Wannalancit Mills
650 Suffolk Street, Suite 200
Lowell, MA 01854

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www.TRCsolutions.com

TRC Reference Number: 115058

June 25, 2013

Cheryl Henlin
Department of Environmental Stewardship
City of New Bedford
133 William Street
New Bedford, Massachusetts 02740

Subject: Groundwater Monitoring Results
Keith Middle School, New Bedford, Massachusetts

Dear Ms. Henlin:

In accordance with the August 2012 Revised Long-Term Monitoring and Maintenance Implementation Plan, Revision 5.5 (LTMMIP) for Keith Middle School (KMS), TRC Environmental Corporation (TRC) collected groundwater samples from three monitoring wells on May 31, 2013.

Review of the polychlorinated biphenyl (PCB) and dissolved metals data has been completed by TRC's Quality Assurance (QA) Chemist. The attached table and laboratory data reports provide the results from this sampling effort. All four (4) samples, including the duplicate sample, were non-detect for PCB Aroclors. Low levels of dissolved metals including arsenic, barium and lead were detected below applicable Massachusetts Department of Environmental Protection (MassDEP) standards. Pursuant to the EPA approved LTMMIP, further assessment is not required.

Please note that the data are compared to Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) Method 1 GW-2 and GW-3 groundwater cleanup criteria per the LTMMIP, but also to the GW-1 criteria because one of the groundwater monitoring wells (MW-3) is within 500 feet of a suspected potable private groundwater supply well at 249 Summit Street.

TRC appreciates the opportunity to support your project. If you have any questions or comments, please do not hesitate to contact me at 978-656-3565.

Sincerely,

TRC

David M. Sullivan, LSP
Senior Project Manager

Enclosure
cc with enclosure: K. Tisa, United States Environmental Protection Agency

L2013-195

Table

Table 1
Summary of Analytical Results for Groundwater Samples
May 2013
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte			Sample ID:	MW-1		MW-2	MW-3
				Sample Date:	5/31/2013	5/31/2013 Field Dup	5/31/2013	5/31/2013
		GW-1	GW-2	GW-3				
PCBs								
(ug/L)	Aroclor 1016	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1260	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	0.5	5	10	0.0500 U	0.0500 U	0.0500 U	0.0500 U
Metals, dissolved								
(ug/L)	Arsenic	10	NS	900	0.40 U	0.40 U	**1.2**	0.40 U
	Barium	2,000	NS	50,000	**52**	**49**	**810**	**140**
	Cadmium	5	NS	4	0.50 U	0.50 U	0.50 U	0.50 U
	Chromium	100	NS	300	1.0 U	1.0 U	1.0 U	1.0 U
	Lead	15	NS	10	1.0 U	1.0 U	1.0 U	**1.1**
	Mercury	2	NS	20	0.10 U	0.10 U	0.10 U	0.10 U
	Selenium	50	NS	100	5.0 U	5.0 U	5.0 U	5.0 U
	Silver	100	NS	7	0.50 U	0.50 U	0.50 U	0.50 U

Notes:

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this compound.

U - Compound was not detected at specified quantitation limit.

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

PCBs - Polychlorinated Biphenyls.

Laboratory Analytical Data

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 31, 2013
Lab Report ID: 13060003
Client Service Contact: Kelly Miller (518) 346-4592 ext. 23

Analysis Included:
PCB Analysis (Water)

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), Virgi nia (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 21, 2013

CASE NARRATIVE

This data package (SDG ID: 13060003) consists of 4 water samples received on 06/01/2013. 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
AQ11008	MW-1	05/31/2013 09:35
AQ11009	MW-101	05/31/2013 10:35
AQ11010	MW-2	05/31/2013 12:00
AQ11011	MW-3	05/31/2013 14:15

1

Sample Delivery and Receipt Conditions

(1.) All samples were delivered to the laboratory via FEDEX delivery service on 06/01/2013.

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

(3.) The following cooler temperature was recorded at sample receipt (Control limits are between 0-6 Degrees Celsius): 1.2 degrees Celsius. Please see Chain of Custody for details.

NOTE: See Communication Log for more details.

PCB Aroclor Analysis

Analysis for PCB Aroclors was performed by method SW-846 8082A using a dual column GC system. Samples were extracted by USEPA SW-846 Method 3535 Solid Phase Extraction. One-liter water samples were extracted by PACE SOP NE178_04. The following technical and administrative items were noted for the analysis:

(1.) Aroclor 1248 was observed in the method blank sample (LAB ID: AQ11011B). Associated samples (LAB ID: AQ11009, AQ11010, and AQ11011) were re-extracted due to the contamination. Sample (LAB ID: AQ11008) was reported from the original analysis; no additional sample material was available for re-extraction. Results for the re-extractions are provided with RE1 sample suffix ID. Please see communication log for details.

(2.) The following samples were re-extracted outside the required holding times: AQ11009, AQ11010, AQ11011. The original extractions were performed within holding time for the following samples: AQ11009, AQ11010, and AQ11011

(3.) Aroclor 1248 was observed in the method blank sample (LAB ID: AQ11009B). Please see associated form 1 for details.

NOTE: The matrix spike and matrix spike duplicate samples were cancelled due to contamination and no additional sample material available for re-extraction. Please see communication log for details.

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,

Kelly A. Miller

Kelly A. Miller
Project Manager

S:\Lims Data\1306\13060003\Package\CN_13060003_Rev00.doc

June 21, 2013

Communication Log

From: Saunders, Jeffry [<mailto:JSaunders@trcsolutions.com>]
Sent: Monday, June 03, 2013 8:41 AM
To: Kelly Miller
Cc: Richards, Zachary; Denly, Elizabeth; Sullivan, Dave
Subject: RE: Keith Middle School

1

Thanks for the heads up.

Standard 5-day turnaround on the samples.

-Jeff

Jeffry B. Saunders, PG
Project Geologist
(978) 656-3610

From: Kelly Miller [mailto:KellyM@nealab.com] <mailto:[mailto:KellyM@nealab.com]>
Sent: Monday, June 03, 2013 8:31 AM
To: Saunders, Jeffry; Sullivan, Dave
Cc: Richards, Zachary
Subject: Keith Middle School

Morning,
We received a shipment of 1L ambers for Keith Middle School. One of them was received broken (MW-1). Since two were collected, we will have enough for the PCB analysis, but I wanted to give you a heads up.
What is the tat for these samples? There is nothing on the chain.
Thank you!

Kelly Miller
Project Manager/ Sample Receiving Supervisor

Pace Analytical Services, Inc.
2190 Technology Drive
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Phone: (518) 346-4592 ext 23
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Email: Kelly.Miller@pacelabs.com <mailto:Kelly.Miller@pacelabs.com>
www.pacelabs.com <http://www.pacelabs.com/>

Right, sorry.

Jeffry B. Saunders, PG
Project Geologist
(978) 656-3610

From: Denly, Elizabeth
Sent: Monday, June 10, 2013 9:41 AM
To: Saunders, Jeffry; Kelly Miller; Sullivan, Dave
Subject: RE: Keith Middle School samples

I think it's for all samples except MW-1, right?

Elizabeth Denly Senior QA Chemist Environmental Sector and Remediation Practice Quality Coordinator

650 Suffolk Street, Lowell, MA 01854 T: 978.656.3577 | F: 978.453.1995 | C: 978.328.2551 LinkedIn <http://www.linkedin.com/company/trc-companies-inc> | Twitter <http://twitter.com/TRC_Companies> | Blog <http://blog.trcsolutions.com/> | Flickr <http://www.flickr.com/photos/trcsolutions/> | www.trcsolutions.com <http://www.trcsolutions.com/>

From: Saunders, Jeffry
Sent: Monday, June 10, 2013 9:40 AM
To: Kelly Miller; Sullivan, Dave
Cc: Denly, Elizabeth
Subject: RE: Keith Middle School samples

Kelly,
Yes, please re-extract and analyze the MW-1 sample. Thanks.
-Jeff

Jeffry B. Saunders, PG
Project Geologist
(978) 656-3610

From: Kelly Miller [<mailto:KellyM@nealab.com>]
Sent: Monday, June 10, 2013 9:09 AM
To: Sullivan, Dave; Saunders, Jeffry
Subject: Keith Middle School samples

Jeff,
I was notified by the GC department this morning that the samples (see attached COC) in house for Keith Middle school have 1248 contamination in the blank. We discovered last week that a sample with an extremely high concentration of aroclor 1248 was extracted causing contamination of glassware. Since discovering the contamination, we have since extensively cleaned (acid bath) all glassware as well as done contamination testing to confirm everything has been adequately cleaned.
Unfortunately, this is potentially the cause of the blank contamination for your sample set. The GC department saw trace PCB's (possibly J flag) in the samples.
We do have additional volume for all samples except MW-1 (broken upon receipt). Would you like us to re-extract the remaining volume for the rest of the samples so only MW-1 has a B flag (blank contamination) on it?
Thank you!

Kelly Miller
Project Manager/ Sample Receiving Supervisor

Pace Analytical Services, Inc.
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Phone: (518) 346-4592 ext 23
Fax:(518) 381-6055
Email: Kelly.Miller@pacelabs.com <mailto:Kelly.Miller@pacelabs.com>
www.pacelabs.com <http://www.pacelabs.com/>

1

From: Denly, Elizabeth [mailto:edenly@trcsolutions.com]
Sent: Monday, June 10, 2013 9:55 AM
To: Kelly Miller; Saunders, Jeffry; Sullivan, Dave
Subject: RE: Keith Middle School samples

Yes, it is more important that we have valid data for MW-3 than an MS/MSD.

Elizabeth Denly Senior QA Chemist Environmental Sector and Remediation Practice Quality Coordinator

650 Suffolk Street, Lowell, MA 01854 T: 978.656.3577 | F: 978.453.1995 | C: 978.328.2551 LinkedIn <http://www.linkedin.com/company/trc-companies-inc> | Twitter <http://twitter.com/TRC_Companies> | Blog <http://blog.trcsolutions.com/> | Flickr <http://www.flickr.com/photos/trcsolutions/> | www.trcsolutions.com <http://www.trcsolutions.com/>

From: Kelly Miller [mailto:KellyM@nealab.com]
Sent: Monday, June 10, 2013 9:48 AM
To: Saunders, Jeffry; Sullivan, Dave
Cc: Denly, Elizabeth
Subject: RE: Keith Middle School samples

Sample MW-3 had an MS/MSD on it. Is it possible to meet the QC requirements for this project by adding it on a future sample submittal? We do not have enough sample material to run the MS/MSD again.

