



January 9, 2013

Wisconsin Department of Natural Resources

Attn: Mr. Dave Rozeboom

473 Griffith Avenue

Wisconsin Rapids, WI 54494



Subject:

Mocadlo Property
Parcel # 020-23-0801-02-06
Town of Hull, Portage County, WI

Dear Dave:

As we discussed, attached is the Construction Documentation/Closure Report for the Mocadlo Property site. Soil contamination observed and confirmed by AECOM during Phase I/II activities was excavated on December 28, 2012. A total of 32.63 tons of soil were excavated for treatment at the Lincoln County Landfill biopile. Confirmation soil sampling indicates no further action is necessary. The \$250 fee is attached.

REI thanks you for the opportunity to service your environmental consulting needs. Please contact me at (715) 675-9784 or adelforge@reiengineering.com if you would like to discuss this further.

Sincerely,
REI Engineering, Inc.

Andrew R. Delforge P.G.
Hydrogeologist/Project Manager

CC: Bernard Mocadlo, 5813 Old Highway 18 Road, Stevens Point, WI 54481



RESPONSIVE. EFFICIENT. INNOVATIVE.

4080 N. 20th Avenue Wausau, WI 54401

715-675-9784 www.REIengineering.com

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REI Engineering, Inc.
 4080 N. 20th Avenue
 Wausau, WI 54401
 715-675-9784
 www.REIengineering.com

PEOPLES STATE BANK
 Wausau, Wisconsin 54402-1686

79-1161
 759

072305

DATE

1/9/2013

PAY Two Hundred Fifty and 00/100 Dollars

AMOUNT

TO THE
 ORDER
 OF

Wisconsin Dept. of Natural Resources
 473 Griffith Avenue
 Wisconsin Rapids, WI 54494-7859

250.00

VOID AFTER 90 DAYS

Sanfer Neuwirth
Joe S. Neuwirth

AMOUNTS OVER \$500 REQUIRE 2 AUTHORIZED SIGNATURES

⑈072305⑈ ⑆075911616⑆

169316⑈

Security Features

REI Engineering, Inc.

072305

Check Date: 1/9/2013

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
1/9/13	1/9/2013	000000008933	250.00			250.00
Wisconsin Dept. of Natural Resources			TOTAL			250.00
PEOPLES STATE BANK	1	WDNRWIRAPI				250.00

**CONSTRUCTION DOCUMENTATION/
CLOSURE REPORT**

**MOCADLO PROPERTY
PARCEL # 020-23-0801-02-06
TOWN OF HULL, PORTAGE COUNTY, WI**

REI PROJECT #6262

PREPARED FOR:

**Mr. Bernard Moadlo
5813 Old Highway 18
Stevens Point, WI 54481**

PREPARED BY:

**REI Engineering, Inc.
4080 North 20th Avenue
Wausau, WI 54401
(715) 675-9784**

January 2013

**CONSTRUCTION DOCUMENTATION/
CLOSURE REPORT**

**MOCADLO PROPERTY
PARCEL # 020-23-0801-02-06
TOWN OF HULL, PORTAGE COUNTY, WI**

REI PROJECT #6262

The recommendations contained in this report are based on the information obtained from our study of the site and were arrived at in accordance with accepted hydrogeologic and engineering practices at this time and location.

"I, Andrew R. Delforge, hereby certify that I am a registered Professional Geologist in the state of Wisconsin as defined in Wisconsin Statutes Chapter 470.01. I also certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."



"I, Matthew W. Rahn, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Matthew W. Rahn
Matthew W. Rahn

1-10-13
Date

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**CONSTRUCTION DOCUMENTATION/
CLOSURE REPORT**

**MOCADLO PROPERTY
PARCEL # 020-23-0801-02-06
TOWN OF HULL, PORTAGE COUNTY, WI**

REI PROJECT #6262

1.0 INTRODUCTION

1.1 Purpose

This report presents the Documentation of Construction Completion for the excavation and treatment of contaminated soils from the Mocadlo property located in the Town of Hull, Portage County, WI. The purpose of this report is to document that the completed construction meets or exceeds all design criteria and plans and specifications developed in accordance with the Wisconsin Administrative Code, ch. NR 724.

2.0 SITE BACKGROUND

2.1 Site Address/Responsible Party:

Site Location:

West ½ of the NW ¼ of the NE ¼
Section 1, Township 23 North, Range 8 East
Town of Hull, Portage County, WI
WTM 91 Coordinates: 560029, 448499

Site Responsible Party:

Mr. Bernard Mocadlo
5813 Old Highway 18
Stevens Point, WI 54481

2.2 Site Property Description:

The Mocadlo Property site is part of a 17.45 acre parcel located in the west ½ of the northwest ¼ of the northeast ¼ of Section 1, Township 23 North, Range 8 East, in the Town of Hull, Portage County, WI (Figure 1). The site is currently utilized as an agricultural field with a diesel fuel motor powered center pivot irrigation system (Figure 2).

2.3 Summary of Nature and Extent of Soil Contamination

In October 2012, AECOM performed a Phase I Environmental Site Assessment (ESA) on approximately 762 acres of vacant land. The land is intended to be annexed by the City of Stevens Point for development as the East Park Commerce Center light industrial park. The Phase I ESA identified soil staining adjacent to the diesel fuel Aboveground Storage Tank (AST), and diesel motor near the center pivot irrigation well on the Mocadlo property. On October 9, 2012, two (2) soil samples were collected from the area of staining by AECOM and analyzed for Diesel Range Organics (DRO), Polynuclear Aromatic Hydrocarbons (PAHs), and Petroleum Volatile Organic Compounds (PVOCs). Sample "Diesel-East" was collected from beneath the fuel filter on the diesel AST and exceeded the proposed NR 720 web based WDNR Residual Contaminant Level (RCL) for DRO. Sample "Engine-West" was collected from beneath the motor, and contained RCL exceedances for DRO, and various PAHs. The AECOM report was submitted to the City of Stevens Point on October 29, 2012. REI was retained to complete remediation of the soil contamination, and notified the WDNR of the release on December 27, 2012.

