



9399 West Higgins Road Suite 1100
Rosemont, IL 60018

Phone: 847 430 1219
Fax: 847 430 2219

IBWA STANDARD OF QUALITY REPORT

Customer Name: Culligan Santa Maria
Customer Address: 700 W Cook St
Santa Maria, CA 93458-5514

Page 1 of 18

Sample Date: 3/13/2019
Sample Description: RO DI
Date Reviewed: 4/17/2019

Sample I.D. 1903065
Report Date 4/17/2019

Inorganic Chemicals (IOCs)

CAS ID#	COMPOUNDS	RESULT	SOQ	MRL	Units	Method
7440-36-0	Antimony	ND	6.00	2.00	ug/L	200.8 R5.4
7440-39-3	Barium	ND	1,000.00	10.00	ug/L	200.7 R4.4
7940-41-7	Beryllium	ND	4.00	0.10	ug/L	200.8 R5.4
	Bromate (BrO3)	ND	10.00	2.50	ug/L	321.8 Rev. 1
7440-43-9	Cadmium (Cd)	ND	5.00	0.10	ug/L	200.8 R5.4
	Chloramine	ND	4.00	0.02	mg/L	330.5
	Chlorine Dioxide	0.00	0.80		mg/L	STND 4500
	Chlorine, Free	0.01	0.10		mg/L	330.5
	Chlorine, Total	0.02	0.10		mg/L	330.5
7440-47-3	Chromium	ND	50.00	0.50	ug/L	200.8 R5.4
16984-48-8	Fluoride	0.28	3.00	0.20	mg/L	300.0 R2.1
7439-92-1	Lead (Pb)	ND	1.00	1.00	ug/L	200.8 R5.4
7439-97-6	Mercury (Hg)	ND	1.00	0.20	ug/L	245.1 Rev. 3
7440-02-0	Nickel (Ni)	ND	100.00	10.00	ug/L	200.7 R4.4
	Perchlorate	ND	2.00	2.00	ug/L	314.0
7782-49-2	Selenium (Se)	ND	10.00	2.00	ug/L	200.8 R5.4
7440-28-0	Thallium (Tl)	ND	2.00	1.00	ug/L	200.8 R5.4
7440-38-2	Total Arsenic	ND	10.00	1.00	ug/L	200.8 R5.4
	Total Chlorine	0.02			mg/L	330.5

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MRL - Method Reporting Limit.

NELAP Certifications: IL-100213; PA-68-04623; NY-11756; TX-TX269-2007A

State Certifications: IL-IDPH-17598; CA-2958; MT-CERT0091; IA-369; VT-VT02199; WI-399016200;
CO-IL100213; MI-9988

Maria Mozdzen
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT

Secondary Inorganic Parameters

CAS ID#	COMPOUNDS	RESULT	SOQ	MRL	Units	Method
7429-90-5	Aluminum	2.30	200.00	2.00	ug/L	200.8 R5.4
	Chloride	0.96	250.00	0.50	mg/L	300.0 R2.1
7440-50-8	Copper (Cu)	ND	1.00	0.02	mg/L	200.7 R4.4
	Est TDS By Conductivity	1.78	500.00		mg/L	
7439-89-6	Iron (Fe)	ND		0.05	mg/L	200.7 R4.4
7439-96-5	Manganese (Mn)	ND	0.05	0.02	mg/L	200.7 R4.4
7440-22-4	Silver (Ag)	ND	25.00	0.10	ug/L	200.8 R5.4
14808-79-8	Sulfate	ND	250.00	3.00	mg/L	300.0 R2.1
7440-66-6	Zinc (Zn)	ND	5.00	0.05	mg/L	200.7 R4.4

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Additional Regulated Contaminants

CAS ID#	COMPOUNDS	RESULT	SOQ	MRL	Units	Method
7440-61-1	Uranium (U)	ND	30.00	2.00	ug/L	200.8 R5.4

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Water Properties

CAS ID#	COMPOUNDS	RESULT	SOQ	MRL	Units	Method
	Color	ND	5.00	5.00	color	SM2120C, 21Ed
	Color after Acidification	NM	5.00	5.00	color	SM2120C,21Ed
	Conductivity	1.80			microS/cm	120.1
	pH	6.31	8.50			150.1
	Turbidity	0.27	0.50		NTU	180.1 Rev. 2 1993
	Turbidity Filtered	NM	0.50		NTU	180.1 Rev. 2 1993