Kelly Miller
Project Manager/ Sample Receiving Supervisor

Pace Analytical Services, Inc.
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www.pacelabs.com <http://www.pacelabs.com/>

SAMPLE CHAIN OF CUSTODY

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

<13060003P1>

130600031

Page: 1 of 1

1590693

Section A Required Client Information:

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

Section B Required Project Information:

Report To: Dave Sullivan
Copy To: Jeff Saunders (jsaunders@trcsolutions.com)
Purchase Order No.: TBD
Project Name: KMS - New Bedford
Project Number: 115058

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

Site Location STATE: MA

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

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	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1	WT	G	5/31/13	0935				2	X								X		AQ11008
2	MW-101	↓	↓	↓	1035				2	X								X		AQ11009
3	MW-2	↓	↓	↓	1200				2	X								X		AQ11010
4	MW-3	↓	↓	↓	1415					X								X		AQ11011
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Plus MS/MSD

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / TRC	5/31/13	1600	Fedex	5/31/13	1600				
	VIA FED-EX →			J. Butty (PACE)	6/1/13	10:28	1.2°C	Y	Y	N
								6/1/13		
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Zack Richards

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/31/13

ORIGINAL

INTERNAL SAMPLE TRACKING RECORD

PCB EXTRACTION LOG

Pace Analytical®

Prep Date: 06/05/13 **Batch ID: 22334**

	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
														Initial for required Clean Up Steps						
														KEN		KEN	KEN			
1	218166	PBLK-55	AQ11011B	Water	5	E PCB W	SPE-1L	N/A	1000	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
2	218165	LCS-55	AQ11011L	Water	5	E PCB W	SPE-1L	N/A	1000	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
3	217750	13060003-04MS	AQ11011M	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
4	217751	13060003-04MSD	AQ11011K	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
5	217747	13060003-01	AQ11008	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
6	217748	13060003-02	AQ11009	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
7	217749	13060003-03	AQ11010	Water	5	E PCB W	SPE-1L	N/A	960	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	
8	217752	13060003-04	AQ11011	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/09	NA	06/09	06/09	10	06/09	

3

Solvent, Surrogate, Spike, and Acid Information

Item	Lot Number	Amount (uL)	Conc (ug/mL)	B	L	LD	S	D	M	K
Methanol (Fisher)	121218	NA		☑	☑	☐	☑	☐	☑	☑
Mercury (Current)	062612HG	NA		☑	☑	☐	☑	☐	☑	☑
Sulfuric Acid	L12057	NA		☑	☑	☐	☑	☐	☑	☑
Dichloromethane	DG947	NA		☑	☑	☐	☑	☐	☑	☑
A1242 @ 0.5ppm in Acetone	010313B033P207C	1000	0.5	☐	☑	☐	☐	☐	☐	☐
Hexane (Dewar)	DH615	NA		☑	☑	☐	☑	☐	☑	☑
.05 TCMX/ .5 DCBP in Acetone	032713B34P092A1-10	1000	.05/.5	☑	☑	☐	☑	☐	☑	☑
A1242 @ 0.5 in Acetone	042613B34P115B	1000	.5	☐	☐	☐	☐	☐	☑	☑
Acetone (Dewar)	DH124	NA		☑	☑	☐	☑	☐	☑	☑
Hexane (Dewar)	DI425B	NA		☑	☑	☐	☑	☐	☑	☑
1:1 Sulfuric Acid (SPE ONLY) CURRENT	041213	NA		☑	☑	☐	☑	☐	☑	☑
Speedisk	0000037689	NA		☑	☑	☐	☑	☐	☑	☑
Acetone (Dewar) CURRENT	DH654	NA		☑	☑	☐	☑	☐	☑	☑
10% Florisil	060113MLB2P178A	NA		☑	☑	☐	☑	☐	☑	☑

Analyst Review: Kaitlyn Nedo

Peer Review: Daniel Dodaro

Print Date: 6/21/2013
Lims Version : 5.0.7.4
_EXT - LOGBOOK_GC-SV; Rev 02; 1.18.2010; EXTRACTION

PCB EXTRACTION LOG

Pace Analytical®

Prep Date: 06/10/13 **Batch ID: 22435**

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
														KEN		KEN	KEN			
1	218849	PBLK-01	AQ11009B	Water	5	E PCB W	SPE-1L	N/A	1000	NA	NA	NA	NA	06/10	NA	06/10	06/10	10	06/10	
2	218848	LCS-01	AQ11009L	Water	5	E PCB W	SPE-1L	N/A	1000	NA	NA	NA	NA	06/10	NA	06/10	06/10	10	06/10	
3	218845	13060003-02	AQ11009RE1	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/10	NA	06/10	06/10	10	06/10	
4	218846	13060003-03	AQ11010RE1	Water	5	E PCB W	SPE-1L	N/A	1000	NA	NA	NA	NA	06/10	NA	06/10	06/10	10	06/10	
5	218847	13060003-04	AQ11011RE1	Water	5	E PCB W	SPE-1L	N/A	1080	NA	NA	NA	NA	06/10	NA	06/10	06/10	10	06/10	

Solvent, Surrogate, Spike, and Acid Information

Item	Lot Number	Amount (uL)	Conc (ug/mL)	B	L	LD	S	D	M	K
Methanol (Fisher)	121218	NA		☑	☑	☐	☑	☐	☐	☐
Mercury (Current)	062612HG	NA		☑	☑	☐	☑	☐	☐	☐
Dichloromethane	DG947	NA		☑	☑	☐	☑	☐	☐	☐
Hexane (DEWAR)	DH615B	NA		☑	☑	☐	☑	☐	☐	☐
.05 TCMX/ .5 DCBP in Acetone	032713B34P092A1-10	1000	.05/.5	☑	☑	☐	☑	☐	☐	☐
Sulfuric Acid	K42027	NA		☑	☑	☐	☑	☐	☐	☐
A1242 @ 0.5 in Acetone	042613B34P115B	1000	.5	☐	☑	☐	☐	☐	☐	☐
10% Florisil Water Lab (CURRENT)	032513F8082A	NA		☑	☑	☐	☑	☐	☐	☐
1:1 Sulfuric Acid (SPE ONLY) CURRENT	041213	NA		☑	☑	☐	☑	☐	☐	☐
Speedisk	0000037689	NA		☑	☑	☐	☑	☐	☐	☐
Acetone (Dewar) CURRENT	DH654	NA		☑	☑	☐	☑	☐	☐	☐

3

Analyst Review: Kaitlyn Nedo

Peer Review: Jillian L Grygas

Print Date: 6/21/2013
Lims Version : 5.0.7.4
_EXT - LOGBOOK_GC-SV; Rev 02; 1.18.2010; EXTRACTION

PCB SCREEN SHEET

LRF: 13060003 **Batch ID:22334**

Lab Sample ID	File ID	Matrix	Prep Date	Wet Weight (g or mL)	Set Volume (mL)	Screen Dilution	Screen Result	Bench Dilution	Dilution Sequence	Final Multiplier	Dilution Analyst
AQ11011B	GC28B-1011-26	Water	**06/05/13**	1000	10	NA	NA	1	NA	10x	Joelle Stairs
	GC28F-1017-26	Water	**06/05/13**	1000	10	NA	NA	1	NA	10x	Joelle Stairs
AQ11011L	GC28B-1011-27	Water	**06/05/13**	1000	10	NA	NA	1	NA	10x	Joelle Stairs
	GC28F-1017-27	Water	**06/05/13**	1000	10	NA	NA	1	NA	10x	Joelle Stairs
AQ11008	GC28B-1011-30	Water	**06/05/13**	1080	10	NA	NA	1	NA	10x	Joelle Stairs
	GC28F-1017-30	Water	**06/05/13**	1080	10	NA	NA	1	NA	10x	Joelle Stairs

3

COMMENTS: _____

Page 1 of 1

Print Date: 6/21/2013
Lims Version : 5.0.7.4
_EXT-INJSHEET_NL; Rev 00; 09.29.2010; EXTRACTION

PCB SCREEN SHEET

LRF: 13060003 **Batch ID:22435**

Lab Sample ID	File ID	Matrix	Prep Date	Wet Weight (g or mL)	Set Volume (mL)	Screen Dilution	Screen Result	Bench Dilution	Dilution Sequence	Final Multiplier	Dilution Analyst
AQ11009B	GC28B-1012-19	Water	**06/10/13**	1000	10	NA	NA	1	NA	10x	Kari Lantiegne
	GC28F-1018-19	Water	**06/10/13**	1000	10	NA	NA	1	NA	10x	Kari Lantiegne
AQ11009L	GC28B-1012-20	Water	**06/10/13**	1000	10	NA	NA	1	NA	10x	Kari Lantiegne
	GC28F-1018-20	Water	**06/10/13**	1000	10	NA	NA	1	NA	10x	Kari Lantiegne
AQ11009RE1	GC28B-1012-21	Water	**06/10/13**	1080	10	NA	NA	1	NA	10x	Kari Lantiegne
	GC28F-1018-21	Water	**06/10/13**	1080	10	NA	NA	1	NA	10x	Kari Lantiegne
AQ11010RE1	GC28B-1012-22	Water	**06/10/13**	1000	10	NA	NA	1	NA	10x	Kari Lantiegne
	GC28F-1018-22	Water	**06/10/13**	1000	10	NA	NA	1	NA	10x	Kari Lantiegne
AQ11011RE1	GC28B-1012-23	Water	**06/10/13**	1080	10	NA	NA	1	NA	10x	Kari Lantiegne
	GC28F-1018-23	Water	**06/10/13**	1080	10	NA	NA	1	NA	10x	Kari Lantiegne

3

COMMENTS: _____

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Print Date: 6/21/2013
Lims Version : 5.0.7.4
_EXT-INJSHEET_NL; Rev 00; 09.29.2010; EXTRACTION

SURROGATE % RECOVERY SUMMARY

4

2E-1
PCB SURROGATE RECOVERY

Laboratory Name: Pace Analytical Services, Inc. SDG: 13060003

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-01	AQ11009B	GC28F-1018-19	81.4	108					0
PBLK-01	AQ11009B	GC28B-1012-19			87.9	116			0
PBLK-55	AQ11011B	GC28F-1017-26	85.0	101					0
PBLK-55	AQ11011B	GC28B-1011-26			91.2	111			0
LCS-01	AQ11009L	GC28F-1018-20	78.0	106					0
LCS-01	AQ11009L	GC28B-1012-20			89.3	119			0
LCS-55	AQ11011L	GC28F-1017-27	83.2	103					0
LCS-55	AQ11011L	GC28B-1011-27			92.7	114			0
13060003-01	AQ11008	GC28F-1017-30	86.8	105					0
13060003-01	AQ11008	GC28B-1011-30			95.6	115			0
13060003-02RE1	AQ11009RE1	GC28F-1018-21	88.4	107					0
13060003-02RE1	AQ11009RE1	GC28B-1012-21			99.7	116			0
13060003-03RE1	AQ11010RE1	GC28F-1018-22	88.4	107					0
13060003-03RE1	AQ11010RE1	GC28B-1012-22			99.3	116			0
13060003-04RE1	AQ11011RE1	GC28F-1018-23	88.4	107					0
13060003-04RE1	AQ11011RE1	GC28B-1012-23			98.1	116			0

4

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: 6/21/2013
Lims Version : 5.0.7.4

LABORATORY CONTROL SPIKE SUMMARY

5

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: Pace Analytical Services, Inc.

