Wannalancit Mills
650 Suffolk St., Suite 200
Lowell, MA 01854

978.970.5600 PHONE
978.453.1995 FAX

www.trcsolutions.com

July 17, 2014

Raymond R. Holberger
City of New Bedford
Department of Environmental Stewardship
133 William Street
New Bedford, Massachusetts 02740

Subject: LTMMIP Wetland Sediment Monitoring – Spring 2014
Keith Middle School
New Bedford, Massachusetts

Dear Mr. Holberger:

This letter provides the results of annual wetland sediment monitoring for the Keith Middle School (KMS) located at 225 Hathaway Boulevard in New Bedford, Massachusetts (see Figure 1). TRC conducted the sediment sampling in accordance with the Revised Long-Term Monitoring and Maintenance Implementation Plan, Revision 5.5 (LTMMIP) for KMS dated August 2012, with modifications as described herein.

A TRC field scientist conducted the LTMMIP wetland sediment sampling on May 22, 2014. For the annual sediment monitoring, the LTMMIP calls for the collection of four randomly selected wetland sediment samples from locations abutting the cap slope per the sediment sampling protocol in Appendix G of the LTMMIP.

Consistent with annual sediment sampling conducted in accordance with the LTMMIP since May 2010, following verbal approval from EPA, the May 2014 monitoring event made use of a random number generator to select three of the four sample locations within the southern portion of the wetland (i.e., south of the Summit Street land bridge). A grid, with a width extending out approximately 10 feet perpendicular to the toe of the cap slope, was placed parallel to the wetland/embankment edge as documented on the December 11, 2006 As-Built Plan of Land prepared on behalf of BETA by Land Planning, Incorporated (Land Planning), of Hanson Massachusetts and presented in the BETA-prepared December 2006 *Final Completion and Inspection Report* (BETA, 2006b). The sample locations corresponded to randomly generated lengths (measured from south to north beginning at the southern wetland limit) parallel to the cap slope and widths (measured out perpendicular to the cap slope) as depicted in Figure 2 and listed in the following table:

Table
Randomly Generated Sample Locations

Sample Location	Length (feet)	Width (feet)
Location #1 (SED-KMS-22)	207	10
Location #2 (SED-KMS-23)	133	7
Location #3 (SED-KMS-24)	244	6

Consistent with prior annual sampling events, the fourth sample (KMS-SED-25) was collected from a biased location at the bottom of the slope in the vicinity of the repaired KMS Site cap slope failure along the southern portion of the wetland. The biased sample was collected to evaluate the potential for impacts to sediment associated with the 2007 slope failure.[1]

All samples were collected using hand tools and were collected from a depth of 0 to 6 inches below the top of the sediment surface. Samples were analyzed for PCB Aroclors via SW-846 Method 8082 by Pace Analytical Services, Incorporated (Pace) of Schenectady, New York. The approximate sample locations are illustrated on Figure 2 and in the photograph log presented in Attachment 1. The samples were designated as follows:

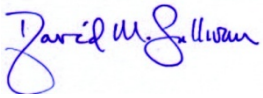
- SED-KMS-22 (Duplicate collected)
- SED-KMS-23
- SED-KMS-24
- SED-KMS-25 (Biased sample collected in vicinity of repaired slope failure)

Final data validation of the laboratory data was completed on July 16, 2014 by TRC's senior quality assurance chemist. A copy of the data package is included as Attachment 2. All five (5) samples, including the duplicate sample, were non-detect for PCB Aroclors (see Table 1). Pursuant to the EPA approved LTMMIP, further assessment is not required.

[1] In the spring of 2007, a slope failure occurred on the steep slope above the wetland near the southwestern corner of the Site. The area measured approximately 7 feet by 8 feet where the topsoil has slumped to the bottom of the slope. The black separation fabric that demarcates the underlying impacted fill from the clean imported fill was not exposed; however, a small (approximately 3 to 4 inch) piece of the orange warning layer was visible in the top left quadrant of the damaged area (when viewed from the wetland). TRC oversaw final repair of the failed slope on October 30, 2008. The repair consisted of lining the damaged area with an 8-ounce non-woven geotextile fabric and covering the fabric with stone (rip-rap) up to local grade to restore the protective cap thickness and allow flow of storm water through the slope in this area without pressure buildup. The rip-rap is intended to allow free drainage of water and be more resistant to the erosive force of storm water overland run off.

If you have any questions concerning this report, please do not hesitate to contact me at 978-656-3565 or via e-mail at dsullivan@trcsolutions.com.

Sincerely,



David M. Sullivan, LSP
Senior Project Manager

Attachments

TABLE

Table 1
Summary of Analytical Results for Sediment Samples
May 2014
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte						Sample ID:	SED-KMS-22		SED-KMS-23	SED-KMS-24	SED-KMS-25
							Sample Depth (ft.):	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
							Sample Date:	5/22/2014	5/22/2014	5/22/2014	5/22/2014	5/22/2014
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1*	TSCA		Field Dup			
PCBs												
(mg/kg)	Aroclor 1016	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Aroclor 1221	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Aroclor 1232	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Aroclor 1242	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Aroclor 1248	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Aroclor 1254	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Aroclor 1260	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ
	Total PCBs	1	1	4	4	1	1	0.246 UJ	0.233 UJ	0.410 UJ	0.225 UJ	0.430 UJ

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

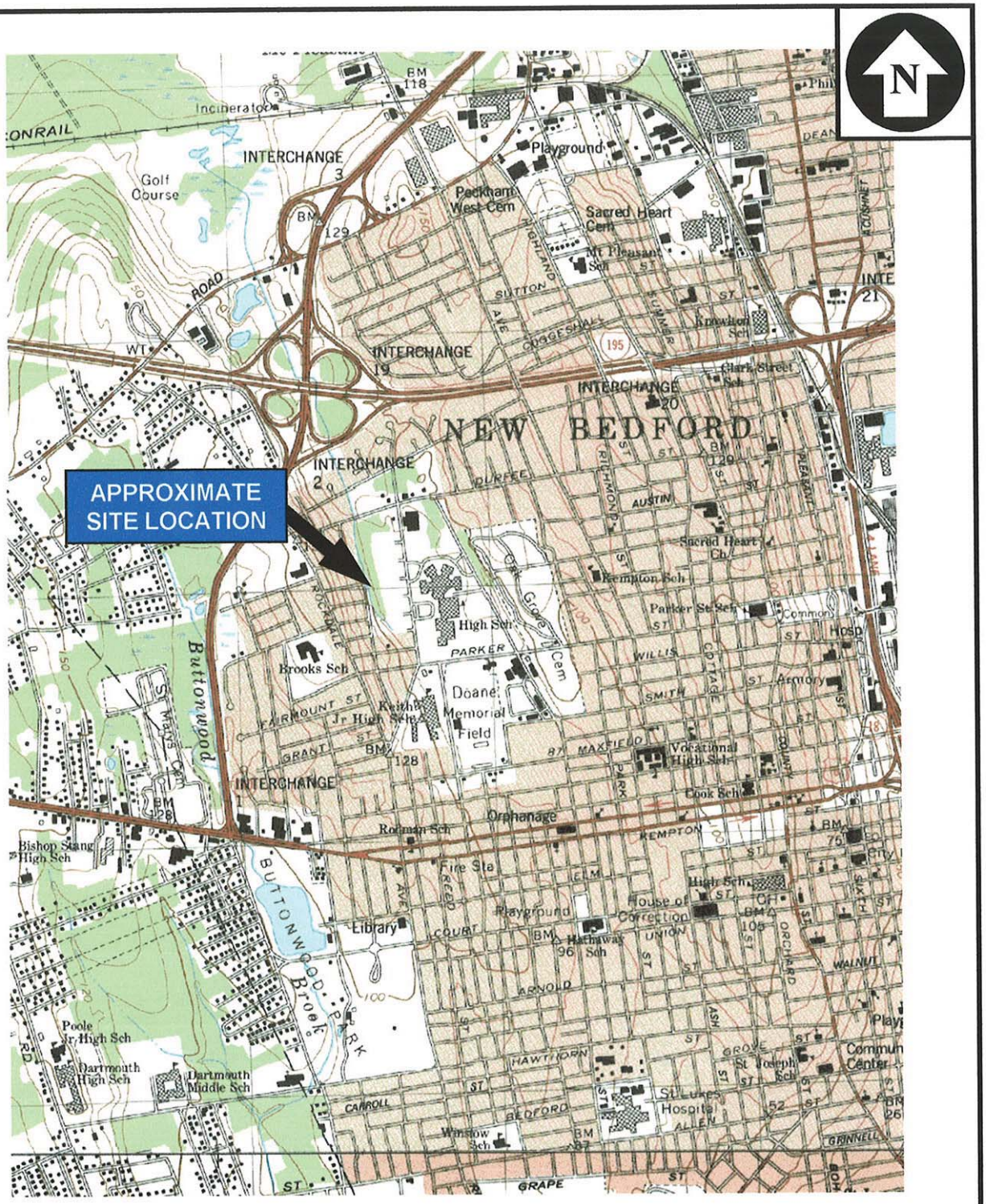
PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - For reference purposes only.