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Hardness						
CAS ID#	COMPOUNDS	RESULT	SOQ	MRL	Units	Method
7440-70-2	Calcium	ND		0.10	mg/L	200.7 R4.4
	Hardness (CaCO3)	0.07			mg/L	200.7 R4.4
7439-95-4	Magnesium	ND		0.10	mg/L	200.7 R4.4
7440-23-5	Sodium	ND		0.10	mg/L	200.7 R4.4

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Uncategorized						
CAS ID#	COMPOUNDS	RESULT	SOQ	MRL	Units	Method
	Bicarbonate	0.56			mg/L	SM2320B, 18Ed
	Carbonate	NM			mg/L	SM2320B, 18Ed
	Contract Lab	See Attached Report				
7440-09-7	Potassium	ND		0.10	mg/L	200.7 R4.4
7631-86-9	Silica	0.70		0.01	mg/L	200.7 R4.4
7440-24-6	Strontium (Sr)	ND		0.05	mg/L	200.7 R4.4
	Tannins	ND		2.00	mg/L	SM 5550

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IBWA STANDARD OF QUALITY REPORT



1903065

Control Number:

ANALYSIS REQUEST FORM - 2019
Pace Analytical
Attn: Sample Receiving
8 East Tower Circle
Ormond Beach, FL 32174

IBWA ANNUAL TESTING - FOR CULLIGAN INTERNATIONAL

SAMPLE SUBMITTED BY:

Account Number: 4258
Account Name: Santa Maria, California

CULLIGAN BWP INFORMATION:

Dealership Location/Name: Culligan Santa Maria
Address: 700 West Cook Street
City: Santa Maria State: CA Zip: 93458-5514

Phone Number: 805-922-3585
FAX Number: 805-922-9912
E-MAIL: dan@eculligan.com
Person Taking Sample: DAVE ALLEN
Date Sample Taken: 3/13/2019 Time Sample Taken: 8:01

SAMPLE INFORMATION (check the appropriate boxes):

Water Supply: Private Municipal
Source: Surface Well Unknown
Condition: Treated Untreated Cloudy
Colored

Water Type: Premium Fluoridated DI Purified
Demineralized Spring RO Distilled
Remineralized Source

For Questions contact Maria Mozden at (847) 430-1219

LAB USE ONLY:

Sample received in acceptable condition: Yes _____ No _____
Received by: _____ Date: _____ Time: _____
If not, reason: _____
Disposition of sample: _____

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IBWA STANDARD OF QUALITY REPORT



