AECOM
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July 16, 2025

Mr. Kevin Bartel
Wisconsin Department of Natural Resources
Waste & Materials Management Program
2984 Shawano Avenue
Green Bay, WI 54313-6727

Subject: Request for Low-Hazard Waste Grant of Exemption – Future Dredge Spoils from Chaudoirs Dock County Park Harbor and Entrance Channel
AECOM Project No. 60751170

Dear Mr. Bartel:

On behalf of Wayne Spritka, Director of Door County Facilities and Parks, AECOM submits this request for a Low-Hazard Waste Grant of Exemption pursuant to s. 289.43(8), Wis. Stats., and s. NR 500.08(4), Wis. Adm. Code. The exemption is sought for the dredged sediment to be generated in 2026 at Chaudoirs Dock County Park, 1552 County N in the Town of Union, Door County, Wisconsin.

Project Overview

- Generator: Door County Facilities and Parks

- Contact Person: Wayne J. Spritka
  Door County Facilities and Parks Director
  421 Nebraska St
  Sturgeon Bay, WI 54235
  920-746-2211

- Type of Waste: Dredge Material. Historic sediment sampling (October 2013) records indicate the material was predominanty silty sand with organic fines. The Sediment Sampling and Analysis Report from November 2013 is provided in Attachment A.

- Origination of Waste Location: Chaudoir's Dock County Park. See Figure 1 for proposed dredging limits)

- Volume & Rate of Production: 10,420 cubic yards total developed at a rate of between 200 and 300 cubic yards per day

- Proposed Disposal/Reuse Location: Old Door County Landfill (Balefill) Site (License #2937) 7129 Hainesville Road, Sturgeon Bay 54235. See Figure 2 (black rectangle) for proposed temporary stockpile location of dredge material. This landfill stopped accepting waste on June 1, 2001, and was closed in September 2001.

- Project Timeframe (anticipated): June 2026 thru August 2026

- Type of Exemption Requested: Landfill slope maintenance whereas the proposed dredge material will be stockpiled at the landfill, and used as a slope cover maintenance on an as-need basis. The volume of material (est. 10,420 CY) is anticipated to be used at the landfill over the next 10 years.

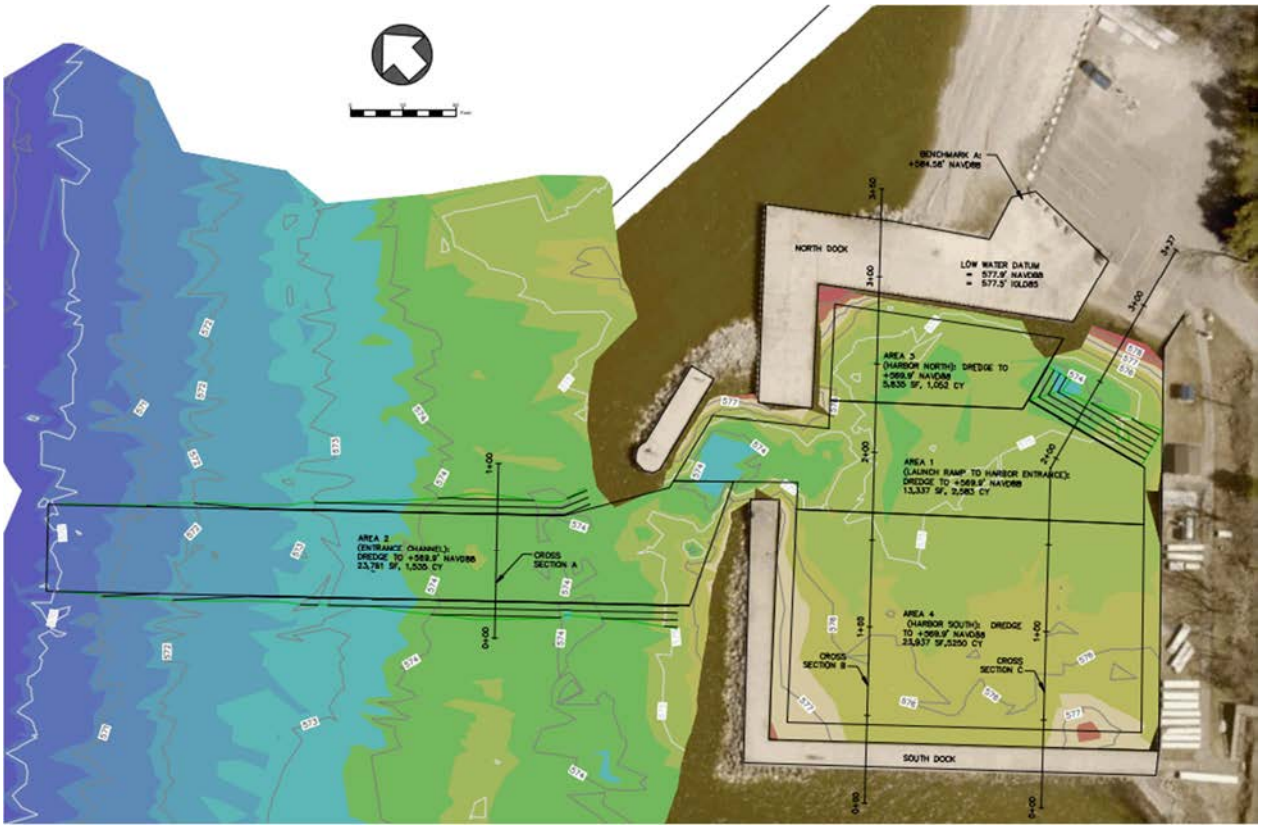

Figure 1. Approximate Dredge Area at Chaudoirs Dock County Park

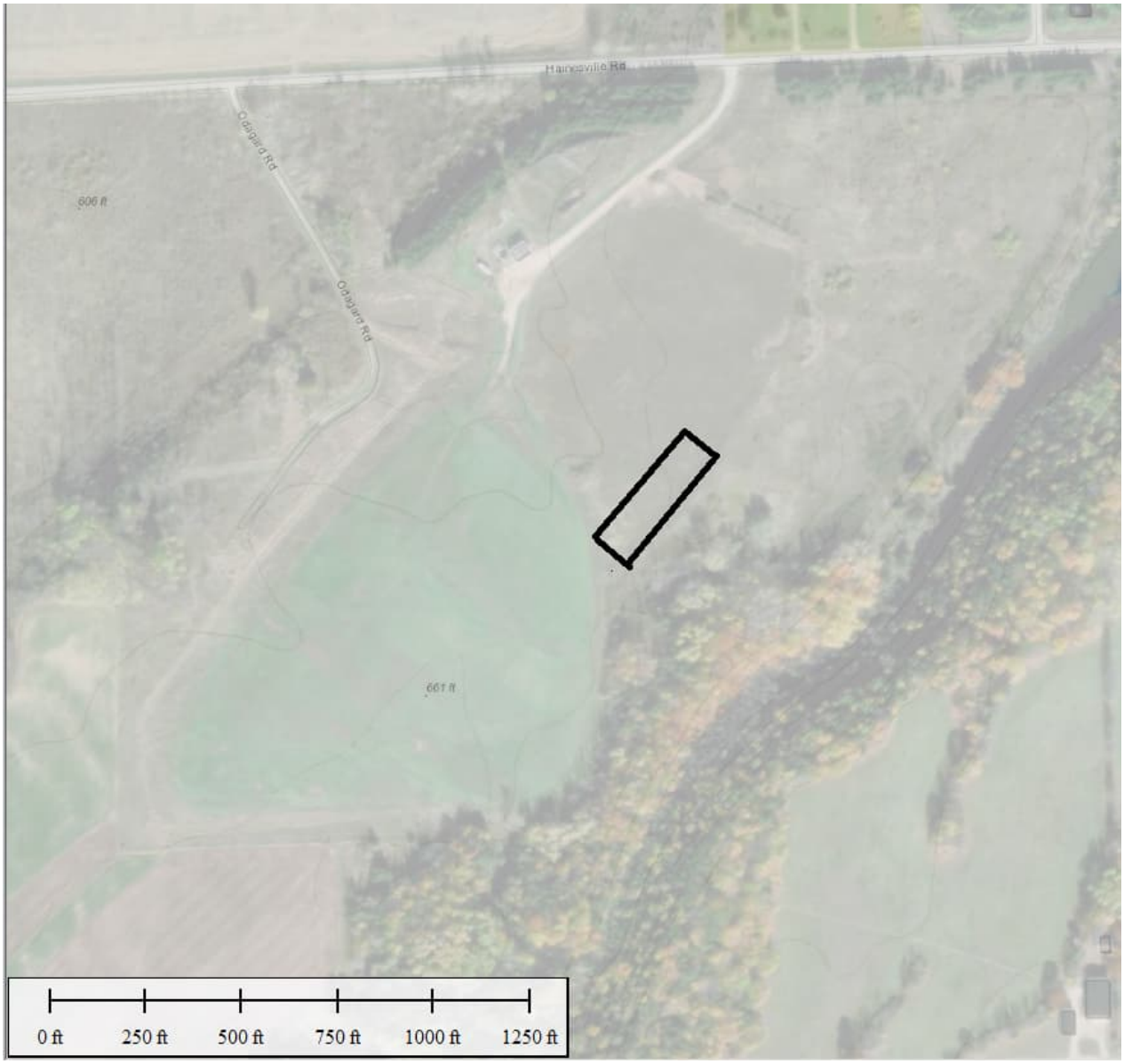

Figure 2. Door County Landfill Dredge Material Temporary Stockpile Location

Justification

We believe this request meets the statutory and regulatory criteria for a low-hazard exemption due to the following:

- The proposed waste consists of dredged sediment transported along the Door County shoreline and deposited in Chaudoir's Dock Harbor through natural processes such as wave action and littoral drift. This sediment originates from Green Bay and is believed to be free from industrial contamination, posing minimal risk to public health or the environment. This assumption is based on 2013 sediment sampling and analysis previously used to support a Landfill Permit Modification (see Attachment B).
- The dredged material will be managed to prevent environmental pollution, in accordance with s. 289.01(8), Wis. Stats.
- Dredging operations will be conducted within an enclosed turbidity barrier. Sediment will be dewatered either on a scow or on harbor property, with drainage contained within the barrier.

- Dewatered sediment will be transported to the landfill using trucks equipped to prevent sediment loss during transit.
- Sediment accumulation has occurred since the last maintenance dredging. Although no new analyses have been conducted, 2013 laboratory testing supported DNR-approved dredging and landfill disposal. The material is still assumed to pose a low risk to health and the environment.
- A 2014 analysis compared landfill elevations at closure with 2013 survey data, identifying approximately 37,800 cubic yards of surface settlement.
- The temporary dredged sediment stockpile will be stabilized using WisDOT seed mix #75 (native grasses). If seeding occurs after September 1, winter wheat or rye will be used instead.
- Supporting documentation includes analytical results, site maps, and proposed sediment management methods to demonstrate compliance with applicable regulations.

We respectfully request the Wisconsin DNR to review the attached proposal and issue a Low-Hazard Waste Grant of Exemption for this project. Please contact Pete Diemer at 920-406-3216 or peter.diemer@aecom.com if you have questions or require additional information during your review.

Thank you for your time and consideration.

Yours sincerely,

Pete Diemer

Peter J. Diemer, PE, CH
Project Manager
AECOM
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Attachment A Sediment Sampling and Analysis Report from (AECOM 2013)
Attachment B DNR Approval of Request for Landfill Permit Modification (September 2014)

Application Fee: $550 (submitted separately)

I, Pete Diemer, hereby certify that I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 500 to 538, Wis. Adm. Code.

Attachment A

Sediment Sampling and Analysis Report from (AECOM 2013)

AECOM

Submitted to
Door County Parks & Airport
Department
3538 Park Drive
Sturgeon Bay, WI 54235

Submitted by
AECOM
1035 Kepler Drive
Green Bay, WI 54311
November 2013

Sediment Sampling and Analysis Report

Chaudoir's Dock County Park
Door County, Wisconsin
AECOM Project No. 60302765

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1 Project Background

The following provides a brief summary of the proposed project, and a chronology of events pertaining to the information contained in this report.

1.1 Project Description

Door County Parks & Airport Department (Parks Department) proposes to dredge the boat harbor basin and entrance channel of the Chaudoir's Dock County Park located in the Town of Union, Door County, Wisconsin. The Site Location Map (Figure 1) shows the general location of the project. Drawing C-01 included in Appendix D, provides greater detail with the latest hydrographic survey information, along with the various areas proposed for dredging. Continued lower water levels on the Lake Michigan-Huron system, including the Bay of Green Bay, have caused difficulties in navigation within this harbor and in and out of the narrow harbor entrance channel. The boat launch within the harbor was expanded and improved in the fall of 2011. However, funding limitations prevented harbor dredging at that time.

To obtain funds for this dredging project, the Parks Department sought partial grant funding through the Wisconsin Waterways Commission Recreational Boating Fund (RBF). One of the RBF requirements is that grant applicants have all regulatory permits in-hand prior to application.

1.2 Project Chronology

On July 25, 2012, the Parks Department submitted a Joint State/Federal Chapter 30 permit application for the proposed dredging project. On October 15, 2012, the Wisconsin Department of Natural Resources (WDNR) issued permit IP-NE-2012-15-03814, authorizing the project to proceed. On October 31, 2012, the United States Army Corps of Engineers issued a permit authorizing the project to proceed.

Having the necessary permits in hand, the Parks Department presented the proposed project and funding request to the Wisconsin Waterways Commission on November 13, 2012, and was subsequently awarded a 50% cost-share (of eligible costs) to a maximum grant reimbursement of $74,250.

The Parks Department then contracted with AECOM to prepare construction documents, assist with bidding, and monitor construction activities. The construction documents included the WDNR and COE regulatory permits and their respective conditions. These documents also identified the disposal site for the dredged materials (Andre Pit); the location of this pit is also shown on Figure 1. Sealed bids were obtained on September 9, 2013. Death's Door Marine Inc. was awarded the contract. Construction was tentatively scheduled to begin in early October 2013 with completion in November 2013. This construction schedule avoided the "No Dredging" period condition (March 15th to July 1st) of the WDNR permit.

On September 18th, 2013, the WDNR emailed the Parks Department indicating the harbor sediment may need to be tested for contamination. In order to clarify the sediment testing and other associated submittals, the Parks Department, AECOM, Death's Door Marine, Inc., and the WDNR representatives met at the WDNR Green Bay office on Monday, September 30th, 2013. During this meeting, the WDNR indicated multiple requirements must be met prior to project commencement (even though project permits were already in-hand), including:

- Sediment Testing and Evaluation per NR347 criteria
- Application for a Grant of Low-Hazard Exemption for the sediment disposal area (Andre Pit)
- A stormwater management and revegetation plan for the sediment disposal area (Andre Pit)
- Potential need for a Wastewater Discharge permit for pore water and interstitial water released during dewatering of the sediment. Dewatering of dredged sediment from the barge deck was considered unacceptable.

On Thursday, October 3, 2013, AECOM presented the proposed Sediment Sampling and Analysis Plan (SAP) to the WDNR for review. The WDNR reviewed and approved the SAP on the same day. AECOM proceeded to perform the sediment

sampling on October 10, 2013. While on-site, AECOM also performed a pre-dredge hydrographic survey of the project area. The remainder of this report addresses the sediment sampling and laboratory results.

Site Photograph October 10, 2013. Panoramic view looking Southwest across harbor area.

2 Purpose and Scope for Hydrographic Survey and Sediment Sampling

2.1 Purpose

The hydrographic survey was performed to determine the existing harbor and channel depths for selection of sediment sampling locations, and to estimate dredge pay volumes for the contract. The most recent hydrographic survey performed at this harbor was from 2007. The sediment sampling and analysis was performed to obtain data necessary to determine the environmental and geotechnical parameters of the sediment for evaluation against sediment disposal site acceptance criteria. The primary site being considered for sediment disposal is at the Door County-owned property informally identified as the Andre Pit (See Figure 1). The Andre Pit is located in the Town of Union, approximately 4 miles from the dredging site. Several factors contributed to the selection of this particular disposal site, including:

- County ownership
- Relatively close travel distance from harbor, thereby minimizing hauling costs
- No tipping fees
- Very low public use and accessibility (located on a dead end road)

2.2 Scope

The sampling and analysis scope described in this report was conducted in accordance with the Wisconsin Natural Resources (NR) Chapter 347 regulations and the WDNR document titled *Guidance for Applying the Sediment and Analysis requirements of Chapter NR 347, Wisconsin Administrative Code* (Guidance Document). This report provides a summary of the site sample collection methods and analytical results obtained.

The Scope of Work for the sampling and analysis consisted of the following:

1. Prepare a Sediment Sampling and Analysis Plan
    a. Submit Sediment Sampling and Analysis Plan to WDNR for review and approval (October 3, 2013)
2. Perform hydrographic survey within the proposed dredge area (October 10, 2013)
    a. Verify sediment thickness to be removed at proposed sample locations
    b. Calculate proposed dredge volume of material
3. Collect sediment samples from three locations within the proposed dredge area. Two samples were collected from each sample location.
4. Submit the sediment samples to a qualified laboratory
5. Prepare a Sediment Sampling and Analysis Report
6. Teleconference with the WDNR and the Parks Department to discuss the survey results

3 Hydrographic Survey

AECOM mobilized to the site on October 10, 2013, to perform the hydrographic survey. Site activities were coordinated with the Park Director upon arrival. Conditions for the 2013 survey were ideal, winds were light and the Bay was very calm through most of the day.

The fieldwork was initiated by finding and verifying the vertical site benchmark, which is the top of the steel sheetpile on the North Dock at the north side of the boat ramp (See Page C-01). This benchmark is identified as +584.1 feet per previous survey records. An InSitu water level (tide gage) recorder was mounted to the existing wall, and this tide gate was calibrated to IGLD85. The tide gage was programmed to record water level elevations on an interval of once per minute. The survey work-boat was launched at the onsite boat launch ramp. The Odom HydroTrac echosounder was calibrated to site conditions. Depth bar-checks were performed at 3-foot, and 10-foot depths. Geographic positions of the soundings were obtained with a Trimble DSM 232 differential geographic positioning (DGPS) unit. Trimble HydroPro software was used on-board to collect depth soundings at 10-foot intervals along transects, oriented approximately perpendicular to the proposed channel centerline. At the conclusion of the survey, bar-checks were re-performed to verify the calibration of the Odom echosounder.

After the field-work was complete, depth soundings were post-processed with Trimble HydroPro software using the tide and depth data collected in the field. The hydrographic survey data was processed to a comma-delimited ASCII point file with northing, easting, and (lakebed) elevation data. This data was post-processed with AutoCAD Civil3d for terrain modeling, dredge volume calculations, and map generation. The survey map is included in Appendix D. Volume calculations were prepared to illustrate design depths, including overdredge allowances.

Proposed dredge volume quantities, based on the October 10, 2013 hydrographic survey are provided in the following table. The proposed dredging was divided into four (4) individual (sub)areas to allow County Parks flexibility with regard to grant reimbursement, prioritization of different areas (the navigational channel receives the highest use), variable depths, and future benefit. An overdredge allowance of 12” was provided to the contractor.

Area	Base Volume to Design Elevation (CY)	Potential 12” Overdredge Volume (CY)	Total Volume (CY)
Area 1: 50-foot wide entrance channel	2,030 CY to +571.5’	1,200 CY	3,230 CY
Area 2: Fuel Dock	1,300 CY to +571.5’	375 CY	1,675 CY
Area 3: Marina Basin North	525 CY to +572.5’	200 CY	725 CY
Area 4: Marina Basin South	750 CY to +574.5’	825 CY	1,575 CY
Sub-Totals:	4,605 CY	2,600 CY	7,205 CY

The total dredge volume based on the October 10, 2013 hydrographic survey is estimated to be 7,205 CY. The total dredge volume based on the 2007 hydrographic information was 6,311 CY. Therefore a significant volume of sediment has accumulated in the proposed dredge area over the past 6 year timeframe. This emphasizes the need for deepening of the harbor and entrance for continued general public use of the facility.