3.0 SUMMARY OF WORK

3.1 Excavation and Removal of Contaminated Soils

On December 28, 2012, REI was on site to observe the excavation and transport of 32.63 tons of contaminated soil from the former UST basin. Prior to excavation, the motor and AST were disconnected from the well and moved to allow access. The excavation and trucking was completed by Construcks, of Stevens Point, WI. The excavation proceeded horizontally and vertically based on field screening. The completed excavation was approximately fourteen (14) feet square by four (4) feet deep in the area shown on Figure 2. Photographs of the excavation are included in Appendix A. The soil was transported to the Lincoln County Landfill commercial biopile in Merrill, WI. The soil disposal documentation is included in Appendix B.

4.0 CONFIRMATORY SOIL SAMPLING

4.1 Soil Analytical Results

During the excavation activities, soil samples were field screened with a Mini-Rae 3000 photoionization detector (PID) with an 10.6 eV lamp for the presence of total organic vapors. The excavation proceeded in depth and direction based on field screening results. Four (4) soil

samples were collected from the sidewalls of the excavation at approximately two (2) feet bls and one (1) sample was collected from the excavation bottom at approximately four (4) feet bls. The samples were analyzed by Pace Analytical, Green Bay, WI for DRO, PVOCs, and PAHs. Figure 2 shows the locations of the confirmatory soil samples taken during the excavation. All five samples were below the detection limit for all PVOCs and PAHs. Samples S-1, S-2, and S-5 contained very low-level DRO at estimated values between the laboratory detection limit and limit of quantification. The results of the confirmation analysis of soils are summarized in Table 1. Soil laboratory analytical reports are presented in Appendix C.

5.0 CONCLUSION AND RECOMMENDATIONS

Based on the results of soil sampling after the excavation, it appears that all of the soil contamination above the RCL has been removed. REI recommends that the site be considered for “No Further Response Action” by the WDNR under NR 708.

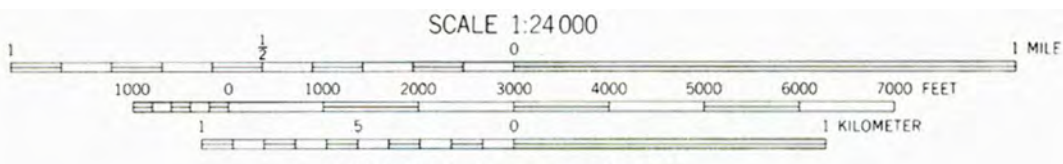
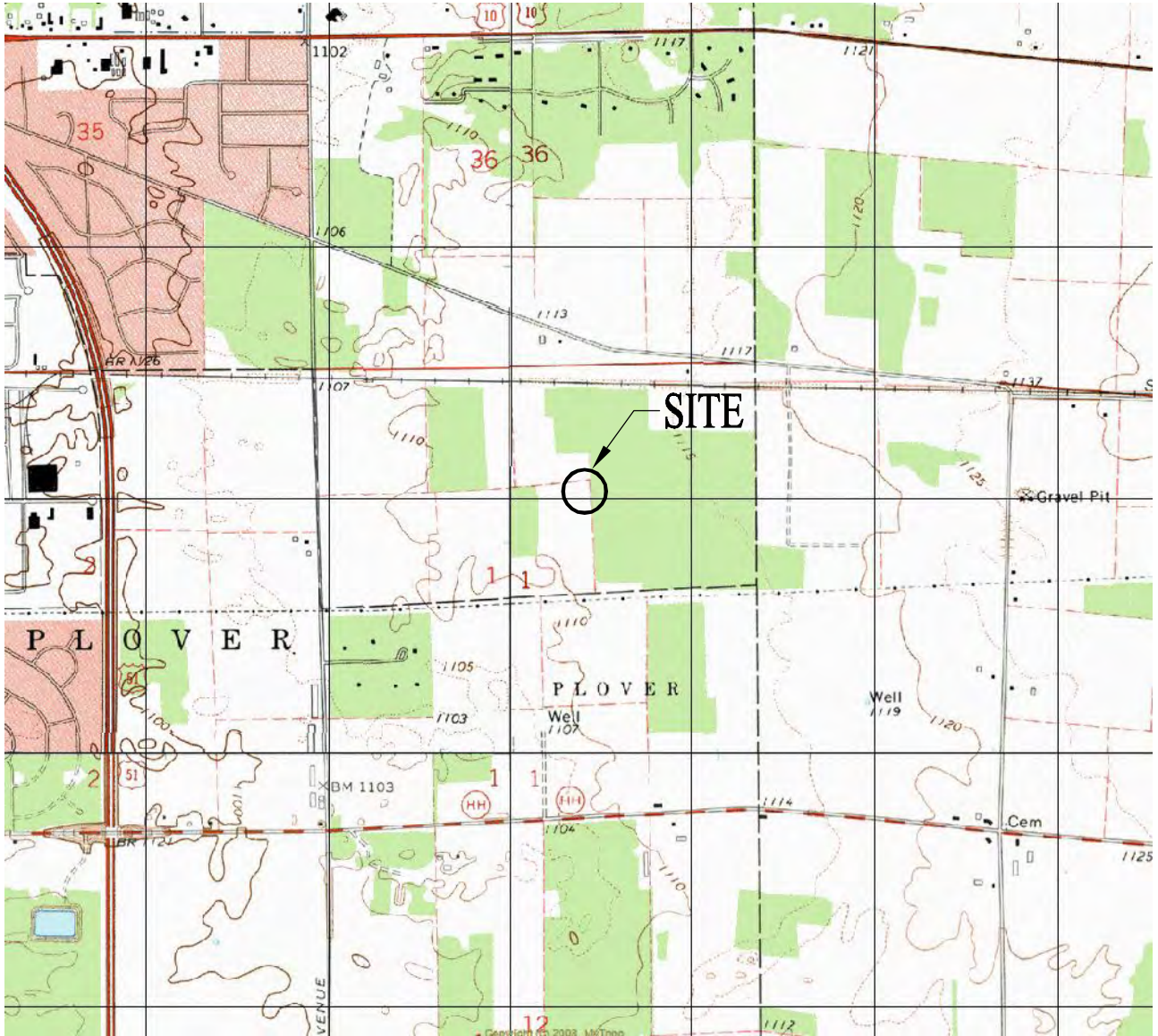
TABLE 1
SOIL ANALYTICAL RESULTS
MOCADLO PROPERTY
PARCEL # 020-23-0801-02-06
TOWN OF HULL, PORTAGE COUNTY, WI

