

October 06, 2017

Bob Walker
H2GO Brunswick Regional Water & Sewer
516 Village Road, NE
Leland, North Carolina 28451

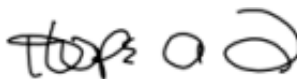
Re: Sample Analysis
Work Order: 432574

Dear Bob Walker:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 13, 2017. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,



Hope Taylor
Project Manager

Purchase Order: signed quote
Enclosures

GEL LABORATORIES LLC

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

Certificate of Analysis Report for

H2GO001 H2GO Brunswick Regional Water & Sewer

Client SDG: 432574 GEL Work Order: 432574

The Qualifiers in this report are defined as follows:

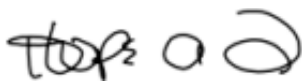
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- h Preparation or preservation holding time was exceeded

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



GEL LABORATORIES LLC

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

Certificate of Analysis

Company : H2GO Brunswick Regional Water & Sewer

Address : 516 Village Road, NE
Leland, North Carolina 28451

Report Date: October 6, 2017

Contact: Bob Walker

Project: **Sample Analysis**

Client Sample ID: Husk L&D
Sample ID: 432574001
Matrix: Water
Collect Date: 01-SEP-17 16:35
Receive Date: 13-SEP-17
Collector: Client

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>NC 6 PFCs by LC-MS/MS "As Received"</i>												
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.0179	1	JLS	09/22/17	0612	1700173	1
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.0179	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	X	7.46			ng/L	0.0179	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	X	11.1			ng/L	0.0179	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	X	367			ng/L	0.0179	25	JLS	09/22/17	0321	1700173	2
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	X	50.9			ng/L	0.0179	25					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.18	3.36	ng/L	0.0179	1	JLS	09/22/17	0612	1700173	3
Fluorotelomer sulfonate 6:2 (6:2 FTS)	BJ	1.69	1.18	3.39	ng/L	0.0179	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.18	3.43	ng/L	0.0179	1					
Perfluorobutanesulfonate (PFBS)		5.97	0.589	1.59	ng/L	0.0179	1					
Perfluorobutyric acid (PFBA)		23.6	0.589	1.79	ng/L	0.0179	1					
Perfluorodecanesulfonate (PFDS)	U	ND	0.589	1.73	ng/L	0.0179	1					
Perfluorodecanoic acid (PFDA)		3.53	0.589	1.79	ng/L	0.0179	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.589	1.79	ng/L	0.0179	1					

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Report Date: October 6, 2017

Contact: Bob Walker

Project: **Sample Analysis**

Client Sample ID: Husk L&D
Sample ID: 432574001

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.589	1.70	ng/L	0.0179	1					
Perfluorohexanesulfonate (PFHxS)		12.5	0.589	1.62	ng/L	0.0179	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.589	1.71	ng/L	0.0179	1					
Perfluorononanoic acid (PFNA)		4.61	0.589	1.79	ng/L	0.0179	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.589	1.66	ng/L	0.0179	1					
Perfluorooctanesulfonate (PFOS)		26.2	0.589	1.79	ng/L	0.0179	1					
Perfluorooctanoic acid (PFOA)		25.1	0.589	1.79	ng/L	0.0179	1					
Perfluoropentanesulfonate (PFPeS)		1.70	0.589	1.68	ng/L	0.0179	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.589	1.79	ng/L	0.0179	1					
Perfluorotridecanoic acid (PFTrDA)	U	ND	0.589	1.79	ng/L	0.0179	1					
Perfluoroundecanoic acid (PFUdA)	J	0.714	0.589	1.79	ng/L	0.0179	1					
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)		164	14.7	44.6	ng/L	0.0179	25	JLS	09/22/17	0321	1700173	4
Perfluoroheptanoic acid (PFHpA)		36.5	14.7	44.6	ng/L	0.0179	25					
Perfluorohexanoic acid (PFHxA)		55.8	14.7	44.6	ng/L	0.0179	25					
Perfluoropentanoic acid (PFPeA)		66.1	14.7	44.6	ng/L	0.0179	25					
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
1,1'-Biphenyl	Uh	ND	3.00	10.0	ug/L	0.001	1	JLD1	09/14/17	1651	1700313	5
1,2,4,5-Tetrachlorobenzene	Uh	ND	3.00	10.0	ug/L	0.001	1					
2,3,4,6-	Uh	ND	3.00	10.0	ug/L	0.001	1					