4 Sediment Sampling and Analysis

Prior to sampling at the site, AECOM prepared an SAP, and submitted this plan to the DNR for review. This plan was approved by DNR on October 10, 2013. The sediment sample collection and analyses were conducted in accordance with this SAP. A copy of the SAP is provided in Appendix E.

4.1 Sediment Sampling

Drawing C-01 in Appendix D shows the sampling locations. The sediment samples were collected with an AMS-brand stainless steel two-inch diameter core sampler (AMS sampler). Clear butyrate liners were used with the AMS sampler to aid in visual identification of recovered sediment sample length and strata. A total of six samples were collected, two samples at each of the three locations. Samples are identified as "upper" (or .1) and "lower" (or .2) at each of the three sample locations. After retrieval of the samples, the sediments were transferred to clean dedicated plastic bags. Each of the six samples was homogenized within the six dedicated plastic bags. The samples were then transferred to the appropriate laboratory approved container, labeled, and put on ice in a cooler. The non-disposable equipment was cleaned between sample locations, per the SAP.

Field sample logs were completed for each sediment sample location. Information documented in the logs includes sample identification, sample location, depth of water, and a visual description of the sediment. The sample logs are included in Appendix A.

4.2 Visual Classification

During sampling, the sediment for each of the three sample locations was visually classified as follows. Elevations of the sample interval are noted:

A-1.1 upper sample consisting of gray to brown sands with organics (from top of sediment at +574.0' to +571.3')

A-1.2 lower sample consisting of dense light-gray clay (+571.3' to +571.1')

A-2.1 upper sample consisting of brown sand with organics (from top of sediment at +575.0' to +573.5')

A-2.2 lower sample consisting of brown sands with silt (+573.5' to +573.0')

A-3.1 upper sample consisting of dark brown sands with organics (from top of sediment at +573.0' to +570.5')

A-3.2 lower sample consisting of dark brown sands with organics (+570.5' to +569.4')

4.3 Sample Custody and Handling

Samples were collected on October 10th, 2013, and maintained by AECOM until transport by AECOM to Pace Analytical Services, Inc. in Green Bay, Wisconsin, on October 11, 2013.

4.4 Analytical Results

4.4.1 Physical (Geotechnical) Results

The results of the physical (geotechnical) analyses are included in Appendix B. These geotechnical analyses consisted of grain-size analyses for each sample.

A-1.1 upper sample at Location A-1 was classified as silty sand with organic fines, fine grained, brown (SM)

A-1.2 lower sample at Location A-1 was classified as sandy, silty clay with organic fines, brown (CL-ML)

A-2.1 upper sample at Location A-2 was classified as silty sand with organic fines, fine grained, brown (SM)

A-2.2 lower sample at Location A-2 was classified as silty sand, fine grained, with trace of organic fines, a little gravel, brown (SM)

A-3.1 upper sample at Location A-3 was classified as sand, fine grained, some organic fines, brown (SP)

A-3.2 lower sample at Location A-3 was classified as sand with silt, fine grained, some organic fines, and a little gravel, brown (SP-SM)

4.4.2 Chemical Analyses

The results of the chemical analysis are included in Appendix C. Table 2 in Appendix C summarizes the results. The detected metals were at concentrations below the Consensus-Based Sediment Quality Guidelines (CBSQG; WDNR Publication WT-732) threshold effect concentration (TEC), where established. PCB detections occurred in the upper samples (A-1.1 and A-2.1) within the boat harbor, however, the normalized PCB values were below the TEC limit. Several PAH compounds were also detected in the samples collected, but were at concentrations below the TEC. Total organic carbon concentrations indicated typically higher concentrations in the upper samples than the lower samples.

5 Summary and Recommendations

The hydrographic survey and sediment sampling presented herein indicate the following:

- Dredging to planned depths will remove approximately 7,205 CY of sediments
- Sediments to be removed are generally classified as brown, fine sands (SP) or silty sands (SM) with some organics. Sediments which would be left exposed by the dredging would consist of this same SM material, or a harder gray clay. The gray clay represents a sediment horizon which has not been previously dredged.
- Laboratory chemical results indicate no exceedance of the TEC sediment screening criteria. PCB Aroclor 1242 are present in the two (2) samples representing upper sediment strata in the harbor (A-1.1 and A-2.1) at concentrations below the TEC. No detection of PCB occurred in sediment outside the harbor. Several PAH compounds were also detected, however, these values were also less than the TEC.
- Some dewatering of the sediment may be needed on-site prior to transport by truck to the disposal site
- Disposal is proposed at the Andre Pit, a site which is currently owned by Door County
- AECOM recommends further dialogue between the County Parks, the dredge contractor, and the DNR to establish a working plan for sediment dredging, dewatering, and disposal which meets the project goals of County Parks. These goals include providing adequate navigation depth within the harbor, completing the project with available funds, and protecting the public waterway and groundwater resources.

Appendix A.

Soil Sample Logs

SAMPLE LOG

Date: 10/10/2013 **Sample ID:** A-3.1(Upper) and A-3.2(Lower)

Time: 1:40pm **Sample Crew Initials:** PJD/RP

Project Name and Location: Sediment Sampling, Chaudoirs Dock County Park, Door County

AECOM Project Number: 60302765

DGPS Coordinate Grid: Wisconsin Door County Coordinate Zone, North American Datum of 1983 (NAD83)

Location (DGPS Northing): 126,941.9'

Location: (DGPS Easting): 410,008.8'

Weather: 68 degrees F, Calm

Water Surface Elevation: +577.7 feet IGLD85

Water Depth: 4.7 feet

Lake Bottom Elevation: +573.0 feet IGLD85

Sampler Tip Elevation : +569.4 feet IGLD85

Collection Method:

Ponar Bucket Grab Sample: _____ **Piston Core Sample:**_____ **AMS Core Sample**: X

Sediment Sample Description:

Color: brown **Odor**: none **Visible Sheen**: none

Inclusions: shell fragments **Grain Size**: see grain size analysis

Comments: Upper and Lower Samples divided at target overdredge dredge elevation (+570.5' IGLD85)

Upper portion is Fine Sand, Lower Portion is Sand with Silt

Design Dredge Elevation = +571.5' IGLD85

Overdredge Elevation = +570.5' IGLD85

SAMPLE LOG

Date: 10/10/2013 **Sample ID:** A-2.1(Upper) and A-2.2(Lower)

Time: 3:30pm **Sample Crew Initials:** PJD/RP

Project Name and Location: Sediment Sampling, Chaudoirs Dock County Park, Door County

AECOM Project Number: 60302765

DGPS Coordinate Grid: Wisconsin Door County Coordinate Zone, North American Datum of 1983 (NAD83)

Location (DGPS Northing): 126,736.4'

Location: (DGPS Easting): 410,167.8'

Weather: 68 degrees F, Calm

Water Surface Elevation: +577.6 feet IGLD85

Water Depth: 2.6 feet

Lake Bottom Elevation: +575.0 feet IGLD85

Sampler Tip Elevation : +573.0 feet IGLD85

Collection Method:

Ponar Bucket Grab Sample: _____ **Piston Core Sample:**_____ **AMS Core Sample**: X

Sediment Sample Description:

Color: brown **Odor**: none **Visible Sheen**: none

Inclusions: shell fragments **Grain Size**: see grain size analysis

Comments: Upper and Lower Samples divided at target overdredge dredge elevation (+573.5' IGLD85) Upper portion is Silty Sand, Lower Portion is Silty Sand

Design Dredge Elevation = +574.5' IGLD85

Overdredge Elevation = +573.5' IGLD85

SAMPLE LOG

Date: 10/10/2013 **Sample ID:** A-1.1(Upper) and A-1.2(Lower)

Time: 2:40pm **Sample Crew Initials:** PJD/RP

Project Name and Location: Sediment Sampling, Chaudoirs Dock County Park, Door County

AECOM Project Number: 60302765

DGPS Coordinate Grid: Wisconsin Door County Coordinate Zone, North American Datum of 1983 (NAD83)

Location (DGPS Northing): 126,818.3'

Location: (DGPS Easting): 410,261.1'

Weather: 68 degrees F, Calm

Water Surface Elevation: +577.7 feet IGLD85

Water Depth: 3.7 feet

Lake Bottom Elevation: +574.0 feet IGLD85

Sampler Tip Elevation : +571.1 feet IGLD85

Collection Method:

Ponar Bucket Grab Sample: _____ **Piston Core Sample:**_____ **AMS Core Sample**: X

Sediment Sample Description:

Color: brown **Odor**: none **Visible Sheen**: none

Inclusions: shell fragments **Grain Size**: see grain size analysis

Comments: Upper and Lower Samples divided at observed clay strata (approximately +571.3' IGLD85)

Upper portion is Silty Sand with organics, Lower Portion is Sandy, Silty, Clay

Design Dredge Elevation = +572.5' IGLD85

Overdredge Elevation = +571.5'IGLD85

Appendix B.

Grain-Size Analysis Report

CQM, INC.

SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENERAL DATA:

Client:	**Pace Analytical Services, Inc.**
Project:	**No. 4086476**
Location Sampled:	**A-1.1**
Sample No:	**4086476-001**
Depth of Sample:	
Date Received:	**10/17/13**
Sample Designated For:	**Soil Classification**
Source of Sample:	**Chaudoir's Dock**
Munsell Color Code:	**10YR 4/3**
Date Sampled:	**10/10/13**

LABORATORY DATA:

Date Tested:	October 17-21, 2013
Test Performed By:	JJN

24 Hrs. Turn Around:	NO
Washed Gradation:	YES

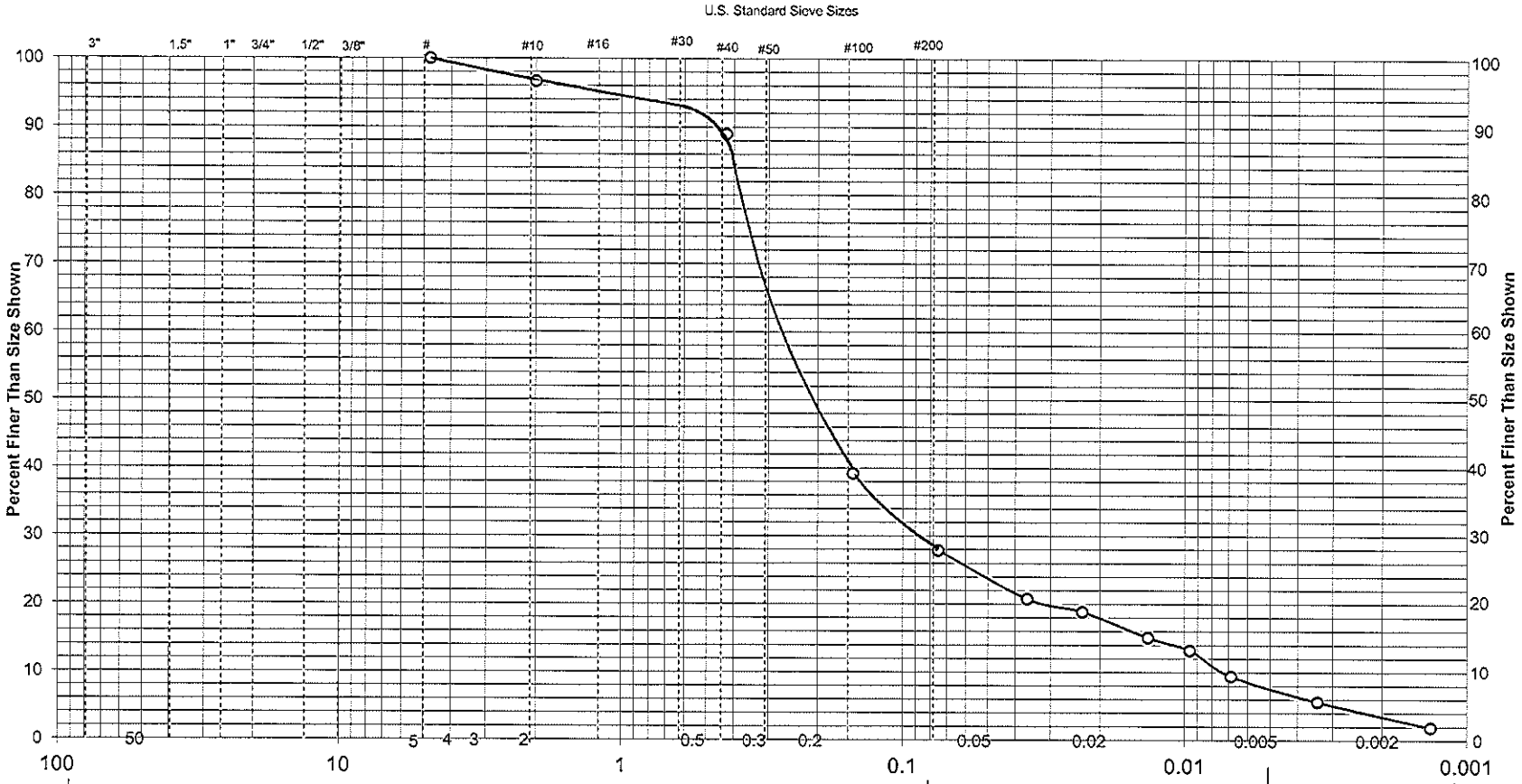
Dry Weight of Soil (gms): 200.4

Sieve Size	Weight Retained	% Retained	% Passing	Project Specification % Passing by Weight	Source of Specification
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"					
#4	0.0	0.0	100.0		
#10	6.7	3.3	96.7		
#40	15.5	7.7	89.0		
#100	99.8	49.8	39.2		
#200	22.6	11.3	27.9		

REVIEWED BY:	Robert A Bowe
DATE REVIEWED:	10/30/13

Remarks:

GRAIN SIZE DISTRIBUTION CURVE



Gravel		Sand				
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
		3.3%	7.7%	61.1%	20.4%	7.5%

Soil Classification: SILTY SAND W/ORGANIC FINES, fine grained, brown (SM)

Location Sampled: A-1.1		Elevation or Depth:	Date Sampled: 10/10/13
Sample Number: 4086476-001		Sampled Moisture Content (%): 91.0	Report No.: 476-1
Sample Source: Chaudoir's Dock		*CQM, INC.*	
Atterberg Limits: LL=	PL= PI=	Client: **Pace Analytical Services, Inc.**	
Munsell Color Code: 10YR 4/3		Project: **No. 4086476**	Page: 2
Date Received: 10/17/13		Prepared by: Michael R. Andraschko	Date: 10/28/13
Coefficients: Cc=	Cu=	Checked by: Robert A Boese	Date: 10/30/13

CQM, INC.

SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENERAL DATA:

Client:	**Pace Analytical Services, Inc.**
Project:	**No. 4086476**
Location Sampled:	**A-1.2**
Sample No:	**4086476-002**
Depth of Sample:	
Date Received:	**10/17/13**
Sample Designated For:	**Soil Classification**
Source of Sample:	**Chaudoir's Dock**
Munsell Color Code:	**10YR 4/3**
Date Sampled:	**10/10/13**

LABORATORY DATA:

Date Tested:	October 17-24, 2013
Test Performed By:	TKA

24 Hrs. Turn Around:	NO
Washed Gradation:	YES

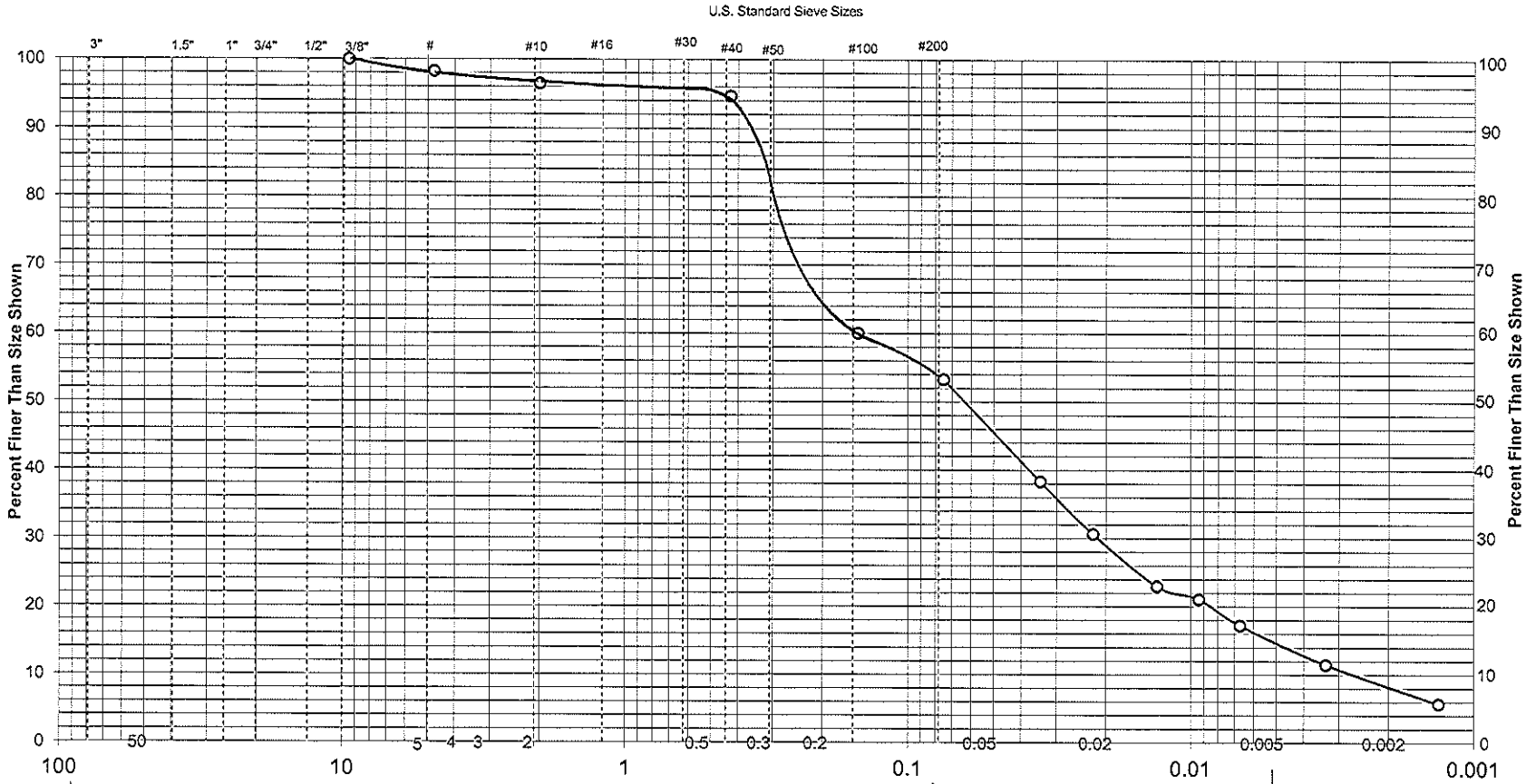
Dry Weight of Soil (gms): 137.7

Sieve Size	Weight Retained	% Retained	% Passing	Project Specification % Passing by Weight	Source of Specification
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"	0.0	0.0	100.0		
#4	2.4	1.7	98.3		
#10	2.5	1.8	96.5		
#40	2.5	1.8	94.7		
#100	47.6	34.6	60.1		
#200	9.4	6.8	53.3		

REVIEWED BY:	Robert A Rouse
DATE REVIEWED:	10/30/13

Remarks:

GRAIN SIZE DISTRIBUTION CURVE



Gravel		Sand				
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
	1.7%	1.8%	1.8%	41.4%	38.8%	14.5%

Soil Classification: SANDY SILTY CLAY W/ORGANIC FINES, brown (CL-ML)

Location Sampled: A-1.2	Elevation or Depth:	Date Sampled:	10/10/13
Sample Number: 4086476-002	Sampled Moisture Content (%): 57.2	Report No.:	476-2
Sample Source: Chaudoir's Dock	*CQM, INC.*		
Atterberg Limits: LL= PL= PI=	Client:	Pace Analytical Services, Inc.	
Munsell Color Code: 10YR 4/3	Project:	No. 4086476	Page: 2
Date Received: 10/17/13	Prepared by:	Michael R. Andraschko	Date: 10/29/13
Coefficients: Cc= Cu=	Checked by:	Robert R Rowan	Date: 10/30/13

CQM, INC.

SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENERAL DATA:

Client:	**Pace Analytical Services, Inc.**
Project:	**No. 4086476**
Location Sampled:	**A-2.1**
Sample No:	**4086476-004**
Depth of Sample:	
Date Received:	**10/17/13**
Sample Designated For:	**Soil Classification**
Source of Sample:	**Chaudoir's Dock**
Munsell Color Code:	**10YR 4/3**
Date Sampled:	**10/10/13**

LABORATORY DATA:

Date Tested:	October 17-21, 2013
Test Performed By:	JJN

24 Hrs. Turn Around:	NO
Washed Gradation:	YES

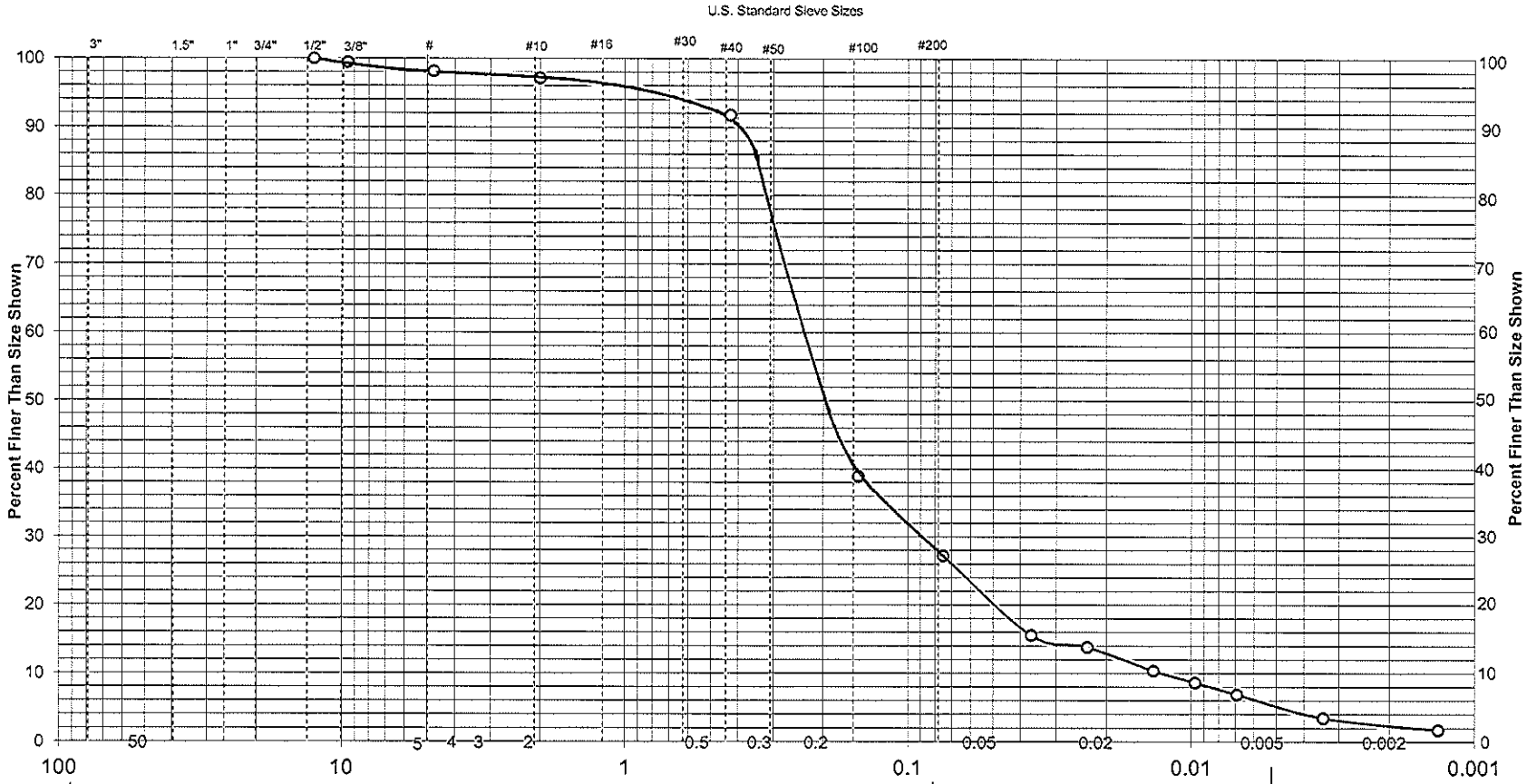
Dry Weight of Soil (gms): 230.8

Sieve Size	Weight Retained	% Retained	% Passing	Project Specification % Passing by Weight	Source of Specification
3"					
1 1/2"					
1"					
3/4"					
1/2"	0.0	0.0	100.0		
3/8"	1.3	0.6	99.4		
#4	3.0	1.3	98.1		
#10	2.3	1.0	97.1		
#40	12.2	5.3	91.8		
#100	122.2	52.9	38.9		
#200	27.0	11.7	27.2		

REVIEWED BY:	Robert A. Rouse
DATE REVIEWED:	10/30/13

Remarks:

GRAIN SIZE DISTRIBUTION CURVE



Gravel		Sand				
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
	1.9%	1.0%	5.3%	64.6%	22.2%	5.0%

Soil Classification: SILTY SAND W/ORGANIC FINES, fine grained, brown (SM)

Location Sampled: A-2.1			Elevation or Depth:	Date Sampled:	10/10/13
Sample Number: 4086476-004			Sampled Moisture Content (%): 106.4	Report No.:	476-4
Sample Source: Chaudoir's Dock			*CQM, INC.*		
Atterberg Limits: LL=	PL=	PI=	Client: **Pace Analytical Services, Inc.**		
Munsell Color Code: 10YR 4/3			Project: **No. 4086476**	Page:	2
Date Received: 10/17/13			Prepared by: Michael R. Andraschko	Date:	10/28/13
Coefficients: Cc=	Cu=		Checked by: Robert R Crouse	Date:	10/30/13

CQM, INC.

SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENERAL DATA:

Client:	**Pace Analytical Services, Inc.**
Project:	**No. 4086476**
Location Sampled:	**A-2.2**
Sample No:	**4086476-005**
Depth of Sample:	
Date Received:	**10/17/13**
Sample Designated For:	**Soil Classification**
Source of Sample:	**Chaudoir's Dock**
Munsell Color Code:	**10YR 4/3**
Date Sampled:	**10/10/13**

LABORATORY DATA:

Date Tested:	October 17-24, 2013
Test Performed By:	TKA

24 Hrs. Turn Around:	NO
Washed Gradation:	YES

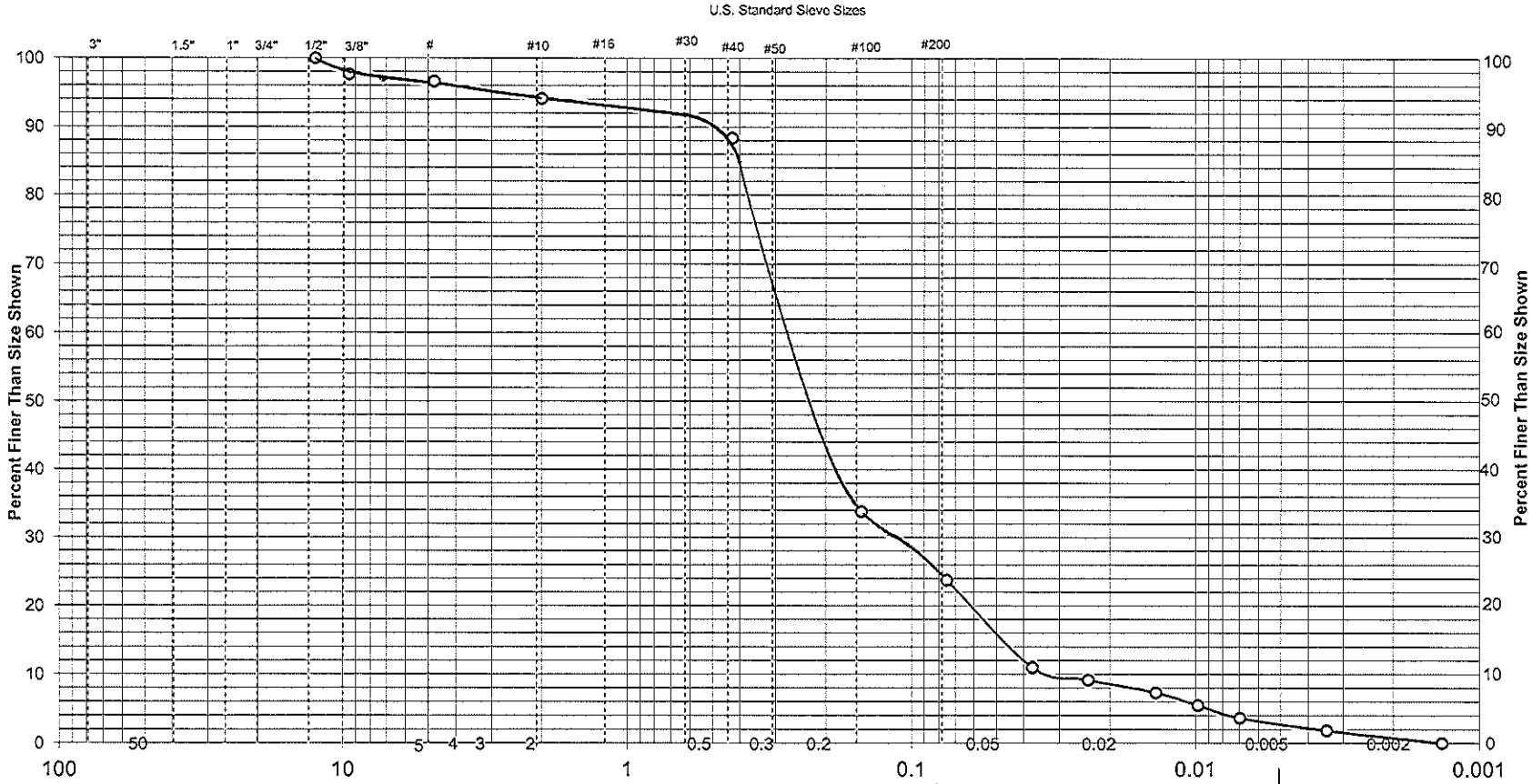
Dry Weight of Soil (gms): 199.3

Sieve Size	Weight Retained	% Retained	% Passing	Project Specification % Passing by Weight	Source of Specification
3"					
1 1/2"					
1"					
3/4"					
1/2"	0.0	0.0	100.0		
3/8"	4.7	2.4	97.6		
#4	2.0	1.0	96.6		
#10	5.0	2.5	94.1		
#40	11.3	5.7	88.4		
#100	108.9	54.6	33.8		
#200	20.0	10.0	23.8		

REVIEWED BY:	Robert A Rouse
DATE REVIEWED:	10/30/13

Remarks:

GRAIN SIZE DISTRIBUTION CURVE



Gravel		Sand				
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
	3.4%	2.5%	5.7%	64.6%	21.3%	2.5%

Soil Classification: SILTY SAND, fine grained, trace of organic fines, a little gravel, brown (SM)					
Location Sampled: A-2.2			Elevation or Depth:	Date Sampled:	10/10/13
Sample Number: 4086476-005			Sampled Moisture Content (%): 20.7	Report No.:	476-5
Sample Source: Chaudoir's Dock			*CQM, INC.*		
Atterberg Limits: LL=	PL=	PI=	Client: **Pace Analytical Services, Inc.**		
Munsell Color Code: 10YR 4/3			Project: **No. 4086476**	Page:	2
Date Received: 10/17/13			Prepared by: Michael R. Andraschko	Date:	10/28/13
Coefficients: Cc=	Cu=		Checked by: Robert A. Rouse	Date:	10/30/13

CQM, INC.

SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENERAL DATA:

Client:	**Pace Analytical Services, Inc.**
Project:	**No. 4086476**
Location Sampled:	**A-3.1**
Sample No:	**476-007**
Depth of Sample:	
Date Received:	**10/17/13**
Sample Designated For:	**Soil Classification**
Source of Sample:	**Chaudoir's Dock**
Munsell Color Code:	**10YR 4/3**
Date Sampled:	**10/10/13**

LABORATORY DATA:

Date Tested:	October 17-21, 2013
Test Performed By:	JJN

24 Hrs. Turn Around:	NO
Washed Gradation:	YES

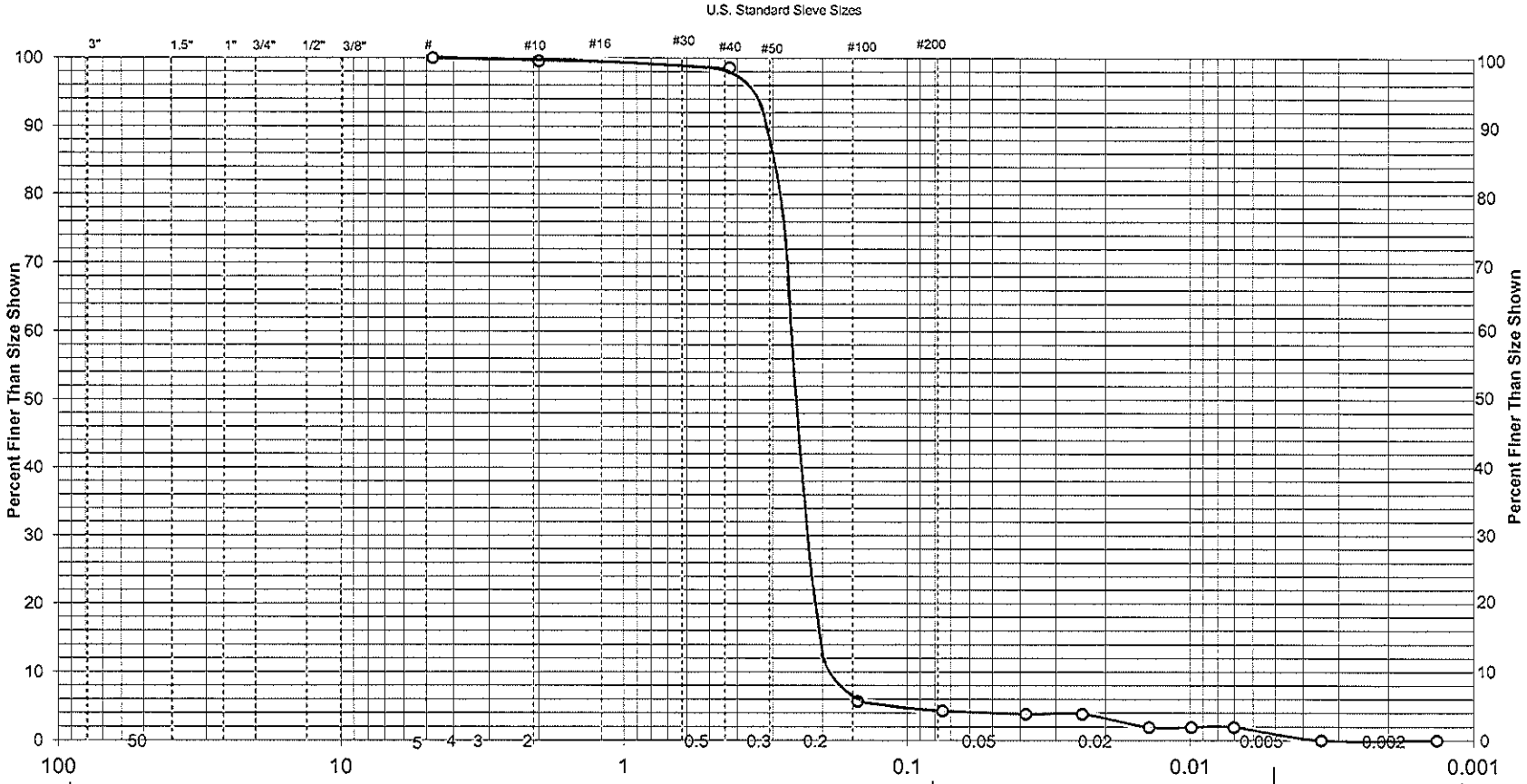
Dry Weight of Soil (gms): 613.3

Sieve Size	Weight Retained	% Retained	% Passing	Project Specification % Passing by Weight	Source of Specification
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"					
#4	0.0	0.0	100.0		
#10	2.7	0.4	99.6		
#40	6.2	1.0	98.6		
#100	569.6	92.9	5.7		
#200	8.3	1.4	4.3		

REVIEWED BY:	Robert R Rouse
DATE REVIEWED:	10/30/13

Remarks:

GRAIN SIZE DISTRIBUTION CURVE



Gravel		Sand			Silt	Clay
Coarse	Fine	Coarse	Medium	Fine		
		0.4%	1.0%	94.2%	3.3%	1.0%

Soil Classification: SAND, fine grained, some organic fines, brown (SP)

Location Sampled: A-3.1			Elevation or Depth:	Date Sampled:	10/10/13
Sample Number: 476-007			Sampled Moisture Content (%): 26.9	Report No.:	476-7
Sample Source: Chaudoir's Dock			*CQM, INC.*		
Atterberg Limits: LL=	PL=	PI=	Client: **Pace Analytical Services, Inc.**		
Munsell Color Code: 10YR 4/3			Project: **No. 4086476**	Page:	2
Date Received: 10/17/13			Prepared by: Michael R. Andraschko	Date:	10/29/13
Coefficients: Cc=	Cu=		Checked by: Robert R Rowe	Date:	10/30/13

CQM, INC.

SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENERAL DATA:

Client:	**Pace Analytical Services, Inc.**
Project:	**No. 4086476**
Location Sampled:	**A-3.2**
Sample No:	**476-008**
Depth of Sample:	
Date Received:	**10/17/13**
Sample Designated For:	**Soil Classification**
Source of Sample:	**Chaudoir's Dock**
Munsell Color Code:	**10YR 4/3**
Date Sampled:	**10/10/13**

LABORATORY DATA:

Date Tested:	October 17-21, 2013
Test Performed By:	JJN

24 Hrs. Turn Around:	NO
Washed Gradation:	YES

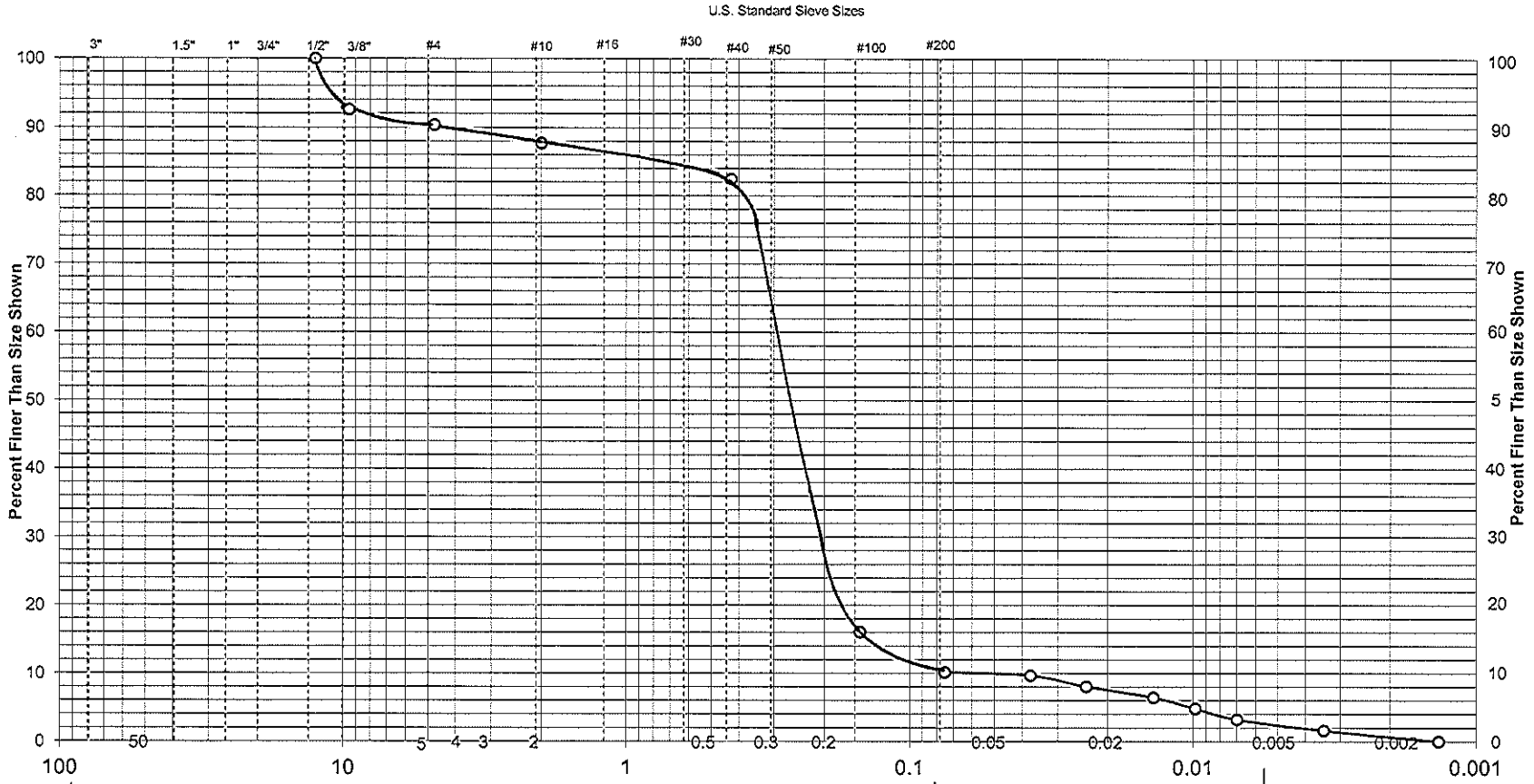
Dry Weight of Soil (gms): 304.9

Sieve Size	Weight Retained	% Retained	% Passing	Project Specification % Passing by Weight	Source of Specification
3"					
1 1/2"					
1"					
3/4"					
1/2"	0.0	0.0	100.0		
3/8"	22.6	7.4	92.6		
#4	6.7	2.2	90.4		
#10	8.1	2.7	87.7		
#40	16.0	5.2	82.5		
#100	202.4	66.4	16.1		
#200	18.1	5.9	10.2		

REVIEWED BY:	Robert R Rouse
DATE REVIEWED:	10/30/13

Remarks:

GRAIN SIZE DISTRIBUTION CURVE



Gravel		Sand				
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
	9.6%	2.7%	5.2%	72.3%		10.2%

Soil Classification: SAND W/SILT, fine grained, some organic fines, a little gravel, brown (SP-SM)

Location Sampled: A-3.2			Elevation or Depth:	Date Sampled:	10/10/13
Sample Number: 476-008			Sampled Moisture Content (%): 24.6	Report No.:	476-8
Sample Source: Chaudoir's Dock			*CQM, INC.*		
Atterberg Limits:	LL=	PL=	PI=	Client:	**Pace Analytical Services, Inc.**
Munsell Color Code: 10YR 4/3			Project:	**No. 4086476**	Page: 2
Date Received: 10/17/13			Prepared by:	Michael R. Andraschko	Date: 10/28/13
Coefficients: Cc=	Cu=		Checked by:	Robert A. Rouse	Date: 10/30/13

Appendix C.

Chemical Analysis Results

Table 2
Sediment Sample Analytical Summary
Sawyer Creek Channel Improvements
AECOM Project No. 60281037

Sample ID	Depth below water surface (ft)	CBSQ Guideline Values[a]	Metals (mg/kg)						PAHs (µg/kg)								Other Parameters			
			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Fluoranthene	Naphthalene	Pyrene	Total PAHs	Total PCBs (µg/kg)	Percent Moisture (%)	Total Organic Carbon (mg/kg)	Mean Total Organic Carbon (mg/kg)	
		Threshold Effect Concentration	9.8	NE	0.99	43	36	0.18	150	240	240	423	176	195	1,610	60				
		⇨ Midpoint Effect Concentration	21.4	NE	3.0	76.5	83	0.64	800	6,820	6,820	1,327	369	858	12,205	368				
		Probable Effect Concentration	33	NE	5.0	110	130	1.1	1,450	13,400	13,400	2,230	561	1,520	22,800	676				
A-1.1		Dry Weight Concentration	2.4 J	21.9	0.23 J	9.3	7.1	0.053		46.7 JB					46.7	76.4 J	51.6	20,400	23,800	22,100
		Normalized to 1% TOC for Comparision With CBSQG Values							--	21.1	--	--	--	--	21.1	34.6				
A-1.2		Dry Weight Concentration	3.3	32.5	0.24 J	22.1	8.2	0.031		17.0 JB					17.0	<37.7	33.7	44,400	35,300	39,800
		Normalized to 1% TOC for Comparision With CBSQG Values							--	4.3	--	--	--	--	4.3	--				
A-2.1		Dry Weight Concentration	2.5 J	22.9	0.22 J	9.3	7.6	0.043	21.1 J	62.9 JB	17.6 J	49.3 J		43.2 J	194.1	58.5 J	50.9	33,600	29,900	31,700
		Normalized to 1% TOC for Comparision With CBSQG Values							6.7	19.8	5.6	15.6	--	13.6	61.2	18.5				
A-2.2		Dry Weight Concentration	1.7 J	14.8	0.13 J	5.8	4.4	0.032		13.6 JB			21.1		34.7	<31.0	19.3	27,700	27,600	27,700
		Normalized to 1% TOC for Comparision With CBSQG Values							--	4.9	--	--	7.6	--	12.5	--				
A-3.1		Dry Weight Concentration	1.0 J	4.4	<0.065	2.6	1.5	0.013		13.9 JB					13.9	<32.4	23.0	3,520	5,480	4,500
		Normalized to 1% TOC for Comparision With CBSQG Values							--	30.9	--	--	--	--	30.9	--				
A-3.2		Dry Weight Concentration	1.0 J	7.3	0.068 J	3.7	1.9	0.015		14.1 JB					14.1	<32.7	23.5	17,100	15,400	16,300
		Normalized to 1% TOC for Comparision With CBSQG Values							--	8.7	--	--	--	--	8.7	--				

Notes:
Only detected compounds are listed.
PAHs = Polynuclear Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls
-- = Not detected at or above limit of detection (LOD)
B = Benzo(b)fluoranthene detects biased high due to detections in the associated laboratory method blank.
J = Estimated concentration above the LOD and below the limit of quantitation (LOQ)
NE = Not Established
Note: The dry wt. normalized value for the Total Organic Content (TOC) assumes a 1% TOC content.
[a] As referenced in *Consensus-Based Sediment Quality Guidelines, Recommendations for Use & Application Interim Guidance*. WDNR, December 2003; WT-732 2003.
Bold text indicates the normalized concentration is above the Threshold Effect Concentration.
Outlined cells indicate normalized concentration is above the Probable Effect Concentrations

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

November 01, 2013

Pete Diemer
AECOM, Inc. - GREEN BAY
1035 Kepler Drive
Green Bay, WI 54311

RE: Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Dear Pete Diemer:
Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Kang Khang

kang.khang@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nebraska Certification #: Pace
Nevada Certification #: MN_00064
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4086476001	**A-1.1**	Solid	10/10/13 14:40	10/11/13 08:10
4086476002	**A-1.2**	Solid	10/10/13 14:40	10/11/13 08:10
4086476004	**A-2.1**	Solid	10/10/13 15:30	10/11/13 08:10
4086476005	**A-2.2**	Solid	10/10/13 15:30	10/11/13 08:10
4086476007	**A-3.1**	Solid	10/10/13 13:40	10/11/13 08:10
4086476008	**A-3.2**	Solid	10/10/13 13:40	10/11/13 08:10

Pace Analytical Services, Inc.
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SAMPLE ANALYTE COUNT

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4086476001	**A-1.1**	EPA 8082	BDS	10	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	18	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 9071	AS1	1	PASI-M
		EPA 9060 Modified	TJJ	4	PASI-G
4086476002	**A-1.2**	EPA 8082	BDS	10	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	18	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 9071	AS1	1	PASI-M
		EPA 9060 Modified	TJJ	4	PASI-G
4086476004	**A-2.1**	EPA 8082	BDS	10	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	18	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 9071	AS1	1	PASI-M
		EPA 9060 Modified	TJJ	4	PASI-G
4086476005	**A-2.2**	EPA 8082	BDS	10	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	18	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 9071	AS1	1	PASI-M
		EPA 9060 Modified	TJJ	4	PASI-G
4086476007	**A-3.1**	EPA 8082	BDS	10	PASI-G
		EPA 6010	DLB	7	PASI-G
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	18	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 9071	AS1	1	PASI-M
		EPA 9060 Modified	TJJ	4	PASI-G
4086476008	**A-3.2**	EPA 8082	BDS	10	PASI-G
		EPA 6010	DLB	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7471	CMS	1	PASI-G
		EPA 8270 by SIM	ARO	18	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 9071	AS1	1	PASI-M
		EPA 9060 Modified	TJJ	4	PASI-G

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-1.1 **Lab ID: 4086476001** Collected: 10/10/13 14:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<51.6**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	12674-11-2	
PCB-1221 (Aroclor 1221)	**<51.6**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	11104-28-2	
PCB-1232 (Aroclor 1232)	**<51.6**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	11141-16-5	
PCB-1242 (Aroclor 1242)	**76.7J**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	53469-21-9	
PCB-1248 (Aroclor 1248)	**<51.6**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	12672-29-6	
PCB-1254 (Aroclor 1254)	**<51.6**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	11097-69-1	
PCB-1260 (Aroclor 1260)	**<51.6**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	11096-82-5	
PCB, Total	**76.7J**	ug/kg	103	51.6	1	10/14/13 09:40	10/14/13 16:00	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	77	%	40-130		1	10/14/13 09:40	10/14/13 16:00	877-09-8	
Decachlorobiphenyl (S)	73	%	48-130		1	10/14/13 09:40	10/14/13 16:00	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.4J**	mg/kg	3.5	0.94	1	10/15/13 15:19	10/16/13 16:41	7440-38-2	
Barium	**21.9**	mg/kg	0.87	0.15	1	10/15/13 15:19	10/16/13 16:41	7440-39-3	
Cadmium	**0.23J**	mg/kg	0.87	0.088	1	10/15/13 15:19	10/16/13 16:41	7440-43-9	
Chromium	**9.3**	mg/kg	0.87	0.22	1	10/15/13 15:19	10/16/13 16:41	7440-47-3	
Lead	**7.1**	mg/kg	1.7	0.51	1	10/15/13 15:19	10/16/13 16:41	7439-92-1	
Selenium	**<1.0**	mg/kg	3.5	1.0	1	10/15/13 15:19	10/16/13 16:41	7782-49-2	
Silver	**<0.37**	mg/kg	1.7	0.37	1	10/15/13 15:19	10/16/13 16:41	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.053**	mg/kg	0.011	0.0055	1	10/14/13 14:11	10/15/13 11:29	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	83-32-9	
Acenaphthylene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	208-96-8	
Anthracene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	120-12-7	
Benzo(a)anthracene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	56-55-3	
Benzo(a)pyrene	**<12.3**	ug/kg	68.8	12.3	1	10/21/13 10:49	10/22/13 16:44	50-32-8	
Benzo(b)fluoranthene	**46.7J**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	205-99-2	
Benzo(g,h,i)perylene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	191-24-2	
Benzo(k)fluoranthene	**<12.1**	ug/kg	68.8	12.1	1	10/21/13 10:49	10/22/13 16:44	207-08-9	
Chrysene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	218-01-9	
Dibenz(a,h)anthracene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	53-70-3	
Fluoranthene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	206-44-0	
Fluorene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	86-73-7	
Indeno(1,2,3-cd)pyrene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	193-39-5	
Naphthalene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	91-20-3	
Phenanthrene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	85-01-8	
Pyrene	**<34.4**	ug/kg	68.8	34.4	1	10/21/13 10:49	10/22/13 16:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	40-130		1	10/21/13 10:49	10/22/13 16:44	321-60-8	
Terphenyl-d14 (S)	64	%	40-130		1	10/21/13 10:49	10/22/13 16:44	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-1.1 **Lab ID: 4086476001** Collected: 10/10/13 14:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**51.6**	%	0.10	0.10	1		10/14/13 13:56		
9071 Oil and Grease, Soxhlet	Analytical Method: EPA 9071 Preparation Method: EPA 3540								
Oil and Grease	**<130**	mg/kg	514	130	1	10/19/13 09:15	10/19/13 09:15		
Total Organic Carbon	Analytical Method: EPA 9060 Modified								
Surrogates									
RPD%	**15.7**	%	0.10	0.10	1		10/17/13 13:37		
Total Organic Carbon	**20400**	mg/kg	2260	1130	1		10/17/13 13:32	7440-44-0	
Total Organic Carbon	**23800**	mg/kg	2270	1130	1		10/17/13 13:37	7440-44-0	
Mean Total Organic Carbon	**22100**	mg/kg	2260	1130	1		10/17/13 13:37	7440-44-0	

Sample: A-1.2 **Lab ID: 4086476002** Collected: 10/10/13 14:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	12674-11-2	
PCB-1221 (Aroclor 1221)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	11104-28-2	
PCB-1232 (Aroclor 1232)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	11141-16-5	
PCB-1242 (Aroclor 1242)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	53469-21-9	
PCB-1248 (Aroclor 1248)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	12672-29-6	
PCB-1254 (Aroclor 1254)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	11097-69-1	
PCB-1260 (Aroclor 1260)	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	11096-82-5	
PCB, Total	**<37.7**	ug/kg	75.4	37.7	1	10/14/13 09:40	10/14/13 16:18	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	40-130		1	10/14/13 09:40	10/14/13 16:18	877-09-8	
Decachlorobiphenyl (S)	85	%	48-130		1	10/14/13 09:40	10/14/13 16:18	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.3**	mg/kg	3.0	0.80	1	10/15/13 15:19	10/16/13 16:48	7440-38-2	
Barium	**32.5**	mg/kg	0.74	0.13	1	10/15/13 15:19	10/16/13 16:48	7440-39-3	
Cadmium	**0.24J**	mg/kg	0.74	0.075	1	10/15/13 15:19	10/16/13 16:48	7440-43-9	
Chromium	**22.1**	mg/kg	0.74	0.19	1	10/15/13 15:19	10/16/13 16:48	7440-47-3	
Lead	**8.2**	mg/kg	1.5	0.43	1	10/15/13 15:19	10/16/13 16:48	7439-92-1	
Selenium	**<0.88**	mg/kg	3.0	0.88	1	10/15/13 15:19	10/16/13 16:48	7782-49-2	
Silver	**<0.32**	mg/kg	1.5	0.32	1	10/15/13 15:19	10/16/13 16:48	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.031**	mg/kg	0.0089	0.0045	1	10/14/13 14:11	10/15/13 11:31	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-1.2 **Lab ID: 4086476002** Collected: 10/10/13 14:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	83-32-9	
Acenaphthylene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	208-96-8	
Anthracene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	120-12-7	
Benzo(a)anthracene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	56-55-3	
Benzo(a)pyrene	**<4.5**	ug/kg	25.1	4.5	1	10/21/13 10:49	10/22/13 17:01	50-32-8	
Benzo(b)fluoranthene	**17.0J**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	205-99-2	
Benzo(g,h,i)perylene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	191-24-2	
Benzo(k)fluoranthene	**<4.4**	ug/kg	25.1	4.4	1	10/21/13 10:49	10/22/13 17:01	207-08-9	
Chrysene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	218-01-9	
Dibenz(a,h)anthracene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	53-70-3	
Fluoranthene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	206-44-0	
Fluorene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	86-73-7	
Indeno(1,2,3-cd)pyrene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	193-39-5	
Naphthalene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	91-20-3	
Phenanthrene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	85-01-8	
Pyrene	**<12.6**	ug/kg	25.1	12.6	1	10/21/13 10:49	10/22/13 17:01	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75	%	40-130		1	10/21/13 10:49	10/22/13 17:01	321-60-8	
Terphenyl-d14 (S)	101	%	40-130		1	10/21/13 10:49	10/22/13 17:01	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**33.7**	%	0.10	0.10	1		10/14/13 13:56		
9071 Oil and Grease, Soxhlet	Analytical Method: EPA 9071 Preparation Method: EPA 3540								
Oil and Grease	**<94.7**	mg/kg	376	94.7	1	10/24/13 09:10	10/24/13 09:10		
Total Organic Carbon	Analytical Method: EPA 9060 Modified								
Surrogates									
RPD%	**22.8**	%	0.10	0.10	1		10/17/13 13:50		
Total Organic Carbon	**44400**	mg/kg	2750	1370	1		10/17/13 13:44	7440-44-0	
Total Organic Carbon	**35300**	mg/kg	2740	1370	1		10/17/13 13:50	7440-44-0	
Mean Total Organic Carbon	**39800**	mg/kg	2740	1370	1		10/17/13 13:50	7440-44-0	

Sample: A-2.1 **Lab ID: 4086476004** Collected: 10/10/13 15:30 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<50.9**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	12674-11-2	
PCB-1221 (Aroclor 1221)	**<50.9**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	11104-28-2	
PCB-1232 (Aroclor 1232)	**<50.9**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	11141-16-5	
PCB-1242 (Aroclor 1242)	**58.5J**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	53469-21-9	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-2.1 **Lab ID: 4086476004** Collected: 10/10/13 15:30 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1248 (Aroclor 1248)	**<50.9**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	12672-29-6	
PCB-1254 (Aroclor 1254)	**<50.9**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	11097-69-1	
PCB-1260 (Aroclor 1260)	**<50.9**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	11096-82-5	
PCB, Total	**58.5J**	ug/kg	102	50.9	1	10/14/13 09:40	10/14/13 16:36	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	40-130		1	10/14/13 09:40	10/14/13 16:36	877-09-8	
Decachlorobiphenyl (S)	75	%	48-130		1	10/14/13 09:40	10/14/13 16:36	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.5J**	mg/kg	3.7	0.99	1	10/15/13 15:19	10/16/13 16:50	7440-38-2	
Barium	**22.9**	mg/kg	0.92	0.16	1	10/15/13 15:19	10/16/13 16:50	7440-39-3	
Cadmium	**0.22J**	mg/kg	0.92	0.093	1	10/15/13 15:19	10/16/13 16:50	7440-43-9	
Chromium	**9.3**	mg/kg	0.92	0.23	1	10/15/13 15:19	10/16/13 16:50	7440-47-3	
Lead	**7.6**	mg/kg	1.8	0.54	1	10/15/13 15:19	10/16/13 16:50	7439-92-1	
Selenium	**<1.1**	mg/kg	3.7	1.1	1	10/15/13 15:19	10/16/13 16:50	7782-49-2	
Silver	**<0.39**	mg/kg	1.8	0.39	1	10/15/13 15:19	10/16/13 16:50	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.043**	mg/kg	0.013	0.0063	1	10/14/13 14:11	10/15/13 11:33	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	83-32-9	
Acenaphthylene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	208-96-8	
Anthracene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	120-12-7	
Benzo(a)anthracene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	56-55-3	
Benzo(a)pyrene	**21.1J**	ug/kg	67.9	12.1	1	10/21/13 10:49	10/22/13 17:18	50-32-8	
Benzo(b)fluoranthene	**62.9J**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	205-99-2	
Benzo(g,h,i)perylene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	191-24-2	
Benzo(k)fluoranthene	**17.6J**	ug/kg	67.9	12.0	1	10/21/13 10:49	10/22/13 17:18	207-08-9	
Chrysene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	218-01-9	
Dibenz(a,h)anthracene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	53-70-3	
Fluoranthene	**49.3J**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	206-44-0	
Fluorene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	193-39-5	
Naphthalene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	91-20-3	
Phenanthrene	**<33.9**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	85-01-8	
Pyrene	**43.2J**	ug/kg	67.9	33.9	1	10/21/13 10:49	10/22/13 17:18	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72	%	40-130		1	10/21/13 10:49	10/22/13 17:18	321-60-8	
Terphenyl-d14 (S)	79	%	40-130		1	10/21/13 10:49	10/22/13 17:18	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**50.9**	%	0.10	0.10	1		10/14/13 13:56		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-2.1 **Lab ID: 4086476004** Collected: 10/10/13 15:30 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9071 Oil and Grease, Soxhlet	Analytical Method: EPA 9071 Preparation Method: EPA 3540								
Oil and Grease	**163J**	mg/kg	510	129	1	10/24/13 09:10	10/24/13 09:10		
Total Organic Carbon	Analytical Method: EPA 9060 Modified								
Surrogates									
RPD%	**11.6**	%	0.10	0.10	1		10/17/13 14:03		
Total Organic Carbon	**33600**	mg/kg	2420	1210	1		10/17/13 13:56	7440-44-0	
Total Organic Carbon	**29900**	mg/kg	2440	1220	1		10/17/13 14:03	7440-44-0	
Mean Total Organic Carbon	**31700**	mg/kg	2430	1210	1		10/17/13 14:03	7440-44-0	