	Date-->	10/9/12		12/28/12		12/28/12		12/28/12		12/28/12		12/28/12	
		Boring-->	Diesel-East	Engine-West	S-1	S-2	S-3	S-4	S-5				
			0.5-1	0.5-1									
	Sample Depth--(Feet)-->	AECOM*		AECOM*		REI		REI		REI		REI	
	Sampler-->	AECOM*		AECOM*		REI		REI		REI		REI	
Petroleum VOC's (ug/kg)													
Benzene	NTEDC	GW											
	7,410	3	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Ethylbenzene	37,000	78.5	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Methyl tert Butyl Ether	293,000	13.5	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Toluene	818,000	553.6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
1,2,4-Trimethylbenzene	219,000	689.1	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
1,3,5-Trimethylbenzene	182,000												
Xylenes (Total)	258,000	1,970	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0
PAHs (ug/kg)													
	NTEDC	GW											
Acenaphthene	33,000,000	NS	<46.5	<467	<8.8	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8
Acenaphthylene	487,000	NS	155	1,150	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Anthracene	100,000,000	98,182	1,190	3,620	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Benzo(a)anthracene	2,110	NS	53.5j	2,940	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Benzo(b)pyrene	128	23.5	<46.5	3,560	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Benzo(k)fluoranthene	2,110	240	71.7j	5,710	<2.5	<2.6	<2.6	<2.6	<2.6	<2.6	<2.5	<2.5	<2.5
Benzo(g,h,i)perylene	NS	NS	100	1,800	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Benzo(k)fluoranthene	21,100	NS	48.7j	7,890	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Chrysene	211,000	72.2	196	6,380	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibenz(a,h)anthracene	211	NS	<46.5	917j	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Fluoranthene	22,000,000	44,383.6	<46.5	10,200	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Fluorene	22,000,000	7,397.3	<46.5	<467	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
Ideno(1,2,3-cd)pyrene	2,110	NS	98.4	2,060	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
1-Methylnaphthalene	98,700	NS	<42.5	<427	<8.0	<8.1	<8.1	<8.2	<8.0	<8.0	<8.0	<8.0	<8.0
2-Methylnaphthalene	368,000	NS	27.4j	<87.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.6	<1.6	<1.6
Naphthalene	26,000	3,294	<17.5	<176	<3.3	<3.3	<3.3	<3.3	<3.4	<3.3	<3.3	<3.3	<3.3
Phenanthrene	115,000	NS	70.8j	953	<2.2	<2.3	<2.3	<2.3	<2.3	<2.3	<2.2	<2.2	<2.2
Pyrene	16,500,000	27,046	142	23,800	<8.8	<8.8	<8.8	<8.8	<9.0	<8.8	<8.8	<8.8	<8.8
DRO (mg/kg)													
	100	NS	6120	35,200	1.4j	2.3j	<0.94	<0.94	<0.94	<0.94	<0.91	<0.91	0.95j

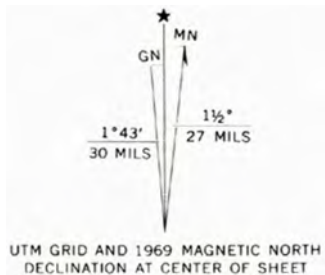
Notes:

- * AECOM Samples collected during Phase II ESA prior to excavation
- NTEDC - Not To Exceed Direct Contact Residual Contaminant Level (RCL)
- GW - RCL Protective of Groundwater Quality
- < - Concentration below listed laboratory detection limit
- GW RCL exceedances are **bold**
- NTEDC RCL exceedances are outlined in **bold**
- NS - No Standard
- j - Estimated Value between detection limit and quantification limit
- NA - Not Analyzed
- DRO - Diesel Range Organics

DRAWING FILE: J:\DRAFTING\6262 MOCADLO PROPERTY.DWG\6262-Vicn.DWG LAYOUT: VICINITY PLOTTED: JAN 09, 2013 - 2:03PM PLOTTED BY: TODDW