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Husk L&D
Sample ID: 432574001

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
Tetrachlorophenol												
2,4,5-Trichlorophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
2,4,6-Trichlorophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
2,4-Dichlorophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
2,4-Dimethylphenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
2,4-Dinitrophenol	Uh	ND	5.00	20.0	ug/L	0.001	1					
2,4-Dinitrotoluene	Uh	ND	3.00	10.0	ug/L	0.001	1					
2,6-Dinitrotoluene	Uh	ND	3.00	10.0	ug/L	0.001	1					
2-Chloronaphthalene	Uh	ND	0.410	1.00	ug/L	0.001	1					
2-Chlorophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
2-Methyl-4,6-dinitrophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
2-Methylnaphthalene	Uh	ND	0.300	1.00	ug/L	0.001	1					
2-Nitrophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
3,3'-Dichlorobenzidine	Uh	ND	3.00	10.0	ug/L	0.001	1					
4-Bromophenylphenylether	Uh	ND	3.00	10.0	ug/L	0.001	1					
4-Chloro-3-methylphenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
4-Chloroaniline	Uh	ND	3.30	10.0	ug/L	0.001	1					
4-Chlorophenylphenylether	Uh	ND	3.00	10.0	ug/L	0.001	1					
4-Nitrophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
Acenaphthene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Acenaphthylene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Acetophenone	Uh	ND	3.00	10.0	ug/L	0.001	1					
Anthracene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Atrazine	Uh	ND	3.00	10.0	ug/L	0.001	1					
Benzaldehyde	Uh	ND	3.00	10.0	ug/L	0.001	1					
Benzo(a)anthracene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Benzo(a)pyrene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Benzo(b)fluoranthene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Benzo(ghi)perylene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Benzo(k)fluoranthene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Butylbenzylphthalate	Uh	ND	3.00	10.0	ug/L	0.001	1					
Caprolactam	Uh	ND	3.00	10.0	ug/L	0.001	1					
Carbazole	Uh	ND	0.300	1.00	ug/L	0.001	1					

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Address : 516 Village Road, NE
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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Husk L&D
Sample ID: 432574001

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
Chrysene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Di-n-butylphthalate	Uh	ND	3.00	10.0	ug/L	0.001	1					
Di-n-octylphthalate	Uh	ND	3.00	10.0	ug/L	0.001	1					
Dibenzo(a,h)anthracene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Dibenzofuran	Uh	ND	3.00	10.0	ug/L	0.001	1					
Diethylphthalate	Uh	ND	3.00	10.0	ug/L	0.001	1					
Dimethylphthalate	Uh	ND	3.00	10.0	ug/L	0.001	1					
Diphenylamine	Uh	ND	3.00	10.0	ug/L	0.001	1					
Fluoranthene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Fluorene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Hexachlorobenzene	Uh	ND	3.00	10.0	ug/L	0.001	1					
Hexachlorobutadiene	Uh	ND	3.00	10.0	ug/L	0.001	1					
Hexachlorocyclopentadiene	Uh	ND	3.00	10.0	ug/L	0.001	1					
Hexachloroethane	Uh	ND	3.00	10.0	ug/L	0.001	1					
Indeno(1,2,3-cd)pyrene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Isophorone	Uh	ND	3.50	10.0	ug/L	0.001	1					
N-Nitrosodipropylamine	Uh	ND	3.00	10.0	ug/L	0.001	1					
Naphthalene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Nitrobenzene	Uh	ND	3.00	10.0	ug/L	0.001	1					
Pentachlorophenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
Phenanthrene	Uh	ND	0.300	1.00	ug/L	0.001	1					
Phenol	Uh	ND	3.00	10.0	ug/L	0.001	1					
Pyrene	Uh	ND	0.300	1.00	ug/L	0.001	1					
bis(2-Chloro-1-methylethyl)ether	Uh	ND	3.00	10.0	ug/L	0.001	1					
bis(2-Chloroethoxy)methane	Uh	ND	3.00	10.0	ug/L	0.001	1					
bis(2-Chloroethyl) ether	Uh	ND	3.00	10.0	ug/L	0.001	1					
bis(2-Ethylhexyl)phthalate	Uh	ND	3.00	10.0	ug/L	0.001	1					
m,p-Cresols	Uh	ND	3.70	10.0	ug/L	0.001	1					
m-Nitroaniline	Uh	ND	3.00	10.0	ug/L	0.001	1					
o-Cresol	Uh	ND	3.00	10.0	ug/L	0.001	1					
o-Nitroaniline	Uh	ND	3.00	10.0	ug/L	0.001	1					
p-Nitroaniline	Uh	ND	3.00	10.0	ug/L	0.001	1					
Surrogate/Tracer recovery		Result	Nominal	Recovery%	Acceptable Limits			Date Time:	09/14/17 16 51			