ELAP ID No: 11078

SDG No: 13060003

LCS Lab ID: LCS-55

Blank Sample ID: PBLK-55

LCS File ID: GC28F-1017-27

Method Blank File ID: GC28F-1017-26

LCS Inj Date: 06/09/2013 19:00:14

Method Blank Inj Date: 06/09/2013 18:46:38

LCS ID: AQ11011L

Method Blank ID: AQ11011B

LCS Matrix: Water

Method Blank Matrix: Water

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	0.500	0.529	106	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.

5

COMMENTS:

Form III-CLP-PCB (PACE)

Lims Version : 5.0.7.4

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: Pace Analytical Services, Inc.

ELAP ID No: 11078

SDG No: 13060003

LCS Lab ID: LCS-55

Blank Sample ID: PBLK-55

LCS File ID: GC28B-1011-27

Method Blank File ID: GC28B-1011-26

LCS Inj Date: 06/09/2013 19:00:18

Method Blank Inj Date: 06/09/2013 18:46:42

LCS ID: AQ11011L

Method Blank ID: AQ11011B

LCS Matrix: Water

Method Blank Matrix: Water

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	0.500	0.576	115	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.

5

COMMENTS:

Form III-CLP-PCB (PACE)

Lims Version : 5.0.7.4

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: Pace Analytical Services, Inc.

ELAP ID No: 11078

SDG No: 13060003

LCS Lab ID: LCS-01

Blank Sample ID: PBLK-01

LCS File ID: GC28F-1018-20

Method Blank File ID: GC28F-1018-19

LCS Inj Date: 06/10/2013 17:30:47

Method Blank Inj Date: 06/10/2013 17:16:57

LCS ID: AQ11009L

Method Blank ID: AQ11009B

LCS Matrix: Water

Method Blank Matrix: Water

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	0.500	0.469	93.7	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.

5

COMMENTS:

Form III-CLP-PCB (PACE)

Lims Version : 5.0.7.4

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: Pace Analytical Services, Inc.

ELAP ID No: 11078

SDG No: 13060003

LCS Lab ID: LCS-01

Blank Sample ID: PBLK-01

LCS File ID: GC28B-1012-20

Method Blank File ID: GC28B-1012-19

LCS Inj Date: 06/10/2013 17:30:51

Method Blank Inj Date: 06/10/2013 17:17:01

LCS ID: AQ11009L

Method Blank ID: AQ11009B

LCS Matrix: Water

Method Blank Matrix: Water

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	0.500	0.505	101	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.

5

COMMENTS:

Form III-CLP-PCB (PACE)

Lims Version : 5.0.7.4

METHOD BLANK SUMMARY

6

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Blank Sample ID:	PBLK-55
Matrix:	Water	Method Blank ID:	AQ11011B
Instrument ID:	GC28F	Lab File ID:	GC28F-1017-26
Extraction Type:	1L - Solid Phase Extraction	Date Extracted:	06/05/2013
GC Column (1):	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	Date Analyzed:	06/09/2013
		Time Analyzed:	18:46:38

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-55(LAB CONTROL SPIKE)	AQ11011L	GC28F-1017-27	06/09/2013 19:00:14
MW-1	AQ11008	GC28F-1017-30	06/09/2013 19:41:43

6

FORM IV-CLP-PCB(PACE)

Print date: 6/21/2013
Lims Version : 5.0.7.4

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Blank Sample ID:	PBLK-55
Matrix:	Water	Method Blank ID:	AQ11011B
Instrument ID:	GC28B	Lab File ID:	GC28B-1011-26
Extraction Type:	1L - Solid Phase Extraction	Date Extracted:	06/05/2013
GC Column (1):	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm	Date Analyzed:	06/09/2013
		Time Analyzed:	18:46:42

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-55(LAB CONTROL SPIKE)	AQ11011L	GC28B-1011-27	06/09/2013 19:00:18
MW-1	AQ11008	GC28B-1011-30	06/09/2013 19:41:47

6

FORM IV-CLP-PCB(PACE)

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Blank Sample ID:	PBLK-01
Matrix:	Water	Method Blank ID:	AQ11009B
Instrument ID:	GC28F	Lab File ID:	GC28F-1018-19
Extraction Type:	1L - Solid Phase Extraction	Date Extracted:	06/10/2013
GC Column (1):	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm	Date Analyzed:	06/10/2013
		Time Analyzed:	17:16:57

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-01(LAB CONTROL SPIKE)	AQ11009L	GC28F-1018-20	06/10/2013 17:30:47
MW-101	AQ11009RE1	GC28F-1018-21	06/10/2013 17:44:38
MW-2	AQ11010RE1	GC28F-1018-22	06/10/2013 17:58:29
MW-3	AQ11011RE1	GC28F-1018-23	06/10/2013 18:12:23

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FORM IV-CLP-PCB(PACE)

Print date: 6/21/2013
Lims Version : 5.0.7.4

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Blank Sample ID:	PBLK-01
Matrix:	Water	Method Blank ID:	AQ11009B
Instrument ID:	GC28B	Lab File ID:	GC28B-1012-19
Extraction Type:	1L - Solid Phase Extraction	Date Extracted:	06/10/2013
GC Column (1):	Phenomenex, Zebron ZB-5, 20 m, 0.18 mm ID, 0.18 µm	Date Analyzed:	06/10/2013
		Time Analyzed:	17:17:01

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-01(LAB CONTROL SPIKE)	AQ11009L	GC28B-1012-20	06/10/2013 17:30:51
MW-101	AQ11009RE1	GC28B-1012-21	06/10/2013 17:44:42
MW-2	AQ11010RE1	GC28B-1012-22	06/10/2013 17:58:33
MW-3	AQ11011RE1	GC28B-1012-23	06/10/2013 18:12:27

SAMPLE ANALYSIS DATA

7

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	13060003-01
Matrix:	Water	Client ID:	MW-1
Sample wt(Dry)/vol:	1080 mL	Lab Sample ID:	AQ11008
Percent Moisture:	100	Date Received:	06/01/2013
Extraction:	1L - Solid Phase Extraction	Date Extracted:	06/05/2013
Conc. Extract Volume:	10000 uL	Date Analyzed:	06/09/2013
Method:	SW-846 Method 8082	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: GC28F-1017-30

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: GC28B-1011-30

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/L	Q
1	12674-11-2	Aroclor 1016	0.0500	U
1	11104-28-2	Aroclor 1221	0.0500	U
1	11141-16-5	Aroclor 1232	0.0500	U
1	53469-21-9	Aroclor 1242	0.0500	U
1	12672-29-6	Aroclor 1248	0.0500	U
1	11097-69-1	Aroclor 1254	0.0500	U
1	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: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	13060003-02RE1
Matrix:	Water	Client ID:	MW-101
Sample wt(Dry)/vol:	1080 mL	Lab Sample ID:	AQ11009RE1
Percent Moisture:	100	Date Received:	06/01/2013
Extraction:	1L - Solid Phase Extraction	Date Extracted:	06/10/2013
Conc. Extract Volume:	10000 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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: GC28F-1018-21

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: GC28B-1012-21

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

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	13060003-03RE1
Matrix:	Water	Client ID:	MW-2
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11010RE1
Percent Moisture:	100	Date Received:	06/01/2013
Extraction:	1L - Solid Phase Extraction	Date Extracted:	06/10/2013
Conc. Extract Volume:	10000 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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: GC28F-1018-22

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: GC28B-1012-22

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/L	Q
1	12674-11-2	Aroclor 1016	0.0500	U
1	11104-28-2	Aroclor 1221	0.0500	U
1	11141-16-5	Aroclor 1232	0.0500	U
1	53469-21-9	Aroclor 1242	0.0500	U
1	12672-29-6	Aroclor 1248	0.0500	U
1	11097-69-1	Aroclor 1254	0.0500	U
1	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: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	13060003-04RE1
Matrix:	Water	Client ID:	MW-3
Sample wt(Dry)/vol:	1080 mL	Lab Sample ID:	AQ11011RE1
Percent Moisture:	100	Date Received:	06/01/2013
Extraction:	1L - Solid Phase Extraction	Date Extracted:	06/10/2013
Conc. Extract Volume:	10000 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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: GC28F-1018-23

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: GC28B-1012-23

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

ANALYTICAL SEQUENCE (GC28F)

8

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 13060003

ELAP ID No: 11078

Instrument ID: GC28F Init. Calib. Date(s): 05/22/13

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: 2.38 DCBP RT: 8.86

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 5 PPB	052216A	GC28F-999-9	05/22/2013 12:13:44	2.38	8.86
02	A1016 10 PPB	052216B	GC28F-999-10	05/22/2013 12:27:35	2.38	8.86
03	A1016 20 PPB	052216C	GC28F-999-11	05/22/2013 12:41:47	2.38	8.86
04	A1016 50 PPB	052216D	GC28F-999-12	05/22/2013 12:55:38	2.38	8.86
05	A1016 100 PPB	052216E	GC28F-999-13	05/22/2013 13:10:01	2.38	8.86
06	A1221 5 PPB	052221A	GC28F-999-14	05/22/2013 13:24:21	2.38	8.86
07	A1221 10 PPB	052221B	GC28F-999-15	05/22/2013 13:38:12	2.38	8.86
08	A1221 20 PPB	052221C	GC28F-999-16	05/22/2013 13:52:05	2.38	8.86
09	A1221 50 PPB	052221D	GC28F-999-17	05/22/2013 14:06:06	2.38	8.86
10	A1221 100 PPB	052221E	GC28F-999-18	05/22/2013 14:19:58	2.38	8.86
11	A1232 5 PPB	052232A	GC28F-999-19	05/22/2013 14:33:49	2.38	8.86
12	A1232 10 PPB	052232B	GC28F-999-20	05/22/2013 14:47:38	2.38	8.86
13	A1232 20 PPB	052232C	GC28F-999-21	05/22/2013 15:01:31	2.38	8.86
14	A1232 50 PPB	052232D	GC28F-999-22	05/22/2013 15:15:21	2.38	8.86
15	A1232 100 PPB	052232E	GC28F-999-23	05/22/2013 15:29:12	2.38	8.86
16	A1242 10 PPB	052242B	GC28F-999-25	05/22/2013 16:01:36	2.38	8.86
17	A1242 20 PPB	052242C	GC28F-999-26	05/22/2013 16:15:31	2.38	8.86
18	A1242 50 PPB	052242D	GC28F-999-27	05/22/2013 16:29:21	2.38	8.86
19	A1242 100 PPB	052242E	GC28F-999-28	05/22/2013 16:43:11	2.38	8.86
20	A1248 5 PPB	052248A	GC28F-999-29	05/22/2013 16:57:01	2.38	8.86
21	A1248 10 PPB	052248B	GC28F-999-30	05/22/2013 17:11:12	2.38	8.86
22	A1248 20 PPB	052248C	GC28F-999-31	05/22/2013 17:24:58	2.38	8.86
23	A1248 50 PPB	052248D	GC28F-999-32	05/22/2013 17:38:49	2.38	8.86
24	A1248 100 PPB	052248E	GC28F-999-33	05/22/2013 17:52:40	2.38	8.86
25	A1254 5 PPB	052254A	GC28F-999-34	05/22/2013 18:06:26	2.38	8.86
26	A1254 10 PPB	052254B	GC28F-999-35	05/22/2013 18:20:01	2.38	8.85
27	A1254 20 PPB	052254C	GC28F-999-36	05/22/2013 18:34:17	2.38	8.86
28	A1254 50 PPB	052254D	GC28F-999-37	05/22/2013 18:48:13	2.38	8.86
29	A1254 100 PPB	052254E	GC28F-999-38	05/22/2013 19:02:03	2.38	8.86
30	A1260 5 PPB	052260A	GC28F-999-39	05/22/2013 19:15:37	2.38	8.86
31	A1260 10 PPB	052260B	GC28F-999-40	05/22/2013 19:29:30	2.38	8.86
32	A1260 20 PPB	052260C	GC28F-999-41	05/22/2013 19:43:40	2.38	8.86
33	A1260 50 PPB	052260D	GC28F-999-42	05/22/2013 19:57:39	2.38	8.86
34	A1260 100 PPB	052260E	GC28F-999-43	05/22/2013 20:11:31	2.38	8.86
35	A1262 5 PPB	052262A	GC28F-999-44	05/22/2013 20:25:17	2.38	8.86
36	A1262 10 PPB	052262B	GC28F-999-45	05/22/2013 20:39:03	2.38	8.86
37	A1262 20 PPB	052262C	GC28F-999-46	05/22/2013 20:53:18	2.38	8.86
38	A1262 50 PPB	052262D	GC28F-999-47	05/22/2013 21:07:12	2.38	8.86

Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 13060003

ELAP ID No: 11078

Instrument ID: GC28F Init. Calib. Date(s): 05/22/13

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: 2.38 DCBP RT: 8.86

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 100 PPB	052262E	GC28F-999-48	05/22/2013 21:21:08	2.38	8.86
40	A1268 5 PPB	052268A	GC28F-999-49	05/22/2013 21:34:59	2.38	8.86
41	A1268 10 PPB	052268B	GC28F-999-50	05/22/2013 21:48:46	2.38	8.86
42	A1268 20 PPB	052268C	GC28F-999-51	05/22/2013 22:03:00	2.38	8.86
43	A1268 50 PPB	052268D	GC28F-999-52	05/22/2013 22:16:52	2.38	8.86
44	A1268 100 PPB	052268E	GC28F-999-53	05/22/2013 22:30:27	2.38	8.86
45	A1242 5 PPB	052242A	GC28F-999-55	05/22/2013 22:58:01	2.38	8.86
46	A1016 50 PPB	CS160522A	GC28F-999-58	05/22/2013 23:39:25	2.38	8.86
47	A1221 50 PPB	CS210522A	GC28F-999-59	05/22/2013 23:53:00	2.38	8.86
48	A1232 50 PPB	CS320522A	GC28F-999-60	05/23/2013 00:06:47	2.38	8.86
49	A1242 50 PPB	CS420522B	GC28F-999-61	05/23/2013 00:20:34	2.38	8.85
50	A1248 50 PPB	CS480522A	GC28F-999-62	05/23/2013 00:34:27	2.38	8.86
51	A1254 50 PPB	CS540522A	GC28F-999-63	05/23/2013 00:48:02	2.38	8.85
52	A1260 50 PPB	CS600522A	GC28F-999-64	05/23/2013 01:01:54	2.38	8.86
53	A1262 50 PPB	CS620522A	GC28F-999-65	05/23/2013 01:15:28	2.38	8.86
54	A1268 50 PPB	CS680522A	GC28F-999-66	05/23/2013 01:29:43	2.38	8.86
55	A1016 50 PPB	CS160609A	GC28F-1017-25	06/09/2013 18:32:46	2.38	8.85
56	PBLK-55(METHOD BLANK)	AQ11011B	GC28F-1017-26	06/09/2013 18:46:38	2.38	8.85
57	LCS-55(LAB CONTROL SPIKE)	AQ11011L	GC28F-1017-27	06/09/2013 19:00:14	2.38	8.85
58	MW-1	AQ11008	GC28F-1017-30	06/09/2013 19:41:43	2.38	8.85
59	ZZZZZ	ZZZZZ	GC28F-1017-34	06/09/2013 20:37:15	2.38	8.85
60	A1221 50 PPB	CS210609A	GC28F-1017-35	06/09/2013 20:51:15	2.38	8.85
61	A1221 50 PPB	CS210610A	GC28F-1018-18	06/10/2013 17:03:21	2.38	8.85
62	PBLK-01(METHOD BLANK)	AQ11009B	GC28F-1018-19	06/10/2013 17:16:57	2.38	8.85
63	LCS-01(LAB CONTROL SPIKE)	AQ11009L	GC28F-1018-20	06/10/2013 17:30:47	2.38	8.85
64	MW-101	AQ11009RE1	GC28F-1018-21	06/10/2013 17:44:38	2.38	8.85
65	MW-2	AQ11010RE1	GC28F-1018-22	06/10/2013 17:58:29	2.38	8.85
66	MW-3	AQ11011RE1	GC28F-1018-23	06/10/2013 18:12:23	2.38	8.85
67	A1232 50 PPB	CS320610A	GC28F-1018-24	06/10/2013 18:26:14	2.38	8.85

Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

INITIAL CALIBRATION DATA (GC28F)

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6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 13060003
ELAP ID No: 11078
Date(s) Analyzed: 05/22/13
Instrument ID: GC28F
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	GC28F-999-9	052216A	5.00	1158.302		
	GC28F-999-10	052216B	10.0	1174.593		
	GC28F-999-11	052216C	20.0	1137.945		
	GC28F-999-12	052216D	50.0	1062.008		
	GC28F-999-13	052216E	100	1047.219	1116.010	5.2
Aroclor 1221	GC28F-999-14	052221A	5.00	329.610		
	GC28F-999-15	052221B	10.0	331.311		
	GC28F-999-16	052221C	20.0	340.155		
	GC28F-999-17	052221D	50.0	334.216		
	GC28F-999-18	052221E	100	312.041	329.466	3.2
Aroclor 1232	GC28F-999-19	052232A	5.00	589.913		
	GC28F-999-20	052232B	10.0	591.815		
	GC28F-999-21	052232C	20.0	559.009		
	GC28F-999-22	052232D	50.0	519.258		
	GC28F-999-23	052232E	100	506.331	553.265	7.1
Aroclor 1242	GC28F-999-55	052242A	5.00	1119.612		
	GC28F-999-25	052242B	10.0	1149.842		
	GC28F-999-26	052242C	20.0	971.891		
	GC28F-999-27	052242D	50.0	926.292		
	GC28F-999-28	052242E	100	930.489	1019.630	11
Aroclor 1248	GC28F-999-29	052248A	5.00	1120.008		
	GC28F-999-30	052248B	10.0	1147.535		
	GC28F-999-31	052248C	20.0	958.013		
	GC28F-999-32	052248D	50.0	977.594		
	GC28F-999-33	052248E	100	949.148	1030.460	9.3
Aroclor 1254	GC28F-999-34	052254A	5.00	1467.237		
	GC28F-999-35	052254B	10.0	1531.271		
	GC28F-999-36	052254C	20.0	1508.544		
	GC28F-999-37	052254D	50.0	1433.369		
	GC28F-999-38	052254E	100	1393.417	1466.770	3.8
Aroclor 1260	GC28F-999-39	052260A	5.00	1791.123		
	GC28F-999-40	052260B	10.0	1898.646		
	GC28F-999-41	052260C	20.0	1725.728		
	GC28F-999-42	052260D	50.0	1693.665		
	GC28F-999-43	052260E	100	1730.054	1767.840	4.6
Aroclor 1262	GC28F-999-44	052262A	5.00	1875.276		
	GC28F-999-45	052262B	10.0	1832.657		
	GC28F-999-46	052262C	20.0	1849.886		
	GC28F-999-47	052262D	50.0	1713.643		
	GC28F-999-48	052262E	100	1857.372	1825.770	3.5

FORM VI-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 13060003
ELAP ID No: 11078
Date(s) Analyzed: 05/22/13
Instrument ID: GC28F
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	GC28F-999-49	052268A	5.00	3231.103		
	GC28F-999-50	052268B	10.0	3127.609		
	GC28F-999-51	052268C	20.0	3321.342		
	GC28F-999-52	052268D	50.0	2991.326		
	GC28F-999-53	052268E	100	2942.173	3122.710	5.1
TCMX	GC28F-999-34	052254A	1.00	6596.772		
	GC28F-999-35	052254B	2.50	6947.334		
	GC28F-999-36	052254C	4.00	6317.063		
	GC28F-999-37	052254D	5.00	6325.662		
	GC28F-999-38	052254E	8.00	6226.855	6482.740	4.5
DCBP	GC28F-999-34	052254A	10.0	5786.385		
	GC28F-999-35	052254B	25.0	5909.038		
	GC28F-999-36	052254C	40.0	5231.007		
	GC28F-999-37	052254D	50.0	5169.344		
	GC28F-999-38	052254E	80.0	4955.750	5410.300	7.7

% 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 (GC28F)

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7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc. SDG NO: 13060003

ELAP ID No: 11078

Instrument ID: GC28F

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	GC28F-999-58	CS160522A	ICV	54.4	50	8.80		05/22/2013 23:39:25
Aroclor 1221	GC28F-999-59	CS210522A	ICV	51.1	50	2.30		05/22/2013 23:53:00
Aroclor 1232	GC28F-999-60	CS320522A	ICV	50.8	50	1.61		05/23/2013 00:06:47
Aroclor 1242	GC28F-999-61	CS420522B	ICV	49.0	50	-2.01		05/23/2013 00:20:34
Aroclor 1248	GC28F-999-62	CS480522A	ICV	55.0	50	9.98		05/23/2013 00:34:27
Aroclor 1254	GC28F-999-63	CS540522A	ICV	52.4	50	4.82		05/23/2013 00:48:02
Aroclor 1260	GC28F-999-64	CS600522A	ICV	45.4	50	-9.13		05/23/2013 01:01:54
Aroclor 1262	GC28F-999-65	CS620522A	ICV	48.1	50	-3.75		05/23/2013 01:15:28
Aroclor 1268	GC28F-999-66	CS680522A	ICV	49.6	50	-0.759		05/23/2013 01:29:43
Aroclor 1016	GC28F-1017-25	CS160609A	CCV	51.8	50	3.54		06/09/2013 18:32:46
Aroclor 1221	GC28F-1017-35	CS210609A	CCV	50.1	50	0.102		06/09/2013 20:51:15
	GC28F-1018-18	CS210610A	CCV	48.8	50	-2.32		06/10/2013 17:03:21
Aroclor 1232	GC28F-1018-24	CS320610A	CCV	51.6	50	3.26		06/10/2013 18:26:14