CONTOUR INTERVAL 10 FEET
 DOTTED LINES REPRESENT 5-FOOT CONTOURS
 NATIONAL GEODETIC VERTICAL DATUM OF 1929



POLONIA, WIS.
 44089-E4-TF-024
 1969
PHOTOINSPECTED 1986
 DMA 3173 III SW - SERIES V861

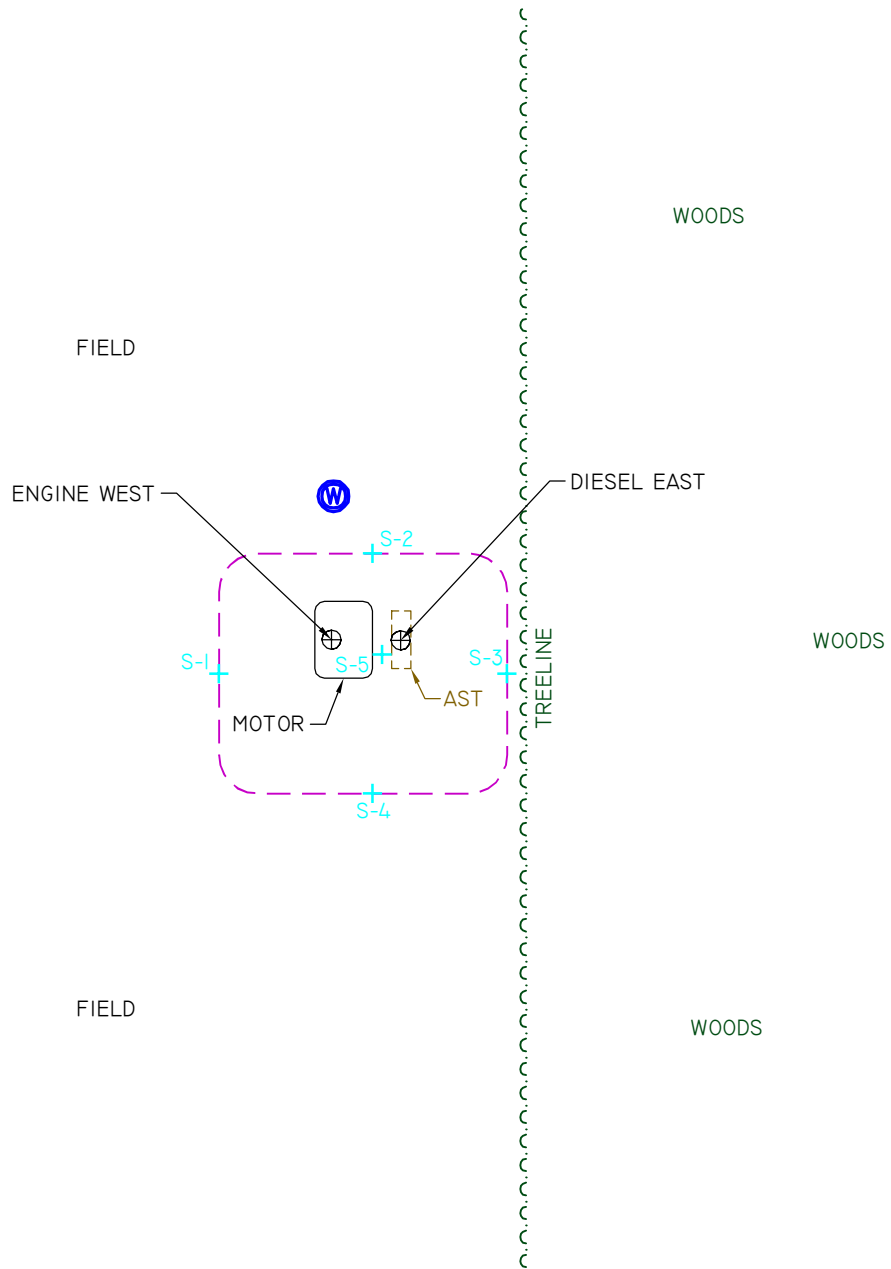


REI Engineering, INC.

MOCADLO PROPERTY
 PARCEL #020-23-0801-02-06
 TOWN OF HULL, PORTAGE COUNTY WISCONSIN

FIGURE 1 : SITE VICINITY MAP		DATE:	
PROJECT NO.	DRAWN BY:	01/02/13	
6262	NAP		

DRAWING FILE: J:\DRAFTING\6262 MOCADLO PROPERTY\DWG\6262-SITE.DWG LAYOUT: SITE PLOTTED: JAN 09, 2013 - 2:03PM PLOTTED BY: TODDW



LEGEND	
 SCALE: 1" = 10'	
	AECOM SOIL SAMPLE
	EXISTING WELL
	REI SOIL SAMPLE
	AREA OF EXCAVATION



REI Engineering, INC.

MOCADLO PROPERTY
 PARCEL #020-23-0801-02-06
 TOWN OF HULL, PORTAGE COUNTY WISCONSIN

FIGURE 2 : SITE MAP

PROJECT NO.	6262	DRAWN BY:	NAP	DATE:	01/02/13
-------------	------	-----------	-----	-------	----------

APPENDIX A

SITE PHOTOGRAPHS



Motor and AST, facing south, well in foreground (photo by AECOM)



Soil staining beneath motor (photo by AECOM)



AECOM soil sample Engine-West (photo by AECOM)



AECOM soil sample Diesel-East (photo by AECOM)



AST and motor removed - facing north, well in background



Excavating soil staining - electrical line flagged



Excavation - facing north, well in background



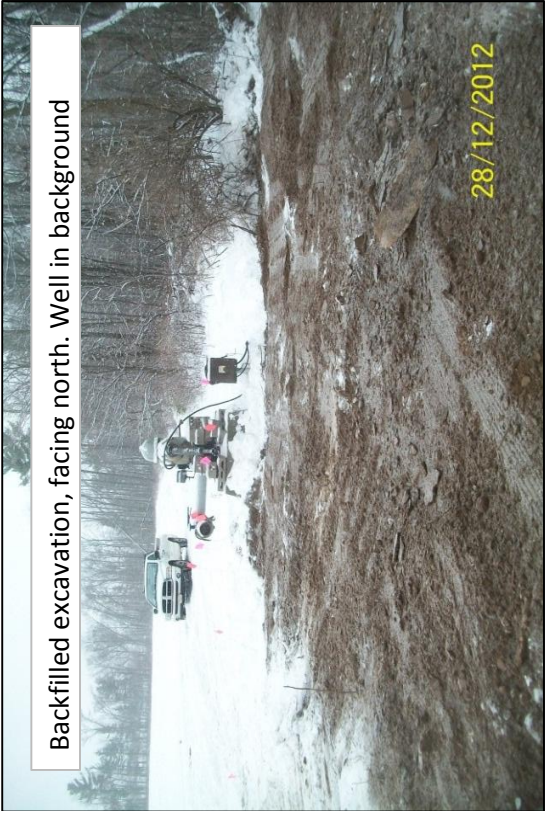
Excavation - facing north - well in background



Completed excavation



Backfilled excavation, facing southeast



Backfilled excavation, facing north. Well in background

APPENDIX B

SOIL DISPOSAL DOCUMENTATION



LINCOLN COUNTY LANDFILL 715-536-9636
 N4750 Landfill Lane, Merrill, WI 54452
OPERATING HOURS:
 Monday-Friday
 SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
 WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
 1st and 3rd Sat. 8:00 am - Noon



LINCOLN COUNTY LANDFILL 715-536-9636
 N4750 Landfill Lane, Merrill, WI 54452
OPERATING HOURS:
 Monday-Friday
 SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
 WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
 1st and 3rd Sat. 8:00 am - Noon

DATE: 12/28/2012
 Time In: 09:39 AM

TICKET #: 156807
 Time Out: 09:57 AM

DATE: 12/28/2012
 Time In: 09:50 AM

TICKET #: 156809
 Time Out: 09:58 AM

BILL TO: R.E.I.
 HAULER: R.E.I.

BILL TO: R.E.I.
 HAULER: R.E.I.

JOB : 12-74 B - E Park CC, HH-Stevens Point
 \$23.00 ton exempt (CON31) 20.83 tn
 Gross: 70500 Net Weight: 41660
 Tare: 28840

JOB : 12-74 B - E Park CC, HH-Stevens Point
 \$23.00 ton exempt (CON31) 11.80 tn
 Gross: 51780 Net Weight: 23600
 Tare: 28180


Scale Notes:
 56


Charge Transaction

Scale Notes:
 34

Charge Transaction

HAVE A NICE DAY!

Customer Signature 
 Weighed By: Administrator

Customer Signature 
 Weighed By: Administrator

HAVE A NICE DAY!

I certify that the waste in this vehicle complies with the Wisconsin Recycling law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.