FIGURES



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 15' USGS TOPOGRAPHIC QUADRANGLES: NEW BEDFORD NORTH, MA, 1979; NEW BEDFORD SOUTH, MA 1977

0 1000 2000 3000

scale in feet

QUADRANGLE LOCATION

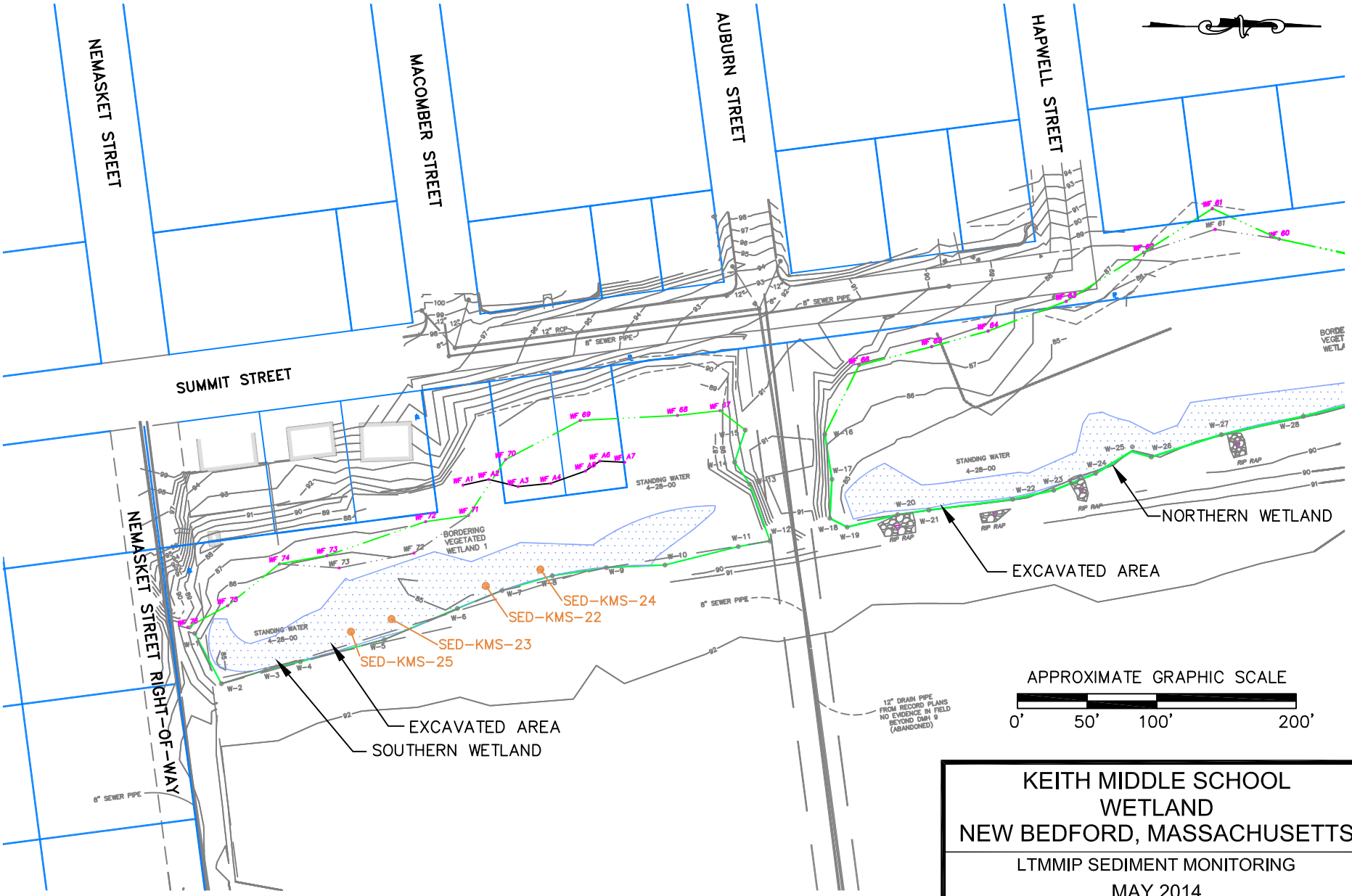
T:\E_CAD\115058\TOPO KEITH MIDDLE SCHOOL.ppt

KEITH MIDDLE SCHOOL WETLAND
PCB CONTAMINATED SEDIMENTS
NEW BEDFORD, MASSACHUSETTS

SITE LOCATION MAP

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
978-970-5600

Drawn: HWB	SCALE: AS SHOWN	FIGURE 1
Checked: DS	Date: JULY 2008	



NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

LEGEND:

SED-KMS-22 ● SEDIMENT SAMPLE

W-6 BETA WETLAND EDGE

PROPERTY BOUNDARY

KEITH MIDDLE SCHOOL WETLAND NEW BEDFORD, MASSACHUSETTS

LTMMIP SEDIMENT MONITORING

MAY 2014

TRC

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

FIGURE 2

DRAWN BY: HWB

CHECKED BY: JBS

DATE: JUNE 2014

FILE: T:\E_CAD\115058\KMS LTMMIPSED 2014-06-27.dwg

Attachment 1

Site Photographs

SITE PHOTOGRAPHS
LTMMIP Wetland Sediment Monitoring – May 22, 2014
Keith Middle School
New Bedford, Massachusetts

1) Location SED-KMS-22 (viewed to the west from the toe of the cap slope).

2) Location SED-KMS-23 (viewed to the northwest from the toe of the cap slope).

SITE PHOTOGRAPHS
LTMMIP Wetland Sediment Monitoring – May 22, 2014
Keith Middle School
New Bedford, Massachusetts

3) Location SED-KMS-24 (viewed to the west from the toe of the cap slope).

4) Location SED-KMS-25 (viewed to the east / toward the cap slope).

Attachment 2

Laboratory Data Package

Date Issued: June 05, 2014

Pace Analytical e-Report

Report prepared for:
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

Project ID: 115058 KEITH MIDDLE SCHOOL
Sampling Date(s): May 22, 2014
Lab Report ID: 14050651
Client Service Contact: Chelsea Farmer (518) 346-4592 ext. 3843

Analysis Included:
PCB Analysis (Solid)

Test results meet all National Environmental Laboratory Accreditation Conference (NELAC) requirements unless noted in the case narrative. The results contained within this document relate only to the samples included in this report. Pace Analytical is responsible only for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt. This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Dan Pfalzer
Laboratory Director

Certifications: New York (EPA: NY00906, ELAP: 11078), New Jersey (NY026), Connecticut (PH-0337), Massachusetts (M-NY906), Virginia (1884)

Pace Analytical Services, Inc.| 2190 Technology Drive | Schenectady, NY 12308
Phone: 518.346.4592 | internet: www.pacelabs.com

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CASE NARRATIVE

June 05, 2014

CASE NARRATIVE

This data package (SDG ID: 14050651) consists of 5 soil samples received on 05/24/2014. The samples are from Project Name: 115058 KEITH MIDDLE SCHOOL.

This sample delivery group consists of the following samples:

Lab Sample ID	Client ID	Collection Date
AR12720	SED-KMS-22 (0-6")	05/22/2014 09:06
AR12721	SED-KMS-23 (0-6")	05/22/2014 08:48
AR12722	SED-KMS-24 (0-6")	05/22/2014 09:13
AR12723	SED-KMS-25 (0-6")	05/22/2014 08:55
AR12724	DUP-1	05/22/2014 10:06

1

Sample Delivery and Receipt Conditions

(1.) All samples were delivered to the laboratory via FEDEX delivery service on 05/24/2014.

(2.) All samples were received at the laboratory intact and within holding times.

(3.) All samples were received at the laboratory properly preserved with any exceptions listed below:

PCB Aroclor Analysis

Analysis for PCB Aroclors was performed by method SW-846 8082A using a dual column GC system. Samples were extracted by Soxhlet Extraction Method (EPA - Method 3540C). The following technical and administrative items were noted for the analysis:

(1.) All quality assurance parameters were met for the analysis.

Qualifier Summary

(1.) B-Denotes analyte observed in associated method blank or extraction blank at a concentration exceeding the MDL.

(2.) J-Denotes concentration result greater than the MDL but less than the RL.

(3.) U-Denotes analyte not observed at a concentration greater than the MDL.

Respectfully submitted,

Chelsea L. Farmer
Project Manager

S:\Lims Data\1405\14050651\Package\CN_14050651_Rev00.doc

SAMPLE CHAIN OF CUSTODY

Pace Analytical®
www.pacelabs.com

140506511

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

1729182

Section A Required Client Information:

Company: TRC
Address: 650 Suffolk St
Lowell, MA 01854
Email To: dsullivan@trcsolutions.com
Phone: 978-970-5600 Fax:
Requested Due Date/TAT: 5-day TAT

Section B Required Project Information:

Report To: David Sullivan
Copy To: Jeff Saunders
Purchase Order No.: 69285
Project Name: KMS - New Bedford
Project Number: 15058

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER MCP

Site Location STATE: MA

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): PCBs (8082) Soxhlet Extraction

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) PCBs (8082) Soxhlet Extraction	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~KMS Sediment 1 (0-6")~~	SL																		
2	~~KMS Sediment 2 (0-6")~~	SL																		
3	~~KMS Sediment 3 (0-6")~~	SL																		
4	~~KMS Sediment 4 (0-6")~~	SL																		
5	DUP-1 ACT 5/22/14																			
6	SED-KMS-22 (0-6")	SL	G			5/22/14	09:00		1	X							X			AR12720
7	SED-KMS-23 (0-6")	SL	G			5/22/14	0848		1	X							X			AR12721
8	SED-KMS-24 (0-6")	SL	G	~~5/22/14~~	~~0808~~	5/22/14	09:13		1	X							X			AR12722
9	SED-KMS-25 (0-6")	SL	G			5/22/14	0855		1	X							X			AR12723
10	DUP-1	SL	G			5/22/14	10:00		1	X							X			AR12724
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	TRC	5/23/14	1225	Fedex #929964	5/23/14	1225				
	FedEx				5/24/14	09:40	11.8	Y	Y	Y

5/23/14 AW

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Aaron Tins
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 5/23/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Sample Condition Upon Receipt

Pace Analytical

Client Name: TRC Project # 6928 S New Bedfo KMS

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

Tracking # 8608 4079 5583

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

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

Thermometer Used IR Type of Ice: Wet ☒ Blue ☐ None ☐ NOT ENOUGH ICE

Cooler Temperature 11.8 Biological Tissue is Frozen: Yes ☐ No ☐

<14050651P2>

Temp should be above freezing to 6°C

		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.
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	
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.	☐Yes ☐No ☒N/A	13. Temp > 6°C
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
exceptions: VOA	☐Yes ☒No	Initial when completed NA / Lot # of added preservative NA
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): NA		

Line-Out: CJP 5/27/14

Log In: PAN 5/27/14

Labeling: KJP 5/27/14

PM Review: _____

LOGIN_SCUR_FORM_051914_REV0_01

SAMPLE RECEIPT

SAMPLE RECEIPT REPORT
14050651

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

CLIENT: TRC ENVIRONMENTAL
PROJECT: 115058 KEITH MIDDLE SCHOOL
LRF: 14050651
REPORT: CLP-LIKE FORMS
EDD: YES
LRF TAT: 1 WEEK

RECEIVED DATE: 05/24/2014 09:40
SHIPPED VIA: FEDEX
SHIPPING ID: 860840795583
NUMBER OF COOLERS: 1
CUSTODY SEAL INTACT: YES
COOLER STATUS: CHILLED
TEMPERATURE(S): [5] 11.8 °C

SAMPLE SEALS INTACT: NA
[1,2] **SAMPLES PRESERVED PER METHOD GUIDANCE:** NO
[3] **SAMPLES REC'D IN HOLDTIME:** YES
DISPOSAL: BY LAB (45 DAYS)
COC DISCREPANCY: NO

COMMENTS:
UPON RECEIPT IN THE LAB, SAMPLES HAD A TEMP OF GREATER THAN 6C SO WERE CONSIDERED NOT PROPERLY PRESERVED.