% Difference must be less than or equal to +/- 15 percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

10

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 13060003
ELAP ID No: 11078
Instrument ID: GC28F
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	GC28F-999-58	CS160522A	ICV	1	3.25	3.17	3.33
		CS160522A	ICV	2	3.45	3.37	3.53
		CS160522A	ICV	3	3.78	3.70	3.86
		CS160522A	ICV	4	3.89	3.81	3.97
		CS160522A	ICV	5	3.96	3.88	4.04
Aroclor 1221	GC28F-999-59	CS210522A	ICV	1	1.70	1.62	1.78
		CS210522A	ICV	2	2.30	2.22	2.38
		CS210522A	ICV	3	2.59	2.51	2.67
		CS210522A	ICV	4	2.70	2.62	2.78
		CS210522A	ICV	5	2.76	2.68	2.84
Aroclor 1232	GC28F-999-60	CS320522A	ICV	1	2.76	2.68	2.84
		CS320522A	ICV	2	3.45	3.37	3.53
		CS320522A	ICV	3	3.78	3.70	3.86
		CS320522A	ICV	4	3.89	3.81	3.97
		CS320522A	ICV	5	3.96	3.88	4.04
Aroclor 1242	GC28F-999-61	CS420522B	ICV	1	3.25	3.17	3.33
		CS420522B	ICV	2	3.45	3.37	3.53
		CS420522B	ICV	3	3.78	3.70	3.86
		CS420522B	ICV	4	3.89	3.81	3.97
		CS420522B	ICV	5	3.96	3.88	4.04
Aroclor 1248	GC28F-999-62	CS480522A	ICV	1	4.24	4.16	4.32
		CS480522A	ICV	2	4.55	4.47	4.63
		CS480522A	ICV	3	4.83	4.75	4.91
		CS480522A	ICV	4	4.90	4.82	4.98
		CS480522A	ICV	5	5.07	4.99	5.15
Aroclor 1254	GC28F-999-63	CS540522A	ICV	1	5.20	5.12	5.28
		CS540522A	ICV	2	5.46	5.38	5.54
		CS540522A	ICV	3	5.57	5.49	5.65
		CS540522A	ICV	4	6.12	6.04	6.20
		CS540522A	ICV	5	6.42	6.34	6.50
Aroclor 1260	GC28F-999-64	CS600522A	ICV	1	6.42	6.34	6.50
		CS600522A	ICV	2	7.17	7.09	7.25
		CS600522A	ICV	3	7.44	7.36	7.52
		CS600522A	ICV	4	7.64	7.56	7.72
		CS600522A	ICV	5	8.14	8.06	8.22
Aroclor 1262	GC28F-999-65	CS620522A	ICV	1	6.42	6.34	6.50
		CS620522A	ICV	2	7.17	7.09	7.25
		CS620522A	ICV	3	7.44	7.36	7.52

FORM VII-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 13060003
ELAP ID No: 11078
Instrument ID: GC28F
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		CS620522A	ICV	4	7.64	7.56	7.72
		CS620522A	ICV	5	8.13	8.05	8.21
Aroclor 1268	GC28F-999-66	CS680522A	ICV	1	7.64	7.56	7.72
		CS680522A	ICV	2	8.14	8.06	8.22
		CS680522A	ICV	3	7.59	7.51	7.67
		CS680522A	ICV	4	7.95	7.87	8.03
		CS680522A	ICV	5	8.03	7.95	8.11

* 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: 13060003
ELAP ID No: 11078
Instrument ID: GC28F
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	GC28F-1017-25	CS160609A	CCV	1	3.25	3.17	3.33
		CS160609A	CCV	2	3.45	3.37	3.53
		CS160609A	CCV	3	3.78	3.70	3.86
		CS160609A	CCV	4	3.89	3.81	3.97
		CS160609A	CCV	5	3.96	3.88	4.04
Aroclor 1221	GC28F-1017-35	CS210609A	CCV	1	1.70	1.62	1.78
		CS210609A	CCV	2	2.30	2.22	2.38
		CS210609A	CCV	3	2.59	2.51	2.67
		CS210609A	CCV	4	2.70	2.62	2.78
		CS210609A	CCV	5	2.76	2.68	2.84
	GC28F-1018-18	CS210610A	CCV	1	1.70	1.62	1.78
		CS210610A	CCV	2	2.30	2.22	2.38
		CS210610A	CCV	3	2.59	2.51	2.67
		CS210610A	CCV	4	2.70	2.62	2.78
		CS210610A	CCV	5	2.76	2.68	2.84
Aroclor 1232	GC28F-1018-24	CS320610A	CCV	1	2.76	2.68	2.84
		CS320610A	CCV	2	3.45	3.37	3.53
		CS320610A	CCV	3	3.78	3.70	3.86
		CS320610A	CCV	4	3.89	3.81	3.97
		CS320610A	CCV	5	3.96	3.88	4.04

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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ANALYTICAL SEQUENCE (GC28B)

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 13060003

ELAP ID No: 11078

Instrument ID: GC28B Init. Calib. Date(s): 05/07/13,05/08/13

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: 2.97 DCBP RT: 8.91

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 5 PPB	050716A	GC28B-977-4	05/07/2013 23:03:25	2.97	8.91
02	A1016 10 PPB	050716B	GC28B-977-5	05/07/2013 23:17:16	2.97	8.91
03	A1016 20 PPB	050716C	GC28B-977-6	05/07/2013 23:31:11	2.97	8.91
04	A1016 50 PPB	050716D	GC28B-977-7	05/07/2013 23:44:46	2.97	8.91
05	A1016 100 PPB	050716E	GC28B-977-8	05/07/2013 23:58:39	2.97	8.91
06	A1221 5 PPB	050721A	GC28B-977-9	05/08/2013 00:12:13	2.97	8.91
07	A1221 10 PPB	050721B	GC28B-977-10	05/08/2013 00:26:04	2.97	8.91
08	A1221 20 PPB	050721C	GC28B-977-11	05/08/2013 00:39:59	2.97	8.91
09	A1221 50 PPB	050721D	GC28B-977-12	05/08/2013 00:53:46	2.97	8.91
10	A1221 100 PPB	050721E	GC28B-977-13	05/08/2013 01:07:43	2.97	8.91
11	A1232 5 PPB	050732A	GC28B-977-14	05/08/2013 01:21:34	2.97	8.91
12	A1232 10 PPB	050732B	GC28B-977-15	05/08/2013 01:35:31	2.97	8.91
13	A1232 20 PPB	050732C	GC28B-977-16	05/08/2013 01:49:05	2.97	8.91
14	A1232 50 PPB	050732D	GC28B-977-17	05/08/2013 02:02:55	2.97	8.91
15	A1232 100 PPB	050732E	GC28B-977-18	05/08/2013 02:16:44	2.97	8.91
16	A1242 5 PPB	050742A	GC28B-977-19	05/08/2013 02:30:46	2.97	8.91
17	A1242 10 PPB	050742B	GC28B-977-20	05/08/2013 02:44:40	2.97	8.91
18	A1242 20 PPB	050742C	GC28B-977-21	05/08/2013 02:58:33	2.97	8.91
19	A1242 50 PPB	050742D	GC28B-977-22	05/08/2013 03:12:24	2.97	8.91
20	A1242 100 PPB	050742E	GC28B-977-23	05/08/2013 03:26:27	2.97	8.91
21	A1248 5 PPB	050748A	GC28B-977-24	05/08/2013 03:40:23	2.97	8.91
22	A1248 10 PPB	050748B	GC28B-977-25	05/08/2013 03:54:30	2.97	8.91
23	A1248 20 PPB	050748C	GC28B-977-26	05/08/2013 04:07:52	2.97	8.91
24	A1248 50 PPB	050748D	GC28B-977-27	05/08/2013 04:21:42	2.97	8.91
25	A1248 100 PPB	050748E	GC28B-977-28	05/08/2013 04:35:32	2.97	8.91
26	A1254 5 PPB	050754A	GC28B-977-29	05/08/2013 04:49:21	2.97	8.91
27	A1254 10 PPB	050754B	GC28B-977-30	05/08/2013 05:03:01	2.97	8.91
28	A1254 20 PPB	050754C	GC28B-977-31	05/08/2013 05:16:52	2.97	8.91
29	A1254 50 PPB	050754D	GC28B-977-32	05/08/2013 05:30:41	2.97	8.91
30	A1254 100 PPB	050754E	GC28B-977-33	05/08/2013 05:44:04	2.97	8.91
31	A1260 5 PPB	050760A	GC28B-977-34	05/08/2013 05:57:55	2.97	8.91
32	A1260 20 PPB	050760C	GC28B-977-36	05/08/2013 06:25:44	2.97	8.91
33	A1260 50 PPB	050760D	GC28B-977-37	05/08/2013 06:39:21	2.97	8.91
34	A1260 100 PPB	050760E	GC28B-977-38	05/08/2013 06:53:10	2.97	8.91
35	A1262 5 PPB	050762A	GC28B-977-39	05/08/2013 07:06:58	2.97	8.91
36	A1262 10 PPB	050762B	GC28B-977-40	05/08/2013 07:20:34	2.97	8.91
37	A1262 20 PPB	050762C	GC28B-977-41	05/08/2013 07:34:37	2.97	8.91
38	A1262 50 PPB	050762D	GC28B-977-42	05/08/2013 07:48:34	2.97	8.91

Column used to flag surrogate retention times outside expected range.

