 14:06	11/27/18 19:33	877-09-8	
Decachlorobiphenyl (S)	69	%	49-104		1	11/26/18 14:06	11/27/18 19:33	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	17.9	%	0.10	0.10	1		11/27/18 10:46		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S07-R
 Lab ID:
 40179971002
 Collected:
 11/17/18 11:10
 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 Prepa	ration Metho	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<33.7	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.7	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	11104-28-2	
PCB-1232 (Aroclor 1232)	<33.7	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	11141-16-5	
PCB-1242 (Aroclor 1242)	<33.7	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	53469-21-9	
PCB-1248 (Aroclor 1248)	<33.7	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	12672-29-6	
PCB-1254 (Aroclor 1254)	281	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	11097-69-1	
PCB-1260 (Aroclor 1260)	62.6J	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	11096-82-5	
PCB, Total	344	ug/kg	67.4	33.7	1	11/26/18 14:06	11/27/18 19:55	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	76	%	56-98		1	11/26/18 14:06	11/27/18 19:55	877-09-8	
Decachlorobiphenyl (S)	66	%	49-104		1	11/26/18 14:06	11/27/18 19:55	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	25.8	%	0.10	0.10	1		11/27/18 10:46		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S08-R
 Lab ID:
 40179971003
 Collected:
 11/17/18 11:20
 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	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)	<28.5	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	12674-11-2	
PCB-1221 (Aroclor 1221)	<28.5	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.5	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	11141-16-5	
PCB-1242 (Aroclor 1242)	124	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	53469-21-9	
PCB-1248 (Aroclor 1248)	<28.5	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	12672-29-6	
PCB-1254 (Aroclor 1254)	267	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	11097-69-1	
PCB-1260 (Aroclor 1260)	79.8	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	11096-82-5	
PCB, Total	470	ug/kg	57.0	28.5	1	11/26/18 14:06	11/27/18 20:17	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	71	%	56-98		1	11/26/18 14:06	11/27/18 20:17	877-09-8	
Decachlorobiphenyl (S)	62	%	49-104		1	11/26/18 14:06	11/27/18 20:17	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	12.3	%	0.10	0.10	1		11/27/18 10:46		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S09-R
 Lab ID:
 40179971004
 Collected:
 11/17/18 11:30
 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	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)	<27.0	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	12674-11-2	
PCB-1221 (Aroclor 1221)	<27.0	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	11104-28-2	
PCB-1232 (Aroclor 1232)	<27.0	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	11141-16-5	
PCB-1242 (Aroclor 1242)	<27.0	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	53469-21-9	
PCB-1248 (Aroclor 1248)	<27.0	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	12672-29-6	
PCB-1254 (Aroclor 1254)	368	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	11097-69-1	
PCB-1260 (Aroclor 1260)	90.5	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	11096-82-5	
PCB, Total	459	ug/kg	54.1	27.0	1	11/26/18 18:37	11/27/18 13:43	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	56	%	56-98		1	11/26/18 18:37	11/27/18 13:43	877-09-8	
Decachlorobiphenyl (S)	53	%	49-104		1	11/26/18 18:37	11/27/18 13:43	2051-24-3	
Percent Moisture	Analytical	Method: AS	FM D2974-87						
Percent Moisture	7.6	%	0.10	0.10	1		11/27/18 10:46		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S10-R
 Lab ID:
 40179971005
 Collected:
 11/17/18 11:40
 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 Prepar	ration Meth	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<78.4	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<78.4	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	11104-28-2	
PCB-1232 (Aroclor 1232)	<78.4	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<78.4	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	53469-21-9	
PCB-1248 (Aroclor 1248)	<78.4	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	12672-29-6	
PCB-1254 (Aroclor 1254)	629	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	11097-69-1	
PCB-1260 (Aroclor 1260)	145J	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	11096-82-5	
PCB, Total	774	ug/kg	157	78.4	1	11/26/18 18:37	11/27/18 14:01	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	62	%	56-98		1	11/26/18 18:37	11/27/18 14:01	877-09-8	
Decachlorobiphenyl (S)	59	%	49-104		1	11/26/18 18:37	11/27/18 14:01	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	68.1	%	0.10	0.10	1		11/26/18 14:25		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S01-L
 Lab ID:
 40179971006
 Collected:
 11/16/18 16:00
 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	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)	<58.9	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	12674-11-2	
PCB-1221 (Aroclor 1221)	<58.9	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	11104-28-2	
PCB-1232 (Aroclor 1232)	<58.9	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	11141-16-5	
PCB-1242 (Aroclor 1242)	<58.9	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	53469-21-9	
PCB-1248 (Aroclor 1248)	<58.9	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	12672-29-6	
PCB-1254 (Aroclor 1254)	509	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	11097-69-1	
PCB-1260 (Aroclor 1260)	112J	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	11096-82-5	
PCB, Total	621	ug/kg	118	58.9	1	11/26/18 18:37	11/27/18 14:19	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	62	%	56-98		1	11/26/18 18:37	11/27/18 14:19	877-09-8	
Decachlorobiphenyl (S)	57	%	49-104		1	11/26/18 18:37	11/27/18 14:19	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	57.6	%	0.10	0.10	1		11/26/18 14:25		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S02-L
 Lab ID:
 40179971007
 Collected:
 11/16/18 16:10
 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.
 Image: Solid Solid