3

CLIENT ID (LAB ID)	TAT-DUE Date[4]	DATE-TIME SAMPLED	MATRIX	METHOD	TEST DESCRIPTION	QC REQUEST
SED-KMS-22 (0-6") (AR12720)	1 WEEK 06-03-14	05/22/2014 09:06	Soil	SW-846 8082A	PCB Analysis (Solid)	
SED-KMS-23 (0-6") (AR12721)	1 WEEK 06-03-14	05/22/2014 08:48	Soil	SW-846 8082A	PCB Analysis (Solid)	
SED-KMS-24 (0-6") (AR12722)	1 WEEK 06-03-14	05/22/2014 09:13	Soil	SW-846 8082A	PCB Analysis (Solid)	
SED-KMS-25 (0-6") (AR12723)	1 WEEK 06-03-14	05/22/2014 08:55	Soil	SW-846 8082A	PCB Analysis (Solid)	
DUP-1 (AR12724)	1 WEEK 06-03-14	05/22/2014 10:06	Soil	SW-846 8082A	PCB Analysis (Solid)	

[1] The pH preservation check of Oil and Grease (Method 1664) is performed as soon as possible after sample receipt and may not be included in this report.
[2] The pH preservation check of aqueous volatile samples is not performed until after the analysis of the sample to maintain zero headspace and is not included in this report.
[3] Samples received for pH analysis are not marked as a hold time exceedance here. SW-846 methods suggests analysis to be done within 15 minutes of sample collection. Because of transportation time it is not possible for the laboratory to perform the test in that time. Sample Certificates of Analysis reports are noted as such.
[4] Samples arriving at the laboratory after 4:00 pm are assigned a due date as if they arrived the following business day unless other arrangements have been made.
[5] All samples which require thermal preservation shall be considered acceptable when received greater than 6 degrees Celsius if they are collected on the same day as received and there is evidence that the chilling process has begun, such as arrival on ice.Control limits are between 0-6 Degrees Celsius. Control limits do not apply for metals analysis.

Reporting Parameters and Lists

SW-846 8082A - PCB Analysis (Solid) - (ug/g)

Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Total PCB Amount > RL

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2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055

INTERNAL SAMPLE TRACKING RECORD

4

PCB EXTRACTION LOG

Pace Analytical®

Prep Date: 05/27/14 **Batch ID: 26672** **Method: EPA 3540C**

Initial for required Clean Up Steps

	Prep ID	LAB Sample ID	Alt Sample ID	Matrix	pH	Analysis Required	Extract Type / Unit	Percent Total Solids	Sample Amount (g or mL)	Extract Time On - 1	Extract Time Off - 1	Extract Time On - 2	Extract Time Off - 2	Date Acid Cleaned (MM/DD)	Date TBA Cleaned (MM/DD)	Date Florisil Shake (MM/DD)	Date Hg Shake (MM/DD)	Final Ext. Vol (mL)	Date Conc (MM/DD)	Comments
														KTC	KTC	KTC				
1	261042	PBLK-28	AR12720B	Soil		E PCB S	SOX	N/A	10.465	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	
2	261041	LCS-28	AR12720L	Soil		E PCB S	SOX	N/A	10.388	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	
3	261036	14050651-01	AR12720	Soil		E PCB S	SOX	20.0	10.181	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	
4	261037	14050651-02	AR12721	Soil		E PCB S	SOX	11.8	10.324	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	
5	261038	14050651-03	AR12722	Soil		E PCB S	SOX	22.2	10.010	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	
6	261039	14050651-04	AR12723	Soil		E PCB S	SOX	11.6	10.018	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	
7	261040	14050651-05	AR12724	Soil		E PCB S	SOX	20.5	10.485	19:00	11:00	NA	NA	05/28	05/28	05/28	NA	25	05/28	

Solvent, Surrogate, Spike, and Acid Information

Item	Lot Number	Amount (uL)	Conc (ug/mL)	B	L	LD	S	D	M	K
Sodium Sulfate CURRENT	113272	NA		☑	☑	☐	☑	☐	☐	☐
Thimbles	NO8433x80MM	NA		☑	☑	☐	☑	☐	☐	☐
Sulfuric Acid CURRENT	0000054026	NA		☑	☑	☐	☑	☐	☐	☐
0.5 ppm TCMX/ 5.0 ppm DCBP in ACETONE	021814B036P124A1-10	500	0.5/5.0	☑	☑	☐	☑	☐	☐	☐
Aroclor 1242 @ 12.5 PPM in Acetone	030314B036P139A	1000	12.5	☐	☑	☐	☐	☐	☐	☐
TBA Solution	032414MLB3P29B	NA		☑	☑	☐	☑	☐	☐	☐
Acetone (Dewar) CURRENT	DJ833	NA		☑	☑	☐	☑	☐	☐	☐
Hexane (Dewar) CURRENT	DK240	NA		☑	☑	☐	☑	☐	☐	☐
10% Florisil	051914MLB3P43A	NA		☑	☑	☐	☑	☐	☐	☐

4

Analyst Review: Kudakwashe Chinhoyi

Peer Review: Diyana Azhari

Print Date: 6/5/2014
Lims Version : 5.0.8.6

PCB SCREEN SHEET

LRF: 14050651 **Batch ID:26672**

Lab Sample ID	File ID	Matrix	Prep Date	Wet Weight (g or mL)	Percent Solids	Dry Weight (g or mL)	Set Volume (mL)	Screen Dilution	Screen Result	Bench Dilution	Dilution Sequence	Final Multiplier	Dilution Analyst
AR12720B	GC21B-2148-30	Soil	**05/27/14**	10.465	N/A	10.465	25	NA	0.0060020	1	NA	25x	Michael Abrahamson
	GC21F-2211-30	Soil	**05/27/14**	10.465	N/A	10.465	25	NA	0.0060020	1	NA	25x	Michael Abrahamson
AR12720L	GC21B-2148-31	Soil	**05/27/14**	10.388	N/A	10.388	25	NA	0.63918	1	NA	25x	Michael Abrahamson
	GC21F-2211-31	Soil	**05/27/14**	10.388	N/A	10.388	25	NA	0.63918	1	NA	25x	Michael Abrahamson
AR12720	GC21B-2148-32	Soil	**05/27/14**	10.181	20.0	2.0362	25	250	0.0035300	1	NA	25x	Michael Abrahamson
	GC21F-2211-32	Soil	**05/27/14**	10.181	20.0	2.0362	25	250	0.0035300	1	NA	25x	Michael Abrahamson
AR12721	GC21B-2148-33	Soil	**05/27/14**	10.324	11.8	1.2182	25	250	0.0040733	1	NA	25x	Michael Abrahamson
	GC21F-2211-33	Soil	**05/27/14**	10.324	11.8	1.2182	25	250	0.0040733	1	NA	25x	Michael Abrahamson
AR12722	GC21B-2148-34	Soil	**05/27/14**	10.010	22.2	2.2222	25	250	0.0024280	1	NA	25x	Michael Abrahamson
	GC21F-2211-34	Soil	**05/27/14**	10.010	22.2	2.2222	25	250	0.0024280	1	NA	25x	Michael Abrahamson
AR12723	GC21B-2148-35	Soil	**05/27/14**	10.018	11.6	1.1621	25	250	0.0018827	1	NA	25x	Michael Abrahamson
	GC21F-2211-35	Soil	**05/27/14**	10.018	11.6	1.1621	25	250	0.0018827	1	NA	25x	Michael Abrahamson
AR12724	GC21B-2148-36	Soil	**05/27/14**	10.485	20.5	2.1494	25	250	0.0045431	1	NA	25x	Michael Abrahamson
	GC21F-2211-36	Soil	**05/27/14**	10.485	20.5	2.1494	25	250	0.0045431	1	NA	25x	Michael Abrahamson

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COMMENTS: _____

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Print Date: 6/5/2014
Lims Version : 5.0.8.6
_EXT-INJSHEET_NL; Rev 00; 09.29.2010; EXTRACTION

SURROGATE % RECOVERY SUMMARY

2F-1
PCB SURROGATE RECOVERY

Laboratory Name: Pace Analytical Services, Inc. SDG: 14050651

ELAP ID No: 11078

GC Column (1): Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

GC Column (2): Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

LRF ID	LAB SAMPLE ID	LAB FILE ID	SURR 1 (Col 1) % REC #	SURR 2 (Col 1) % REC #	SURR 1 (Col 2) % REC #	SURR 2 (Col 2) % REC #	OTHER (1)	OTHER (2)	TOTAL OUT
PBLK-28	AR12720B	GC21F-2211-30	103	104					0
PBLK-28	AR12720B	GC21B-2148-30			106	113			0
LCS-28	AR12720L	GC21F-2211-31	101	103					0
LCS-28	AR12720L	GC21B-2148-31			104	109			0
14050651-01	AR12720	GC21F-2211-32	101	90.1					0
14050651-01	AR12720	GC21B-2148-32			103	98.0			0
14050651-02	AR12721	GC21F-2211-33	94.8	100					0
14050651-02	AR12721	GC21B-2148-33			97.0	102			0
14050651-03	AR12722	GC21F-2211-34	93.3	102					0
14050651-03	AR12722	GC21B-2148-34			95.9	94.2			0
14050651-04	AR12723	GC21F-2211-35	102	101					0
14050651-04	AR12723	GC21B-2148-35			102	107			0
14050651-05	AR12724	GC21F-2211-36	102	104					0
14050651-05	AR12724	GC21B-2148-36			99.8	95.6			0

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Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

	Advisory QC Limits.
SURR1 = TETRACHLORO-META-XYLENE	(60.0-140)
SURR2 = DECACHLOROBIPHENYL	(60.0-140)

Form II-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

LABORATORY CONTROL SPIKE SUMMARY

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3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: Pace Analytical Services, Inc.