I certify that the waste in this vehicle complies with the Wisconsin Recycling law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.

APPENDIX C

SOIL ANALYTICAL REPORTS

January 08, 2013

Andy Delforge
REI
4080 North 20th Avenue
Wausau, WI 54401

RE: Project: 6262 MOCADLO
Pace Project No.: 4072398

Dear Andy Delforge:

Enclosed are the analytical results for sample(s) received by the laboratory on December 29, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: 6262 MOCADLO

Pace Project No.: 4072398

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 Carolina Certification #: 503

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

SAMPLE SUMMARY

Project: 6262 MOCADLO

Pace Project No.: 4072398

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4072398001	S-1	Solid	12/28/12 08:15	12/29/12 08:55
4072398002	S-2	Solid	12/28/12 08:20	12/29/12 08:55
4072398003	S-3	Solid	12/28/12 08:25	12/29/12 08:55
4072398004	S-4	Solid	12/28/12 08:30	12/29/12 08:55
4072398005	S-5	Solid	12/28/12 08:35	12/29/12 08:55

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: 6262 MOCADLO

Pace Project No.: 4072398

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4072398001	S-1	WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	MRS	9	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	MAV	1	PASI-G
4072398002	S-2	WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	MRS	9	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	MAV	1	PASI-G
4072398003	S-3	WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	MRS	9	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	MAV	1	PASI-G
4072398004	S-4	WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	MRS	9	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	MAV	1	PASI-G
4072398005	S-5	WI MOD DRO	DAL	1	PASI-G
		WI MOD GRO	MRS	9	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		ASTM D2974-87	MAV	1	PASI-G

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: 6262 MOCADLO

Pace Project No.: 4072398

Sample: S-1 **Lab ID: 4072398001** Collected: 12/28/12 08:15 Received: 12/29/12 08:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	1.4J	mg/kg	2.6	1.3	1	01/02/13 12:00	01/03/13 11:35		
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	71-43-2	W
Ethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	100-41-4	W
Methyl-tert-butyl ether	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	1634-04-4	W
Toluene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	108-88-3	W
1,2,4-Trimethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	95-63-6	W
1,3,5-Trimethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	108-67-8	W
m&p-Xylene	< 50.0	ug/kg	120	50.0	1	01/04/13 07:08	01/04/13 10:12	179601-23-1	W
o-Xylene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:12	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	102 %.		80-120		1	01/04/13 07:08	01/04/13 10:12	98-08-8	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	83-32-9	
Acenaphthylene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	208-96-8	
Anthracene	< 1.8	ug/kg	17.6	1.8	1	01/02/13 12:00	01/02/13 16:58	120-12-7	
Benzo(a)anthracene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	56-55-3	
Benzo(a)pyrene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	50-32-8	
Benzo(b)fluoranthene	< 2.5	ug/kg	17.6	2.5	1	01/02/13 12:00	01/02/13 16:58	205-99-2	
Benzo(g,h,i)perylene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	191-24-2	
Benzo(k)fluoranthene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	207-08-9	
Chrysene	< 2.0	ug/kg	17.6	2.0	1	01/02/13 12:00	01/02/13 16:58	218-01-9	
Dibenz(a,h)anthracene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	53-70-3	
Fluoranthene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	206-44-0	
Fluorene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	86-73-7	
Indeno(1,2,3-cd)pyrene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	193-39-5	
1-Methylnaphthalene	< 8.0	ug/kg	17.6	8.0	1	01/02/13 12:00	01/02/13 16:58	90-12-0	
2-Methylnaphthalene	< 1.7	ug/kg	17.6	1.7	1	01/02/13 12:00	01/02/13 16:58	91-57-6	
Naphthalene	< 3.3	ug/kg	17.6	3.3	1	01/02/13 12:00	01/02/13 16:58	91-20-3	
Phenanthrene	< 2.2	ug/kg	17.6	2.2	1	01/02/13 12:00	01/02/13 16:58	85-01-8	
Pyrene	< 8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 16:58	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78 %.		43-130		1	01/02/13 12:00	01/02/13 16:58	321-60-8	
Terphenyl-d14 (S)	86 %.		32-130		1	01/02/13 12:00	01/02/13 16:58	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	5.4	%	0.10	0.10	1		01/02/13 10:35		

ANALYTICAL RESULTS

Project: 6262 MOCADLO

Pace Project No.: 4072398

Sample: S-2 **Lab ID: 4072398002** Collected: 12/28/12 08:20 Received: 12/29/12 08:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	2.3J	mg/kg	2.3	1.1	1	01/02/13 12:00	01/03/13 11:40		
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	71-43-2	W
Ethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	100-41-4	W
Methyl-tert-butyl ether	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	1634-04-4	W
Toluene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	108-88-3	W
1,2,4-Trimethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	95-63-6	W
1,3,5-Trimethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	108-67-8	W
m&p-Xylene	< 50.0	ug/kg	120	50.0	1	01/04/13 07:08	01/04/13 10:37	179601-23-1	W
o-Xylene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 10:37	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100 %.		80-120		1	01/04/13 07:08	01/04/13 10:37	98-08-8	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	83-32-9	
Acenaphthylene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	208-96-8	
Anthracene	< 1.8	ug/kg	17.7	1.8	1	01/02/13 12:00	01/02/13 17:15	120-12-7	
Benzo(a)anthracene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	56-55-3	
Benzo(a)pyrene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	50-32-8	
Benzo(b)fluoranthene	< 2.6	ug/kg	17.7	2.6	1	01/02/13 12:00	01/02/13 17:15	205-99-2	
Benzo(g,h,i)perylene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	191-24-2	
Benzo(k)fluoranthene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	207-08-9	
Chrysene	< 2.0	ug/kg	17.7	2.0	1	01/02/13 12:00	01/02/13 17:15	218-01-9	
Dibenz(a,h)anthracene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	53-70-3	
Fluoranthene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	206-44-0	
Fluorene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	86-73-7	
Indeno(1,2,3-cd)pyrene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	193-39-5	
1-Methylnaphthalene	< 8.1	ug/kg	17.7	8.1	1	01/02/13 12:00	01/02/13 17:15	90-12-0	
2-Methylnaphthalene	< 1.7	ug/kg	17.7	1.7	1	01/02/13 12:00	01/02/13 17:15	91-57-6	
Naphthalene	< 3.3	ug/kg	17.7	3.3	1	01/02/13 12:00	01/02/13 17:15	91-20-3	
Phenanthrene	< 2.3	ug/kg	17.7	2.3	1	01/02/13 12:00	01/02/13 17:15	85-01-8	
Pyrene	< 8.8	ug/kg	17.7	8.8	1	01/02/13 12:00	01/02/13 17:15	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59 %.		43-130		1	01/02/13 12:00	01/02/13 17:15	321-60-8	
Terphenyl-d14 (S)	66 %.		32-130		1	01/02/13 12:00	01/02/13 17:15	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	5.8	%	0.10	0.10	1		01/02/13 10:35		