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EP	A 8082 Prepa	ration Methe	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<72.4	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	12674-11-2	
PCB-1221 (Aroclor 1221)	<72.4	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	11104-28-2	
PCB-1232 (Aroclor 1232)	<72.4	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	11141-16-5	
PCB-1242 (Aroclor 1242)	<72.4	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	53469-21-9	
PCB-1248 (Aroclor 1248)	<72.4	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	12672-29-6	
PCB-1254 (Aroclor 1254)	972	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	11097-69-1	
PCB-1260 (Aroclor 1260)	236	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	11096-82-5	
PCB, Total	1210	ug/kg	145	72.4	1	11/26/18 18:37	11/27/18 14:38	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	64	%	56-98		1	11/26/18 18:37	11/27/18 14:38	877-09-8	
Decachlorobiphenyl (S)	58	%	49-104		1	11/26/18 18:37	11/27/18 14:38	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	65.5	%	0.10	0.10	1		11/26/18 14:26		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S03-L
 Lab ID:
 40179971008
 Collected:
 11/16/18 16:20
 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	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)	<73.6	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	12674-11-2	
PCB-1221 (Aroclor 1221)	<73.6	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	11104-28-2	
PCB-1232 (Aroclor 1232)	<73.6	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	11141-16-5	
PCB-1242 (Aroclor 1242)	458	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	53469-21-9	
PCB-1248 (Aroclor 1248)	<73.6	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	12672-29-6	
PCB-1254 (Aroclor 1254)	1010	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	11097-69-1	
PCB-1260 (Aroclor 1260)	306	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	11096-82-5	
PCB, Total	1770	ug/kg	147	73.6	1	11/26/18 18:37	11/27/18 14:56	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	63	%	56-98		1	11/26/18 18:37	11/27/18 14:56	877-09-8	
Decachlorobiphenyl (S)	60	%	49-104		1	11/26/18 18:37	11/27/18 14:56	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	66.1	%	0.10	0.10	1		11/26/18 14:26		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S04-L
 Lab ID:
 40179971009
 Collected:
 11/16/18 16:30
 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 Prepa	ration Meth	od: EP	A 3541			
PCB-1016 (Aroclor 1016)	<64.6	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	12674-11-2	
PCB-1221 (Aroclor 1221)	<64.6	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	11104-28-2	
PCB-1232 (Aroclor 1232)	<64.6	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	11141-16-5	
PCB-1242 (Aroclor 1242)	<64.6	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	53469-21-9	
PCB-1248 (Aroclor 1248)	<64.6	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	12672-29-6	
PCB-1254 (Aroclor 1254)	1310	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	11097-69-1	
PCB-1260 (Aroclor 1260)	308	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	11096-82-5	
PCB, Total	1610	ug/kg	129	64.6	1	11/26/18 18:37	11/27/18 15:14	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	56	%	56-98		1	11/26/18 18:37	11/27/18 15:14	877-09-8	
Decachlorobiphenyl (S)	54	%	49-104		1	11/26/18 18:37	11/27/18 15:14	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	61.3	%	0.10	0.10	1		11/26/18 14:26		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-S05-C
 Lab ID:
 40179971010
 Collected:
 11/16/18 16:40
 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.
 Image: Solid 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)	<56.4	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	12674-11-2	
PCB-1221 (Aroclor 1221)	<56.4	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	11104-28-2	
PCB-1232 (Aroclor 1232)	<56.4	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	11141-16-5	
PCB-1242 (Aroclor 1242)	<56.4	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	53469-21-9	
PCB-1248 (Aroclor 1248)	<56.4	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	12672-29-6	
PCB-1254 (Aroclor 1254)	847	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	11097-69-1	
PCB-1260 (Aroclor 1260)	183	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	11096-82-5	
PCB, Total	1030	ug/kg	113	56.4	1	11/26/18 18:37	11/27/18 15:32	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	62	%	56-98		1	11/26/18 18:37	11/27/18 15:32	877-09-8	
Decachlorobiphenyl (S)	57	%	49-104		1	11/26/18 18:37	11/27/18 15:32	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	55.7	%	0.10	0.10	1		11/26/18 15:01		



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

 Sample:
 OU4-IC-DUP01
 Lab ID:
 40179971011
 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.
 Image: Collected of 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)	<128	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	12674-11-2	
PCB-1221 (Aroclor 1221)	<128	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	11104-28-2	
PCB-1232 (Aroclor 1232)	<128	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	11141-16-5	
PCB-1242 (Aroclor 1242)	<128	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	53469-21-9	
PCB-1248 (Aroclor 1248)	<128	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	12672-29-6	
PCB-1254 (Aroclor 1254)	1490	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	11097-69-1	
PCB-1260 (Aroclor 1260)	326	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	11096-82-5	
PCB, Total	1820	ug/kg	256	128	2	11/26/18 18:37	11/27/18 15:51	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	58	%	56-98		2	11/26/18 18:37	11/27/18 15:51	877-09-8	
Decachlorobiphenyl (S)	53	%	49-104		2	11/26/18 18:37	11/27/18 15:51	2051-24-3	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	60.9	%	0.10	0.10	1		11/26/18 15:01		



#### Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

Sample: OU4-FB01	Lab ID:	40179971012	Collecte	d: 11/17/18	3 12:10	Received: 11/	20/18 09:15 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical	Method: EPA 8	082 Prepa	ration Methe	od: EP	A 3510			
PCB-1016 (Aroclor 1016)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	12674-11-2	
PCB-1221 (Aroclor 1221)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	11104-28-2	
PCB-1232 (Aroclor 1232)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	11141-16-5	
PCB-1242 (Aroclor 1242)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	53469-21-9	
PCB-1248 (Aroclor 1248)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	12672-29-6	
PCB-1254 (Aroclor 1254)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	11097-69-1	
PCB-1260 (Aroclor 1260)	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	11096-82-5	
PCB, Total	<0.24	ug/L	0.48	0.24	1	11/27/18 08:15	11/28/18 11:17	1336-36-3	
Surrogates		-							
Tetrachloro-m-xylene (S)	87	%	44-121		1	11/27/18 08:15	11/28/18 11:17	877-09-8	
Decachlorobiphenyl (S)	40	%	10-119		1	11/27/18 08:15	11/28/18 11:17	2051-24-3	



EPA 8082

8082 GCS PCB

Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

QC Batch:	307557
QC Batch Method:	EPA 3541

Analysis Method:

Analysis Description:

Matrix: Solid

Associated Lab Samples: 40179971001, 40179971002, 40179971003

#### METHOD BLANK: 1797836

Associated Lab Sample	. 40170071001	40170071002	40170071003
Associated Lab Sample	. 401/99/1001	,40179971002,	40179971003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
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 (S)	%	79	49-104	11/27/18 11:13	
Tetrachloro-m-xylene (S)	%	82	56-98	11/27/18 11:13	

#### LABORATORY CONTROL SAMPLE: 1797837

		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	379	76	61-105	
Decachlorobiphenyl (S)	%			80	49-104	
Tetrachloro-m-xylene (S)	%			82	56-98	

MATRIX SPIKE & MATRIX SP	PIKE DUPLICA	TE: 17978	38		1797839						
	4	0179875006	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<0.029 mg/kg			<29.3	<29.3				20	
PCB-1221 (Aroclor 1221)	ug/kg	<0.029 mg/kg			<29.3	<29.3				20	
PCB-1232 (Aroclor 1232)	ug/kg	<0.029 mg/kg			<29.3	<29.3				20	
PCB-1242 (Aroclor 1242)	ug/kg	<0.029 mg/kg			<29.3	<29.3				20	
PCB-1248 (Aroclor 1248)	ug/kg	0.12 mg/kg			130	137				6 20	
PCB-1254 (Aroclor 1254)	ug/kg	<0.029 mg/kg			<29.3	<29.3				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.: 40179971

MATRIX SPIKE & MATRIX SPIK		CATE: 17978;	38		1797839							
			MS	MSD								
		40179875006	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	<0.029 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:	10792	7.0000.100 9	300 HARP										
Pace Project No .:	40179	971											
QC Batch:	3075	92		Analys	sis Method	: El	PA 8082						
QC Batch Method:	EPA	3541		Analys	sis Descrip	tion: 80	82 GCS P	СВ					
Associated Lab San	nples:	401799710 401799710	04, 40179971005 11	, 40179971	006, 4017	9971007, 40	0179971008	3, 401799	71009, 401	79971010,			
METHOD BLANK:	17979	48		Ν	Matrix: So	lid							
Associated Lab San	nples:	401799710 401799710	04, 40179971005 11	, 40179971	006, 4017	9971007, 40	0179971008	3, 401799 <sup>-</sup>	71009, 401	79971010,			
				Blank	k F	Reporting							
Paran	neter		Units	Resul	t	Limit	Analyz	ed	Qualifiers				
PCB-1016 (Aroclor	1016)		ug/kg		<25.0	50.0	11/27/18	11:34		_			
PCB-1221 (Aroclor	1221)		ug/kg		<25.0	50.0	11/27/18	11:34					
PCB-1232 (Aroclor	1232)		ug/kg		<25.0	50.0	11/27/18	11:34					
PCB-1242 (Aroclor	1242)		ug/kg	•	<25.0	50.0	11/27/18	11:34					
PCB-1248 (Aroclor	1248)		ug/kg		<25.0	50.0	11/27/18	11:34					
PCB-1254 (Aroclor	1254)		ug/kg	•	<25.0	50.0	11/27/18	11:34					
PCB-1260 (Aroclor	1260)		ug/kg	•	<25.0	50.0	11/27/18	11:34					
Decachlorobiphenyl	(S)		%		75	49-104	11/27/18	11:34					
letrachloro-m-xylen	e (S)		%		11	56-98	11/27/18	11:34					
			17070/0										
	INOL	SAMI LL.	1191949	Snike	1.09	3	LCS	% Re	20				
Paran	neter		Units	Conc.	Res	ult	% Rec	Limit	s Q	ualifiers			
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	)	396	79	6	1-105				
Decachlorobiphenyl	(S)		%				73	4	9-104				
Tetrachloro-m-xylen	e (S)		%				74		56-98				
			ICATE: 47070	50		1707054							
WAIRIN SPIKE & IV	IAI KIÁ	SFINE DUPL	IGATE. 17979	Me	Men	1191921							
			40180066001	Spike	Spike	MS	Med	MG	Men	% Pec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
PCB-1016 (Aroclor	1016)	ug/kg	<40.6			<40.6	<40.6					20	
PCB-1221 (Aroclor	1221)	ug/kę	g <40.6			<40.6	<40.6					20	
PCB-1232 (Aroclor 2	1232)	ug/kg	<b>40.6</b>			<40.6	<40.6					20	
PCB-1242 (Aroclor 2	1242)	ug/kg	<b>j</b> 700			904	803				12	20	
PCB-1248 (Aroclor 2	1248)	ug/kę	g <40.6			<40.6	<40.6					20	
PCB-1254 (Aroclor 2	1254)	ug/kថ	, <40.6			<40.6	<40.6					20	
PCB-1260 (Aroclor 2	1260)	ug/kថ	, <40.6	813	813	710	554	87	68	35-125	25	20	
Decachlorobiphenyl	(S)	%						61	55	49-104			
Tetrachloro-m-xylen	e (S)	%						65	60	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.