Sample Results

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386) 672-5668

Client: Culligan International

Client ID: 1903065

Project ID: 1903065

Lab ID: 35454766001

Received: 03/18/2019 08:30

Pace Project: 35454766

Collected: 03/18/2019 08:30

Matrix: Drinking Water

Parameters	Report Limit	Results	Units	FDA Limit	Above/Below Limit	IBWA Limit	Above/Below Limit
504.1 GCS EDB and DBCP							
		Analytical Method: EPA 504.1		Preparation Method: EPA 504.1			
1,2-Dibromo-3-chloropropane	0.0063	<0.0063	ug/L	0.2	Below	0.2	Below
1,2-Dibromoethane (EDB)	0.0073	<0.0073	ug/L	0.05	Below	0.05	Below
508.1 GCS Pesticides							
		Analytical Method: EPA 508.1		Preparation Method: EPA 508.1			
Alachlor	0.060	<0.060	ug/L	2	Below	2	Below
gamma-BHC (Lindane)	0.0034	<0.0034	ug/L	0.2	Below	0.2	Below
Chlordane (Technical)	0.045	<0.045	ug/L	2	Below	2	Below
Endrin	0.0038	<0.0038	ug/L	2	Below	2	Below
Heptachlor	0.0093	<0.0093	ug/L	0.4	Below	0.4	Below
Heptachlor epoxide	0.0067	<0.0067	ug/L	0.2	Below	0.2	Below
Hexachlorobenzene	0.024	<0.024	ug/L	1	Below	1	Below
Hexachlorocyclopentadiene	0.016	<0.016	ug/L	50	Below	50	Below
Methoxychlor	0.056	<0.056	ug/L	40	Below	40	Below
PCB-1016 (Aroclor 1016)	0.077	<0.077	ug/L				
PCB-1221 (Aroclor 1221)	0.028	<0.028	ug/L				
PCB-1232 (Aroclor 1232)	0.028	<0.028	ug/L				
PCB-1242 (Aroclor 1242)	0.049	<0.049	ug/L				
PCB-1248 (Aroclor 1248)	0.059	<0.059	ug/L				
PCB-1254 (Aroclor 1254)	0.022	<0.022	ug/L				
PCB-1260 (Aroclor 1260)	0.063	<0.063	ug/L				
PCB, Total	0.077	<0.077	ug/L	0.5	Below	0.5	Below
Simazine	0.046	<0.046	ug/L	4	Below	4	Below
Toxaphene	0.58	<0.58	ug/L	3	Below	3	Below
515.3 Chlorinated Herbicides							
		Analytical Method: EPA 515.3		Preparation Method: EPA 515.3			
2,4-D	0.081	<0.081	ug/L	70	Below	70	Below
Dalapon	0.89	<0.89	ug/L	200	Below	200	Below
Dinoseb	0.16	<0.16	ug/L	7	Below	7	Below
Pentachlorophenol	0.030	<0.030	ug/L	1	Below	1	Below
Picloram	0.094	<0.094	ug/L	500	Below	500	Below
2,4,5-TP (Silvex)	0.16	<0.16	ug/L	50	Below	10	Below
525.2 Semi Volatile Compounds							
		Analytical Method: EPA 525.2		Preparation Method: EPA 525.2			
Atrazine	0.076	<0.076	ug/L	3	Below	3	Below
Benzo(a)pyrene	0.012	<0.012	ug/L	0.2	Below	0.2	Below
bis(2-Ethylhexyl)adipate	0.37	<0.37	ug/L	400	Below	400	Below
bis(2-Ethylhexyl)phthalate	0.48	<0.48	ug/L			6	Below
547 HPLC Glyphosate							
		Analytical Method: EPA 547					
Glyphosate	4.2	<4.2	ug/L	700	Below	700	Below
549.2 HPLC Paraquat Diquat							
		Analytical Method: EPA 549.2		Preparation Method: EPA 549.2			
Diquat	0.30	<0.30	ug/L	20	Below	20	Below
552.3 Haloacetic Acids							
		Analytical Method: EPA 552.3		Preparation Method: EPA 552.3			
Dibromoacetic Acid	0.43	<0.43	ug/L				
Dichloroacetic Acid	0.24	<0.24	ug/L				
Haloacetic Acids (Total)	0.90	<0.90	ug/L	60	Below	60	Below
Monobromoacetic Acid	0.29	<0.29	ug/L				
Monochloroacetic Acid	0.90	<0.90	ug/L				
Trichloroacetic Acid	0.26	<0.26	ug/L				

04/10/2019 22:56:04

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Maria Mozden
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT



Sample Results

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386) 672-5668

Client: Culligan International

Client ID: 1903065

Project ID: 1903065

Lab ID: 35454766001

Received: 03/18/2019 08:30

Pace Project: 35454766

Collected: 03/18/2019 08:30

Matrix: Drinking Water

Parameters	Report Limit	Results	Units	FDA Limit	Above/Below Limit	IBWA Limit	Above/Below Limit
524.2 MSV Analytical Method: EPA 524.2							
Benzene	0.25	<0.25	ug/L	5	Below	1	Below
Bromodichloromethane	0.25	<0.25	ug/L				
Bromoform	0.32	<0.32	ug/L				
Carbon tetrachloride	0.25	<0.25	ug/L	5	Below	5	Below
Chlorobenzene	0.25	<0.25	ug/L	100	Below	50	Below
Chloroform	0.25	<0.25	ug/L				
Dibromochloromethane	0.25	<0.25	ug/L				
1,2-Dichlorobenzene	0.25	<0.25	ug/L	600	Below	600	Below
1,4-Dichlorobenzene	0.25	<0.25	ug/L	75	Below	75	Below
1,2-Dichloroethane	0.25	<0.25	ug/L	5	Below	2	Below
1,1-Dichloroethene	0.25	<0.25	ug/L	7	Below	2	Below
cis-1,2-Dichloroethene	0.25	<0.25	ug/L	70	Below	70	Below
trans-1,2-Dichloroethene	0.25	<0.25	ug/L	100	Below	100	Below
1,2-Dichloropropane	0.25	<0.25	ug/L	5	Below	5	Below
Ethylbenzene	0.25	<0.25	ug/L	700	Below	700	Below
Methylene Chloride	0.44	<0.44	ug/L	5	Below	3	Below
Methyl-tert-butyl ether	0.25	<0.25	ug/L			70	Below
Naphthalene	0.25	<0.25	ug/L			300	Below
Styrene	0.25	<0.25	ug/L	100	Below	100	Below
1,1,2,2-Tetrachloroethane	0.25	<0.25	ug/L			1	Below
Tetrachloroethene	0.25	<0.25	ug/L	5	Below	1	Below
Toluene	0.25	<0.25	ug/L	1000	Below	1000	Below
Total Trihalomethanes (Calc.)	0.32	<0.32	ug/L	80	Below	10	Below
1,2,4-Trichlorobenzene	0.41	<0.41	ug/L	70	Below	9	Below
1,1,1-Trichloroethane	0.25	<0.25	ug/L	200	Below	30	Below
1,1,2-Trichloroethane	0.25	<0.25	ug/L	5	Below	3	Below
Trichloroethene	0.25	<0.25	ug/L	5	Below	1	Below
Vinyl chloride	0.39	<0.39	ug/L	2	Below	2	Below
Xylene (Total)	0.25	<0.25	ug/L	10000	Below	1000	Below
900.0 Gross Alpha/Beta Analytical Method: EPA 900.0							
Gross Alpha	1.21	1.21U	pCi/L	15	Below	15	Below
Gross Beta	1.87	1.87U	pCi/L	50	Below	50	Below
903.1 Radium 226 Analytical Method: EPA 903.1							
Radium-226	0.684	0.684U	pCi/L				
904.0 Radium 228 Analytical Method: EPA 904.0							
Radium-228	0.808	0.808U	pCi/L				
300.1 Oxihalide IC Anions 14d Analytical Method: EPA 300.1							
Chlorite	1.3	<1.3	ug/L	1000	Below	1000	Below
335.4 Cyanide, Total Analytical Method: EPA 335.4 Preparation Method: EPA 335.4							
Cyanide	0.0050	<0.0050	mg/L	0.1	Below	0.1	Below
353.2 Nitrogen, NO2/NO3 Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	0.025	<0.025	mg/L	10	Below	10	Below
Nitrogen, Nitrate	0.025	<0.025	mg/L				
Nitrogen, Nitrite	0.025	<0.025	mg/L				
420.4 Phenolics, Total Low Lvl Analytical Method: EPA 420.4							