ANALYTICAL RESULTS

Project: 6262 MOCADLO

Pace Project No.: 4072398

Sample: S-3 **Lab ID: 4072398003** Collected: 12/28/12 08:25 Received: 12/29/12 08:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	<0.94	mg/kg	1.9	0.94	1	01/02/13 12:00	01/03/13 11:46		
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	1634-04-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	108-88-3	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	108-67-8	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	01/04/13 07:08	01/04/13 11:03	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:03	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101 %.		80-120		1	01/04/13 07:08	01/04/13 11:03	98-08-8	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	83-32-9	
Acenaphthylene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	208-96-8	
Anthracene	<1.8	ug/kg	17.9	1.8	1	01/02/13 12:00	01/02/13 17:33	120-12-7	
Benzo(a)anthracene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	56-55-3	
Benzo(a)pyrene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	50-32-8	
Benzo(b)fluoranthene	<2.6	ug/kg	17.9	2.6	1	01/02/13 12:00	01/02/13 17:33	205-99-2	
Benzo(g,h,i)perylene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	191-24-2	
Benzo(k)fluoranthene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	207-08-9	
Chrysene	<2.0	ug/kg	17.9	2.0	1	01/02/13 12:00	01/02/13 17:33	218-01-9	
Dibenz(a,h)anthracene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	53-70-3	
Fluoranthene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	206-44-0	
Fluorene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	86-73-7	
Indeno(1,2,3-cd)pyrene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	193-39-5	
1-Methylnaphthalene	<8.2	ug/kg	17.9	8.2	1	01/02/13 12:00	01/02/13 17:33	90-12-0	
2-Methylnaphthalene	<1.7	ug/kg	17.9	1.7	1	01/02/13 12:00	01/02/13 17:33	91-57-6	
Naphthalene	<3.4	ug/kg	17.9	3.4	1	01/02/13 12:00	01/02/13 17:33	91-20-3	
Phenanthrene	<2.3	ug/kg	17.9	2.3	1	01/02/13 12:00	01/02/13 17:33	85-01-8	
Pyrene	<9.0	ug/kg	17.9	9.0	1	01/02/13 12:00	01/02/13 17:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	69 %.		43-130		1	01/02/13 12:00	01/02/13 17:33	321-60-8	
Terphenyl-d14 (S)	75 %.		32-130		1	01/02/13 12:00	01/02/13 17:33	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	6.9 %		0.10	0.10	1		01/02/13 10:35		

ANALYTICAL RESULTS

Project: 6262 MOCADLO

Pace Project No.: 4072398

Sample: S-4 **Lab ID: 4072398004** Collected: 12/28/12 08:30 Received: 12/29/12 08:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	<0.91	mg/kg	1.8	0.91	1	01/02/13 12:00	01/03/13 11:52		
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	71-43-2	W
Ethylbenzene	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	100-41-4	W
Methyl-tert-butyl ether	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	1634-04-4	W
Toluene	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	108-88-3	W
1,2,4-Trimethylbenzene	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	95-63-6	W
1,3,5-Trimethylbenzene	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	108-67-8	W
m&p-Xylene	<53.2	ug/kg	128	53.2	1	01/04/13 07:08	01/04/13 11:28	179601-23-1	W
o-Xylene	<26.6	ug/kg	63.8	26.6	1	01/04/13 07:08	01/04/13 11:28	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101 %.		80-120		1	01/04/13 07:08	01/04/13 11:28	98-08-8	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	83-32-9	
Acenaphthylene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	208-96-8	
Anthracene	<1.8	ug/kg	17.6	1.8	1	01/02/13 12:00	01/02/13 17:50	120-12-7	
Benzo(a)anthracene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	56-55-3	
Benzo(a)pyrene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	50-32-8	
Benzo(b)fluoranthene	<2.5	ug/kg	17.6	2.5	1	01/02/13 12:00	01/02/13 17:50	205-99-2	
Benzo(g,h,i)perylene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	191-24-2	
Benzo(k)fluoranthene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	207-08-9	
Chrysene	<2.0	ug/kg	17.6	2.0	1	01/02/13 12:00	01/02/13 17:50	218-01-9	
Dibenz(a,h)anthracene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	53-70-3	
Fluoranthene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	206-44-0	
Fluorene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	86-73-7	
Indeno(1,2,3-cd)pyrene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	193-39-5	
1-Methylnaphthalene	<8.0	ug/kg	17.6	8.0	1	01/02/13 12:00	01/02/13 17:50	90-12-0	
2-Methylnaphthalene	<1.6	ug/kg	17.6	1.6	1	01/02/13 12:00	01/02/13 17:50	91-57-6	
Naphthalene	<3.3	ug/kg	17.6	3.3	1	01/02/13 12:00	01/02/13 17:50	91-20-3	
Phenanthrene	<2.2	ug/kg	17.6	2.2	1	01/02/13 12:00	01/02/13 17:50	85-01-8	
Pyrene	<8.8	ug/kg	17.6	8.8	1	01/02/13 12:00	01/02/13 17:50	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	53 %.		43-130		1	01/02/13 12:00	01/02/13 17:50	321-60-8	
Terphenyl-d14 (S)	61 %.		32-130		1	01/02/13 12:00	01/02/13 17:50	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	5.2 %		0.10	0.10	1		01/02/13 10:35		