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

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EPA 8082

8082 GCS PCB

Analysis Method:

Analysis Description:

Matrix: Water

Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

QC Batch:	307615	
QC Batch Method:	EPA 3510	

Associated Lab Samples: 40179971012

#### METHOD BLANK: 1798044

Associated Lab Samples: 40179971012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1221 (Aroclor 1221)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1232 (Aroclor 1232)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1242 (Aroclor 1242)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1248 (Aroclor 1248)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1254 (Aroclor 1254)	ug/L	<0.12	0.25	11/28/18 08:20	
PCB-1260 (Aroclor 1260)	ug/L	<0.12	0.25	11/28/18 08:20	
Decachlorobiphenyl (S)	%	73	10-119	11/28/18 08:20	
Tetrachloro-m-xylene (S)	%	87	44-121	11/28/18 08:20	

LABORATORY CONTROL SAMPLE	& LCSD: 179804	15	17	798046						
		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.



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

QC Batch:	30757	73	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM	1 D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samp	oles:	40179971005, 40179971006, 40	0179971007, 40179971008	, 40179971009

		40179961016	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	14.9	15.2	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.



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

QC Batch:	307577	Analysis Method:	ASTM D2974-87	
QC Batch Method:	ASTM D2974-87	Analysis Description	Dry Weight/Percent Moisture	
Associated Lab Sampl	es: 40179971010, 40179971011			
SAMPLE DUPLICATE	: 1797899	047000000	- Mau	

Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	17.2	15.6	9	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.



Project: 107927.0000.100 9300 HARP

Pace Project No.: 40179971

QC Batch:	307652	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samp	bles: 40179971001, 40179971002	, 40179971003, 40179971004	

SAMPLE DUPLICATE: 1798242						
		40180072005	Dup		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.: 40179971

#### 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.: 40179971

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40179971001	OU4-IC-S06-L	EPA 3541	307557	EPA 8082	307578
40179971002	OU4-IC-S07-R	EPA 3541	307557	EPA 8082	307578
40179971003	OU4-IC-S08-R	EPA 3541	307557	EPA 8082	307578
40179971004	OU4-IC-S09-R	EPA 3541	307592	EPA 8082	307593
40179971005	OU4-IC-S10-R	EPA 3541	307592	EPA 8082	307593
40179971006	OU4-IC-S01-L	EPA 3541	307592	EPA 8082	307593
40179971007	OU4-IC-S02-L	EPA 3541	307592	EPA 8082	307593
40179971008	OU4-IC-S03-L	EPA 3541	307592	EPA 8082	307593
40179971009	OU4-IC-S04-L	EPA 3541	307592	EPA 8082	307593
40179971010	OU4-IC-S05-C	EPA 3541	307592	EPA 8082	307593
40179971011	OU4-IC-DUP01	EPA 3541	307592	EPA 8082	307593
40179971012	OU4-FB01	EPA 3510	307615	EPA 8082	307703
40179971001	OU4-IC-S06-L	ASTM D2974-87	307652		
40179971002	OU4-IC-S07-R	ASTM D2974-87	307652		
40179971003	OU4-IC-S08-R	ASTM D2974-87	307652		
40179971004	OU4-IC-S09-R	ASTM D2974-87	307652		
40179971005	OU4-IC-S10-R	ASTM D2974-87	307573		
40179971006	OU4-IC-S01-L	ASTM D2974-87	307573		
40179971007	OU4-IC-S02-L	ASTM D2974-87	307573		
40179971008	OU4-IC-S03-L	ASTM D2974-87	307573		
40179971009	OU4-IC-S04-L	ASTM D2974-87	307573		
40179971010	OU4-IC-S05-C	ASTM D2974-87	307577		
40179971011	OU4-IC-DUP01	ASTM D2974-87	307577		

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Project Contact:	M. Westorn		1 /			www.pi	scenaus.con	11	,	N				Quote #:			Pa
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EPA Lev	el III (billable) G	$B \approx Biota$ $C \approx Charcoal$ $D \approx Oil$	GW = Grour SW = Surfar	ng water nd Water se Water	7505	13								Invoice To Phone:			
EPA Lev	el IV LINOT needed on s your sample s	3 = Soil 3I = Sludge	WW = Wast WP = Wipe	e Water	hat	<u> </u>								CLIENT	LAB C	OMMENTS	Profile #
PACE LAB #	CLIENT FIELD ID	DATE	TIME	MATRIX										COMMENTS	(Lab l	Jse Only)	
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Page <u>1</u> of <u>2</u>