04/10/2019 22:56:04

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Project ID: 1903065

Lab ID: 35454766001

Received 03/18/2019 08:30

Pace Project 35454766

Collected: 03/18/2019 08:30

Matrix: Drinking Water

Parameters	Report Limit	Results	Units	FDA Limit	Above/Below Limit	IBWA Limit	Above/Below Limit
420.4 Phenolics, Total Low Lvl							
Phenolics, Total Recoverable LL	0.00060	<0.00060	mg/L	0.001	Below	0.001	Below

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Definitions/Qualifiers

Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386) 672-5668

Pace Project 35454766

DEFINITIONS

- DF Dilution Factor
- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting
- U Indicates the compound was analyzed for, but not detected.
- MDL Adjusted Method Detection Limit
- PQL Practical Quantitation Limit
- ND Not Detected at or above adjusted reporting limit.

ANALYTE QUALIFIERS

- IS The internal standard response is below criteria. Results may be biased high.
- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

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Definitions/Glossary

Client: Pace Analytical Services, LLC
Project/Site: 35454766 / 1903065

TestAmerica Job ID: 680-166168-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TestAmerica Savannah

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Analytical Lab Manager

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Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: 35454766 / 1903065

TestAmerica Job ID: 680-166168-1

Client Sample ID: 1903065
Date Collected: 03/18/19 08:30
Date Received: 03/20/19 09:35

Lab Sample ID: 680-166168-1
Matrix: Water

Method: 548.1 - Endothall (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endothall	6.3	U	10	6.3	ug/L		03/25/19 08:01	03/25/19 19:41	1

TestAmerica Savannah

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State Certifications: IL-IDPH-17598; CA-2958; MT-CERT0091; IA-369; VT-VT02199; WI-399016200;

CO-IL100213; MI-9988

Maria Mozden
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT



Pace Analytical Services, L.L.C.
1700 Elm Street
Minneapolis, MN 55414

Drinking Water Analysis Results
2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700
Fax: 612-607-6444

Sample ID.....1903065 Date Collected.....03/18/2019
Client..... PASI Florida Date Received.....03/23/2019
Lab Sample ID..... 35454766001 Date Extracted.....04/04/2019

	Sample 1903065	Method Blank	Lab Spike	Lab Spike Dup
[2,3,7,8-TCDD]	ND	ND	--	--
EDL	1.2 pg/L	2.4 pg/L	--	--
2,3,7,8-TCDD Recovery	--	--	97%	98%
Spike Recovery Limit	--	--	73-146%	73-146%
RPD				0.3%
IS Recovery	77%	49%	71%	81%
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%
CS Recovery	100%	73%	94%	105%
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%
Filename	F190407A_08	F190407A_06	F190407A_03	F190407A_04
Analysis Date	04/07/2019	04/07/2019	04/07/2019	04/07/2019
Analysis Time	05:38	04:48	03:33	03:58
Analyst	JRH	JRH	JRH	JRH
Volume	1.015L	0.966L	0.973L	0.969L
Dilution	NA	NA	NA	NA
ICAL Date	01/16/2019	01/16/2019	01/16/2019	01/16/2019
CCAL Filename	F190407A_02	F190407A_02	F190407A_02	F190407A_02