Sample: A-2.2 **Lab ID: 4086476005** Collected: 10/10/13 15:30 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	12674-11-2	
PCB-1221 (Aroclor 1221)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	11104-28-2	
PCB-1232 (Aroclor 1232)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	11141-16-5	
PCB-1242 (Aroclor 1242)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	53469-21-9	
PCB-1248 (Aroclor 1248)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	12672-29-6	
PCB-1254 (Aroclor 1254)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	11097-69-1	
PCB-1260 (Aroclor 1260)	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	11096-82-5	
PCB, Total	**<31.0**	ug/kg	62.0	31.0	1	10/14/13 09:40	10/14/13 16:54	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83	%	40-130		1	10/14/13 09:40	10/14/13 16:54	877-09-8	
Decachlorobiphenyl (S)	80	%	48-130		1	10/14/13 09:40	10/14/13 16:54	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**1.7J**	mg/kg	2.3	0.61	1	10/15/13 15:19	10/16/13 16:52	7440-38-2	
Barium	**14.8**	mg/kg	0.56	0.098	1	10/15/13 15:19	10/16/13 16:52	7440-39-3	
Cadmium	**0.13J**	mg/kg	0.56	0.057	1	10/15/13 15:19	10/16/13 16:52	7440-43-9	
Chromium	**5.8**	mg/kg	0.56	0.14	1	10/15/13 15:19	10/16/13 16:52	7440-47-3	
Lead	**4.4**	mg/kg	1.1	0.33	1	10/15/13 15:19	10/16/13 16:52	7439-92-1	
Selenium	**<0.67**	mg/kg	2.3	0.67	1	10/15/13 15:19	10/16/13 16:52	7782-49-2	
Silver	**<0.24**	mg/kg	1.1	0.24	1	10/15/13 15:19	10/16/13 16:52	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.032**	mg/kg	0.0064	0.0032	1	10/14/13 14:11	10/15/13 11:35	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	83-32-9	
Acenaphthylene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	208-96-8	
Anthracene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	120-12-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-2.2 **Lab ID: 4086476005** Collected: 10/10/13 15:30 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Benzo(a)anthracene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	56-55-3	
Benzo(a)pyrene	**<3.7**	ug/kg	20.7	3.7	1	10/21/13 10:49	10/22/13 14:09	50-32-8	
Benzo(b)fluoranthene	**13.6J**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	205-99-2	B
Benzo(g,h,i)perylene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	191-24-2	
Benzo(k)fluoranthene	**<3.6**	ug/kg	20.7	3.6	1	10/21/13 10:49	10/22/13 14:09	207-08-9	
Chrysene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	218-01-9	
Dibenz(a,h)anthracene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	53-70-3	
Fluoranthene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	206-44-0	
Fluorene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	86-73-7	
Indeno(1,2,3-cd)pyrene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	193-39-5	
Naphthalene	**21.1**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	91-20-3	
Phenanthrene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	85-01-8	
Pyrene	**<10.3**	ug/kg	20.7	10.3	1	10/21/13 10:49	10/22/13 14:09	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	62	%	40-130		1	10/21/13 10:49	10/22/13 14:09	321-60-8	
Terphenyl-d14 (S)	71	%	40-130		1	10/21/13 10:49	10/22/13 14:09	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.3**	%	0.10	0.10	1		10/14/13 13:56		
9071 Oil and Grease, Soxhlet	Analytical Method: EPA 9071 Preparation Method: EPA 3540								
Oil and Grease	**<77.6**	mg/kg	308	77.6	1	10/24/13 09:10	10/24/13 09:10		
Total Organic Carbon	Analytical Method: EPA 9060 Modified								
Surrogates									
RPD%	**0.37**	%	0.10	0.10	1		10/17/13 14:28		
Total Organic Carbon	**27700**	mg/kg	901	451	1		10/17/13 14:21	7440-44-0	
Total Organic Carbon	**27600**	mg/kg	896	448	1		10/17/13 14:28	7440-44-0	
Mean Total Organic Carbon	**27700**	mg/kg	899	449	1		10/17/13 14:28	7440-44-0	

Sample: A-3.1 **Lab ID: 4086476007** Collected: 10/10/13 13:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	12674-11-2	
PCB-1221 (Aroclor 1221)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	11104-28-2	
PCB-1232 (Aroclor 1232)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	11141-16-5	
PCB-1242 (Aroclor 1242)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	53469-21-9	
PCB-1248 (Aroclor 1248)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	12672-29-6	
PCB-1254 (Aroclor 1254)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	11097-69-1	
PCB-1260 (Aroclor 1260)	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	11096-82-5	

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-3.1 **Lab ID: 4086476007** Collected: 10/10/13 13:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB, Total	**<32.4**	ug/kg	64.9	32.4	1	10/14/13 09:40	10/14/13 17:12	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	40-130		1	10/14/13 09:40	10/14/13 17:12	877-09-8	
Decachlorobiphenyl (S)	78	%	48-130		1	10/14/13 09:40	10/14/13 17:12	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**1.0J**	mg/kg	2.6	0.69	1	10/15/13 15:19	10/16/13 16:54	7440-38-2	
Barium	**4.4**	mg/kg	0.64	0.11	1	10/15/13 15:19	10/16/13 16:54	7440-39-3	
Cadmium	**<0.065**	mg/kg	0.64	0.065	1	10/15/13 15:19	10/16/13 16:54	7440-43-9	
Chromium	**2.6**	mg/kg	0.64	0.16	1	10/15/13 15:19	10/16/13 16:54	7440-47-3	
Lead	**1.5**	mg/kg	1.3	0.37	1	10/15/13 15:19	10/16/13 16:54	7439-92-1	
Selenium	**<0.75**	mg/kg	2.6	0.75	1	10/15/13 15:19	10/16/13 16:54	7782-49-2	
Silver	**<0.27**	mg/kg	1.3	0.27	1	10/15/13 15:19	10/16/13 16:54	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.013**	mg/kg	0.0077	0.0038	1	10/14/13 14:11	10/15/13 11:37	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	83-32-9	
Acenaphthylene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	208-96-8	
Anthracene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	120-12-7	
Benzo(a)anthracene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	56-55-3	
Benzo(a)pyrene	**<3.9**	ug/kg	21.6	3.9	1	10/21/13 10:49	10/22/13 15:01	50-32-8	
Benzo(b)fluoranthene	**13.9J**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	205-99-2	
Benzo(g,h,i)perylene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	191-24-2	
Benzo(k)fluoranthene	**<3.8**	ug/kg	21.6	3.8	1	10/21/13 10:49	10/22/13 15:01	207-08-9	
Chrysene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	218-01-9	
Dibenz(a,h)anthracene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	53-70-3	
Fluoranthene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	206-44-0	
Fluorene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	86-73-7	
Indeno(1,2,3-cd)pyrene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	193-39-5	
Naphthalene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	91-20-3	
Phenanthrene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	85-01-8	
Pyrene	**<10.8**	ug/kg	21.6	10.8	1	10/21/13 10:49	10/22/13 15:01	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	53	%	40-130		1	10/21/13 10:49	10/22/13 15:01	321-60-8	
Terphenyl-d14 (S)	55	%	40-130		1	10/21/13 10:49	10/22/13 15:01	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.0**	%	0.10	0.10	1		10/14/13 13:56		
9071 Oil and Grease, Soxhlet	Analytical Method: EPA 9071 Preparation Method: EPA 3540								
Oil and Grease	**<81.4**	mg/kg	323	81.4	1	10/24/13 09:10	10/24/13 09:10		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-3.1 **Lab ID: 4086476007** Collected: 10/10/13 13:40 Received: 10/11/13 08:10 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon	Analytical Method: EPA 9060 Modified								
Surrogates									
RPD%	**43.5**	%	0.10	0.10	1		10/17/13 14:40		
Total Organic Carbon	**3520**	mg/kg	846	423	1		10/17/13 14:35	7440-44-0	
Total Organic Carbon	**5480**	mg/kg	848	424	1		10/17/13 14:40	7440-44-0	
Mean Total Organic Carbon	**4500**	mg/kg	847	424	1		10/17/13 14:40	7440-44-0	1q

Sample: A-3.2 **Lab ID: 4086476008** Collected: 10/10/13 13:40 Received: 10/11/13 08:10 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541								
PCB-1016 (Aroclor 1016)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	12674-11-2	
PCB-1221 (Aroclor 1221)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	11104-28-2	
PCB-1232 (Aroclor 1232)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	11141-16-5	
PCB-1242 (Aroclor 1242)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	53469-21-9	
PCB-1248 (Aroclor 1248)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	12672-29-6	
PCB-1254 (Aroclor 1254)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	11097-69-1	
PCB-1260 (Aroclor 1260)	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	11096-82-5	
PCB, Total	**<32.7**	ug/kg	65.3	32.7	1	10/14/13 09:40	10/14/13 17:30	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83	%	40-130		1	10/14/13 09:40	10/14/13 17:30	877-09-8	
Decachlorobiphenyl (S)	79	%	48-130		1	10/14/13 09:40	10/14/13 17:30	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**1.0J**	mg/kg	2.5	0.68	1	10/15/13 15:19	10/16/13 16:57	7440-38-2	
Barium	**7.3**	mg/kg	0.63	0.11	1	10/15/13 15:19	10/16/13 16:57	7440-39-3	
Cadmium	**0.068J**	mg/kg	0.63	0.064	1	10/15/13 15:19	10/16/13 16:57	7440-43-9	
Chromium	**3.7**	mg/kg	0.63	0.16	1	10/15/13 15:19	10/16/13 16:57	7440-47-3	
Lead	**1.9**	mg/kg	1.3	0.37	1	10/15/13 15:19	10/16/13 16:57	7439-92-1	
Selenium	**<0.75**	mg/kg	2.5	0.75	1	10/15/13 15:19	10/16/13 16:57	7782-49-2	
Silver	**<0.27**	mg/kg	1.3	0.27	1	10/15/13 15:19	10/16/13 16:57	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.015**	mg/kg	0.0070	0.0035	1	10/14/13 14:11	10/15/13 11:39	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	83-32-9	
Acenaphthylene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	208-96-8	
Anthracene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	120-12-7	
Benzo(a)anthracene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	56-55-3	
Benzo(a)pyrene	**<3.9**	ug/kg	21.8	3.9	1	10/21/13 10:49	10/22/13 15:18	50-32-8	
Benzo(b)fluoranthene	**14.1J**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	205-99-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Sample: A-3.2 **Lab ID: 4086476008** Collected: 10/10/13 13:40 Received: 10/11/13 08:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Benzo(g,h,i)perylene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	191-24-2	
Benzo(k)fluoranthene	**<3.8**	ug/kg	21.8	3.8	1	10/21/13 10:49	10/22/13 15:18	207-08-9	
Chrysene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	218-01-9	
Dibenz(a,h)anthracene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	53-70-3	
Fluoranthene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	206-44-0	
Fluorene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	193-39-5	
Naphthalene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	91-20-3	
Phenanthrene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	85-01-8	
Pyrene	**<10.9**	ug/kg	21.8	10.9	1	10/21/13 10:49	10/22/13 15:18	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	74	%	40-130		1	10/21/13 10:49	10/22/13 15:18	321-60-8	
Terphenyl-d14 (S)	95	%	40-130		1	10/21/13 10:49	10/22/13 15:18	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.5**	%	0.10	0.10	1		10/14/13 13:56		
9071 Oil and Grease, Soxhlet	Analytical Method: EPA 9071 Preparation Method: EPA 3540								
Oil and Grease	**<82.0**	mg/kg	325	82.0	1	10/24/13 09:10	10/24/13 09:10		
Total Organic Carbon	Analytical Method: EPA 9060 Modified								
Surrogates									
RPD%	**10.5**	%	0.10	0.10	1		10/17/13 14:53		
Total Organic Carbon	**17100**	mg/kg	1650	826	1		10/17/13 14:47	7440-44-0	
Total Organic Carbon	**15400**	mg/kg	1640	819	1		10/17/13 14:53	7440-44-0	
Mean Total Organic Carbon	**16300**	mg/kg	1650	823	1		10/17/13 14:53	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: MERP/3914 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

METHOD BLANK: 874850 Matrix: Solid
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.0033	0.0067	10/15/13 10:31	

LABORATORY CONTROL SAMPLE: 874851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.17	0.18	107	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 874852 874853

Parameter	Units	4086262001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	44.3	.35	.37	2.3	2.9	-11900	-11600	85-115	23	20	P6,R1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: MPRP/9331 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

METHOD BLANK: 875535 Matrix: Solid
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.54	2.0	10/16/13 15:59	
Barium	mg/kg	<0.087	0.50	10/16/13 15:59	
Cadmium	mg/kg	<0.051	0.50	10/16/13 15:59	
Chromium	mg/kg	<0.13	0.50	10/16/13 15:59	
Lead	mg/kg	<0.29	1.0	10/16/13 15:59	
Selenium	mg/kg	<0.59	2.0	10/16/13 15:59	
Silver	mg/kg	<0.21	1.0	10/16/13 15:59	

LABORATORY CONTROL SAMPLE: 875536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	41.4	83	80-120	
Barium	mg/kg	50	42.6	85	80-120	
Cadmium	mg/kg	50	42.2	84	80-120	
Chromium	mg/kg	50	42.2	84	80-120	
Lead	mg/kg	50	42.9	86	80-120	
Selenium	mg/kg	50	42.0	84	80-120	
Silver	mg/kg	25	20.3	81	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 875537 875538

Parameter	Units	4086287001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	1.8J	51.5	51.6	43.4	43.9	81	82	75-125	1	20	
Barium	mg/kg	36.7	51.5	51.6	81.3	82.8	87	89	75-125	2	20	
Cadmium	mg/kg	0.14J	51.5	51.6	42.9	43.4	83	84	75-125	1	20	
Chromium	mg/kg	7.9	51.5	51.6	50.5	50.9	83	83	75-125	1	20	
Lead	mg/kg	5.6	51.5	51.6	48.8	48.8	84	84	75-125	0	20	
Selenium	mg/kg	<0.61	51.5	51.6	42.3	43.4	82	84	75-125	3	20	
Silver	mg/kg	<0.22	25.8	25.9	21.0	21.1	81	82	75-125	0	20	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: OEXT/20200 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

METHOD BLANK: 874842 Matrix: Solid
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	10/14/13 13:54	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	10/14/13 13:54	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	10/14/13 13:54	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	10/14/13 13:54	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	10/14/13 13:54	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	10/14/13 13:54	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	10/14/13 13:54	
Decachlorobiphenyl (S)	%	83	48-130	10/14/13 13:54	
Tetrachloro-m-xylene (S)	%	80	40-130	10/14/13 13:54	

LABORATORY CONTROL SAMPLE: 874843

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	397	79	70-130	
Decachlorobiphenyl (S)	%			83	48-130	
Tetrachloro-m-xylene (S)	%			79	40-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 874844 874845

Parameter	Units	4086559001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<37.8			<37.8	<37.8					31	
PCB-1221 (Aroclor 1221)	ug/kg	<37.8			<37.8	<37.8					31	
PCB-1232 (Aroclor 1232)	ug/kg	<37.8			<37.8	<37.8					31	
PCB-1242 (Aroclor 1242)	ug/kg	821			876	832				5	31	
PCB-1248 (Aroclor 1248)	ug/kg	<37.8			<37.8	<37.8					31	
PCB-1254 (Aroclor 1254)	ug/kg	<37.8			<37.8	<37.8					31	
PCB-1260 (Aroclor 1260)	ug/kg	40.6J	756	756	622	619	77	76	40-149	0	31	
Decachlorobiphenyl (S)	%						76	76	48-130			
Tetrachloro-m-xylene (S)	%						84	83	40-130			

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: OEXT/20267 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

METHOD BLANK: 879086 Matrix: Solid
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	<8.3	16.7	10/21/13 14:04	
Acenaphthylene	ug/kg	<8.3	16.7	10/21/13 14:04	
Anthracene	ug/kg	<8.3	16.7	10/21/13 14:04	
Benzo(a)anthracene	ug/kg	<8.3	16.7	10/21/13 14:04	
Benzo(a)pyrene	ug/kg	<3.0	16.7	10/21/13 14:04	
Benzo(b)fluoranthene	ug/kg	10.7J	16.7	10/21/13 14:04	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	10/21/13 14:04	
Benzo(k)fluoranthene	ug/kg	<2.9	16.7	10/21/13 14:04	
Chrysene	ug/kg	<8.3	16.7	10/21/13 14:04	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	10/21/13 14:04	
Fluoranthene	ug/kg	<8.3	16.7	10/21/13 14:04	
Fluorene	ug/kg	<8.3	16.7	10/21/13 14:04	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	10/21/13 14:04	
Naphthalene	ug/kg	<8.3	16.7	10/21/13 14:04	
Phenanthrene	ug/kg	<8.3	16.7	10/21/13 14:04	
Pyrene	ug/kg	<8.3	16.7	10/21/13 14:04	
2-Fluorobiphenyl (S)	%	68	40-130	10/21/13 14:04	
Terphenyl-d14 (S)	%	92	40-130	10/21/13 14:04	

LABORATORY CONTROL SAMPLE: 879087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	333	315	95	55-130	
Acenaphthylene	ug/kg	333	308	92	55-130	
Anthracene	ug/kg	333	329	99	66-130	
Benzo(a)anthracene	ug/kg	333	301	90	55-130	
Benzo(a)pyrene	ug/kg	333	336	101	56-130	
Benzo(b)fluoranthene	ug/kg	333	283	85	53-130	
Benzo(g,h,i)perylene	ug/kg	333	282	84	51-130	
Benzo(k)fluoranthene	ug/kg	333	337	101	52-130	
Chrysene	ug/kg	333	320	96	58-130	
Dibenz(a,h)anthracene	ug/kg	333	300	90	55-130	
Fluoranthene	ug/kg	333	329	99	62-130	
Fluorene	ug/kg	333	304	91	58-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	298	89	54-130	
Naphthalene	ug/kg	333	265	79	41-130	
Phenanthrene	ug/kg	333	308	92	60-130	
Pyrene	ug/kg	333	320	96	51-130	
2-Fluorobiphenyl (S)	%			83	40-130	
Terphenyl-d14 (S)	%			74	40-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 879088 879089

Parameter	Units	4086572010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acenaphthene	ug/kg	517	402	402	693	451	44	-17	31-130	42	35	M1,R1
Acenaphthylene	ug/kg	<50.3	402	402	285	267	64	59	32-130	7	25	
Anthracene	ug/kg	162	402	402	419	338	64	44	39-131	21	38	
Benzo(a)anthracene	ug/kg	<50.3	402	402	266	242	66	60	29-130	9	30	
Benzo(a)pyrene	ug/kg	<17.9	402	402	287	261	71	65	35-130	10	33	
Benzo(b)fluoranthene	ug/kg	65.2J	402	402	246	221	45	39	21-142	11	44	
Benzo(g,h,i)perylene	ug/kg	<50.3	402	402	215	188	53	47	12-134	13	33	
Benzo(k)fluoranthene	ug/kg	<17.7	402	402	347	319	86	79	35-130	9	37	
Chrysene	ug/kg	<50.3	402	402	317	290	77	70	37-130	9	38	
Dibenz(a,h)anthracene	ug/kg	<50.3	402	402	246	215	61	54	23-130	13	27	
Fluoranthene	ug/kg	<50.3	402	402	287	250	67	58	29-137	13	50	
Fluorene	ug/kg	461	402	402	630	485	42	6	32-130	26	32	M1
Indeno(1,2,3-cd)pyrene	ug/kg	<50.3	402	402	236	209	59	52	17-134	12	28	
Naphthalene	ug/kg	117	402	402	374	263	64	36	24-130	35	40	
Phenanthrene	ug/kg	1270	402	402	1390	954	30	-79	27-135	38	46	M1
Pyrene	ug/kg	<50.3	402	402	308	301	69	67	24-130	2	49	
2-Fluorobiphenyl (S)	%						68	63	40-130			
Terphenyl-d14 (S)	%						77	70	40-130			