Proce Analytical       Sample Condition Upon Receipt (SCUR)       Document No.         1241 Bellevue Strest. Green Bay, WI 54302       Project #         Sample Condition Upon Receipt Form (SCUR)         Courier: F CS Logistics F ed Ex F Speedee F UPS fX Waltco F Client F Pace Other:       Project #         Tracking #       189/9096-1         Custody Seal on Cooler/Box Present: F yes Ex no Seals intact F yes F no       WO# : 40179971         Custody Seal on Cooler/Box Present: F yes Ex no Seals intact F yes F no       R Samples on ice. cooling process has begut         Courier: G Logistics F is de X F Speedee F UPS fX Waltco       R Samples on ice. cooling process has begut         Custody Seal on Cooler/Box Present: F yes Ex no Seals intact F yes F no       R Samples on ice. cooling process has begut         Custody Seal on Cooler/Box Present: F yes X no       Biological Tissue is Frozen: F yes F no         Person examining ontan       Type of fee: V@ Blue Dry Nore       R Samples on ice. cooling process has begut         Cooler Temperature Uncoor RQE Icorr       Tope of fee: V@ Blue Dry Nore       R Samples on ice. cooling process has begut         Temp Blank Present: F yes X no       Biological Tissue is Frozen: F yes F no       Person examining ontan         Tem Blank Present: F yes X no       Biological Tissue is Frozen: F yes F no       Person examining ontan         Chain of Custody Filed Out       Qres We have       1       Person		Doc	ument Name:	Document Revised: 254-2018
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Client Name:       TRC         Courier:       CS Logistics F Fed Ex       Speedee       UPS       K Waltco         F Client       F Pace Other.       Facking #:       1891096-1         Custody Seal on Coolar/Box Present:       Yes       No       Seals intact:       F yes       Inc.         Custody Seal on Coolar/Box Present:       Yes       No       Seals intact:       F yes       Inc.         Cooler Temperature       Uncorr:       RO       Seals intact:       F yes       F on         Temp should be above freezing to 6°C.       Biological Tissue is Frozen:       F yes       No         Biola Samples may be received at s 0°C.       Biological Tissue is Frozen:       F yes       No         Chain of Custody Present:       Øves       No       No       No       No         Samples Name & Signature on COC:       Øves       No       No       No       No       No         Sampler Name & Signature on COC:       Øves       No       A.       Sampler Name & Signature on COC:       Øves       No       Sampler Name	Sample	Condition Up	on Receipt Form (S	CUR)
Client Name:       K         Courie:       C Logistics F Fed Ex F Speedee F UPS K Waltco F Client F Pace Other:       WO# : 40179971         Tracking #:       8 8/0 96 -1         Custody Seal on Cooler/Box Present:       Yes K no Seals intact:       F yes F no         Packing Material:       F Bubble Wrap K Bubble Bags F None F Other       K samples on ice. cooling process has begun         Thermometer Used       S.P. //A       Type of ice: V@R Blue Dry None       K samples on ice. cooling process has begun         Cooler Temperature       Uncorr:       R/D / Icorr:       Biological Tissue is Frozen:       F yes T no         Temp should be above freezing to 6°C.       Biological Tissue is Frozen:       F yes T no       Person examining contents:         Stanges may be received at 5 0°C.       Ohio A 1.       Chain of Custody Present:       Yes No       No         Chain of Custody Present:       Ø'res No       No       No       No       No       No         Samples Naree & Signature on COC.       Ø'res No	The		Project #:	^
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Tracking #:          [             897096-              Custody Seal on Cooler/Box Present: [] yes [] no Seals intact: [] yes [] no               46179971          Custody Seal on Samples Present: [] yes [] no Seals intact: [] yes [] no               Samples on ice, cooling process has begun             Cooler Temperature             Uncorr: RD: r/orr:             Type of ice: [] Blue Dry None             Cooler Temperature             Uncorr: RD: r/orr:             Temp Should be above freezing to 8°C.             Biological Tissue is Prozen: [] yes [] no             Person examining conten             Date: [] 1 - 20 - 1.8             Initials: [] TK             Initials: [] TK	Client Pace Other:		-	
Custody Seal on Cooler/Box Present: 「 yes K no Seals intact: 「 yes 「 no Custody Seal on Samples Present: 「 yes K no Seals intact: 「 yes 「 no Person samples and the seals intact: 「 yes 「 no Thermometer Used SR - //A Type of ice: With Blue Dry None K Samples on ice, cooling process has begun Cooler Temperature Uncor: RDL / Corr: Temp Blank Present: 「 yes K no Biological Tissue is Frozen: 「 yes 「 no Date: <u> Urabolit</u> Biological Tissue is Frozen: 「 yes 「 no Date: <u> Urabolit</u> Biological Tissue is Frozen: 「 yes 「 no Date: <u> Urabolit</u> Initials: <u> Trk</u> Initials: <u> Trk</u> Initials: <u> Trk</u> Initials: <u> Trk</u> Chain of Custody Present: K ves No Chain of Custody Releant: K ves No Samples Arrived within Hold Time: Ves No Sort Hold Time Requested: Ves K No For Analysis: K ves No Prese No	Tracking #: [889096-1			0179971