- ! = Outside the Control Limits
- ND = Not Detected
- EDL = Estimated Detection Limit
- Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A
- RPD = Relative Percent Difference of Lab Spike Recoveries
- IS = Internal Standard [2,3,7,8-TCDD-¹³C₁₂]
- CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

Analyst: *Jessica Hecker*

Project No.....10468058

Report No.....10468058_1613DW_DFR

Page 7 of 7

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Maria Mozdzen
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

PACE001 Pace Analytical Services Inc.
Client SDG: 35454766 GEL Work Order: 474078

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Hope Taylor.

Reviewed by _____



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Maria Mozden
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 10, 2019

Company : Pace Analytical Services Inc.
Address : Pace Analytical Services Inc.- Florida
8 East Tower Circle
Ormond Beach, Florida 32174
Contact: Mr. Jeff Baylor
Project: Sediment Project - Baylor

Client Sample ID: 1903065 Project: PACE00215
Sample ID: 474078001 Client ID: PACE001
Matrix: Drinking Water (Potable)
Collect Date: 18-MAR-19 08:30
Receive Date: 20-MAR-19
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
EPA 537 PFCs by LC-MS/MS "As Received"												
N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	U	ND	1.20	3.63	ng/L	0.0182	1	JLS	03/24/19	1847	1860703	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	U	ND	1.20	3.63	ng/L	0.0182	1					
Perfluorobutanesulfonic acid (PFBS)	U	ND	0.599	1.62	ng/L	0.0182	1					
Perfluorodecanoic acid (PFDA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluoroheptanoic acid (PFHpA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorohexanesulfonic acid (PFHxS)	U	ND	0.599	1.65	ng/L	0.0182	1					
Perfluorohexanoic acid (PFHxA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorononanoic acid (PFNA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorooctanesulfonic acid (PFOS)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorooctanoic acid (PFOA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluorotridecanoic acid (PFTrDA)	U	ND	0.599	1.82	ng/L	0.0182	1					
Perfluoroundecanoic acid (PFUdA)	U	ND	0.599	1.82	ng/L	0.0182	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	NOR1	03/24/19	1106	1860702

The following Analytical Methods were performed:

Method	Description	Analyst Comments
I	EPA 537	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Perfluoro-n-[1,2-13C2] decanoic aci	EPA 537 PFCs by LC-MS/MS "As Received"	4.36 ng/L	4.54	96	(70%-130%)	
Perfluoro-n-[1,2-13C2] octanoic acid	EPA 537 PFCs by LC-MS/MS "As Received"	4.32 ng/L	4.54	95	(70%-130%)	
Perfluoro-n-[2,3,4-13C3] butanoic acid	EPA 537 PFCs by LC-MS/MS "As Received"	4.68 ng/L	4.54	103	(70%-130%)	
Sodium perfluoro-1-[1,2,3,4-13C4]oc	EPA 537 PFCs by LC-MS/MS "As Received"	4.26 ng/L	4.54	94	(70%-130%)	

Notes:

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CO-IL100213; MI-9988

Maria Mozdzen
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT

Definitions/Glossary

Client: Pace Analytical Services, LLC
Project/Site: 35454766/1903065

Job ID: 680-166957-5

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

These commonly used abbreviations may or may not be present in this report.

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Eurofins TestAmerica, Savannah

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Maria Mozdzen
Analytical Lab Manager

IBWA STANDARD OF QUALITY REPORT

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: 35454766/1903065

Job ID: 680-166957-5

Client Sample ID: 1903065
Date Collected: 03/18/19 08:30
Date Received: 04/03/19 08:51

Lab Sample ID: 680-166957-5
Matrix: Drinking Water

Method: 531.1 - Carbamate Pesticides (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldicarb	0.50	U	2.5	0.50	ug/L			04/09/19 22:33	1
Aldicarb sulfone	0.25	U	2.5	0.25	ug/L			04/09/19 22:33	1
Aldicarb sulfoxide	0.25	U	2.5	0.25	ug/L			04/09/19 22:33	1
Carbofuran	0.25	U	2.5	0.25	ug/L			04/09/19 22:33	1
Oxamyl	0.37	U	2.5	0.37	ug/L			04/09/19 22:33	1

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