ELAP ID No: 11078

SDG No: 14050651

LCS Lab ID: LCS-28

Blank Sample ID: PBLK-28

LCS File ID: GC21F-2211-31

Method Blank File ID: GC21F-2211-30

LCS Inj Date: 05/28/2014 17:03:30

Method Blank Inj Date: 05/28/2014 16:50:42

LCS ID: AR12720L

Method Blank ID: AR12720B

LCS Matrix: SODIUM SULFATE

Method Blank Matrix: SODIUM SULFATE

COMPOUND	SPIKE ADDED (ug/g)	LCS CONCENTRATION (ug/g)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	1.20	1.19	98.8	70.0-130

Column to be used to flag recovery values

* Values outside of QC limits

[1]QC Limits based upon laboratory defaults.

Spike Recovery: 0 out of 1 outside limits.

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COMMENTS:

Form III-CLP-PCB (PACE)

Lims Version : 5.0.8.6

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: Pace Analytical Services, Inc.

ELAP ID No: 11078

SDG No: 14050651

LCS Lab ID: LCS-28

Blank Sample ID: PBLK-28

LCS File ID: GC21B-2148-31

Method Blank File ID: GC21B-2148-30

LCS Inj Date: 05/28/2014 17:03:34

Method Blank Inj Date: 05/28/2014 16:50:47

LCS ID: AR12720L

Method Blank ID: AR12720B

LCS Matrix: SODIUM SULFATE

Method Blank Matrix: SODIUM SULFATE

COMPOUND	SPIKE ADDED (ug/g)	LCS CONCENTRATION (ug/g)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	1.20	1.24	103	70.0-130

Column to be used to flag recovery values

* Values outside of QC limits

[1]QC Limits based upon laboratory defaults.

Spike Recovery: 0 out of 1 outside limits.

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COMMENTS:

Form III-CLP-PCB (PACE)

Lims Version : 5.0.8.6

METHOD BLANK SUMMARY

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4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	Blank Sample ID:	PBLK-28
Matrix:	SODIUM SULFATE	Method Blank ID:	AR12720B
Instrument ID:	GC21B	Lab File ID:	GC21B-2148-30
Extraction Type:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
GC Column (1):	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm	Date Analyzed:	05/28/2014
		Time Analyzed:	16:50:47

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-28(LAB CONTROL SPIKE)	AR12720L	GC21B-2148-31	05/28/2014 17:03:34
SED-KMS-22 (0-6")	AR12720	GC21B-2148-32	05/28/2014 17:16:16
SED-KMS-23 (0-6")	AR12721	GC21B-2148-33	05/28/2014 17:28:58
SED-KMS-24 (0-6")	AR12722	GC21B-2148-34	05/28/2014 17:41:39
SED-KMS-25 (0-6")	AR12723	GC21B-2148-35	05/28/2014 17:54:21
DUP-1	AR12724	GC21B-2148-36	05/28/2014 18:07:09

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	Blank Sample ID:	PBLK-28
Matrix:	SODIUM SULFATE	Method Blank ID:	AR12720B
Instrument ID:	GC21F	Lab File ID:	GC21F-2211-30
Extraction Type:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
GC Column (1):	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	Date Analyzed:	05/28/2014
		Time Analyzed:	16:50:42

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-28(LAB CONTROL SPIKE)	AR12720L	GC21F-2211-31	05/28/2014 17:03:30
SED-KMS-22 (0-6")	AR12720	GC21F-2211-32	05/28/2014 17:16:11
SED-KMS-23 (0-6")	AR12721	GC21F-2211-33	05/28/2014 17:28:54
SED-KMS-24 (0-6")	AR12722	GC21F-2211-34	05/28/2014 17:41:35
SED-KMS-25 (0-6")	AR12723	GC21F-2211-35	05/28/2014 17:54:16
DUP-1	AR12724	GC21F-2211-36	05/28/2014 18:07:05

SAMPLE ANALYSIS DATA

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1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	14050651-01
Matrix:	Soil	Client ID:	SED-KMS-22 (0-6")
Sample wt(Dry)/vol:	2.0362 g	Lab Sample ID:	AR12720
Percent Moisture:	80.0	Date Received:	05/24/2014
Extraction:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
Conc. Extract Volume:	25000 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21F-2211-32

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21B-2148-32

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.246	U
1	11104-28-2	Aroclor 1221	0.246	U
1	11141-16-5	Aroclor 1232	0.246	U
1	53469-21-9	Aroclor 1242	0.246	U
1	12672-29-6	Aroclor 1248	0.246	U
1	11097-69-1	Aroclor 1254	0.246	U
1	11096-82-5	Aroclor 1260	0.246	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	14050651-02
Matrix:	Soil	Client ID:	SED-KMS-23 (0-6")
Sample wt(Dry)/vol:	1.2182 g	Lab Sample ID:	AR12721
Percent Moisture:	88.2	Date Received:	05/24/2014
Extraction:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
Conc. Extract Volume:	25000 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21F-2211-33

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21B-2148-33

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.410	U
1	11104-28-2	Aroclor 1221	0.410	U
1	11141-16-5	Aroclor 1232	0.410	U
1	53469-21-9	Aroclor 1242	0.410	U
1	12672-29-6	Aroclor 1248	0.410	U
1	11097-69-1	Aroclor 1254	0.410	U
1	11096-82-5	Aroclor 1260	0.410	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	14050651-03
Matrix:	Soil	Client ID:	SED-KMS-24 (0-6")
Sample wt(Dry)/vol:	2.2222 g	Lab Sample ID:	AR12722
Percent Moisture:	77.8	Date Received:	05/24/2014
Extraction:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
Conc. Extract Volume:	25000 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21F-2211-34

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21B-2148-34

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.225	U
1	11104-28-2	Aroclor 1221	0.225	U
1	11141-16-5	Aroclor 1232	0.225	U
1	53469-21-9	Aroclor 1242	0.225	U
1	12672-29-6	Aroclor 1248	0.225	U
1	11097-69-1	Aroclor 1254	0.225	U
1	11096-82-5	Aroclor 1260	0.225	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	14050651-04
Matrix:	Soil	Client ID:	SED-KMS-25 (0-6")
Sample wt(Dry)/vol:	1.1621 g	Lab Sample ID:	AR12723
Percent Moisture:	88.4	Date Received:	05/24/2014
Extraction:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
Conc. Extract Volume:	25000 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21F-2211-35

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21B-2148-35

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.430	U
1	11104-28-2	Aroclor 1221	0.430	U
1	11141-16-5	Aroclor 1232	0.430	U
1	53469-21-9	Aroclor 1242	0.430	U
1	12672-29-6	Aroclor 1248	0.430	U
1	11097-69-1	Aroclor 1254	0.430	U
1	11096-82-5	Aroclor 1260	0.430	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	14050651-05
Matrix:	Soil	Client ID:	DUP-1
Sample wt(Dry)/vol:	2.1494 g	Lab Sample ID:	AR12724
Percent Moisture:	79.5	Date Received:	05/24/2014
Extraction:	Soxhlet Method (3540C)	Date Extracted:	05/27/2014
Conc. Extract Volume:	25000 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21F-2211-36

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

Injection Volume: 1.0 uL

Lab File ID: GC21B-2148-36

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.233	U
1	11104-28-2	Aroclor 1221	0.233	U
1	11141-16-5	Aroclor 1232	0.233	U
1	53469-21-9	Aroclor 1242	0.233	U
1	12672-29-6	Aroclor 1248	0.233	U
1	11097-69-1	Aroclor 1254	0.233	U
1	11096-82-5	Aroclor 1260	0.233	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

ANALYTICAL SEQUENCE (GC21F)

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 14050651

ELAP ID No: 11078

Instrument ID: GC21F Init. Calib. Date(s): 05/24/14,05/25/14

GC Column (1): Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 2.14 DCBP RT: 8.49