ANALYTICAL RESULTS

Project: 6262 MOCADLO

Pace Project No.: 4072398

Sample: S-5 **Lab ID: 4072398005** Collected: 12/28/12 08:35 Received: 12/29/12 08:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	0.95J	mg/kg	1.8	0.90	1	01/02/13 12:00	01/03/13 11:58		
WIGRO GCV									
Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Benzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	71-43-2	W
Ethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	100-41-4	W
Methyl-tert-butyl ether	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	1634-04-4	W
Toluene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	108-88-3	W
1,2,4-Trimethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	95-63-6	W
1,3,5-Trimethylbenzene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	108-67-8	W
m&p-Xylene	< 50.0	ug/kg	120	50.0	1	01/04/13 07:08	01/04/13 11:54	179601-23-1	W
o-Xylene	< 25.0	ug/kg	60.0	25.0	1	01/04/13 07:08	01/04/13 11:54	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101 %.		80-120		1	01/04/13 07:08	01/04/13 11:54	98-08-8	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	83-32-9	
Acenaphthylene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	208-96-8	
Anthracene	< 1.8	ug/kg	17.5	1.8	1	01/02/13 12:00	01/02/13 18:08	120-12-7	
Benzo(a)anthracene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	56-55-3	
Benzo(a)pyrene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	50-32-8	
Benzo(b)fluoranthene	< 2.5	ug/kg	17.5	2.5	1	01/02/13 12:00	01/02/13 18:08	205-99-2	
Benzo(g,h,i)perylene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	191-24-2	
Benzo(k)fluoranthene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	207-08-9	
Chrysene	< 2.0	ug/kg	17.5	2.0	1	01/02/13 12:00	01/02/13 18:08	218-01-9	
Dibenz(a,h)anthracene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	53-70-3	
Fluoranthene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	206-44-0	
Fluorene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	86-73-7	
Indeno(1,2,3-cd)pyrene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	193-39-5	
1-Methylnaphthalene	< 8.0	ug/kg	17.5	8.0	1	01/02/13 12:00	01/02/13 18:08	90-12-0	
2-Methylnaphthalene	< 1.6	ug/kg	17.5	1.6	1	01/02/13 12:00	01/02/13 18:08	91-57-6	
Naphthalene	< 3.3	ug/kg	17.5	3.3	1	01/02/13 12:00	01/02/13 18:08	91-20-3	
Phenanthrene	< 2.2	ug/kg	17.5	2.2	1	01/02/13 12:00	01/02/13 18:08	85-01-8	
Pyrene	< 8.8	ug/kg	17.5	8.8	1	01/02/13 12:00	01/02/13 18:08	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72 %.		43-130		1	01/02/13 12:00	01/02/13 18:08	321-60-8	
Terphenyl-d14 (S)	82 %.		32-130		1	01/02/13 12:00	01/02/13 18:08	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	4.9	%	0.10	0.10	1		01/02/13 10:35		

QUALITY CONTROL DATA

Project: 6262 MOCADLO
Pace Project No.: 4072398

QC Batch: GCV/9598 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

METHOD BLANK: 733680 Matrix: Solid
Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	01/04/13 08:56	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	01/04/13 08:56	
Benzene	ug/kg	<25.0	60.0	01/04/13 08:56	
Ethylbenzene	ug/kg	<25.0	60.0	01/04/13 08:56	
m&p-Xylene	ug/kg	<50.0	120	01/04/13 08:56	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	01/04/13 08:56	
o-Xylene	ug/kg	<25.0	60.0	01/04/13 08:56	
Toluene	ug/kg	<25.0	60.0	01/04/13 08:56	
a,a,a-Trifluorotoluene (S)	%.	100	80-120	01/04/13 08:56	

LABORATORY CONTROL SAMPLE & LCSD: 733681 733682

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	988	1030	99	103	80-120	4	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1010	1060	101	106	80-120	4	20	
Benzene	ug/kg	1000	1020	1090	102	109	80-120	6	20	
Ethylbenzene	ug/kg	1000	1030	1090	103	109	80-120	6	20	
m&p-Xylene	ug/kg	2000	2060	2190	103	109	80-120	6	20	
Methyl-tert-butyl ether	ug/kg	1000	1080	1120	108	112	80-120	4	20	
o-Xylene	ug/kg	1000	1030	1100	103	110	80-120	6	20	
Toluene	ug/kg	1000	1010	1050	101	105	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%.				100	100	80-120			

QUALITY CONTROL DATA

Project: 6262 MOCADLO

Pace Project No.: 4072398

QC Batch: OEXT/17268 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

METHOD BLANK: 732818 Matrix: Solid
Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<7.6	16.7	01/02/13 11:44	
2-Methylnaphthalene	ug/kg	<1.6	16.7	01/02/13 11:44	
Acenaphthene	ug/kg	<8.3	16.7	01/02/13 11:44	
Acenaphthylene	ug/kg	<8.3	16.7	01/02/13 11:44	
Anthracene	ug/kg	<1.7	16.7	01/02/13 11:44	
Benzo(a)anthracene	ug/kg	<8.3	16.7	01/02/13 11:44	
Benzo(a)pyrene	ug/kg	<8.3	16.7	01/02/13 11:44	
Benzo(b)fluoranthene	ug/kg	<2.4	16.7	01/02/13 11:44	
Benzo(g,h,i)perylene	ug/kg	<8.3	16.7	01/02/13 11:44	
Benzo(k)fluoranthene	ug/kg	<8.3	16.7	01/02/13 11:44	
Chrysene	ug/kg	<1.9	16.7	01/02/13 11:44	
Dibenz(a,h)anthracene	ug/kg	<8.3	16.7	01/02/13 11:44	
Fluoranthene	ug/kg	<8.3	16.7	01/02/13 11:44	
Fluorene	ug/kg	10.5J	16.7	01/02/13 11:44	
Indeno(1,2,3-cd)pyrene	ug/kg	<8.3	16.7	01/02/13 11:44	
Naphthalene	ug/kg	<3.1	16.7	01/02/13 11:44	
Phenanthrene	ug/kg	<2.1	16.7	01/02/13 11:44	
Pyrene	ug/kg	<8.3	16.7	01/02/13 11:44	
2-Fluorobiphenyl (S)	%	95	43-130	01/02/13 11:44	
Terphenyl-d14 (S)	%	92	32-130	01/02/13 11:44	