Lustody Seal on Sample's Present:   yes kin0 Seals intact:   yes   n0 Packing Material:   Bubble Wrap   K Bubble Bags   None   Other Thermometer Used SR - \/A Type of Ice: We Blue Dry None   K Samples on ice. cooling process has begun Cooler Temperature Uncorr: RD / Corr: Temp Blank Present:   res   ves   n0 Biological Tissue is Frozen:   res   n0 Date:   res how feezing to 6'C. Biota Samples may be received at s 0'C. Chain of Custody Present:   ves   n0 Chain of Custody Present:   ves   n0 Chain of Custody Relinquished:   ves   n0 Chain of Custody Relinquished:   ves   n0 Chain of Custody Relinquished:   ves   n0 - VOA Samples frozen upon receipt   ves   No - VOA Samples frozen upon receipt   ves   No Sufficient Volume:   ves   No - VOA Samples frozen upon receipt   ves   No - VoA Samples frozen upon receipt   ves   No - VoA Samples frozen upon receipt   ves   No - Pace IR Containers Used:   ves   No - Pace Containers Used:   ves   No - Pace R Containers Used:   ves   No - Pace R Containers Used:   ves   No - No - No - No - No - No - No - Pace R Containers Used:   ves   No - No	Custody Seal on Cooler/Box Present: 🔽 yes	🗙 no Seals intac	t: Tyes no	
Control of a bobble bags / None       Content       Type of ice:       Viet Blue Dry None       K samples on ice, cooling process has begur         Cooler Temperature       Uncorr:       ROL ICorr:       Biological Tissue is Frozen:       yes f no       Person examining content         Temp Blank Present:       yes f no       Biological Tissue is Frozen:       yes f no       Person examining content         Data Samples may be received at s 0°C.       Biological Tissue is Frozen:       yes f no       Person examining content         Chain of Custody Present:       Kres       No       No       No       1.         Chain of Custody Present:       Kres       No       No       No       1.         Chain of Custody Relinquished:       Kres       No       No       1.       August       1.         Samples Arrived within Hold Time:       Kres       No       Date/Time:       So       -       -       VOA Samples frozen upon receipt       Yes       No       Date/Time:       So         Sufficient Volume:       Kres       No       Date/Time:       So       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -	Custody Seal on Samples Present: 📋 yes 🔀 Packing Material: 🔽 Bubble Wrap 📭 Bub	no Seals intac	t: yes no	
Cooler Temperature       Uncorr:       R0 Toorr:       R0 Toorr:       R0 Toorr:       R0 Toorr:       R0 Toorr:       Person examining content Date:       11-2016         Temp Blank Present:       F yes       No       Biological Tissue is Frozen:       F yes       No       Date:       11-2016         Ents Samples may be received at 5 0°C.       Entitials:       Trive Divide Date:       11-2016       Initials:       Trive         Chain of Custody Present:       Kres       No       NA       1.       Initials:       Trive         Chain of Custody Present:       Kres       No       NA       2.       Initials:       Trive         Chain of Custody Present:       Kres       No       NA       3.       Initials:       Trive         Chain of Custody Relinquished:       Kres       No       NA       4.       Initials:       Initials: <td>Thermometer Used SR - <math>NA</math></td> <td>Type of Ice: Wa</td> <td>t Blue Dry None</td> <td>Samples on ice, cooling process has begun</td>	Thermometer Used SR - $NA$	Type of Ice: Wa	t Blue Dry None	Samples on ice, cooling process has begun
Temp Blank Present:       yes       no       Biological Tissue is Frozen:       yes       no         Temp should be above freezing to 6°C.       Biological Tissue is Frozen:       yes       no       Date:       11-2018         Chain of Custody Present:       Xres       No       NvA       1.         Chain of Custody Relinquished:       Xres       No       NvA       2.       NVA       1.         Chain of Custody Relinquished:       Xres       No       NvA       3.       Sampler Name & Signature on COC:       Xres       No       NvA       4.         Sampler Name & Signature on COC:       Xres       No       NvA       4.       Sampler Name & Signature on COC:       Xres       No       Date/Time:         Short Hold Time Analysis (<72hr):	Cooler Temperature Uncorr: ROL /Corr:			
Biota Samples may be received at s 0°C.       Initials:       TK         Chain of Custody Present:       Area       Area       Area         Chain of Custody Filled Out:       Area       Area       Area         Chain of Custody Relinquished:       Area       Area       Area         Sampler Name & Signature on COC:       Area       Area       Area         Sampler Name & Signature on COC:       Area       Area       Area         - VOA Samples frozen upon receipt       Yes       No       Date/Time:       Area         Short Hold Time Analysis (<72hr):       Yes       No       Area       Area         Sufficient Volume:       For Analysis:       Area       Area       Area         -Pace Containers Used:       Area       No       No       Area         -Pace R Containers Used:       Yes       No       10.       Area         -Includes date/time/ID/Analysis       Matrix:       Yes       No       Area      <	Temp Blank Present: yes K no	Biological	Tissue is Frozen: Tyes	Person examining contents: Date: 11-20-18
Chain of Custody Present:       Image: Construct of Custody Present:       Image: Cust	Biota Samples may be received at ≤ 0°C.		-	Initials: <del>7K</del>
Chain of Custody Filled Out:       Qres Qres       DNA       2.713       DQ 11, 14       (A III)         Chain of Custody Relinquished:       Wres       DNo       DNA       3.         Sampler Name & Signature on COC:       Wres       DNo       DNA       4.         Samples Arrived within Hold Time:       Wres       DNo       Date/Time:         - VOA Samples frozen upon receipt       Wres       DNo       Date/Time:         Short Hold Time Analysis (<72hr):	Chain of Custody Present:		A 1.	