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 20 PPB	052416A	GC21F-2208-17	05/24/2014 13:52:40	2.14	8.49
02	A1016 100 PPB	052416B	GC21F-2208-18	05/24/2014 14:05:22	2.14	8.49
03	A1016 250 PPB	052416C	GC21F-2208-19	05/24/2014 14:18:05	2.14	8.49
04	A1016 500 PPB	052416D	GC21F-2208-20	05/24/2014 14:30:47	2.14	8.49
05	A1016 1000 PPB	052416E	GC21F-2208-21	05/24/2014 14:43:29	2.14	8.49
06	A1221 20 PPB	052421A	GC21F-2208-22	05/24/2014 14:56:18	2.14	8.49
07	A1221 100 PPB	052421B	GC21F-2208-23	05/24/2014 15:09:06	2.14	8.49
08	A1221 250 PPB	052421C	GC21F-2208-24	05/24/2014 15:21:54	2.14	8.49
09	A1221 1000 PPB	052421E	GC21F-2208-26	05/24/2014 15:47:23	2.14	8.49
10	A1232 20 PPB	052432A	GC21F-2208-27	05/24/2014 16:00:05	2.14	8.49
11	A1232 100 PPB	052432B	GC21F-2208-28	05/24/2014 16:12:47	2.14	8.49
12	A1232 250 PPB	052432C	GC21F-2208-29	05/24/2014 16:25:29	2.14	8.49
13	A1232 500 PPB	052432D	GC21F-2208-30	05/24/2014 16:38:17	2.14	8.49
14	A1232 1000 PPB	052432E	GC21F-2208-31	05/24/2014 16:50:59	2.14	8.49
15	A1242 20 PPB	052442A	GC21F-2208-32	05/24/2014 17:03:40	2.14	8.49
16	A1242 100 PPB	052442B	GC21F-2208-33	05/24/2014 17:16:21	2.14	8.49
17	A1242 250 PPB	052442C	GC21F-2208-34	05/24/2014 17:29:02	2.14	8.49
18	A1242 500 PPB	052442D	GC21F-2208-35	05/24/2014 17:41:50	2.14	8.49
19	A1242 1000 PPB	052442E	GC21F-2208-36	05/24/2014 17:54:32	2.14	8.49
20	A1248 20 PPB	052448A	GC21F-2208-37	05/24/2014 18:07:14	2.14	8.49
21	A1248 100 PPB	052448B	GC21F-2208-38	05/24/2014 18:20:02	2.14	8.49
22	A1248 250 PPB	052448C	GC21F-2208-39	05/24/2014 18:32:50	2.14	8.49
23	A1248 500 PPB	052448D	GC21F-2208-40	05/24/2014 18:45:39	2.14	8.49
24	A1248 1000 PPB	052448E	GC21F-2208-41	05/24/2014 18:58:21	2.14	8.49
25	A1254 20 PPB	052454A	GC21F-2208-42	05/24/2014 19:11:01	2.15	8.49
26	A1254 100 PPB	052454B	GC21F-2208-43	05/24/2014 19:23:50	2.15	8.50
27	A1254 250 PPB	052454C	GC21F-2208-44	05/24/2014 19:36:38	2.15	8.49
28	A1254 500 PPB	052454D	GC21F-2208-45	05/24/2014 19:49:25	2.14	8.49
29	A1254 1000 PPB	052454E	GC21F-2208-46	05/24/2014 20:02:13	2.14	8.49
30	A1260 20 PPB	052460A	GC21F-2208-47	05/24/2014 20:15:01	2.14	8.49
31	A1260 100 PPB	052460B	GC21F-2208-48	05/24/2014 20:27:50	2.14	8.49
32	A1260 250 PPB	052460C	GC21F-2208-49	05/24/2014 20:40:31	2.14	8.49
33	A1260 500 PPB	052460D	GC21F-2208-50	05/24/2014 20:53:18	2.14	8.49
34	A1260 1000 PPB	052460E	GC21F-2208-51	05/24/2014 21:06:05	2.14	8.49
35	A1262 20 PPB	052462A	GC21F-2208-52	05/24/2014 21:18:53	2.14	8.49
36	A1262 100 PPB	052462B	GC21F-2208-53	05/24/2014 21:31:34	2.14	8.49
37	A1262 250 PPB	052462C	GC21F-2208-54	05/24/2014 21:44:21	2.14	8.49
38	A1262 500 PPB	052462D	GC21F-2208-55	05/24/2014 21:57:08	2.14	8.49

Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 14050651

ELAP ID No: 11078

Instrument ID: GC21F Init. Calib. Date(s): 05/24/14,05/25/14

GC Column (1): Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 2.14 DCBP RT: 8.49

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 1000 PPB	052462E	GC21F-2208-56	05/24/2014 22:09:49	2.14	8.49
40	A1268 20 PPB	052468A	GC21F-2208-57	05/24/2014 22:22:31	2.14	8.49
41	A1268 100 PPB	052468B	GC21F-2208-58	05/24/2014 22:35:19	2.14	8.49
42	A1268 250 PPB	052468C	GC21F-2208-59	05/24/2014 22:48:07	2.14	8.49
43	A1268 500 PPB	052468D	GC21F-2208-60	05/24/2014 23:00:54	2.14	8.49
44	A1268 1000 PPB	052468E	GC21F-2208-61	05/24/2014 23:13:43	2.14	8.49
45	A1221 500 PPB	052521D	GC21F-2208-3	05/25/2014 13:55:08	2.14	8.49
46	A1016 500 PPB	CS160525A	GC21F-2208-5	05/25/2014 14:20:39	2.15	8.49
47	A1221 500 PPB	CS210525A	GC21F-2208-6	05/25/2014 14:33:22	2.14	8.49
48	A1232 500 PPB	CS320525A	GC21F-2208-7	05/25/2014 14:46:06	2.14	8.49
49	A1242 500 PPB	CS420525A	GC21F-2208-8	05/25/2014 14:58:48	2.14	8.49
50	A1248 500 PPB	CS480525A	GC21F-2208-9	05/25/2014 15:11:32	2.14	8.49
51	A1254 500 PPB	CS540525A	GC21F-2208-10	05/25/2014 15:24:18	2.15	8.49
52	A1260 500 PPB	CS600525A	GC21F-2208-11	05/25/2014 15:37:00	2.15	8.49
53	A1262 500 PPB	CS620525A	GC21F-2208-12	05/25/2014 15:49:42	2.15	8.49
54	A1268 500 PPB	CS680525A	GC21F-2208-13	05/25/2014 16:02:31	2.15	8.49
55	A1016 500 PPB	CS160528A	GC21F-2211-28	05/28/2014 14:57:08	2.14	8.49
56	PBLK-28(METHOD BLANK)	AR12720B	GC21F-2211-30	05/28/2014 16:50:42	2.15	8.49
57	LCS-28(LAB CONTROL SPIKE)	AR12720L	GC21F-2211-31	05/28/2014 17:03:30	2.15	8.49
58	SED-KMS-22 (0-6")	AR12720	GC21F-2211-32	05/28/2014 17:16:11	2.15	8.49
59	SED-KMS-23 (0-6")	AR12721	GC21F-2211-33	05/28/2014 17:28:54	2.14	8.49
60	SED-KMS-24 (0-6")	AR12722	GC21F-2211-34	05/28/2014 17:41:35	2.14	8.49
61	SED-KMS-25 (0-6")	AR12723	GC21F-2211-35	05/28/2014 17:54:16	2.14	8.49
62	DUP-1	AR12724	GC21F-2211-36	05/28/2014 18:07:05	2.15	8.49
63	A1221 500 PPB	CS210528A	GC21F-2211-37	05/28/2014 18:19:53	2.14	8.49

Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

INITIAL CALIBRATION DATA (GC21F)

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6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 14050651
ELAP ID No: 11078
Date(s) Analyzed: 05/24/14,05/25/14
Instrument ID: GC21F
GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1016	GC21F-2208-17	052416A	20.0	71.881		
	GC21F-2208-18	052416B	100	75.009		
	GC21F-2208-19	052416C	250	73.989		
	GC21F-2208-20	052416D	500	74.404		
	GC21F-2208-21	052416E	1000	68.625	72.782	3.6
Aroclor 1221	GC21F-2208-22	052421A	20.0	20.398		
	GC21F-2208-23	052421B	100	21.745		
	GC21F-2208-24	052421C	250	21.962		
	GC21F-2208-3	052521D	500	19.414		
	GC21F-2208-26	052421E	1000	19.249	20.554	6.2
Aroclor 1232	GC21F-2208-27	052432A	20.0	37.209		
	GC21F-2208-28	052432B	100	42.354		
	GC21F-2208-29	052432C	250	37.081		
	GC21F-2208-30	052432D	500	41.253		
	GC21F-2208-31	052432E	1000	35.053	38.590	8.0
Aroclor 1242	GC21F-2208-32	052442A	20.0	65.019		
	GC21F-2208-33	052442B	100	62.810		
	GC21F-2208-34	052442C	250	63.275		
	GC21F-2208-35	052442D	500	60.621		
	GC21F-2208-36	052442E	1000	59.121	62.169	3.7
Aroclor 1248	GC21F-2208-37	052448A	20.0	70.412		
	GC21F-2208-38	052448B	100	72.621		
	GC21F-2208-39	052448C	250	68.886		
	GC21F-2208-40	052448D	500	65.644		
	GC21F-2208-41	052448E	1000	62.533	68.019	5.9
Aroclor 1254	GC21F-2208-42	052454A	20.0	93.362		
	GC21F-2208-43	052454B	100	100.960		
	GC21F-2208-44	052454C	250	94.851		
	GC21F-2208-45	052454D	500	94.376		
	GC21F-2208-46	052454E	1000	87.545	94.219	5.1
Aroclor 1260	GC21F-2208-47	052460A	20.0	134.167		
	GC21F-2208-48	052460B	100	128.821		
	GC21F-2208-49	052460C	250	126.707		
	GC21F-2208-50	052460D	500	122.668		
	GC21F-2208-51	052460E	1000	124.149	127.302	3.5
Aroclor 1262	GC21F-2208-52	052462A	20.0	146.518		
	GC21F-2208-53	052462B	100	139.787		
	GC21F-2208-54	052462C	250	130.981		
	GC21F-2208-55	052462D	500	125.790		
	GC21F-2208-56	052462E	1000	115.445	131.704	9.2

FORM VI-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 14050651
ELAP ID No: 11078
Date(s) Analyzed: 05/24/14,05/25/14
Instrument ID: GC21F
GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1268	GC21F-2208-57	052468A	20.0	239.190		
	GC21F-2208-58	052468B	100	232.341		
	GC21F-2208-59	052468C	250	222.401		
	GC21F-2208-60	052468D	500	214.528		
	GC21F-2208-61	052468E	1000	203.071	222.306	6.4
TCMX	GC21F-2208-42	052454A	2.00	438.116		
	GC21F-2208-43	052454B	5.00	447.889		
	GC21F-2208-44	052454C	8.00	422.007		
	GC21F-2208-45	052454D	10.0	423.814		
	GC21F-2208-46	052454E	20.0	401.218	426.609	4.2
DCBP	GC21F-2208-42	052454A	20.0	458.229		
	GC21F-2208-43	052454B	50.0	447.706		
	GC21F-2208-44	052454C	80.0	415.961		
	GC21F-2208-45	052454D	100	415.051		
	GC21F-2208-46	052454E	200	371.171	421.623	8.1

% RSD Limit <= 20%
TCMX=TETRACHLOROMETAXYLENE
DCBP=DECACHLOROBIPHENYL

[1] Response factor calculated using total area of 5 peaks used to quantitate each Aroclor. Mean response factor not used in Aroclor quantitation, calibration curve by linear regression used for quantitation. Concentrations are nominal values, please see Calibration Curve Report Point Table for actual values.