FORM VIII-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: Pace Analytical Services, Inc. SDG No: 13060003

ELAP ID No: 11078

Instrument ID: GC28B Init. Calib. Date(s): 05/07/13,05/08/13

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: 2.97 DCBP RT: 8.91

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 100 PPB	050762E	GC28B-977-43	05/08/2013 08:02:03	2.97	8.91
40	A1268 5 PPB	050768A	GC28B-977-44	05/08/2013 08:15:51	2.97	8.91
41	A1268 10 PPB	050768B	GC28B-977-45	05/08/2013 08:29:25	2.97	8.91
42	A1268 50 PPB	050768D	GC28B-977-47	05/08/2013 08:57:10	2.97	8.91
43	A1268 100 PPB	050768E	GC28B-977-48	05/08/2013 09:11:06	2.97	8.91
44	A1260 10 PPB	050860B	GC28B-977-49	05/08/2013 09:24:55	2.97	8.91
45	A1268 20 PPB	050868C	GC28B-977-50	05/08/2013 09:38:53	2.97	8.91
46	A1016 50 PPB	CS160507A	GC28B-977-52	05/08/2013 10:06:15	2.97	8.91
47	A1221 50 PPB	CS210507A	GC28B-977-53	05/08/2013 10:20:11	2.98	8.91
48	A1232 50 PPB	CS320507A	GC28B-977-54	05/08/2013 10:33:35	2.98	8.91
49	A1242 50 PPB	CS420507A	GC28B-977-55	05/08/2013 10:47:24	2.97	8.91
50	A1248 50 PPB	CS480507A	GC28B-977-56	05/08/2013 11:01:14	2.98	8.91
51	A1254 50 PPB	CS540507A	GC28B-977-57	05/08/2013 11:15:10	2.98	8.91
52	A1260 50 PPB	CS600507A	GC28B-977-58	05/08/2013 11:28:59	2.97	8.91
53	A1262 50 PPB	CS620507A	GC28B-977-59	05/08/2013 11:42:49	2.97	8.91
54	A1268 50 PPB	CS680507A	GC28B-977-60	05/08/2013 11:56:45	2.97	8.91
55	A1016 50 PPB	CS160609A	GC28B-1011-25	06/09/2013 18:32:50	2.97	8.90
56	PBLK-55(METHOD BLANK)	AQ11011B	GC28B-1011-26	06/09/2013 18:46:42	2.97	8.90
57	LCS-55(LAB CONTROL SPIKE)	AQ11011L	GC28B-1011-27	06/09/2013 19:00:18	2.97	8.90
58	MW-1	AQ11008	GC28B-1011-30	06/09/2013 19:41:47	2.97	8.90
59	A1221 50 PPB	CS210609A	GC28B-1011-35	06/09/2013 20:51:19	2.97	8.90
60	A1221 50 PPB	CS210610A	GC28B-1012-18	06/10/2013 17:03:25	2.97	8.89
61	PBLK-01(METHOD BLANK)	AQ11009B	GC28B-1012-19	06/10/2013 17:17:01	2.97	8.90
62	LCS-01(LAB CONTROL SPIKE)	AQ11009L	GC28B-1012-20	06/10/2013 17:30:51	2.97	8.90
63	MW-101	AQ11009RE1	GC28B-1012-21	06/10/2013 17:44:42	2.97	8.90
64	MW-2	AQ11010RE1	GC28B-1012-22	06/10/2013 17:58:33	2.97	8.90
65	MW-3	AQ11011RE1	GC28B-1012-23	06/10/2013 18:12:27	2.97	8.89
66	A1232 50 PPB	CS320610A	GC28B-1012-24	06/10/2013 18:26:18	2.97	8.89

Column used to flag surrogate retention times outside expected range.

INITIAL CALIBRATION DATA (GC28B)

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6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 13060003
ELAP ID No: 11078
Date(s) Analyzed: 05/07/13,05/08/13
Instrument ID: GC28B
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	GC28B-977-4	050716A	5.00	947.817		
	GC28B-977-5	050716B	10.0	946.955		
	GC28B-977-6	050716C	20.0	924.891		
	GC28B-977-7	050716D	50.0	900.974		
	GC28B-977-8	050716E	100	868.555	917.839	3.7
Aroclor 1221	GC28B-977-9	050721A	5.00	297.538		
	GC28B-977-10	050721B	10.0	277.223		
	GC28B-977-11	050721C	20.0	285.836		
	GC28B-977-12	050721D	50.0	276.092		
	GC28B-977-13	050721E	100	254.885	278.315	5.6
Aroclor 1232	GC28B-977-14	050732A	5.00	498.851		
	GC28B-977-15	050732B	10.0	471.655		
	GC28B-977-16	050732C	20.0	447.885		
	GC28B-977-17	050732D	50.0	432.545		
	GC28B-977-18	050732E	100	420.543	454.296	6.9
Aroclor 1242	GC28B-977-19	050742A	5.00	747.027		
	GC28B-977-20	050742B	10.0	800.088		
	GC28B-977-21	050742C	20.0	845.215		
	GC28B-977-22	050742D	50.0	787.378		
	GC28B-977-23	050742E	100	764.793	788.900	4.8
Aroclor 1248	GC28B-977-24	050748A	5.00	902.669		
	GC28B-977-25	050748B	10.0	806.362		
	GC28B-977-26	050748C	20.0	837.719		
	GC28B-977-27	050748D	50.0	806.391		
	GC28B-977-28	050748E	100	802.681	831.164	5.1
Aroclor 1254	GC28B-977-29	050754A	5.00	1320.476		
	GC28B-977-30	050754B	10.0	1257.345		
	GC28B-977-31	050754C	20.0	1236.086		
	GC28B-977-32	050754D	50.0	1179.852		
	GC28B-977-33	050754E	100	1149.110	1228.570	5.5
Aroclor 1260	GC28B-977-34	050760A	5.00	1461.482		
	GC28B-977-49	050860B	10.0	1472.570		
	GC28B-977-36	050760C	20.0	1489.284		
	GC28B-977-37	050760D	50.0	1422.775		
	GC28B-977-38	050760E	100	1518.025	1472.830	2.4
Aroclor 1262	GC28B-977-39	050762A	5.00	1483.978		
	GC28B-977-40	050762B	10.0	1554.957		
	GC28B-977-41	050762C	20.0	1540.195		
	GC28B-977-42	050762D	50.0	1491.503		
	GC28B-977-43	050762E	100	1616.650	1537.460	3.5

FORM VI-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: Pace Analytical Services, Inc.
SDG NO: 13060003
ELAP ID No: 11078
Date(s) Analyzed: 05/07/13,05/08/13
Instrument ID: GC28B
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	GC28B-977-44	050768A	5.00	2764.080		
	GC28B-977-45	050768B	10.0	2504.260		
	GC28B-977-50	050868C	20.0	2496.647		
	GC28B-977-47	050768D	50.0	2417.272		
	GC28B-977-48	050768E	100	2444.518	2525.360	5.5
TCMX	GC28B-977-29	050754A	1.00	6017.802		
	GC28B-977-30	050754B	2.50	6327.434		
	GC28B-977-31	050754C	4.00	5685.641		
	GC28B-977-32	050754D	5.00	5754.183		
	GC28B-977-33	050754E	8.00	5669.342	5890.880	4.8
DCBP	GC28B-977-29	050754A	10.0	4808.764		
	GC28B-977-30	050754B	25.0	4960.548		
	GC28B-977-31	050754C	40.0	4355.093		
	GC28B-977-32	050754D	50.0	4380.642		
	GC28B-977-33	050754E	80.0	4166.568	4534.320	7.4

% 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 (GC28B)

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7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc. SDG NO: 13060003

ELAP ID No: 11078

Instrument ID: GC28B

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	GC28B-977-52	CS160507A	ICV	52.7	50	5.33		05/08/2013 10:06:15
Aroclor 1221	GC28B-977-53	CS210507A	ICV	49.0	50	-1.90		05/08/2013 10:20:11
Aroclor 1232	GC28B-977-54	CS320507A	ICV	50.0	50	-0.0684		05/08/2013 10:33:35
Aroclor 1242	GC28B-977-55	CS420507A	ICV	46.8	50	-6.34		05/08/2013 10:47:24
Aroclor 1248	GC28B-977-56	CS480507A	ICV	48.0	50	-4.02		05/08/2013 11:01:14
Aroclor 1254	GC28B-977-57	CS540507A	ICV	53.0	50	5.90		05/08/2013 11:15:10
Aroclor 1260	GC28B-977-58	CS600507A	ICV	46.6	50	-6.80		05/08/2013 11:28:59
Aroclor 1262	GC28B-977-59	CS620507A	ICV	47.7	50	-4.68		05/08/2013 11:42:49
Aroclor 1268	GC28B-977-60	CS680507A	ICV	49.4	50	-1.15		05/08/2013 11:56:45
Aroclor 1016	GC28B-1011-25	CS160609A	CCV	55.1	50	10.2		06/09/2013 18:32:50
Aroclor 1221	GC28B-1011-35	CS210609A	CCV	55.4	50	10.8		06/09/2013 20:51:19
	GC28B-1012-18	CS210610A	CCV	55.4	50	10.8		06/10/2013 17:03:25
Aroclor 1232	GC28B-1012-24	CS320610A	CCV	54.2	50	8.37		06/10/2013 18:26:18

% Difference must be less than or equal to +/- 15 percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

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FORM VII-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 13060003
ELAP ID No: 11078
Instrument ID: GC28B
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	GC28B-977-52	CS160507A	ICV	1	3.68	3.60	3.76
		CS160507A	ICV	2	3.86	3.78	3.94
		CS160507A	ICV	3	4.12	4.04	4.20
		CS160507A	ICV	4	4.22	4.14	4.30
		CS160507A	ICV	5	4.29	4.21	4.37
Aroclor 1221	GC28B-977-53	CS210507A	ICV	1	2.52	2.44	2.60
		CS210507A	ICV	2	2.96	2.88	3.04
		CS210507A	ICV	3	3.16	3.08	3.24
		CS210507A	ICV	4	3.25	3.17	3.33
		CS210507A	ICV	5	3.30	3.22	3.38
Aroclor 1232	GC28B-977-54	CS320507A	ICV	1	3.30	3.22	3.38
		CS320507A	ICV	2	3.86	3.78	3.94
		CS320507A	ICV	3	4.12	4.04	4.20
		CS320507A	ICV	4	4.22	4.14	4.30
		CS320507A	ICV	5	4.29	4.21	4.37
Aroclor 1242	GC28B-977-55	CS420507A	ICV	1	3.68	3.60	3.76
		CS420507A	ICV	2	3.86	3.78	3.94
		CS420507A	ICV	3	4.12	4.04	4.20
		CS420507A	ICV	4	4.22	4.14	4.30
		CS420507A	ICV	5	4.29	4.21	4.37
Aroclor 1248	GC28B-977-56	CS480507A	ICV	1	4.51	4.43	4.59
		CS480507A	ICV	2	4.81	4.73	4.89
		CS480507A	ICV	3	5.04	4.96	5.12
		CS480507A	ICV	4	5.12	5.04	5.20
		CS480507A	ICV	5	5.30	5.22	5.38
Aroclor 1254	GC28B-977-57	CS540507A	ICV	1	5.37	5.29	5.45
		CS540507A	ICV	2	5.65	5.57	5.73
		CS540507A	ICV	3	5.75	5.67	5.83
		CS540507A	ICV	4	6.27	6.19	6.35
		CS540507A	ICV	5	6.56	6.48	6.64
Aroclor 1260	GC28B-977-58	CS600507A	ICV	1	6.56	6.48	6.64
		CS600507A	ICV	2	7.27	7.19	7.35
		CS600507A	ICV	3	7.57	7.49	7.65
		CS600507A	ICV	4	7.72	7.64	7.80
		CS600507A	ICV	5	8.23	8.15	8.31
Aroclor 1262	GC28B-977-59	CS620507A	ICV	1	6.56	6.48	6.64
		CS620507A	ICV	2	7.27	7.19	7.35
		CS620507A	ICV	3	7.57	7.49	7.65