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: PMST/8995 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

SAMPLE DUPLICATE: 875030

Parameter	Units	4086495002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.4	21.3	1	10	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: WET/32897 Analysis Method: EPA 9071
QC Batch Method: EPA 3540 Analysis Description: 9071 SOX, Oil and Grease
Associated Lab Samples: 4086476001

METHOD BLANK: 1556542 Matrix: Solid
Associated Lab Samples: 4086476001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/kg	<63.0	250	10/19/13 09:15	

LABORATORY CONTROL SAMPLE: 1556543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/kg	2000	2040	102	78-114	

MATRIX SPIKE SAMPLE: 1556544

Parameter	Units	10245064016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/kg	126000	12400	211000	686	78-114	2q,M1

SAMPLE DUPLICATE: 1556545

Parameter	Units	10245808001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/kg	40200	37500	7	18	2q

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: WET/32965 Analysis Method: EPA 9071
QC Batch Method: EPA 3540 Analysis Description: 9071 SOX, Oil and Grease
Associated Lab Samples: 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

METHOD BLANK: 1559952 Matrix: Solid
Associated Lab Samples: 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/kg	<63.0	250	10/24/13 09:10	

LABORATORY CONTROL SAMPLE: 1559953

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/kg	2000	1900	95	78-114	

MATRIX SPIKE SAMPLE: 1559954

Parameter	Units	4086476002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/kg	<94.7	3020	2640	87	78-114	

SAMPLE DUPLICATE: 1559955

Parameter	Units	4086476004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/kg	163J	143J		18	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

QC Batch: WETA/20089 Analysis Method: EPA 9060 Modified
QC Batch Method: EPA 9060 Modified Analysis Description: 9060 TOC Average
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

METHOD BLANK: 876876 Matrix: Solid
Associated Lab Samples: 4086476001, 4086476002, 4086476004, 4086476005, 4086476007, 4086476008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/kg	<300	600	10/17/13 12:24	

LABORATORY CONTROL SAMPLE: 876877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/kg	120000	125000	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 876878 876879

Parameter	Units	4086809002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mean Total Organic Carbon	mg/kg	3550	10500	10600	11900	12400	80	84	50-150	4	30	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: MSSV/6132

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

ANALYTE QUALIFIERS

1q	Two additional repetitions were analyzed as a result of an RPD >/=40%. The results from the additional repetitions are 11,500 mg/Kg and 13,000 mg/Kg, adjusted for % moisture.
2q	Unable to establish constant weight due to free-flowing liquid
B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4086476001	**A-1.1**	EPA 3541	OEXT/20200	EPA 8082	GCSV/10347
4086476002	**A-1.2**	EPA 3541	OEXT/20200	EPA 8082	GCSV/10347
4086476004	**A-2.1**	EPA 3541	OEXT/20200	EPA 8082	GCSV/10347
4086476005	**A-2.2**	EPA 3541	OEXT/20200	EPA 8082	GCSV/10347
4086476007	**A-3.1**	EPA 3541	OEXT/20200	EPA 8082	GCSV/10347
4086476008	**A-3.2**	EPA 3541	OEXT/20200	EPA 8082	GCSV/10347
4086476001	**A-1.1**	EPA 3050	MPRP/9331	EPA 6010	ICP/8219
4086476002	**A-1.2**	EPA 3050	MPRP/9331	EPA 6010	ICP/8219
4086476004	**A-2.1**	EPA 3050	MPRP/9331	EPA 6010	ICP/8219
4086476005	**A-2.2**	EPA 3050	MPRP/9331	EPA 6010	ICP/8219
4086476007	**A-3.1**	EPA 3050	MPRP/9331	EPA 6010	ICP/8219
4086476008	**A-3.2**	EPA 3050	MPRP/9331	EPA 6010	ICP/8219
4086476001	**A-1.1**	EPA 7471	MERP/3914	EPA 7471	MERC/4995
4086476002	**A-1.2**	EPA 7471	MERP/3914	EPA 7471	MERC/4995
4086476004	**A-2.1**	EPA 7471	MERP/3914	EPA 7471	MERC/4995
4086476005	**A-2.2**	EPA 7471	MERP/3914	EPA 7471	MERC/4995
4086476007	**A-3.1**	EPA 7471	MERP/3914	EPA 7471	MERC/4995
4086476008	**A-3.2**	EPA 7471	MERP/3914	EPA 7471	MERC/4995
4086476001	**A-1.1**	EPA 3546	OEXT/20267	EPA 8270 by SIM	MSSV/6132
4086476002	**A-1.2**	EPA 3546	OEXT/20267	EPA 8270 by SIM	MSSV/6132
4086476004	**A-2.1**	EPA 3546	OEXT/20267	EPA 8270 by SIM	MSSV/6132
4086476005	**A-2.2**	EPA 3546	OEXT/20267	EPA 8270 by SIM	MSSV/6132
4086476007	**A-3.1**	EPA 3546	OEXT/20267	EPA 8270 by SIM	MSSV/6132
4086476008	**A-3.2**	EPA 3546	OEXT/20267	EPA 8270 by SIM	MSSV/6132
4086476001	**A-1.1**	ASTM D2974-87	PMST/8995		
4086476002	**A-1.2**	ASTM D2974-87	PMST/8995		
4086476004	**A-2.1**	ASTM D2974-87	PMST/8995		
4086476005	**A-2.2**	ASTM D2974-87	PMST/8995		
4086476007	**A-3.1**	ASTM D2974-87	PMST/8995		
4086476008	**A-3.2**	ASTM D2974-87	PMST/8995		
4086476001	**A-1.1**	EPA 3540	WET/32897	EPA 9071	WET/32907
4086476002	**A-1.2**	EPA 3540	WET/32965	EPA 9071	WET/33037
4086476004	**A-2.1**	EPA 3540	WET/32965	EPA 9071	WET/33037
4086476005	**A-2.2**	EPA 3540	WET/32965	EPA 9071	WET/33037
4086476007	**A-3.1**	EPA 3540	WET/32965	EPA 9071	WET/33037
4086476008	**A-3.2**	EPA 3540	WET/32965	EPA 9071	WET/33037
4086476001	**A-1.1**	EPA 9060 Modified	WETA/20089		
4086476001	**A-1.1**	EPA 9060 Modified	WETA/20090		
4086476002	**A-1.2**	EPA 9060 Modified	WETA/20089		
4086476002	**A-1.2**	EPA 9060 Modified	WETA/20090		
4086476004	**A-2.1**	EPA 9060 Modified	WETA/20089		
4086476004	**A-2.1**	EPA 9060 Modified	WETA/20090		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60302765 CHAUDOIR'S DOCK
Pace Project No.: 4086476

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4086476005	**A-2.2**	EPA 9060 Modified	WETA/20089		
4086476005	**A-2.2**	EPA 9060 Modified	WETA/20090		
4086476007	**A-3.1**	EPA 9060 Modified	WETA/20089		
4086476007	**A-3.1**	EPA 9060 Modified	WETA/20090		
4086476008	**A-3.2**	EPA 9060 Modified	WETA/20089		
4086476008	**A-3.2**	EPA 9060 Modified	WETA/20090		

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

COC No. 4086476

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	AECOM
Branch/Location:	Green Bay, WI
Project Contact:	Pete Diemer
Phone:	(920) 406-3216
Project Number:	60302765
Project Name:	Chaudoir's Dock County Park
Project State:	WI
Sampled By (Print):	Pete Diemer
Sampled By (Sign):	Pete Diemer
PO #:	Regulatory Program: NR 347

Quote #:	
Mail To Contact:	Pete Diemer
Mail To Company:	AECOM - GB
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested	RCRA 6010/7472	PAHs	Oil and Grease	TOC 9060	PCBs	Grain Size(Seive+Hydrome		CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
FILTERED? (YES/NO)					Y/N	N	N	N	N	N	N				
PRESERVATION (CODE)*					Pick Letter	A	A	A	A	A	A				
001	A-1.1	10/10/13	2:40p	S		X	X	X	X	X	X		1-40zpA, 3-40zagA, 1-polybagA		
002	A-1.2	10/10/13	2:40p	S		X	X	X	X	X	X				
~~003~~	~~A-1.3~~			S		X	X	X	X	X	X	(1)	Not received		
004	A-2.1	10/10/13	3:30p	S		X	X	X	X	X	X				
005	A-2.2	10/10/13	3:30p	S		X	X	X	X	X	X				
~~006~~	~~A-2.3~~			S		X	X	X	X	X	X	(1)			
007	A-3.1	10/10/13	1:40p	S		X	X	X	X	X	X				
008	A-3.2	10/10/13	1:40p	S		X	X	X	X	X	X				
~~009~~	~~A-3.3~~			S		X	X	X	X	X	X	(1)			
													No TSS samples yet. PSD 10/11/2013		

(1) Lab did not received on 10/11/13

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Pete Diemer	10/11/13 8:10am	Susan Kugler Pace	10/11/13 0810

PACE Project No. 4086476

Receipt Temp = R 2 IC

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

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

Pace Analytical™

Sample Condition Upon Receipt

Client Name: AECOM Project # 40864476

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

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

Cooler Temperature Uncorr: ROI /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 10-11-13
Initials: SLW

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☒N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☒No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	14.
Trip Blank Present:	☐Yes ☐No ☒N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

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

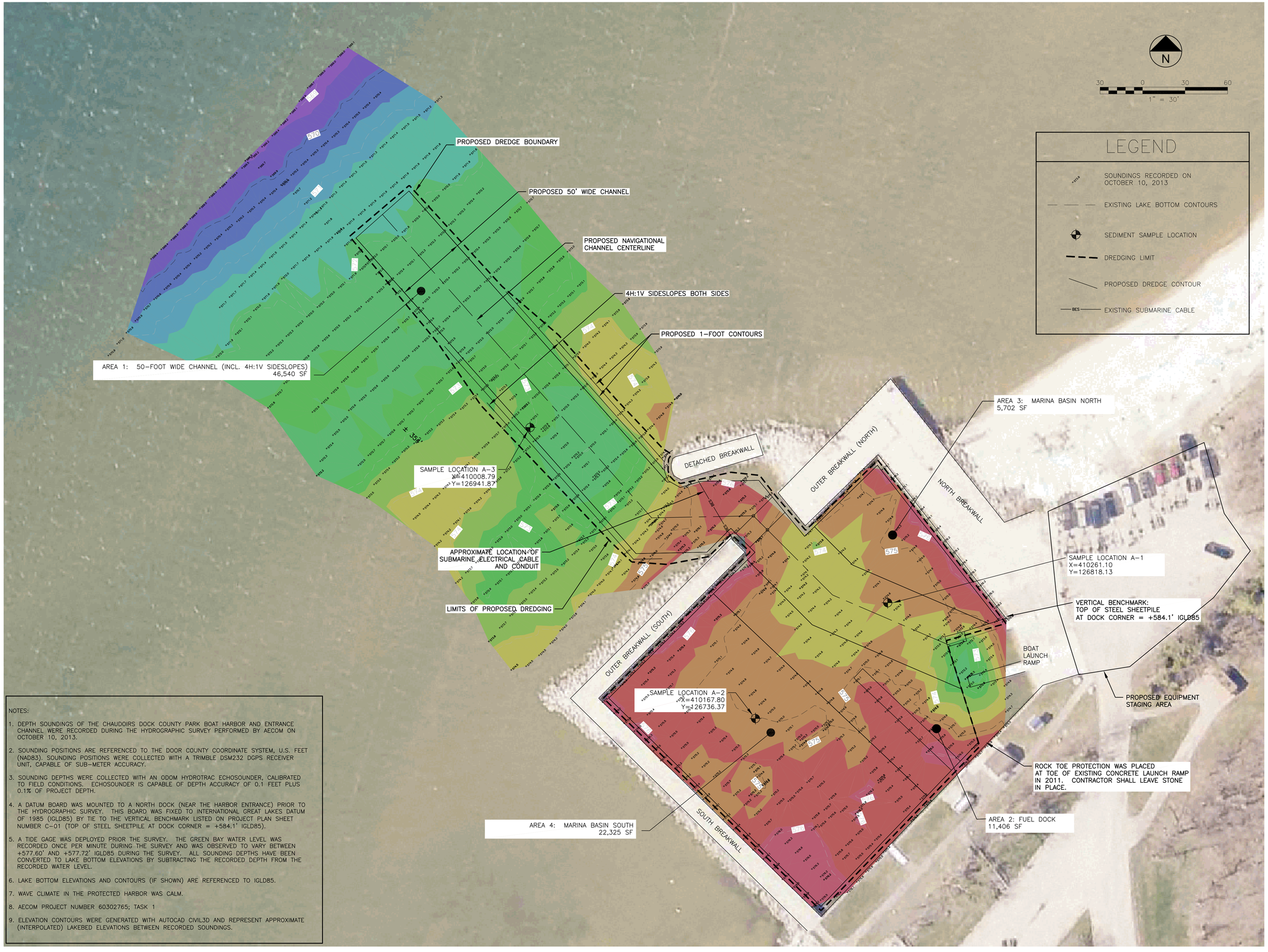
Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 10/13/13

Appendix D.

Hydrographic Survey and Dredge Volume Calculations



NOTES:

1. DEPTH SOUNDINGS OF THE CHAUDOIRS DOCK COUNTY PARK BOAT HARBOR AND ENTRANCE CHANNEL WERE RECORDED DURING THE HYDROGRAPHIC SURVEY PERFORMED BY AECOM ON OCTOBER 10, 2013.
2. SOUNDING POSITIONS ARE REFERENCED TO THE DOOR COUNTY COORDINATE SYSTEM, U.S. FEET (NAD83). SOUNDING POSITIONS WERE COLLECTED WITH A TRIMBLE DSM232 DGPS RECEIVER UNIT, CAPABLE OF SUB-METER ACCURACY.
3. SOUNDING DEPTHS WERE COLLECTED WITH AN ODOM HYDROTRAC ECHOSOUNDER, CALIBRATED TO FIELD CONDITIONS. ECHOSOUNDER IS CAPABLE OF DEPTH ACCURACY OF 0.1 FEET PLUS 0.1% OF PROJECT DEPTH.
4. A DATUM BOARD WAS MOUNTED TO A NORTH DOCK (NEAR THE HARBOR ENTRANCE) PRIOR TO THE HYDROGRAPHIC SURVEY. THIS BOARD WAS FIXED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85) BY TIE TO THE VERTICAL BENCHMARK LISTED ON PROJECT PLAN SHEET NUMBER C-01 (TOP OF STEEL SHEETPILE AT DOCK CORNER = +584.1' IGLD85).
5. A TIDE GAGE WAS DEPLOYED PRIOR THE SURVEY. THE GREEN BAY WATER LEVEL WAS RECORDED ONCE PER MINUTE DURING THE SURVEY AND WAS OBSERVED TO VARY BETWEEN +577.60' AND +577.72' IGLD85 DURING THE SURVEY. ALL SOUNDING DEPTHS HAVE BEEN CONVERTED TO LAKE BOTTOM ELEVATIONS BY SUBTRACTING THE RECORDED DEPTH FROM THE RECORDED WATER LEVEL.
6. LAKE BOTTOM ELEVATIONS AND CONTOURS (IF SHOWN) ARE REFERENCED TO IGLD85.
7. WAVE CLIMATE IN THE PROTECTED HARBOR WAS CALM.
8. AECOM PROJECT NUMBER 60302765; TASK 1
9. ELEVATION CONTOURS WERE GENERATED WITH AUTOCAD CIVIL3D AND REPRESENT APPROXIMATE (INTERPOLATED) LAKEBED ELEVATIONS BETWEEN RECORDED SOUNDINGS.

AECOM

PROJECT

CHAUDOIRS DOCK DREDGING 2013

CHAUDOIRS DOCK
1525 County Road N
Brussels, WI 54204

CLIENT

DOOR COUNTY PARKS DEPARTMENT

3538 Park Drive
Sturgeon Bay, WI
920 746 9959 tel 920 743 9971 fax
http://map.co.door.wi.us/parks/

CONSULTANT

AECOM Technical Services, Inc.
1035 Kepler Drive
Green Bay, Wisconsin 54311
920.468.1978 tel 920.468.3312 fax
www.aecom.com

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
3	2013-11-12	SAMPLE & ANALYSIS REPORT
2	2013-10-01	PROPOSED SAMPLE LOCATIONS
1	2013-07-18	FOR CLIENT REVIEW

KEY PLAN

PROJECT NUMBER

60302765

SHEET TITLE

PROPOSED SAMPLE LOCATION MAP

SHEET NUMBER

C-01

ARCH D 24" x 36"
Approved:
Checked:
Designer:
Project Management Initials:
Last saved by: DIEMERP Last Plotted: 2013-11-12
Filename: K:\PROJECTS\60302765_CHAUDOIRS DOCK\900_WORKINGDOCS\CAD\2013-10-10_SAR_MAP.DWG

Appendix E.

Sampling and Analysis Plan

AECOM

Sampling and Analysis Plan

Sediment Sampling and Analysis Plan at

Chaudoir's Dock County Park, Door County, Wisconsin

Revision No.: 1.0

Revision Date: October 2, 2013

Peter J Diemer, P.E. Project Manager — Date: October 2, 2013

Michelle L. Freimund, Project Scientist — Date: October 2, 2013

Terry A. Peterson, P.E., QA Reviewer — Date: October 2, 2013

Sampling and Analysis Plan

Sediment Sampling and Analysis Plan at Chaudoir's Dock County Park

Contents

FIGURES

ATTACHMENTS

Sampling and Analysis Plan

Sediment Sampling and Analysis Plan at Chaudoir's Dock County Park

1.0 Introduction

The Door County Parks Department is planning to dredge the harbor and entrance channel at Chaudoir's Dock County Park, located at 10865 County Highway N, Town of Union, Door County, Wisconsin. To prepare this plan, AECOM Technical Services, Inc. (AECOM) used data obtained during a hydrographic survey of October 2, 2007 to quantify the amount of material required to be dredged and the depth of the sediment for sampling purposes.

Based upon discussion and correspondence with the Wisconsin Department of Natural Resources (WDNR), AECOM requested a reduced analytical parameter list for the samples obtained, which was approved by the Wisconsin Department of Natural Resources (WDNR) on September 30, 2013. This approved parameter list includes the analyses required by the previously-closed solid waste disposal facility (Door County Landfill) maintained by the Door County Highway Department. The dredge material is proposed to be used for routine landfill cap maintenance including filling of low areas.

This Sampling and Analysis Plan (SAP) documents practices and procedures to be followed during the sediment sampling at the Chaudoir's Dock County Park. The SAP outlines the sampling rationale for selecting and analyzing sediment, and was developed in accordance with Wisconsin Administrative Code (WAC) Chapter NR 347 (*Sediment Sampling and Analysis, Monitoring Protocol and Disposal Criteria for Dredging Projects*) and the WDNR's *Guidance for Applying the Sediment Sampling and Analysis Requirements of Chapter NR 347, Wisconsin Administrative Code* (Publ. WT-778 2003, December 2003).

1.1 Sampling area

This SAP encompasses the harbor and entrance channel areas to be dredged. The site layout is presented on Figure C-01: Proposed Dredge Plan. Figure C-01: Proposed Dredge Plan also depicts the proposed location of the three sample locations. Approximately 6,300 CY of dredge material is proposed for removal.