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INITIAL/CONTINUING CALIBRATION DATA (GC21F)

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7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc. SDG NO: 14050651

ELAP ID No: 11078

Instrument ID: GC21F

GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB TYPE	CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	PERCENT DIFFERENCE	Q	DATE / TIME ANALYZED
Aroclor 1016	GC21F-2208-5	CS160525A	ICV	480	500	-4.08		05/25/2014 14:20:39
Aroclor 1221	GC21F-2208-6	CS210525A	ICV	519	500	3.81		05/25/2014 14:33:22
Aroclor 1232	GC21F-2208-7	CS320525A	ICV	430	500	-14.0		05/25/2014 14:46:06
Aroclor 1242	GC21F-2208-8	CS420525A	ICV	452	500	-9.64		05/25/2014 14:58:48
Aroclor 1248	GC21F-2208-9	CS480525A	ICV	444	500	-11.2		05/25/2014 15:11:32
Aroclor 1254	GC21F-2208-10	CS540525A	ICV	509	500	1.90		05/25/2014 15:24:18
Aroclor 1260	GC21F-2208-11	CS600525A	ICV	454	500	-9.13		05/25/2014 15:37:00
Aroclor 1262	GC21F-2208-12	CS620525A	ICV	455	500	-9.00		05/25/2014 15:49:42
Aroclor 1268	GC21F-2208-13	CS680525A	ICV	460	500	-8.08		05/25/2014 16:02:31
Aroclor 1016	GC21F-2211-28	CS160528A	CCV	488	500	-2.46		05/28/2014 14:57:08
Aroclor 1221	GC21F-2211-37	CS210528A	CCV	534	500	6.81		05/28/2014 18:19:53

% Difference must be less than or equal to +/- 20.0 percent.

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

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FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 14050651
ELAP ID No: 11078
Instrument ID: GC21F
GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC21F-2208-5	CS160525A	ICV	1	2.97	2.89	3.05
		CS160525A	ICV	2	3.17	3.09	3.25
		CS160525A	ICV	3	3.48	3.40	3.56
		CS160525A	ICV	4	3.59	3.51	3.67
		CS160525A	ICV	5	3.66	3.58	3.74
Aroclor 1221	GC21F-2208-6	CS210525A	ICV	1	1.52	1.44	1.60
		CS210525A	ICV	2	2.08	2.00	2.16
		CS210525A	ICV	3	2.34	2.26	2.42
		CS210525A	ICV	4	2.44	2.36	2.52
		CS210525A	ICV	5	2.50	2.42	2.58
Aroclor 1232	GC21F-2208-7	CS320525A	ICV	1	2.50	2.42	2.58
		CS320525A	ICV	2	3.17	3.09	3.25
		CS320525A	ICV	3	3.48	3.40	3.56
		CS320525A	ICV	4	3.59	3.51	3.67
		CS320525A	ICV	5	3.66	3.58	3.74
Aroclor 1242	GC21F-2208-8	CS420525A	ICV	1	2.97	2.89	3.05
		CS420525A	ICV	2	3.17	3.09	3.25
		CS420525A	ICV	3	3.48	3.40	3.56
		CS420525A	ICV	4	3.59	3.51	3.67
		CS420525A	ICV	5	3.66	3.58	3.74
Aroclor 1248	GC21F-2208-9	CS480525A	ICV	1	3.93	3.85	4.01
		CS480525A	ICV	2	4.23	4.15	4.31
		CS480525A	ICV	3	4.50	4.42	4.58
		CS480525A	ICV	4	4.57	4.49	4.65
		CS480525A	ICV	5	4.74	4.66	4.82
Aroclor 1254	GC21F-2208-10	CS540525A	ICV	1	4.87	4.79	4.95
		CS540525A	ICV	2	5.13	5.05	5.21
		CS540525A	ICV	3	5.24	5.16	5.32
		CS540525A	ICV	4	5.78	5.70	5.86
		CS540525A	ICV	5	6.07	5.99	6.15
Aroclor 1260	GC21F-2208-11	CS600525A	ICV	1	6.07	5.99	6.15
		CS600525A	ICV	2	6.82	6.74	6.90
		CS600525A	ICV	3	7.08	7.00	7.16
		CS600525A	ICV	4	7.29	7.21	7.37
		CS600525A	ICV	5	7.77	7.69	7.85
Aroclor 1262	GC21F-2208-12	CS620525A	ICV	1	6.08	6.00	6.16
		CS620525A	ICV	2	6.82	6.74	6.90
		CS620525A	ICV	3	7.09	7.01	7.17

FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 14050651
ELAP ID No: 11078
Instrument ID: GC21F
GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1262		CS620525A	ICV	4	7.29	7.21	7.37
		CS620525A	ICV	5	7.78	7.70	7.86
Aroclor 1268	GC21F-2208-13	CS680525A	ICV	1	7.29	7.21	7.37
		CS680525A	ICV	2	7.78	7.70	7.86
		CS680525A	ICV	3	7.24	7.16	7.32
		CS680525A	ICV	4	7.60	7.52	7.68
		CS680525A	ICV	5	7.67	7.59	7.75

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 14050651
ELAP ID No: 11078
Instrument ID: GC21F
GC Column: Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC21F-2211-28	CS160528A	CCV	1	2.97	2.89	3.05
		CS160528A	CCV	2	3.17	3.09	3.25
		CS160528A	CCV	3	3.48	3.40	3.56
		CS160528A	CCV	4	3.59	3.51	3.67
		CS160528A	CCV	5	3.66	3.58	3.74
Aroclor 1221	GC21F-2211-37	CS210528A	CCV	1	1.52	1.44	1.60
		CS210528A	CCV	2	2.08	2.00	2.16
		CS210528A	CCV	3	2.34	2.26	2.42
		CS210528A	CCV	4	2.44	2.36	2.52
		CS210528A	CCV	5	2.50	2.42	2.58

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

ANALYTICAL SEQUENCE (GC21B)

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8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 14050651

ELAP ID No: 11078

Instrument ID: GC21B Init. Calib. Date(s): 05/24/14,05/25/14

GC Column (1): Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 2.91 DCBP RT: 8.82

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 20 PPB	052416A	GC21B-2145-14	05/24/2014 13:52:43	2.91	8.82
02	A1016 100 PPB	052416B	GC21B-2145-15	05/24/2014 14:05:26	2.91	8.82
03	A1016 250 PPB	052416C	GC21B-2145-16	05/24/2014 14:18:09	2.91	8.82
04	A1016 500 PPB	052416D	GC21B-2145-17	05/24/2014 14:30:51	2.91	8.82
05	A1016 1000 PPB	052416E	GC21B-2145-18	05/24/2014 14:43:33	2.91	8.82
06	A1221 20 PPB	052421A	GC21B-2145-19	05/24/2014 14:56:22	2.91	8.82
07	A1221 100 PPB	052421B	GC21B-2145-20	05/24/2014 15:09:10	2.91	8.82
08	A1221 250 PPB	052421C	GC21B-2145-21	05/24/2014 15:21:58	2.91	8.82
09	A1221 1000 PPB	052421E	GC21B-2145-22	05/24/2014 15:47:27	2.91	8.82
10	A1232 20 PPB	052432A	GC21B-2145-23	05/24/2014 16:00:09	2.91	8.82
11	A1232 100 PPB	052432B	GC21B-2145-24	05/24/2014 16:12:51	2.91	8.82
12	A1232 250 PPB	052432C	GC21B-2145-25	05/24/2014 16:25:33	2.91	8.82
13	A1232 500 PPB	052432D	GC21B-2145-26	05/24/2014 16:38:21	2.91	8.82
14	A1232 1000 PPB	052432E	GC21B-2145-27	05/24/2014 16:51:03	2.91	8.82
15	A1242 20 PPB	052442A	GC21B-2145-28	05/24/2014 17:03:44	2.91	8.82
16	A1242 100 PPB	052442B	GC21B-2145-29	05/24/2014 17:16:25	2.91	8.82
17	A1242 250 PPB	052442C	GC21B-2145-30	05/24/2014 17:29:06	2.91	8.82
18	A1242 500 PPB	052442D	GC21B-2145-31	05/24/2014 17:41:54	2.91	8.82
19	A1242 1000 PPB	052442E	GC21B-2145-32	05/24/2014 17:54:36	2.91	8.82
20	A1248 20 PPB	052448A	GC21B-2145-33	05/24/2014 18:07:18	2.91	8.82
21	A1248 100 PPB	052448B	GC21B-2145-34	05/24/2014 18:20:06	2.91	8.82
22	A1248 250 PPB	052448C	GC21B-2145-35	05/24/2014 18:32:54	2.91	8.82
23	A1248 500 PPB	052448D	GC21B-2145-36	05/24/2014 18:45:43	2.91	8.82
24	A1248 1000 PPB	052448E	GC21B-2145-37	05/24/2014 18:58:25	2.91	8.82
25	A1254 20 PPB	052454A	GC21B-2145-38	05/24/2014 19:11:06	2.92	8.82
26	A1254 100 PPB	052454B	GC21B-2145-39	05/24/2014 19:23:54	2.92	8.83
27	A1254 250 PPB	052454C	GC21B-2145-40	05/24/2014 19:36:42	2.91	8.82
28	A1254 500 PPB	052454D	GC21B-2145-41	05/24/2014 19:49:29	2.91	8.82
29	A1254 1000 PPB	052454E	GC21B-2145-42	05/24/2014 20:02:17	2.91	8.82
30	A1260 20 PPB	052460A	GC21B-2145-43	05/24/2014 20:15:05	2.91	8.82
31	A1260 100 PPB	052460B	GC21B-2145-44	05/24/2014 20:27:54	2.91	8.82
32	A1260 250 PPB	052460C	GC21B-2145-45	05/24/2014 20:40:35	2.91	8.82
33	A1260 500 PPB	052460D	GC21B-2145-46	05/24/2014 20:53:22	2.91	8.82
34	A1260 1000 PPB	052460E	GC21B-2145-47	05/24/2014 21:06:09	2.91	8.82
35	A1262 20 PPB	052462A	GC21B-2145-48	05/24/2014 21:18:57	2.91	8.82
36	A1262 100 PPB	052462B	GC21B-2145-49	05/24/2014 21:31:38	2.91	8.82
37	A1262 250 PPB	052462C	GC21B-2145-50	05/24/2014 21:44:25	2.91	8.82
38	A1262 500 PPB	052462D	GC21B-2145-51	05/24/2014 21:57:12	2.91	8.82

Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 14050651

ELAP ID No: 11078

Instrument ID: GC21B Init. Calib. Date(s): 05/24/14,05/25/14

GC Column (1): Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 2.91 DCBP RT: 8.82

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 1000 PPB	052462E	GC21B-2145-52	05/24/2014 22:09:53	2.91	8.82
40	A1268 20 PPB	052468A	GC21B-2145-53	05/24/2014 22:22:35	2.91	8.82
41	A1268 100 PPB	052468B	GC21B-2145-54	05/24/2014 22:35:23	2.91	8.82
42	A1268 250 PPB	052468C	GC21B-2145-55	05/24/2014 22:48:11	2.91	8.82
43	A1268 500 PPB	052468D	GC21B-2145-56	05/24/2014 23:00:59	2.91	8.82
44	A1268 1000 PPB	052468E	GC21B-2145-57	05/24/2014 23:13:47	2.91	8.82
45	A1221 500 PPB	052521D	GC21B-2145-3	05/25/2014 13:55:13	2.91	8.82
46	A1016 500 PPB	CS160525A	GC21B-2145-5	05/25/2014 14:20:44	2.92	8.82
47	A1221 500 PPB	CS210525A	GC21B-2145-6	05/25/2014 14:33:27	2.91	8.83
48	A1232 500 PPB	CS320525A	GC21B-2145-7	05/25/2014 14:46:10	2.91	8.83
49	A1242 500 PPB	CS420525A	GC21B-2145-8	05/25/2014 14:58:53	2.91	8.82
50	A1248 500 PPB	CS480525A	GC21B-2145-9	05/25/2014 15:11:36	2.91	8.82
51	A1254 500 PPB	CS540525A	GC21B-2145-10	05/25/2014 15:24:22	2.92	8.82
52	A1260 500 PPB	CS600525A	GC21B-2145-11	05/25/2014 15:37:04	2.92	8.82
53	A1262 500 PPB	CS620525A	GC21B-2145-12	05/25/2014 15:49:46	2.92	8.83
54	A1268 500 PPB	CS680525A	GC21B-2145-13	05/25/2014 16:02:35	2.92	8.83
55	A1016 500 PPB	CS160528A	GC21B-2148-28	05/28/2014 14:57:12	2.92	8.83
56	PBLK-28(METHOD BLANK)	AR12720B	GC21B-2148-30	05/28/2014 16:50:47	2.91	8.83
57	LCS-28(LAB CONTROL SPIKE)	AR12720L	GC21B-2148-31	05/28/2014 17:03:34	2.91	8.83
58	SED-KMS-22 (0-6")	AR12720	GC21B-2148-32	05/28/2014 17:16:16	2.91	8.83
59	SED-KMS-23 (0-6")	AR12721	GC21B-2148-33	05/28/2014 17:28:58	2.91	8.83
60	SED-KMS-24 (0-6")	AR12722	GC21B-2148-34	05/28/2014 17:41:39	2.91	8.83
61	SED-KMS-25 (0-6")	AR12723	GC21B-2148-35	05/28/2014 17:54:21	2.91	8.83
62	DUP-1	AR12724	GC21B-2148-36	05/28/2014 18:07:09	2.91	8.83
63	A1221 500 PPB	CS210528A	GC21B-2148-37	05/28/2014 18:19:57	2.91	8.83

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Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

INITIAL CALIBRATION DATA (GC21B)

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6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 14050651
ELAP ID No: 11078
Date(s) Analyzed: 05/24/14,05/25/14
Instrument ID: GC21B
GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1016	GC21B-2145-14	052416A	20.0	51.148		
	GC21B-2145-15	052416B	100	53.662		
	GC21B-2145-16	052416C	250	53.008		
	GC21B-2145-17	052416D	500	53.552		
	GC21B-2145-18	052416E	1000	49.282	52.131	3.6
Aroclor 1221	GC21B-2145-19	052421A	20.0	15.178		
	GC21B-2145-20	052421B	100	16.361		
	GC21B-2145-21	052421C	250	15.892		
	GC21B-2145-3	052521D	500	14.716		
	GC21B-2145-22	052421E	1000	14.000	15.230	6.1
Aroclor 1232	GC21B-2145-23	052432A	20.0	25.921		
	GC21B-2145-24	052432B	100	29.039		
	GC21B-2145-25	052432C	250	26.407		
	GC21B-2145-26	052432D	500	29.508		
	GC21B-2145-27	052432E	1000	25.374	27.250	6.9
Aroclor 1242	GC21B-2145-28	052442A	20.0	42.407		
	GC21B-2145-29	052442B	100	45.998		
	GC21B-2145-30	052442C	250	46.403		
	GC21B-2145-31	052442D	500	44.284		
	GC21B-2145-32	052442E	1000	40.912	44.001	5.3
Aroclor 1248	GC21B-2145-33	052448A	20.0	48.963		
	GC21B-2145-34	052448B	100	53.265		
	GC21B-2145-35	052448C	250	49.538		
	GC21B-2145-36	052448D	500	46.454		
	GC21B-2145-37	052448E	1000	45.875	48.819	6.0
Aroclor 1254	GC21B-2145-38	052454A	20.0	66.742		
	GC21B-2145-39	052454B	100	70.857		
	GC21B-2145-40	052454C	250	70.158		
	GC21B-2145-41	052454D	500	64.245		
	GC21B-2145-42	052454E	1000	61.074	66.615	6.1
Aroclor 1260	GC21B-2145-43	052460A	20.0	87.269		
	GC21B-2145-44	052460B	100	89.529		
	GC21B-2145-45	052460C	250	86.421		
	GC21B-2145-46	052460D	500	87.474		
	GC21B-2145-47	052460E	1000	86.975	87.534	1.4
Aroclor 1262	GC21B-2145-48	052462A	20.0	95.749		
	GC21B-2145-49	052462B	100	96.497		
	GC21B-2145-50	052462C	250	88.790		
	GC21B-2145-51	052462D	500	86.318		
	GC21B-2145-52	052462E	1000	79.724	89.416	7.8

FORM VI-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 14050651
ELAP ID No: 11078
Date(s) Analyzed: 05/24/14,05/25/14
Instrument ID: GC21B
GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1268	GC21B-2145-53	052468A	20.0	149.076		
	GC21B-2145-54	052468B	100	150.209		
	GC21B-2145-55	052468C	250	142.699		
	GC21B-2145-56	052468D	500	136.879		
	GC21B-2145-57	052468E	1000	125.294	140.831	7.2
TCMX	GC21B-2145-38	052454A	2.00	351.562		
	GC21B-2145-39	052454B	5.00	338.069		
	GC21B-2145-40	052454C	8.00	328.286		
	GC21B-2145-41	052454D	10.0	304.208		
	GC21B-2145-42	052454E	20.0	294.872	323.399	7.3
DCBP	GC21B-2145-38	052454A	20.0	301.347		
	GC21B-2145-39	052454B	50.0	290.399		
	GC21B-2145-40	052454C	80.0	269.117		
	GC21B-2145-41	052454D	100	254.128		
	GC21B-2145-42	052454E	200	231.529	269.304	10

% RSD Limit <= 20%
TCMX=TETRACHLOROMETAXYLENE
DCBP=DECACHLOROBIPHENYL

[1] Response factor calculated using total area of 5 peaks used to quantitate each Aroclor. Mean response factor not used in Aroclor quantitation, calibration curve by linear regression used for quantitation. Concentrations are nominal values, please see Calibration Curve Report Point Table for actual values.

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INITIAL/CONTINUING CALIBRATION DATA (GC21B)

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7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc. SDG NO: 14050651

ELAP ID No: 11078

Instrument ID: GC21B

GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB TYPE	CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	PERCENT DIFFERENCE	Q	DATE / TIME ANALYZED
Aroclor 1016	GC21B-2145-5	CS160525A	ICV	475	500	-5.09		05/25/2014 14:20:44
Aroclor 1221	GC21B-2145-6	CS210525A	ICV	530	500	6.09		05/25/2014 14:33:27
Aroclor 1232	GC21B-2145-7	CS320525A	ICV	454	500	-9.28		05/25/2014 14:46:10
Aroclor 1242	GC21B-2145-8	CS420525A	ICV	448	500	-10.5		05/25/2014 14:58:53
Aroclor 1248	GC21B-2145-9	CS480525A	ICV	441	500	-11.9		05/25/2014 15:11:36
Aroclor 1254	GC21B-2145-10	CS540525A	ICV	525	500	4.96		05/25/2014 15:24:22
Aroclor 1260	GC21B-2145-11	CS600525A	ICV	457	500	-8.64		05/25/2014 15:37:04
Aroclor 1262	GC21B-2145-12	CS620525A	ICV	451	500	-9.88		05/25/2014 15:49:46
Aroclor 1268	GC21B-2145-13	CS680525A	ICV	458	500	-8.44		05/25/2014 16:02:35
Aroclor 1016	GC21B-2148-28	CS160528A	CCV	493	500	-1.34		05/28/2014 14:57:12
Aroclor 1221	GC21B-2148-37	CS210528A	CCV	524	500	4.75		05/28/2014 18:19:57

% Difference must be less than or equal to +/- 20.0 percent.