FORM VII-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: Pace Analytical Services, Inc.
SGD NO: 13060003
ELAP ID No: 11078
Instrument ID: GC28B
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		CS620507A	ICV	4	7.72	7.64	7.80
		CS620507A	ICV	5	8.23	8.15	8.31
Aroclor 1268	GC28B-977-60	CS680507A	ICV	1	7.72	7.64	7.80
		CS680507A	ICV	2	8.23	8.15	8.31
		CS680507A	ICV	3	7.66	7.58	7.74
		CS680507A	ICV	4	8.01	7.93	8.09
		CS680507A	ICV	5	8.09	8.01	8.17

* 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: 13060003
ELAP ID No: 11078
Instrument ID: GC28B
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	GC28B-1011-25	CS160609A	CCV	1	3.67	3.60	3.76
		CS160609A	CCV	2	3.85	3.78	3.94
		CS160609A	CCV	3	4.11	4.04	4.20
		CS160609A	CCV	4	4.21	4.14	4.30
		CS160609A	CCV	5	4.29	4.21	4.37
Aroclor 1221	GC28B-1011-35	CS210609A	CCV	1	2.52	2.44	2.60
		CS210609A	CCV	2	2.96	2.88	3.04
		CS210609A	CCV	3	3.15	3.08	3.24
		CS210609A	CCV	4	3.24	3.17	3.33
		CS210609A	CCV	5	3.29	3.22	3.38
	GC28B-1012-18	CS210610A	CCV	1	2.52	2.44	2.60
		CS210610A	CCV	2	2.96	2.88	3.04
		CS210610A	CCV	3	3.15	3.08	3.24
		CS210610A	CCV	4	3.24	3.17	3.33
		CS210610A	CCV	5	3.29	3.22	3.38
Aroclor 1232	GC28B-1012-24	CS320610A	CCV	1	3.28	3.22	3.38
		CS320610A	CCV	2	3.85	3.78	3.94
		CS320610A	CCV	3	4.11	4.04	4.20
		CS320610A	CCV	4	4.21	4.14	4.30
		CS320610A	CCV	5	4.28	4.21	4.37

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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QC SAMPLE RAW DATA

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1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	PBLK-01
Matrix:	Water	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11009B
Percent Moisture:	100	Lab File ID:	GC28F-1018-19
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/10/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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/L	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	0.175	
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: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	PBLK-01
Matrix:	Water	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11009B
Percent Moisture:	100	Lab File ID:	GC28B-1012-19
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/10/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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/L	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	0.184	
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: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	LCS-01
Matrix:	Water	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11009L
Percent Moisture:	100	Lab File ID:	GC28F-1018-20
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/10/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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/L	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	0.469	
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.

14

FORM I-CLP-PCB

Print Date: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	LCS-01
Matrix:	Water	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11009L
Percent Moisture:	100	Lab File ID:	GC28B-1012-20
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/10/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/10/2013
Method:	SW-846 Method 8082	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/L	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	0.505	
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.

14

FORM I-CLP-PCB

Print Date: 6/21/2013
Lims Version : 5.0.7.4

10-B
PCB Identification Summary

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Client ID:	LCS-01(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-01	Lab Sample ID:	AQ11009L
Instrument 1 ID:	GC28F	Instrument 2 ID:	GC28B
Date Analyzed:	06/10/2013 5:30:47 PM	Date Analyzed:	06/10/2013 5:30:51 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:	GC28F-1018-20	Lab File ID 2:	GC28B-1012-20
Matrix:	Water		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/L)	RPD (%)	*
Aroclor 1016	1	1	3.25	3.17	3.33			
		2	3.45	3.37	3.53			
		3	3.78	3.70	3.86			
		4	3.89	3.81	3.97			
		5	3.96	3.88	4.04			
	2	1	3.67	3.60	3.76			
		2	3.85	3.78	3.94			
		3	4.11	4.04	4.20			
		4	4.21	4.14	4.30			
		5	4.29	4.21	4.37			
Aroclor 1221	1	1	NA	1.62	1.78			
		2	NA	2.22	2.38			
		3	NA	2.51	2.67			
		4	NA	2.62	2.78			
		5	NA	2.68	2.84			
	2	1	NA	2.44	2.60			
		2	NA	2.88	3.04			
		3	NA	3.08	3.24			
		4	NA	3.17	3.33			
		5	NA	3.22	3.38			
Aroclor 1232	1	1	NA	2.68	2.84			
		2	3.45	3.37	3.53			
		3	3.78	3.70	3.86			
		4	3.89	3.81	3.97			
		5	3.96	3.88	4.04			
	2	1	NA	3.22	3.38			
		2	3.85	3.78	3.94			
		3	4.11	4.04	4.20			
		4	4.21	4.14	4.30			
		5	4.29	4.21	4.37			
Aroclor 1242	1	1	3.25	3.17	3.33			
		2	3.45	3.37	3.53			
		3	3.78	3.70	3.86			
		4	3.89	3.81	3.97			
		5	3.96	3.88	4.04	0.469		
	2	1	3.67	3.60	3.76			
		2	3.85	3.78	3.94			
		3	4.11	4.04	4.20			
		4	4.21	4.14	4.30			
		5	4.29	4.21	4.37	0.505	7.39	

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

10-B
PCB Identification Summary

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Client ID:	LCS-01(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-01	Lab Sample ID:	AQ11009L
Instrument 1 ID:	GC28F	Instrument 2 ID:	GC28B
Date Analyzed:	06/10/2013 5:30:47 PM	Date Analyzed:	06/10/2013 5:30:51 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:	GC28F-1018-20	Lab File ID 2:	GC28B-1012-20
Matrix:	Water		

Analyte	Column	Peak	RT (min)	RT Window		Concentration (ug/L)	RPD (%)	*
				From	To			
Aroclor 1248	1	1	NA	4.16	4.32			
		2	NA	4.47	4.63			
		3	NA	4.75	4.91			
		4	NA	4.82	4.98			
		5	NA	4.99	5.15			
	2	1	NA	4.43	4.59			
		2	NA	4.73	4.89			
		3	NA	4.96	5.12			
		4	NA	5.04	5.20			
		5	NA	5.22	5.38			
Aroclor 1254	1	1	NA	5.12	5.28			
		2	NA	5.38	5.54			
		3	NA	5.49	5.65			
		4	NA	6.04	6.20			
		5	NA	6.34	6.50			
	2	1	NA	5.29	5.45			
		2	NA	5.57	5.73			
		3	NA	5.67	5.83			
		4	NA	6.19	6.35			
		5	NA	6.48	6.64			
Aroclor 1260	1	1	NA	6.34	6.50			
		2	NA	7.09	7.25			
		3	NA	7.36	7.52			
		4	NA	7.56	7.72			
		5	NA	8.06	8.22			
	2	1	NA	6.48	6.64			
		2	NA	7.19	7.35			
		3	NA	7.49	7.65			
		4	NA	7.64	7.80			
		5	NA	8.15	8.31			

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Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	PBLK-55
Matrix:	Water	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11011B
Percent Moisture:	100	Lab File ID:	GC28F-1017-26
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/05/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/09/2013
Method:	SW-846 Method 8082	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/L	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	0.496	
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.

14

FORM I-CLP-PCB

Print Date: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	PBLK-55
Matrix:	Water	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11011B
Percent Moisture:	100	Lab File ID:	GC28B-1011-26
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/05/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/09/2013
Method:	SW-846 Method 8082	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/L	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	0.534	
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.

14

FORM I-CLP-PCB

Print Date: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	LCS-55
Matrix:	Water	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11011L
Percent Moisture:	100	Lab File ID:	GC28F-1017-27
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/05/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/09/2013
Method:	SW-846 Method 8082	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/L	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	0.529	
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.

14

FORM I-CLP-PCB

Print Date: 6/21/2013
Lims Version : 5.0.7.4

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	LRF ID:	LCS-55
Matrix:	Water	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	1000 mL	Lab Sample ID:	AQ11011L
Percent Moisture:	100	Lab File ID:	GC28B-1011-27
Extraction:	1L - Solid Phase Extraction	Date Received:	
Conc. Extract Volume:	10000 uL	Date Extracted:	06/05/2013
Injection Volume:	1.0 uL	Date Analyzed:	06/09/2013
Method:	SW-846 Method 8082	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/L	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	0.576	
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.

14

FORM I-CLP-PCB

Print Date: 6/21/2013
Lims Version : 5.0.7.4

10-B
PCB Identification Summary

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Client ID:	LCS-55(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-55	Lab Sample ID:	AQ11011L
Instrument 1 ID:	GC28F	Instrument 2 ID:	GC28B
Date Analyzed:	06/09/2013 7:00:14 PM	Date Analyzed:	06/09/2013 7:00:18 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:	GC28F-1017-27	Lab File ID 2:	GC28B-1011-27
Matrix:	Water		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/L)	RPD (%)	*
Aroclor 1016	1	1	3.25	3.17	3.33			
		2	3.45	3.37	3.53			
		3	3.78	3.70	3.86			
		4	3.89	3.81	3.97			
		5	3.96	3.88	4.04			
	2	1	3.67	3.60	3.76			
		2	3.85	3.78	3.94			
		3	4.11	4.04	4.20			
		4	4.21	4.14	4.30			
		5	4.29	4.21	4.37			
Aroclor 1221	1	1	NA	1.62	1.78			
		2	NA	2.22	2.38			
		3	NA	2.51	2.67			
		4	NA	2.62	2.78			
		5	NA	2.68	2.84			
	2	1	NA	2.44	2.60			
		2	NA	2.88	3.04			
		3	NA	3.08	3.24			
		4	NA	3.17	3.33			
		5	NA	3.22	3.38			
Aroclor 1232	1	1	NA	2.68	2.84			
		2	3.45	3.37	3.53			
		3	3.78	3.70	3.86			
		4	3.89	3.81	3.97			
		5	3.96	3.88	4.04			
	2	1	NA	3.22	3.38			
		2	3.85	3.78	3.94			
		3	4.11	4.04	4.20			
		4	4.21	4.14	4.30			
		5	4.29	4.21	4.37			
Aroclor 1242	1	1	3.25	3.17	3.33			
		2	3.45	3.37	3.53			
		3	3.78	3.70	3.86			
		4	3.89	3.81	3.97			
		5	3.96	3.88	4.04	0.529		
	2	1	3.67	3.60	3.76			
		2	3.85	3.78	3.94			
		3	4.11	4.04	4.20			
		4	4.21	4.14	4.30			
		5	4.29	4.21	4.37	0.576	8.51	

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

10-B
PCB Identification Summary

Laboratory Name:	Pace Analytical Services, Inc.	SDG No:	13060003
ELAP ID No:	11078	Client ID:	LCS-55(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-55	Lab Sample ID:	AQ11011L
Instrument 1 ID:	GC28F	Instrument 2 ID:	GC28B
Date Analyzed:	06/09/2013 7:00:14 PM	Date Analyzed:	06/09/2013 7:00:18 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:	GC28F-1017-27	Lab File ID 2:	GC28B-1011-27
Matrix:	Water		