Chain of Custody Relinquished:       Xres       No       N//A       3.       1 V         Sampler Name & Signature on COC:       Xres       No       N//A       4.         Samples Arrived within Hold Time:       Xres       No       Date/Time:         -VOA Samples frozen upon receipt       Yres       No       Date/Time:         Short Hold Time Analysis (<72hr):	Chain of Custody Filled Out:		A 2. 10 20 H	(M11/20
Sampler Name & Signature on COC:       Yes       INo       INi       4.         Samples Arrived within Hold Time:       Yes       INo       Date/Time:         - VOA Samples frozen upon receipt       IYes       INo       Date/Time:         Short Hold Time Analysis (<72hr):	Chain of Custody Relinquished:	XYes No N/	A 3.	
Samples Arrived within Hold Time:       Image: Samples frozen upon receipt       Image: Samples frozen upon receipt for Upon upon receipt for	Sampler Name & Signature on COC:		A 4.	
- VOA Samples frozen upon receipt       □Yes       □No       Date/Time:         Short Hold Time Analysis (<72hr):	Samples Arrived within Hold Time:	XYes □No	5.	
Short Hold Time Analysis (<72hr):	- VOA Samples frozen upon receipt	□Yes □No	Date/Time:	
Rush Turn Around Time Requested:       Image: Styles	Short Hold Time Analysis (<72hr):	□Yes Ma No	6.	
Sufficient Volume: 8.   For Analysis: Sigres INo MS/MSD: Ires   Orrect Containers Used: Igres   -Pace Containers Used: Igres   -Pace IR Containers Used: Ires   Orrect Containers Used: Ires   -Pace IR Containers Used: Ires   Image: Index Containers Used: Image: I	Rush Turn Around Time Requested:	🗆 Yes 🕱 No	7.	
For Analysis: Soves INO       MS/MSD: Ives Sovo       IN/A         Correct Containers Used:       Soves INO       IN/A         -Pace Containers Used:       Ives Sovo       IN/A         -Pace IR Containers Used:       Ives Sovo       IN/A         -Pace IR Containers Used:       Ives Sovo       IN/A         Containers Intact:       Ives INO       IN/A         Containers Intact:       Ives INO       IN/A         Filtered volume received for Dissolved tests       Ives INO       IN/A         Sample Labels match COC:       Ives INO       IN/A         -Includes date/time/ID/Analysis       Matrix:       Ives INO       IN/A         Trip Blank Present:       Ives INO       IN/A       I3.         Trip Blank Lot # (if purchased):	Sufficient Volume:		8.	
Correct Containers Used: Yes No 9.   -Pace Containers Used: Yes No N/A   -Pace IR Containers Used: Yes No N/A   Containers Intact: Yes No 10.   Filtered volume received for Dissolved tests Yes No N/A   Sample Labels match COC: Yes No N/A   -Includes date/time/ID/Analysis Matrix: Yes No   Yes No N/A 12.   Trip Blank Present: Yes No N/A   Pace Trip Blank Lot # (if purchased): Yes No N/A   Person Contacted: Date/Time: If checked, see attached form for additional comments	For Analysis: 🖄 Yes 🗆 No 🛛 MS/MSD	): 🗆 Yes 🖾 No 🗆 N//	Α	
-Pace Containers Used:       Image: Signal Containers Used: <td< td=""><td>Correct Containers Used:</td><td>XYes □No</td><td>9.</td><td></td></td<>	Correct Containers Used:	XYes □No	9.	
-Pace IR Containers Used:       Image: Solution of the set	-Pace Containers Used:	Kayes □No □N//	A	
Containers Intact:       Image: Yes Into Into Interview	-Pace IR Containers Used:	□Yes ⊠KNo □N//	A	
Filtered volume received for Dissolved tests Yes No NA 11.   Sample Labels match COC:   Includes date/time/ID/Analysis Matrix: Yes No N/A 12.   Trip Blank Present:   Yes Yes No N/A 13.   Frip Blank Lot # (if purchased):   Yes No N/A 14.   If checked, see attached form for additional comments   Person Contacted: Date/Time:	Containers Intact:	Yes 🗆 No	10.	
Sample Labels match COC:     -Includes date/time/ID/Analysis     Matrix:     Yes     Includes date/time/ID/Analysis     Matrix:     Yes     Includes date/time/ID/Analysis     Matrix:     Yes     Includes date/time/ID/Analysis     Matrix:     Yes     Includes date/time/ID/Analysis     Matrix:   Yes     Includes date/time/ID/Analysis     Matrix:   Yes   Includes date/time/ID/Analysis     Matrix:   Yes   Includes date/time/ID/Analysis     Includes date/time/ID/Analysis     Matrix:   Yes   Includes date/time/ID/Analysis     Includes date/time/ID/Analysis   Matrix:   Yes   Includes date/time/ID/Analysis     Includes date/time/ID/Analysis     Matrix:   Yes   Includes date/time/ID/Analysis     Includes date/time </td <td>Filtered volume received for Dissolved tests</td> <td>□Yes □No <b>\$\$</b>\$\$</td> <td>11.</td> <td></td>	Filtered volume received for Dissolved tests	□Yes □No <b>\$\$</b> \$\$	11.	
-Includes date/time/ID/Analysis       Matrix:       5       ✓         Trip Blank Present:       □Yes       ☑No       □N/A       13.         Trip Blank Custody Seals Present       □Yes       □No       №N/A         Pace Trip Blank Lot # (if purchased):	Sample Labels match COC:		12.	
Trip Blank Present:       Image: Yes Present       Image: Y	-Includes date/time/ID/Analysis Matrix:	», w		
Image: Trip Blank Custody Seals Present     Image: Yes Image: N/A       Pace Trip Blank Lot # (if purchased):     Image: N/A       Client Notification/ Resolution:     If checked, see attached form for additional comments       Person Contacted:     Date/Time:	Trip Blank Present:	□Yes XNo □N/A	13.	
Pace Trip Blank Lot # (if purchased): Client Notification/ Resolution: If checked, see attached form for additional comments Person Contacted: Date/Time:	Trip Blank Custody Seals Present	□Yes □No 🕅 YA		
Person Contacted: Date/Time:	Pace Trip Blank Lot # (if purchased):			h non ottophod form for a little
Comments/ Resolution:	Person Contacted: Comments/ Resolution:	Date	/Time:	a, see attached form for additional comments
	Project Manager Review:		lkw	Date: 11/1/1