1.2 Site background

The area presently being proposed for dredging is located within the harbor interior and connecting entrance channel. Localized dredging at the launch ramp was last performed in 2011 when the launch ramp was reconstructed. The harbor interior was dredged in the late 1980s, during higher water levels of Lake Michigan. Current lake levels render portions of this harbor unusable during periods of the year.

2.0 Sampling Objectives

The primary objective of this SAP is to provide instructions for the collection of data necessary to characterize the sediment for disposal and identify potential environmental risk(s) from dredging activities. The sampling is also being conducted to fulfill WDNR requirements for dredging permits. As per discussions with WDNR, sediment samples will be collected at three (3) locations, two feet

below the proposed design elevation , to determine if contaminants will be left exposed at this interface upon project completion (Figure 1). If bedrock or parent hardpan materials prevent obtaining this lower two-foot length, the length obtained to hardpan will be used for analysis. The samples will be analyzed for polynuclear aromatic hydrocarbons (PAHs), oil and grease, RCRA 10 Metals (arsenic, barium, cadmium, chromium, mercury, lead, selenium, silver, nickel and zinc), and total organic carbon. Additional analysis for polychlorinated biphenyls (PCBs) will be performed on the sample collected in the channel to the bay of Green Bay. Grain size analysis will also be conducted.

Distinct strata in the core profile, based on physical appearances (e.g., texture or coloring), will be separated out as distinct segments for analysis based on NR 347.06(6)(a), Adm. Code. The sampling result report will include a written description including length, odor, texture, and color of any strata visually observed in the core profile. If there are no distinct strata or the strata are not of any significant thickness, the core sample will be divided into 2-foot long segments for analysis of the specified chemical and physical parameters.

Mechanical dredging will be implemented by a qualified and experienced Great Lakes dredging contractor. The sediment material will be mechanically removed and placed on a barge retrofitted to contain the sediments. Discharge from the barge will be permitted in accordance with WDNR standards. The dewatered material will be transported to the launch ramp area and placed in sealed trucks.

The primary location proposed for sediment material disposal is at the county-owned Andre Pit, located in the Town of Union on Pleasant Ridge Court, approximately 0.5 miles south of Door County Highway D. An alternative location that is also being considered for disposal is the Door County Landfill located approximately twenty (20) miles from the project site at 7129 Hainesville Road in the Town of Nasewaupee. Maps to the disposal sites are included as attachments.

3.0 Sample Collection and Designation

This section of the SAP presents the planned field activities for the collection of sediment samples at the site. Within AECOM, routine Standard Operating Procedures (SOPs) are prepared or adopted for each project to provide a guide and control for the performance of work. SOPs implement quality requirements by ensuring the appropriate and consistent performance of a repetitive task. AECOM has incorporated these SOPs into this SAP to reflect actual steps and methods to be performed in the field at the site. The procedures contained in Chapter NR 347 and the WDNR's *Guidance for Applying the Sediment Sampling and Analysis Requirements of Chapter NR 347, Wisconsin Administrative Code* were used as guidance in the development of this SAP. A site-specific Health and Safety Plan has been developed by AECOM that establishes health and safety procedures to minimize any potential risk to AECOM personnel implementing the field sampling activities.

The table below presents a summary of the sampling frequency and parameter matrix for the sediment sampling.

Sample Identification	Sampling Interval	Analytical Parameter
Sediment Samples	Sediment-water interface/top of core sample Approximately two (2) feet below the project design elevation (varies)	RCRA Metals; Oil and Grease; Total Organic Carbon; Total PAHs; PCBs and Grain-size analysis

Metals – includes arsenic, barium, cadmium, chromium, mercury, lead, selenium, silver, nickel and zinc
PAHs – Polynuclear aromatic hydrocarbons
PCBs – Polychlorinated biphenyls

3.1 Pre-field Sampling Program Activities

Preparation for field work will include: resolution of site access issues; selection and procurement of qualified subcontractors for laboratory analysis; procurement of necessary field and sampling equipment; and designation of an equipment decontamination area.

3.2 Sample Collection

AECOM will collect sediment samples using a stainless steel piston-sampler for the sediment-water interface to four feet depth thickness interval. The sampler will be carefully advanced into the sediment in order to minimize disturbance of the underlying material and compaction of the sediment. Water will be decanted off the top of the sampler prior to placing the analytical sample into the laboratory provided jars. The sediment samples collected for analysis will be placed into appropriate laboratory provided containers and labeled with the following minimum information: project name, sample designation, sample collection date, sample collection time, and sampler's name. The chemical analysis sampling method requirements are presented in the table below:

Analytical Parameter	Sample Container	Sample Amount and Preservation
Metals, total	4-ounce plastic cup	Fill container, cool to 4° Celsius
PAHs	4-ounce amber, glass jar	Fill container, cool to 4° Celsius
Oil and grease	4-ounce amber, glass jar	Fill container, cool to 4° Celsius
Total Organic Carbon	4-ounce plastic cup	Fill container, cool to 4° Celsius
PCBs	4-ounce glass jar	Fill container, cool to 4° Celsius
Grain Size	16-ounce, plastic jar	Fill container

3.3 Sample Designation

The sample identification code will be recorded on the sample label, in the field log book, on the custody form, and will be carried through the analytical process to reporting. The samples will be

identified by core location as indicated on the map (A-1, A-2, and A-3), followed by the depth from which the sample was collected.

3.4 Sample Equipment Decontamination

All reusable equipment used in the field at the site will be cleaned between sample collection points. Cleaning of equipment is performed to prevent cross-contamination between samples and to maintain a clean working environment for all personnel. In addition, a clean pair of nitrile gloves will be used during collection of each sample to prevent cross-contamination of samples.

A summary of the decontamination method for all sampling equipment used for the collection of samples is presented below:

- Clean equipment with distilled water and a laboratory grade non-phosphate detergent;
- Double rinse with distilled water; and
- Place in a plastic bag, which is sealed to prevent contamination, or tightly wrap in clean aluminum foil if equipment is going to be stored or transported.

4.0 Analytical Sample Handling and Analysis

This Section of the SAP outlines the quality control and handling procedures for equipment and samples collected at the site.

4.1 Quality Control Samples

Quality control (QC) samples assess the validity of analytical results by measuring the accuracy and precision of each method and matrix, serving as a means to detect errors or out-of-control events, and requiring corrective action techniques to prevent or minimize the recurrence of these events. Laboratory generated QC samples will include method blanks, calibration standards, matrix spikes, laboratory replicates, and laboratory check samples.

4.2 Sample Handling and Data Record

The samples collected by AECOM will remain in the custody of the AECOM field sampling personnel until relinquished at the analytical or physical laboratory. The sample bottles will be appropriately labeled (label affixed directly to the bottle), tagged and transported in a cooler. The samples will be collected in appropriate containers as specified in Section 3.2. All samples collected for chemical analysis will be placed in "certified-clean" sample containers which are obtained from the laboratory.

Chain-of-custody forms, identifying each sample contained in a shipping container, will be completed and signed by the AECOM field sampling personnel, sealed in a plastic bag, and taped to the inside of the cooler lid or other container (physical analytical samples). The samples will then be transported by the AECOM field personnel from the site to the laboratory. All samples will be handled and shipped in accordance with current Department of Transportation (DOT) regulations. Upon

relinquishing the samples to the laboratory, AECOM will retain one copy of the chain-of-custody form for the field records.

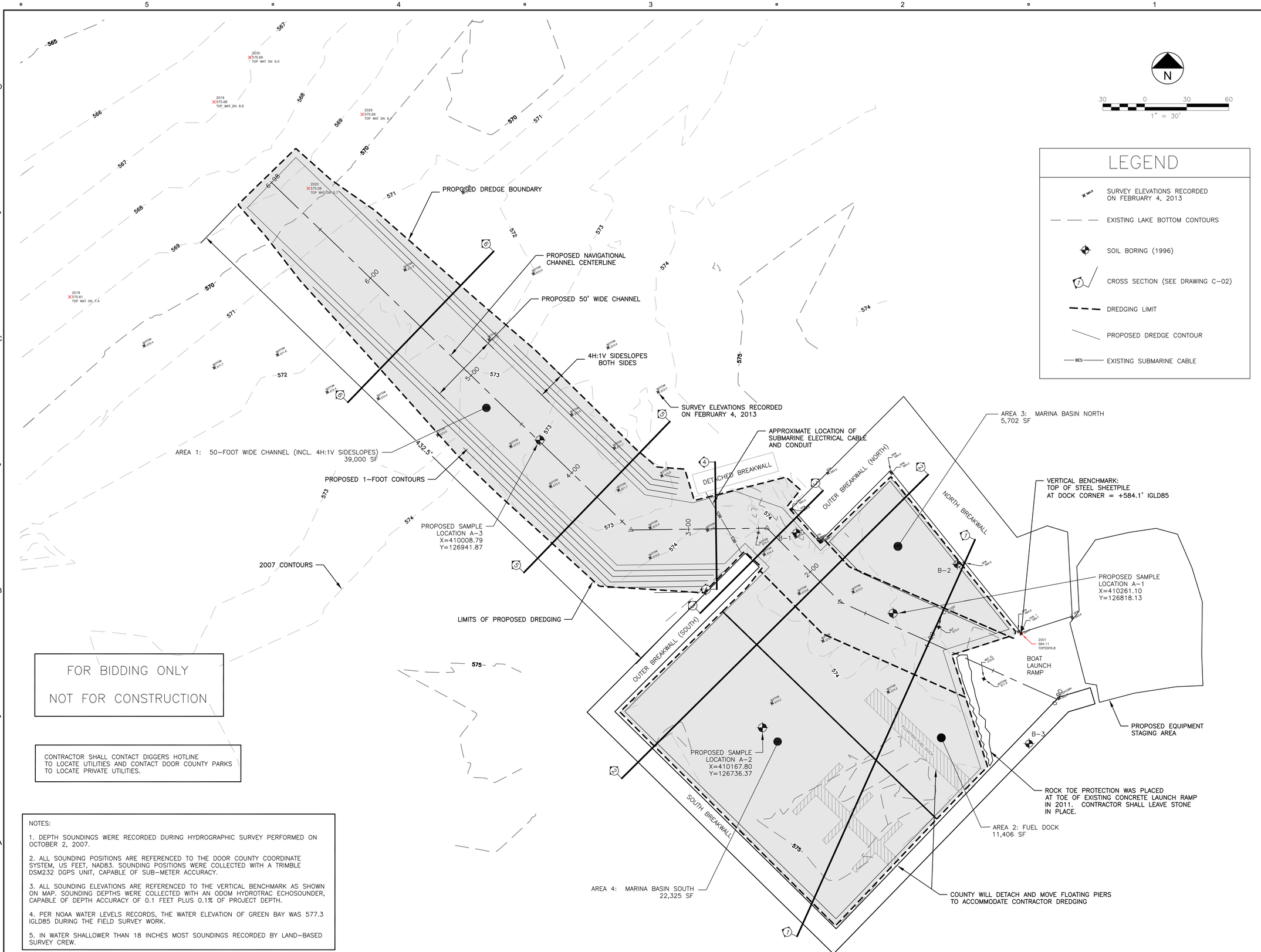
4.3 Analytical requirements

Samples collected during the field activities will be analyzed according to the table below:

Sample Location/Matrix	Parameter	Analytical Methods
A-1, A-2, and A-3/sediment	Metals, total	USEPA Methods SW 846-6010/7471/6010B
	PAHs, total	USEPA Method SW 846-8270 SIM
	Oil and Grease	USEPA Method SW 846-9070 or 9071B
	Total Organic Carbon	USEPA Method 9060
	PCBs	USEPA Method SW846-8082
	Grain size	ASTM D422 and D6913

Chemical analysis samples collected will be delivered by AECOM to Pace Analytical Services, Inc. in Green Bay, Wisconsin. Samples collected for physical analysis will be delivered to AECOM's physical soils laboratory in Green Bay, Wisconsin. The results of the laboratory analysis will be compared to the WDNR Consensus-Based Sediment Quality Guidelines and associated Levels of Concern for each parameter.

Figures



FOR BIDDING ONLY

NOT FOR CONSTRUCTION

CONTRACTOR SHALL CONTACT DIGGERS HOTLINE TO LOCATE UTILITIES AND CONTACT DOOR COUNTY PARKS TO LOCATE PRIVATE UTILITIES.

NOTES:

1. DEPTH SOUNDINGS WERE RECORDED DURING HYDROGRAPHIC SURVEY PERFORMED ON OCTOBER 2, 2007.

2. ALL SOUNDING POSITIONS ARE REFERENCED TO THE DOOR COUNTY COORDINATE SYSTEM, US FEET, NAD83. SOUNDING POSITIONS WERE COLLECTED WITH A TRIMBLE DSM232 DGPS UNIT, CAPABLE OF SUB-METER ACCURACY.

3. ALL SOUNDING ELEVATIONS ARE REFERENCED TO THE VERTICAL BENCHMARK AS SHOWN ON MAP. SOUNDING DEPTHS WERE COLLECTED WITH AN ODOM HYDROTRAC ECHOSOUNDER, CAPABLE OF DEPTH ACCURACY OF 0.1 FEET PLUS 0.1% OF PROJECT DEPTH.

4. PER NOAA WATER LEVELS RECORDS, THE WATER ELEVATION OF GREEN BAY WAS 577.3 IGLD85 DURING THE FIELD SURVEY WORK.

5. IN WATER SHALLOWER THAN 18 INCHES MOST SOUNDINGS RECORDED BY LAND-BASED SURVEY CREW.

AECOM

PROJECT

CHAUDOIRS DOCK DREDGING 2013

CHAUDOIRS DOCK
1525 County Road N
Brussels, WI 54204

CLIENT

DOOR COUNTY PARKS DEPARTMENT

3538 Park Drive
Sturgeon Bay, WI
920 746 9959 tel 920 743 9971 fax
http://map.co.door.wi.us/parks/

CONSULTANT

AECOM Technical Services, Inc.
1035 Kepler Drive
Green Bay, Wisconsin 54311
920.468.1978 tel 920.468.3312 fax
www.aecom.com

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
2	2013-10-01	PROPOSED SAMPLE LOCATIONS
1	2013-07-18	FOR CLIENT REVIEW

KEY PLAN

PROJECT NUMBER

60302765

SHEET TITLE

PROPOSED SAMPLE LOCATION MAP

SHEET NUMBER

C-01

Sampling and Analysis Plan

Sediment Sampling and Analysis Plan at Chaudoir's Dock County Park

Project No.: 60302765
Revision: 1.0
Date: October 1, 2013

Attachment

mapquest

Notes

Trip to:

Odagard Rd

Sturgeon Bay, WI 54235

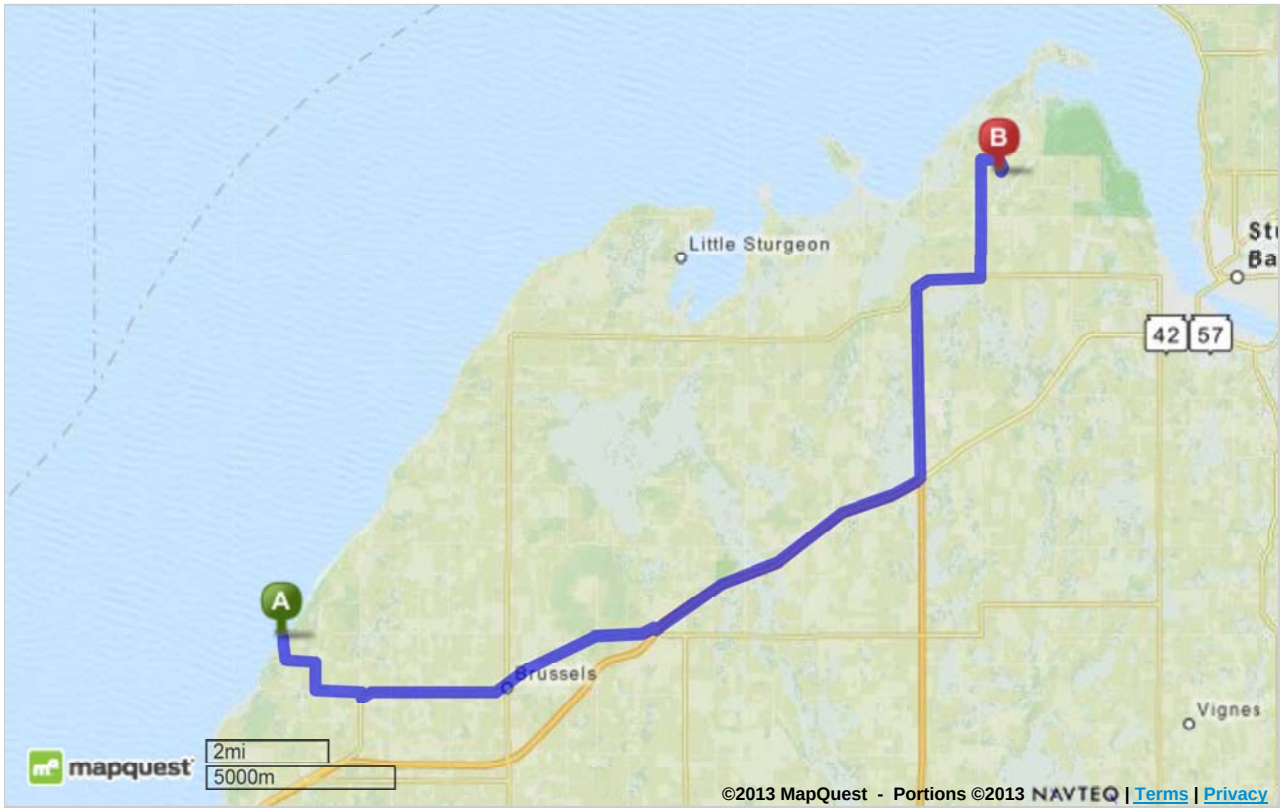
19.65 miles / 29 minutes

	Chaudoir's Dock County Park Latitude: 44.747055 Longitude: -87.697863, Brussels, WI	
	1. Start out going **south** toward **Chaudoirs Dock Rd** (Portions unpaved). Map	**0.09 Mi** *0.09 Mi Total*
	2. Turn **slight right** onto **CR-N**. Map	**0.3 Mi** *0.4 Mi Total*
	3. Turn **left** to stay on **CR-N**. Map	**0.5 Mi** *0.9 Mi Total*
	4. Turn **right** to stay on **CR-N**. Map	**0.5 Mi** *1.4 Mi Total*
	5. Take the 1st **left** to stay on **CR-N**. Map	**0.8 Mi** *2.1 Mi Total*
	6. Take the 2nd **right** to stay on **CR-N**. Map	**0.1 Mi** *2.2 Mi Total*
	7. Turn **left** onto **CR-DK**. Map	**5.3 Mi** *7.5 Mi Total*
	8. Turn **right** onto **CR-H**. Map	**0.06 Mi** *7.6 Mi Total*
NORTH 57	9. Take the 1st **left** onto **WI-57 N**. Map	**5.1 Mi** *12.7 Mi Total*
	10. Turn **left** onto **CR-MM**. Map	**3.3 Mi** *16.0 Mi Total*
	11. Turn **right** onto **CR-C**. Map	**1.1 Mi** *17.1 Mi Total*
	12. Turn **left** onto **CR-M**. Map	**2.0 Mi** *19.1 Mi Total*
	13. Turn **right** onto **Hainesville Rd**. Map	**0.3 Mi** *19.4 Mi Total*
	14. Take the 1st **right**. Map	**0.2 Mi** *19.7 Mi Total*

15. **ODAGARD RD**. Map

B **Odagard Rd**, Sturgeon Bay, WI 5423544.860936, -87.451057
(Address is approximate)

Total Travel Estimate: **19.65 miles - about 29 minutes**



mapquest

Notes

Trip to:

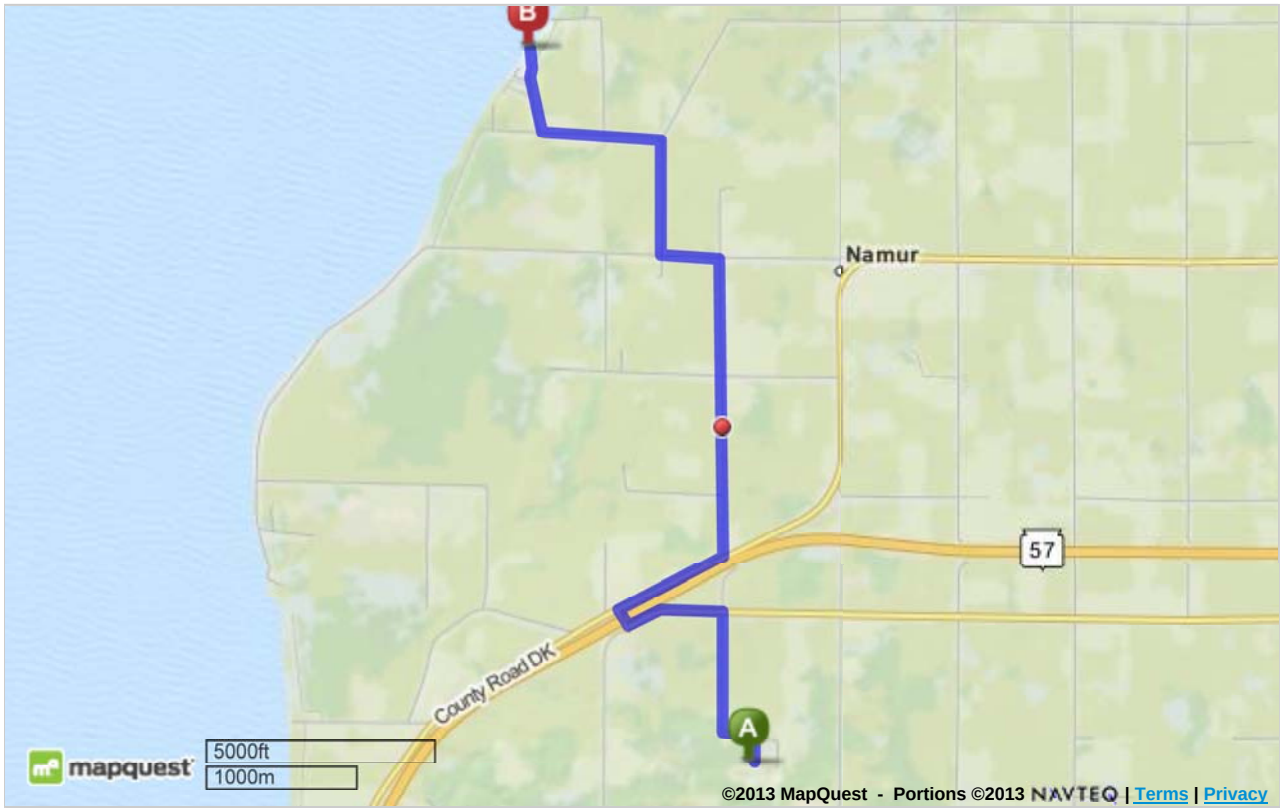
Latitude: 44.747055 Longitude: -87.697863

Brussels, WI

4.62 miles / 11 minutes

A	**Latitude: 44.703178 Longitude: -87.678776**, Luxemburg, WI 54217	
	1. Start out going **north** toward **Pleasant Ridge Ct**. Map	**0.1 Mi** *0.1 Mi Total*
	2. Turn **left** onto **Pleasant Ridge Ct**. Map	**0.6 Mi** *0.7 Mi Total*
	3. Take the 1st **left** onto **CR-D**. Map *If you reach the end of Pleasant Ridge Ct you've gone about 0.2 miles too far*	**0.4 Mi** *1.2 Mi Total*
	4. Take the 1st **right** to stay on **CR-D**. Map *If you are on Sand Hill Rd and reach Cedar Rd you've gone about 1.4 miles too far*	**0.09 Mi** *1.3 Mi Total*
	5. Turn **right** onto **CR-DK**. Map	**0.5 Mi** *1.8 Mi Total*
	6. Take the 1st **left** onto **Pleasant Ridge Rd**. Map *Bethel Shalom is on the corner* *If you reach CR-Y you've gone about 0.5 miles too far*	**1.3 Mi** *3.0 Mi Total*
	7. Turn **left** onto **CR-N**. Map *CR-N is 0.5 miles past Belgian Dr* *If you reach the end of Pleasant Ridge Rd you've gone about 0.3 miles too far*	**0.2 Mi** *3.3 Mi Total*
	8. Take the 1st **right** to stay on **CR-N**. Map *Door Bible Baptist Church is on the corner* *If you are on Bay Shore Rd and reach Belgian Dr you've gone about 0.2 miles too far*	**0.5 Mi** *3.7 Mi Total*
	9. Take the 1st **left** to stay on **CR-N**. Map *If you are on Ledge Rd and reach Pit Rd you've gone about 1.5 miles too far*	**0.5 Mi** *4.3 Mi Total*
	10. Take the 2nd **right** to stay on **CR-N**. Map *CR-N is 0.2 miles past Bent Rd* *If you are on N Bayshore Rd and reach Bay Shore Rd you've gone about 0.7 miles too far*	**0.3 Mi** *4.5 Mi Total*
	11. Turn **slight left** (Portions unpaved). Map	**0.09 Mi** *4.6 Mi Total*
	12. **LATITUDE: 44.747055 LONGITUDE: -87.697863**. Map	
B	Chaudoir's Dock County Park Latitude: 44.747055 Longitude: -87.697863, Brussels, WI	

Total Travel Estimate: **4.62 miles - about 11 minutes**



Appendix F.

Photo Log

Photo 1. Taken from North Dock, Facing South

Photo 2. Panoramic View from North Dock, Facing South

Photo 3. Sediment accumulation in Southeast Corner of harbor

Photo 4. Shallow depths along south edge of floating finger piers

Photo 5. Floating Finger Pier System

Photo 6. Shallow, weedy area south of North Dock

Photo 7. Shallow weedy area near boat launch dock.

Photo 8. Taken from Launch Area, Facing West along North Dock

Photo 9. Shallows at Northwest Corner of Harbor

Photo 10. Shallows at Northwest Corner of Harbor

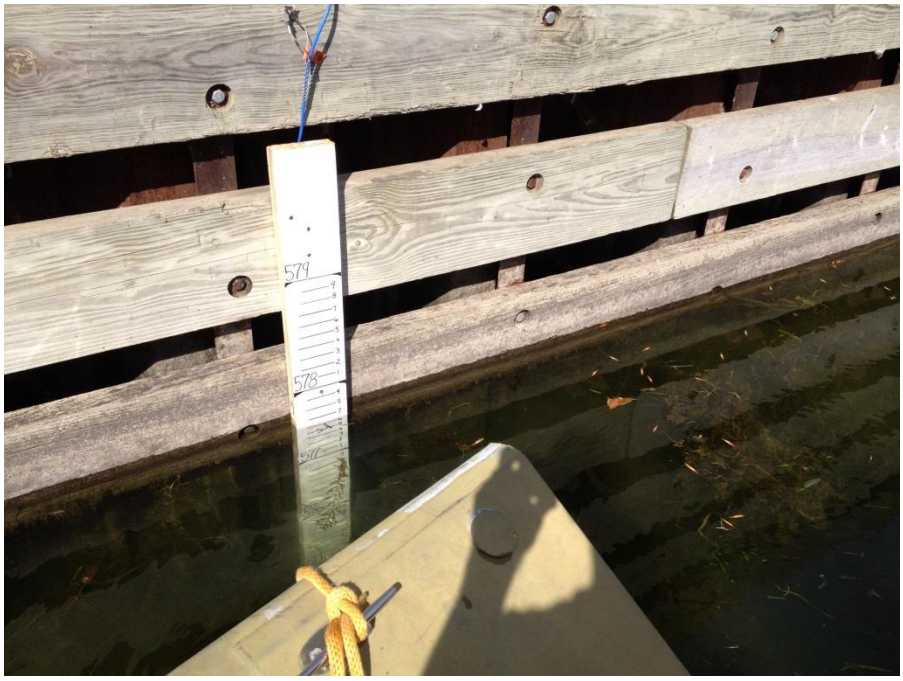


Photo 11. Staff Gage mounted on inside of North Dock, near harbor entrance

Photo caption

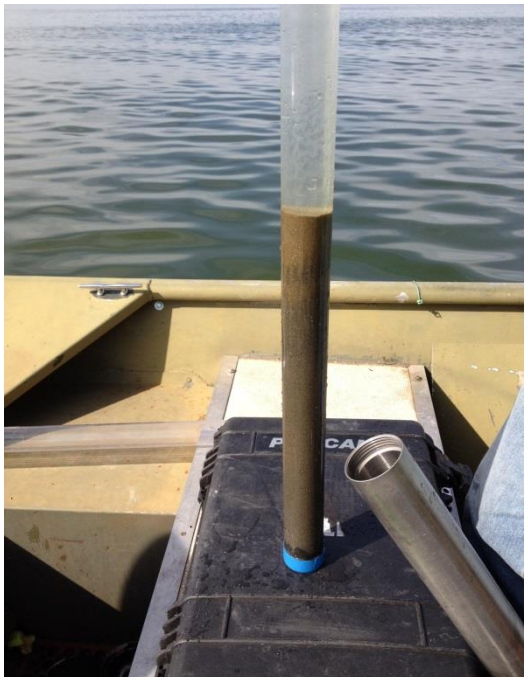


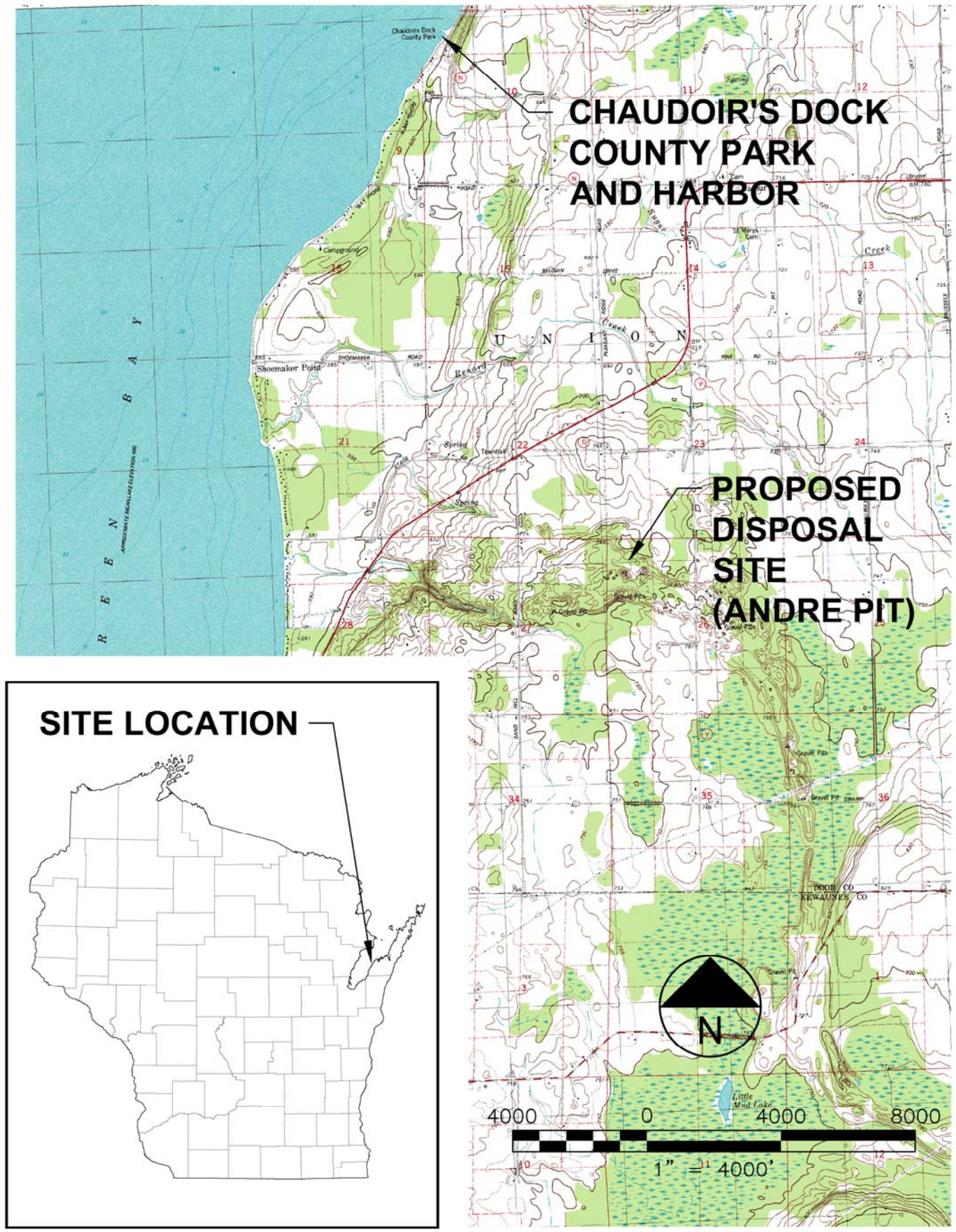
Photo12. Sediment Core at Sample Location A-3

Photo 13. Sediment Sample, Firm Clay at Sample Location A-1 (Lower Sample A-1.2)

Photo 14. Sediment Sample, Firm Clay at Sample Location A-1 (Lower Sample A-1.2)

Photo 15. Sediment Samples in Butyrate Tubes

List of Figures



Project Management Initials: Designer: --- Checked: --- Approved: --- ANSI A 8.5" x 11"

Last saved by: DIEMERP(2013-12-04) Last Plotted: 2013-12-04
Filename: K:\PROJECTS\60302765_CHAUDOIRS DOCK\900_WORKINGDOCS\CAD\LOCATION_MAP.DWG

Chaudoir's Dock County Park
Door County Park Department
Town of Union, Door County, Wisconsin
Project No.: 60302765 12/4/2013

Site Location Map
Chaudoir's Dock County Park
Door County

AECOM

FIGURE 1

About AECOM

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and collaborative technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. A *Fortune 500* company, AECOM serves clients in more than 130 countries and has annual revenue in excess of $8.0 billion.

More information on AECOM and its services can be found at www.aecom.com.

1035 Kepler Drive
Green Bay, Wisconsin 54311
920.468.1978

Attachment B

DNR Approval of Request for Landfill Permit Modification (September 2014)

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

WISCONSIN DEPT. OF NATURAL RESOURCES

September 18, 2014

FID #415007780
SW/APPR
Door County

Mr. John Kolodziej
Door County Highway Department
1001 South Duluth Avenue
Sturgeon Bay, WI 54235-3812

Subject: Dredge material disposal at the Door County Landfill; License #2937

Dear Mr. Kolodziej:

We have completed review of "Request for Landfill Permit Modification, Chaudoir's Dock County Park Harbor Dredging, Door County, Wisconsin – AECOM Project No. 60302765." The document was submitted on the County's behalf by AECOM, dated and received by the Department on August 29, 2014.

The request is for approval to dispose of material dredged (material) from the harbor and entrance channel at Chaudoir's Dock County Park at the closed Door County Landfill site. The estimated volume of material to be dredged is anticipated to be approximately 4,000 cubic yards. The material is proposed to be temporarily stored at the landfill site on approximately 1 acre northeast of the landfill. The material would be formed into a berm approximately 8 ft high and vegetated. The material will then be used on the closed landfill for drainage maintenance where waste settlement has created areas where precipitation run-off may be impeded.

The material was sampled for chemical characteristics as part of the permit for dredging. Six samples were analyzed for metals, polycyclic aromatic hydrocarbons (PAHs), and PCBs. Two of the samples contained slightly elevated benzo(a)pyrene (21.0 µg/kg) and total PCBs (76 µg/kg).

No immediate plan or schedule has been established by the County to utilize the material for slope maintenance; however they anticipate use of the material within the next five years. This approval contains a requirement that the material be placed on the landfill within five years (by end of 2019). When the slope maintenance project is initiated the topsoil portion of the cap would be stripped and stockpiled. The dredged material will then be placed and the topsoil re-graded to uniform thickness over the material and seeded.

Please note an area of wetland exists approximately 150 ft northeast of the area proposed for material placement. BPMs must be in place to prevent any impact upon this area.

If you have any questions regarding this approval, please contact Greg Tilkens at (920) 662- 5433.

Sincerely,

James A. Zellmer
Waste & Materials Management Supervisor
Northeast Region

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL PLAN MODIFICATION APPROVAL
DOOR COUNTY BALEFILL
#2937

FINDINGS OF FACT

The Department finds that:

1) Door County owns and operates a non-hazardous solid waste landfill located in the SE 1/4 and the NE 1/4 of the NW 1/4 of Section 34, T28N, R25E, Town of Nasewaupee, Door County, Wisconsin.

2) The Department issued a conditional plan of operation approval for the landfill on June 30, 1981.

3) On August 29, 2014 AECOM submitted, on behalf of the County, a report titled "Request for Landfill Permit Modification, Chaudoir's Dock County Park Harbor Dredging, Door County, Wisconsin – AECOM Project No. 60302765" dated, and received by the Department, on August 29, 2014.

4) On September 18, 2014 the Department held a public meeting at the Cherryland Airport in the Town of Nasewaupee to discuss and solicit public comments on the planned dredged material disposal plan.

5) The proper plan review fee was received on March, 10, 2014.

6) Additional documents considered in connection with the review of the report include:

   a) August 19, 1996 report titled "Door county Balefill Expansion Addendum No. 2 to December 12, 1995 Practicable Alternatives Analysis" submitted by Robert E. Lee & Associates. This report includes a map depicting the locations of wetland areas adjacent to the landfill.

   b) An email dated Nov 4, 2013 from Pete Diemer of AECOM that contained the results of sediment sampling from Chaudoir's Dock County Park.

CONCLUSIONS OF LAW

1) The Department has the authority under s. 289.30(6) Stats., to modify a plan of operation approval if the modification would not inhibit compliance with the applicable portions of chs. 280 to 299, Stats., and chs. NR 500-538, Wis. Adm. Code.

2) The Department has the authority under s. 289.30(6), Stats., to approve a modification to the plan of operation with special conditions if the conditions are needed to ensure compliance with the applicable portions of chs. 280 to 299, Stats., and chs. NR 500-538, Wis. Adm. Code.

3) The Department has authority under NR 520, Table 3, Wis. Adm. Code, to charge a review fee for a requested modification to the plan of operation approval.

4) The conditions of approval set forth below are needed to ensure compliance with the applicable portions of chs. 30, 31, 160 and 280 to 299 and ss. 1.11, 23, 40, 59.692, 59.693, 60.627, 61.351, 61.354, 62.231, 62.234, and 87.30, Stats., and chs. NR 500-538, Wis. Adm. Code.

5) In accordance with the foregoing, the Department has the authority under s. 289.30, Stats., to issue the following conditional plan of operation approval modification.

CONDITIONAL PLAN OF OPERATION
APPROVAL MODIFICATION

The Department hereby approves the proposed modification to the Plan of Operation for the Door County Landfill for disposal of dredged material from Chaudoir's Dock County Park subject to the following conditions:

1) All dredged material disposed of in accordance with this approval shall be used on the landfill for drainage maintenance on or before January 1, 2020. A report shall be submitted to the Department, on or before February 1, 2020, that includes the total amount of material accepted from the Chaudoir's Dock project and a map showing where on the landfill material was placed to improve drainage including thickness.

2) The extent of the wetland area northeast of the material placement area (identified in the report referenced in Finding of Fact # 6a) shall be identified with flags prior to placement of dredged material. The wetland area shall be protected from vehicle traffic and any other physical or hydrologic disturbance. The flags shall be maintained for the duration of material placement. The area shall be flagged similarly anytime material is removed from the berm for use on the landfill.

This approval is based on the information available to the Department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity. Likewise, the Department accepts proposals to modify approvals, as provided for in state statutes and administrative codes.

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes and administrative codes establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the Department to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.

Dated: September 18, 2014

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

James A. Zellmer
Waste & Materials Management Supervisor
Northeast Region

Greg Tilkens
Waste & Materials Management Hydrogeologist
Northeast Region