LABORATORY CONTROL SAMPLE: 732819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	244	73	44-130	
2-Methylnaphthalene	ug/kg	333	244	73	45-130	
Acenaphthene	ug/kg	333	267	80	51-130	
Acenaphthylene	ug/kg	333	275	82	53-130	
Anthracene	ug/kg	333	342	102	48-130	
Benzo(a)anthracene	ug/kg	333	279	84	55-130	
Benzo(a)pyrene	ug/kg	333	344	103	56-130	
Benzo(b)fluoranthene	ug/kg	333	323	97	53-130	
Benzo(g,h,i)perylene	ug/kg	333	316	95	58-130	
Benzo(k)fluoranthene	ug/kg	333	307	92	55-130	
Chrysene	ug/kg	333	298	90	59-130	
Dibenz(a,h)anthracene	ug/kg	333	326	98	56-130	
Fluoranthene	ug/kg	333	313	94	56-130	
Fluorene	ug/kg	333	287	86	54-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	314	94	57-130	
Naphthalene	ug/kg	333	200	60	43-130	
Phenanthrene	ug/kg	333	305	91	56-130	

QUALITY CONTROL DATA

Project: 6262 MOCADLO

Pace Project No.: 4072398

LABORATORY CONTROL SAMPLE: 732819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	333	282	85	54-130	
2-Fluorobiphenyl (S)	%.			82	43-130	
Terphenyl-d14 (S)	%.			94	32-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 732820 732821

Parameter	Units	4072408006		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
1-Methylnaphthalene	ug/kg	<9.4	411	411	248	266	60	64	35-130	7	30	
2-Methylnaphthalene	ug/kg	4.8J	411	411	251	267	60	64	39-130	6	33	
Acenaphthene	ug/kg	<10.3	411	411	262	283	64	69	40-130	8	20	
Acenaphthylene	ug/kg	<10.3	411	411	274	298	66	72	40-130	8	20	
Anthracene	ug/kg	<2.1	411	411	309	343	75	83	46-130	10	24	
Benzo(a)anthracene	ug/kg	<10.3	411	411	241	268	58	65	42-130	11	25	
Benzo(a)pyrene	ug/kg	<10.3	411	411	266	349	64	85	40-130	27	31	
Benzo(b)fluoranthene	ug/kg	<3.0	411	411	236	264	57	64	45-130	11	29	
Benzo(g,h,i)perylene	ug/kg	<10.3	411	411	265	299	64	72	16-143	12	23	
Benzo(k)fluoranthene	ug/kg	<10.3	411	411	294	341	71	82	38-130	15	33	
Chrysene	ug/kg	<2.3	411	411	262	277	63	67	38-130	5	31	
Dibenz(a,h)anthracene	ug/kg	<10.3	411	411	272	313	66	76	30-135	14	23	
Fluoranthene	ug/kg	<10.3	411	411	279	311	67	75	42-133	11	28	
Fluorene	ug/kg	<10.3	411	411	273	295	66	72	43-130	8	22	
Indeno(1,2,3-cd)pyrene	ug/kg	<10.3	411	411	263	302	64	73	15-150	14	27	
Naphthalene	ug/kg	<3.9	411	411	213	229	51	55	24-130	8	33	
Phenanthrene	ug/kg	<2.6	411	411	279	303	67	73	27-135	8	27	
Pyrene	ug/kg	<10.3	411	411	251	275	61	66	36-130	9	23	
2-Fluorobiphenyl (S)	%.						65	71	43-130			
Terphenyl-d14 (S)	%.						65	74	32-130			

QUALITY CONTROL DATA

Project: 6262 MOCADLO

Pace Project No.: 4072398

QC Batch: OEXT/17274 Analysis Method: WI MOD DRO

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

Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

METHOD BLANK: 732868 Matrix: Solid

Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.99	2.0	01/03/13 11:29	

LABORATORY CONTROL SAMPLE & LCSD: 732869 732870

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	37.3	37.5	93	94	70-120	1	20	

QUALITY CONTROL DATA

Project: 6262 MOCADLO

Pace Project No.: 4072398

QC Batch: PMST/8099

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 4072398001, 4072398002, 4072398003, 4072398004, 4072398005

SAMPLE DUPLICATE: 732965

Parameter	Units	4072401001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.0	8.1	1	10	

QUALIFIERS

Project: 6262 MOCADLO
Pace Project No.: 4072398

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6262 MOCADLO
Pace Project No.: 4072398

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4072398001	S-1	WI MOD DRO	OEXT/17274	WI MOD DRO	GCSV/8947
4072398002	S-2	WI MOD DRO	OEXT/17274	WI MOD DRO	GCSV/8947
4072398003	S-3	WI MOD DRO	OEXT/17274	WI MOD DRO	GCSV/8947
4072398004	S-4	WI MOD DRO	OEXT/17274	WI MOD DRO	GCSV/8947
4072398005	S-5	WI MOD DRO	OEXT/17274	WI MOD DRO	GCSV/8947
4072398001	S-1	TPH GRO/PVOC WI ext.	GCV/9598	WI MOD GRO	GCV/9601
4072398002	S-2	TPH GRO/PVOC WI ext.	GCV/9598	WI MOD GRO	GCV/9601
4072398003	S-3	TPH GRO/PVOC WI ext.	GCV/9598	WI MOD GRO	GCV/9601
4072398004	S-4	TPH GRO/PVOC WI ext.	GCV/9598	WI MOD GRO	GCV/9601
4072398005	S-5	TPH GRO/PVOC WI ext.	GCV/9598	WI MOD GRO	GCV/9601
4072398001	S-1	EPA 3546	OEXT/17268	EPA 8270 by SIM	MSSV/5320
4072398002	S-2	EPA 3546	OEXT/17268	EPA 8270 by SIM	MSSV/5320
4072398003	S-3	EPA 3546	OEXT/17268	EPA 8270 by SIM	MSSV/5320
4072398004	S-4	EPA 3546	OEXT/17268	EPA 8270 by SIM	MSSV/5320
4072398005	S-5	EPA 3546	OEXT/17268	EPA 8270 by SIM	MSSV/5320
4072398001	S-1	ASTM D2974-87	PMST/8099		
4072398002	S-2	ASTM D2974-87	PMST/8099		
4072398003	S-3	ASTM D2974-87	PMST/8099		
4072398004	S-4	ASTM D2974-87	PMST/8099		
4072398005	S-5	ASTM D2974-87	PMST/8099		



Sample Condition Upon Receipt

Client Name: REI Project # 4072398

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 2836068

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

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

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

Cooler Temperature ROI Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

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

Person examining contents:
Date: 12/29/12
Initials: B.F.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>S</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, Q&G, WL-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N
Person Contacted: _____ Date/Time: _____
Comments/ Resolution: _____

Project Manager Review: _____ Date: 12-31-12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)