Analyte	Column	Peak	RT (min)	RT Window		Concentration (ug/L)	RPD (%)	*
				From	To			
Aroclor 1248	1	1	NA	4.16	4.32			
		2	NA	4.47	4.63			
		3	NA	4.75	4.91			
		4	NA	4.82	4.98			
		5	NA	4.99	5.15			
	2	1	NA	4.43	4.59			
		2	NA	4.73	4.89			
		3	NA	4.96	5.12			
		4	NA	5.04	5.20			
		5	NA	5.22	5.38			
Aroclor 1254	1	1	NA	5.12	5.28			
		2	NA	5.38	5.54			
		3	NA	5.49	5.65			
		4	NA	6.04	6.20			
		5	NA	6.34	6.50			
	2	1	NA	5.29	5.45			
		2	NA	5.57	5.73			
		3	NA	5.67	5.83			
		4	NA	6.19	6.35			
		5	NA	6.48	6.64			
Aroclor 1260	1	1	NA	6.34	6.50			
		2	NA	7.09	7.25			
		3	NA	7.36	7.52			
		4	NA	7.56	7.72			
		5	NA	8.06	8.22			
	2	1	NA	6.48	6.64			
		2	NA	7.19	7.35			
		3	NA	7.49	7.65			
		4	NA	7.64	7.80			
		5	NA	8.15	8.31			

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Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(PACE)

Print Date: 6/21/2013
Lims Version : 5.0.7.4

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 6, 2013

David Sullivan
TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852

Project Location: City Of New Bedford - KMS
Client Job Number:
Project Number: 115058
Laboratory Work Order Number: 13E1098

Enclosed are results of analyses for samples received by the laboratory on May 31, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852
ATTN: David Sullivan

REPORT DATE: 6/6/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 115058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13E1098

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: City Of New Bedford - KMS

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	13E1098-01	Ground Water		SW-846 6020A	
				SW-846 7470A	
MW-101	13E1098-02	Ground Water		SW-846 6020A	
				SW-846 7470A	
MW-2	13E1098-03	Ground Water		SW-846 6020A	
				SW-846 7470A	
MW-3	13E1098-04	Ground Water		SW-846 6020A	
				SW-846 7470A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6020, only RCRA 8 metals were requested and reported.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford - KMS
Sample Description:
Work Order: 13E1098

Date Received: 5/31/2013

Field Sample #: MW-1
Sampled: 5/31/2013 09:35

Sample ID: 13E1098-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH
Barium	52	10	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/1/13	6/3/13 13:56	SAJ
Selenium	ND	5.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:09	KSH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford - KMS
Sample Description:
Work Order: 13E1098

Date Received: 5/31/2013

Field Sample #: MW-101
Sampled: 5/31/2013 10:35

Sample ID: 13E1098-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH
Barium	49	10	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/1/13	6/3/13 13:58	SAJ
Selenium	ND	5.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:13	KSH

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Project Location: City Of New Bedford - KMS
Sample Description:
Work Order: 13E1098

Date Received: 5/31/2013

Field Sample #: MW-2
Sampled: 5/31/2013 12:00

Sample ID: 13E1098-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	1.2	0.40	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:16	KSH
Barium	810	100	µg/L	10		SW-846 6020A	6/3/13	6/4/13 11:30	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:16	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:16	KSH
Lead	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:16	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/1/13	6/3/13 14:00	SAJ
Selenium	ND	5.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:16	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 16:16	KSH

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Project Location: City Of New Bedford - KMS
Sample Description:
Work Order: 13E1098

Date Received: 5/31/2013

Field Sample #: MW-3
Sampled: 5/31/2013 14:15

Sample ID: 13E1098-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.40	µg/L	1		SW-846 6020A	6/3/13	6/3/13 15:44	KSH
Barium	140	50	µg/L	5		SW-846 6020A	6/3/13	6/4/13 11:27	KSH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 15:44	KSH
Chromium	ND	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 15:44	KSH
Lead	1.1	1.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 15:44	KSH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/1/13	6/3/13 14:01	SAJ
Selenium	ND	5.0	µg/L	1		SW-846 6020A	6/3/13	6/3/13 15:44	KSH
Silver	ND	0.50	µg/L	1		SW-846 6020A	6/3/13	6/3/13 15:44	KSH

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Sample Extraction Data

Prep Method: SW-846 3005A Dissolved-SW-846 6020A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E1098-01 [MW-1]	B074127	50.0	50.0	06/03/13
13E1098-02 [MW-101]	B074127	50.0	50.0	06/03/13
13E1098-03 [MW-2]	B074127	50.0	50.0	06/03/13
13E1098-04 [MW-3]	B074127	50.0	50.0	06/03/13

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13E1098-01 [MW-1]	B074108	6.00	6.00	06/01/13
13E1098-02 [MW-101]	B074108	6.00	6.00	06/01/13
13E1098-03 [MW-2]	B074108	6.00	6.00	06/01/13
13E1098-04 [MW-3]	B074108	6.00	6.00	06/01/13

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B074108 - SW-846 7470A Prep										
Blank (B074108-BLK1)				Prepared: 06/01/13 Analyzed: 06/03/13						
Mercury	ND	0.00010	mg/L							
LCS (B074108-BS1)				Prepared: 06/01/13 Analyzed: 06/03/13						
Mercury	0.00194	0.00010	mg/L	0.00200		97.1	80-120			
LCS Dup (B074108-BSD1)				Prepared: 06/01/13 Analyzed: 06/03/13						
Mercury	0.00187	0.00010	mg/L	0.00200		93.6	80-120	3.71	20	
Duplicate (B074108-DUP1)		**Source: 13E1098-04**		Prepared: 06/01/13 Analyzed: 06/03/13						
Mercury	ND	0.00010	mg/L		ND			NC	20	
Matrix Spike (B074108-MS1)		**Source: 13E1098-04**		Prepared: 06/01/13 Analyzed: 06/03/13						
Mercury	0.00194	0.00010	mg/L	0.00200	ND	97.2	75-125			
Batch B074127 - SW-846 3005A Dissolved										
Blank (B074127-BLK1)				Prepared & Analyzed: 06/03/13						
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
LCS (B074127-BS1)				Prepared & Analyzed: 06/03/13						
Arsenic	251	2.0	µg/L	250		101	80-120			
Barium	251	50	µg/L	250		100	80-120			
Cadmium	254	2.5	µg/L	250		102	80-120			
Chromium	263	5.0	µg/L	250		105	80-120			
Lead	269	5.0	µg/L	250		108	80-120			
Selenium	251	25	µg/L	250		100	80-120			
Silver	264	2.5	µg/L	250		106	80-120			
LCS Dup (B074127-BSD1)				Prepared & Analyzed: 06/03/13						
Arsenic	247	2.0	µg/L	250		98.9	80-120	1.64	20	
Barium	248	50	µg/L	250		99.3	80-120	1.05	20	
Cadmium	247	2.5	µg/L	250		98.8	80-120	3.01	20	
Chromium	253	5.0	µg/L	250		101	80-120	3.64	20	
Lead	251	5.0	µg/L	250		100	80-120	6.87	20	
Selenium	245	25	µg/L	250		97.9	80-120	2.53	20	
Silver	261	2.5	µg/L	250		104	80-120	1.38	20	

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B074127 - SW-846 3005A Dissolved										
Duplicate (B074127-DUP1)		**Source: 13E1098-04**		Prepared & Analyzed: 06/03/13						
Arsenic	ND	0.40	µg/L		ND			NC	20	
Barium	142	50	µg/L		141			0.740	20	
Cadmium	ND	0.50	µg/L		ND			NC	20	
Chromium	ND	1.0	µg/L		ND			NC	20	
Lead	1.10	1.0	µg/L		1.09			1.07	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.50	µg/L		ND			NC	20	
Matrix Spike (B074127-MS1)		**Source: 13E1098-04**		Prepared & Analyzed: 06/03/13						
Arsenic	247	4.0	µg/L	250	ND	98.9	75-125			
Barium	376	100	µg/L	250	141	93.8	75-125			
Cadmium	243	5.0	µg/L	250	ND	97.3	75-125			
Chromium	255	10	µg/L	250	ND	102	75-125			
Lead	255	10	µg/L	250	1.09	101	75-125			
Selenium	241	50	µg/L	250	ND	96.5	75-125			
Silver	252	5.0	µg/L	250	ND	101	75-125			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6020A in Water	
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012

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www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East longmeadow, MA 01028

Rev 04.05.12

13E1098

Company Name: TRC
Address: 650 Suffolk St.
Lowell, MA 01854
Attention: Dave Sullivan
Project Location: City of New Bedford - KMS
Sampled By: Zack Richards

Telephone: 978-970-5600
Project #: 115058
Client PO#: TBD

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ○ WEBSITE
Fax #
Email: dsullivan@trcsolutions.com jsaunders@trcsolutions.com
Format: ☒ PDF ○ EXCEL ☒ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
☒ yes 2012 proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	RCRA-8 Metals (Dissolved)											# of Containers
								G											** Preservation
								N											***Container Code
								P											
01	MW-1	5/31/13	0935		X	GW	U	X											
02	MW-101	↓	1035		X	GW	U	X											
03	MW-2		1200		X	GW	U	X											
04	MW-3		1415		X	GW	U	X		Plus	MS/DUP								

ANALYSIS REQUESTED

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Dm 5/31

Relinquished by: (signature)	Date/Time:
5/31/13	1530
Received by: (signature) 5-31-13	Date/Time: 1530
Relinquished by: (signature) 5-31-13	Date/Time: 1830
Received by: (signature) 4.6°C 5/31/13	Date/Time: 1830

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5-Day
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts: MCP GW-2/GW-3
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

*** Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

** Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfat
X = Na hydroxide
T = Na thiosulfate
O = Other

* Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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East Longmeadow, MA. 01028
P: 413-525-2332
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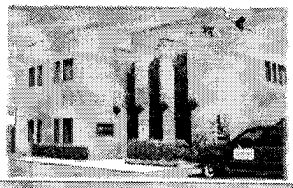

Sample Receipt Checklist

CLIENT NAME: TRC **RECEIVED BY:** RLF **DATE:** 5/31/13

1) **Was the chain(s) of custody relinquished and signed?** Yes No No CoC Included
2) **Does the chain agree with the samples?** Yes No
   If not, explain:
3) **Are all the samples in good condition?** Yes No
   If not, explain:
4) **How were the samples received:**
   On Ice ☑ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☑
   Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A
   Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.6°C
5) **Are there Dissolved samples for the lab to filter?** Yes No
   Who was notified _____ Date _____ Time _____
6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes No
   Who was notified _____ Date _____ Time _____
7) **Location where samples are stored:** 19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) **Do all samples have the proper Acid pH:** Yes No N/A _____
9) **Do all samples have the proper Base pH:** Yes No N/A _____
10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic	6	Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
Bisulfate _____ # DI Water _____
Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Doc# 277
Rev. 3 May 2012

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13E1098
Project Location: City Of New Bedford - KMS	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13E1098-01 thru 13E1098-04

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D (X)	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: M Erickson Position: Laboratory Director

Printed Name: Michael A. Erickson Date: 06/06/13