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Branch/Location:	Madison, WI		] /		ace	Ana www.pe			$\mathcal{M}$					40	017997	(
Project Contact:	H. Westow							1					Quote #:			
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Project Number:	107927.0000, 100	9300	A=N	one B=H	CL C=I	12504	Preservation Co D=HNO3 E=D	<b>des</b> I Water	F=Metha	nol G=Na	юн		Mail To Company:			
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Sample	s on HOLD are subject to	Relin	quished By:	ana ang kana	an jan ja mini ni ini ni ini ini ini ini ini ini	an a	Date/Time:			Received B	Ву:	inaktion temperature inter	Date/Time:	9.09.000000000000000000000000000000000	Present / No	Present
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ORIGINAL

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

Sample Preservation Receipt F	Form
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0179971

Client Name:

Lab 00

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Project #

	All c	ontain	ers ne	eding	) pres	ervatio	on ha	ve be	en ch	ecked Lab	and r Lot# o	oted I	pelow: paper:	: ¤Yes	s ⊡No	XN/A	Lat	o Std ≉	#ID of	prese	rvatio	n (if pl	H adju	isted):	:				Initial comp	when bleted:		Date/ Time:	
		Landon Contraction of Landon		Glass	، ، 5						Plast	ic	1				Vi	als				Jars		G	enera	al	(>6mm) *	5	Act pH ≥9	212	2	justed	Volume
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	<b>BP3N</b>	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials	H2SO4 pH	NaOH+Zn	NaOH pH 2	HNO3 pH =	pH after ad	(mL)
001																					1												2.5/5/10
002																					11												2.5 / 5 / 10
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Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm) : "Yes "No X/A \*If yes look in headspace 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	BP3N	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:	

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

	Doc	cument Name:	Document Revised: 25A	pr2018
Pace Analytical	Sample Condi	tion Upon Receipt (SCUR)	loouing Authority	
/ 1241 Bellevue Street, Green Bay, WI 54302	F-G	B-C-031-Rev.07	Pace Green Bay Quality	Office
Sample (	Condition Up	on Receipt Form (S	CUR)	······································
		Project #:		
Client Name: RC		5	IOH: 40179	971
Courier: CS Logistics Fed Ex For Speede	e TUPS 🕅	Waltco		•••
Client Pace Other:		,		
Tracking #:		<sup>4</sup>	0179971	
Custody Seal on Cooler/Box Present: 🔽 yes	🗙 no Seals inta	ct: Tyes Tno		
Custody Seal on Samples Present: 1 yes K	no Seals inta	ct: yes no		
Thermometer lised SR - $MA$	Type of Ice: Wi	at Blue Dry None	Samples on ice, cooling proce	ss has begun
Cooler Temperature Uncorr: ROL /Corr:	Type of loc.	the big none in	Bampies of ice, cooling proce	ss has begun
Temp Blank Present: yes Kno	Biologica	l Tissue is Frozen: 🥅 ye	es no Person exam	ining contents:
Temp should be above freezing to $6^{\circ}$ C. Biota Samples may be received at $\leq 0^{\circ}$ C.			Date:11 Initials:	-20-18 TK
Chain of Custody Present:		/A 1.		
Chain of Custody Filled Out:		1A 2. 10 24 H		MILLOUT
Chain of Custody Relinquished:		/A 3.	· · · · · · · · · · · · · · · · · · ·	
Sampler Name & Signature on COC:	XYes DNO DN	/A <b>4</b> .	se un se un constant anna de la constant	
Samples Arrived within Hold Time:	⊠Yes □No	5.		
- VOA Samples frozen upon receipt	□Yes □No	Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes XNo	6.		
Rush Turn Around Time Requested:	□Yes XNo	7.		
Sufficient Volume:		8.		
For Analysis: 🖄 Yes 🗆 No 🛛 MS/MSD:	⊡Yes 🖄No □N	/A		
Correct Containers Used:	D\$(Yes □No	9.		
-Pace Containers Used:	Kayes □No □N	/A		
-Pace IR Containers Used:	⊡Yes ⊠KNo ⊡N	/A		
Containers Intact:	XYes □No	10.		
Filtered volume received for Dissolved tests	□Yes □No 🕅	/A 11.		
Sample Labels match COC:		/A 12.		
-Includes date/time/ID/Analysis Matrix:	,W			
Trip Blank Present:	□Yes XNo □N	/A 13.		
Trip Blank Custody Seals Present	🗆 Yes 🗆 No 🕱	/A		
Pace Trip Blank Lot # (if purchased):				
Client Notification/ Resolution: Person Contacted: Comments/ Resolution:	Dat	e/Time:	ed, see attached form for additio	nal comments
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Project Manager Review:	n o'n y ar Syland ar an an ar an by jan ar an an ar	UKW	Date: 111/1	

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