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 14050651
ELAP ID No: 11078
Instrument ID: GC21B
GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC21B-2145-5	CS160525A	ICV	1	3.62	3.54	3.70
		CS160525A	ICV	2	3.79	3.71	3.87
		CS160525A	ICV	3	4.06	3.98	4.14
		CS160525A	ICV	4	4.15	4.07	4.23
		CS160525A	ICV	5	4.23	4.15	4.31
Aroclor 1221	GC21B-2145-6	CS210525A	ICV	1	2.46	2.38	2.54
		CS210525A	ICV	2	2.90	2.82	2.98
		CS210525A	ICV	3	3.09	3.01	3.17
		CS210525A	ICV	4	3.18	3.10	3.26
		CS210525A	ICV	5	3.23	3.15	3.31
Aroclor 1232	GC21B-2145-7	CS320525A	ICV	1	3.23	3.15	3.31
		CS320525A	ICV	2	3.79	3.71	3.87
		CS320525A	ICV	3	4.05	3.97	4.13
		CS320525A	ICV	4	4.15	4.07	4.23
		CS320525A	ICV	5	4.22	4.14	4.30
Aroclor 1242	GC21B-2145-8	CS420525A	ICV	1	3.61	3.53	3.69
		CS420525A	ICV	2	3.79	3.71	3.87
		CS420525A	ICV	3	4.05	3.97	4.13
		CS420525A	ICV	4	4.15	4.07	4.23
		CS420525A	ICV	5	4.22	4.14	4.30
Aroclor 1248	GC21B-2145-9	CS480525A	ICV	1	4.44	4.36	4.52
		CS480525A	ICV	2	4.73	4.65	4.81
		CS480525A	ICV	3	4.97	4.89	5.05
		CS480525A	ICV	4	5.04	4.96	5.12
		CS480525A	ICV	5	5.22	5.14	5.30
Aroclor 1254	GC21B-2145-10	CS540525A	ICV	1	5.29	5.21	5.37
		CS540525A	ICV	2	5.57	5.49	5.65
		CS540525A	ICV	3	5.67	5.59	5.75
		CS540525A	ICV	4	6.19	6.11	6.27
		CS540525A	ICV	5	6.47	6.39	6.55
Aroclor 1260	GC21B-2145-11	CS600525A	ICV	1	6.47	6.39	6.55
		CS600525A	ICV	2	7.18	7.10	7.26
		CS600525A	ICV	3	7.49	7.41	7.57
		CS600525A	ICV	4	7.63	7.55	7.71
		CS600525A	ICV	5	8.14	8.06	8.22
Aroclor 1262	GC21B-2145-12	CS620525A	ICV	1	6.48	6.40	6.56
		CS620525A	ICV	2	7.19	7.11	7.27
		CS620525A	ICV	3	7.49	7.41	7.57

FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 14050651
ELAP ID No: 11078
Instrument ID: GC21B
GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1262		CS620525A	ICV	4	7.64	7.56	7.72
		CS620525A	ICV	5	8.14	8.06	8.22
Aroclor 1268	GC21B-2145-13	CS680525A	ICV	1	7.64	7.56	7.72
		CS680525A	ICV	2	8.14	8.06	8.22
		CS680525A	ICV	3	7.58	7.50	7.66
		CS680525A	ICV	4	7.93	7.85	8.01
		CS680525A	ICV	5	8.01	7.93	8.09

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 14050651
ELAP ID No: 11078
Instrument ID: GC21B
GC Column: Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm

COMPOUND	LAB FILE ID	LAB SAMPLE ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC21B-2148-28	CS160528A	CCV	1	3.61	3.54	3.70
		CS160528A	CCV	2	3.79	3.71	3.87
		CS160528A	CCV	3	4.05	3.98	4.14
		CS160528A	CCV	4	4.15	4.07	4.23
		CS160528A	CCV	5	4.23	4.15	4.31
Aroclor 1221	GC21B-2148-37	CS210528A	CCV	1	2.46	2.38	2.54
		CS210528A	CCV	2	2.90	2.82	2.98
		CS210528A	CCV	3	3.09	3.01	3.17
		CS210528A	CCV	4	3.18	3.10	3.26
		CS210528A	CCV	5	3.23	3.15	3.31

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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FORM VII-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

QC SAMPLE RAW DATA

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1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	PBLK-28
Matrix:	SODIUM SULFATE	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	10.465 g	Lab Sample ID:	AR12720B
Percent Moisture:	0.0	Lab File ID:	GC21F-2211-30
Extraction:	Soxhlet Method (3540C)	Date Received:	NA
Conc. Extract Volume:	25000 uL	Date Extracted:	05/27/2014
Injection Volume:	1.0 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	0.0500	U
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	PBLK-28
Matrix:	SODIUM SULFATE	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	10.465 g	Lab Sample ID:	AR12720B
Percent Moisture:	0.0	Lab File ID:	GC21B-2148-30
Extraction:	Soxhlet Method (3540C)	Date Received:	NA
Conc. Extract Volume:	25000 uL	Date Extracted:	05/27/2014
Injection Volume:	1.0 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	0.0500	U
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	LCS-28
Matrix:	SODIUM SULFATE	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	10.388 g	Lab Sample ID:	AR12720L
Percent Moisture:	0.0	Lab File ID:	GC21F-2211-31
Extraction:	Soxhlet Method (3540C)	Date Received:	NA
Conc. Extract Volume:	25000 uL	Date Extracted:	05/27/2014
Injection Volume:	1.0 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	1.19	
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	LRF ID:	LCS-28
Matrix:	SODIUM SULFATE	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	10.388 g	Lab Sample ID:	AR12720L
Percent Moisture:	0.0	Lab File ID:	GC21B-2148-31
Extraction:	Soxhlet Method (3540C)	Date Received:	NA
Conc. Extract Volume:	25000 uL	Date Extracted:	05/27/2014
Injection Volume:	1.0 uL	Date Analyzed:	05/28/2014
Method:	SW-846 8082A (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	1.24	
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

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FORM I-CLP-PCB

Print Date: 6/5/2014
Lims Version : 5.0.8.6

10-B
PCB Identification Summary

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	Client ID:	LCS-28(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-28	Lab Sample ID:	AR12720L
Instrument 1 ID:	GC21F	Instrument 2 ID:	GC21B
Date Analyzed:	05/28/2014 5:03:30 PM	Date Analyzed:	05/28/2014 5:03:34 PM
GC Column 1:	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	GC Column 2:	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm
Lab File ID 1:	GC21F-2211-31	Lab File ID 2:	GC21B-2148-31
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	2.97	2.89	3.05			
		2	3.17	3.09	3.25			
		3	3.48	3.40	3.56			
		4	3.59	3.51	3.67			
		5	3.66	3.58	3.74			
	2	1	3.61	3.54	3.70			
		2	3.79	3.71	3.87			
		3	4.05	3.98	4.14			
		4	4.15	4.07	4.23			
		5	4.22	4.15	4.31			
Aroclor 1221	1	1	NA	1.44	1.60			
		2	NA	2.00	2.16			
		3	NA	2.26	2.42			
		4	NA	2.36	2.52			
		5	NA	2.42	2.58			
	2	1	NA	2.38	2.54			
		2	NA	2.82	2.98			
		3	NA	3.01	3.17			
		4	NA	3.10	3.26			
		5	NA	3.15	3.31			
Aroclor 1232	1	1	NA	2.42	2.58			
		2	3.17	3.09	3.25			
		3	3.48	3.40	3.56			
		4	3.59	3.51	3.67			
		5	3.66	3.58	3.74			
	2	1	NA	3.15	3.31			
		2	3.79	3.71	3.87			
		3	4.05	3.97	4.13			
		4	4.15	4.07	4.23			
		5	4.22	4.14	4.30			
Aroclor 1242	1	1	2.97	2.89	3.05			
		2	3.17	3.09	3.25			
		3	3.48	3.40	3.56			
		4	3.59	3.51	3.67			
		5	3.66	3.58	3.74	1.19		
	2	1	3.61	3.53	3.69			
		2	3.79	3.71	3.87			
		3	4.05	3.97	4.13			
		4	4.15	4.07	4.23			
		5	4.22	4.14	4.30	1.24	4.12	

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6

10-B
PCB Identification Summary

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	14050651
ELAP ID No:	11078	Client ID:	LCS-28(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-28	Lab Sample ID:	AR12720L
Instrument 1 ID:	GC21F	Instrument 2 ID:	GC21B
Date Analyzed:	05/28/2014 5:03:30 PM	Date Analyzed:	05/28/2014 5:03:34 PM
GC Column 1:	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	GC Column 2:	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm
Lab File ID 1:	GC21F-2211-31	Lab File ID 2:	GC21B-2148-31
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window		Concentration (ug/g)	RPD (%)	*
				From	To			
Aroclor 1248	1	1	NA	3.85	4.01			
		2	NA	4.15	4.31			
		3	NA	4.42	4.58			
		4	NA	4.49	4.65			
		5	NA	4.66	4.82			
	2	1	NA	4.36	4.52			
		2	NA	4.65	4.81			
		3	NA	4.89	5.05			
		4	NA	4.96	5.12			
		5	NA	5.14	5.30			
Aroclor 1254	1	1	NA	4.79	4.95			
		2	NA	5.05	5.21			
		3	NA	5.16	5.32			
		4	NA	5.70	5.86			
		5	NA	5.99	6.15			
	2	1	NA	5.21	5.37			
		2	NA	5.49	5.65			
		3	NA	5.59	5.75			
		4	NA	6.11	6.27			
		5	NA	6.39	6.55			
Aroclor 1260	1	1	NA	5.99	6.15			
		2	NA	6.74	6.90			
		3	NA	7.00	7.16			
		4	NA	7.21	7.37			
		5	NA	7.69	7.85			
	2	1	NA	6.39	6.55			
		2	NA	7.10	7.26			
		3	NA	7.41	7.57			
		4	NA	7.55	7.71			
		5	NA	8.06	8.22			

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Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(PACE)

Print Date: 6/5/2014
Lims Version : 5.0.8.6