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Husk L&D
Sample ID: 432574001

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Semi-Volatile-GC/MS

SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"

Phenol-d5	26.0 ug/L	100	26	(15%-91%)
p-Terphenyl-d14	38.0 ug/L	50.0	76	(36%-121%)
2-Fluorobiphenyl	39.0 ug/L	50.0	78	(32%-112%)
Nitrobenzene-d5	39.7 ug/L	50.0	79	(36%-115%)
2-Fluorophenol	42.0 ug/L	100	42	(15%-88%)
2,4,6-Tribromophenol	70.9 ug/L	100	71	(32%-124%)

Tentatively Identified Compound (TIC)	CAS No.	RT	Est. Concentration	Fit	Qual	Date Time:	09/14/17 16 51
unknown		2.179	4.87 ug/L	0	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	09/14/17	0830	1700171
SW846 3510C	3510C BNA Liq. Prep-8270 Analysis	DXF4	09/14/17	0430	1700312

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 537	
2	EPA 537	
3	EPA 537	
4	EPA 537	
5	SW846 3510C/8270D	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451

Report Date: October 6, 2017

Contact: Bob Walker
Project: **Sample Analysis**

Client Sample ID: Husk L&D Trip Blank
Sample ID: 432574002
Matrix: Water
Collect Date: 01-SEP-17 16:35
Receive Date: 13-SEP-17
Collector: Client

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>NC 6 PFCs by LC-MS/MS "As Received"</i>												
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.0198	1	JLS	09/22/17	0342	1700173	1
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.0198	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	UX	ND			ng/L	0.0198	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	UX	ND			ng/L	0.0198	1					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	UX	ND			ng/L	0.0198	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	UX	ND			ng/L	0.0198	1					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	U	ND	0.654	1.98	ng/L	0.0198	1	JLS	09/22/17	0342	1700173	2
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.31	3.73	ng/L	0.0198	1					
Fluorotelomer sulfonate 6:2 (6:2 FTS)	U	ND	1.31	3.76	ng/L	0.0198	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.31	3.80	ng/L	0.0198	1					
Perfluorobutanesulfonate (PFBS)	U	ND	0.654	1.76	ng/L	0.0198	1					
Perfluorobutyric acid (PFBA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorodecanesulfonate	U	ND	0.654	1.92	ng/L	0.0198	1					

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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Husk L&D Trip Blank
Sample ID: 432574002

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
e (PFDS)												
Perfluorodecanoic acid	U	ND	0.654	1.98	ng/L	0.0198	1					
(PFDA)												
Perfluorododecanoic acid (PFDoA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.654	1.88	ng/L	0.0198	1					
Perfluoroheptanoic acid (PFHpA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorohexanesulfonate (PFHxS)	U	ND	0.654	1.80	ng/L	0.0198	1					
Perfluorohexanoic acid (PFHxA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.654	1.90	ng/L	0.0198	1					
Perfluorononanoic acid (PFNA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.654	1.84	ng/L	0.0198	1					
Perfluorooctanesulfonate (PFOS)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorooctanoic acid (PFOA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluoropentanesulfonate (PFPeS)	U	ND	0.654	1.86	ng/L	0.0198	1					
Perfluoropentanoic acid (PFPeA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluorotridecanoic acid (PFTTrDA)	U	ND	0.654	1.98	ng/L	0.0198	1					
Perfluoroundecanoic acid (PFUdA)	U	ND	0.654	1.98	ng/L	0.0198	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	09/14/17	0830	1700171

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Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Husk L&D Trip Blank
Sample ID: 432574002

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	EPA 537		
2	EPA 537		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451

Report Date: October 6, 2017

Contact: Bob Walker
Project: **Sample Analysis**

Client Sample ID: Lock & Dam #1
Sample ID: 432574003
Matrix: Water
Collect Date: 07-SEP-17 10:30
Receive Date: 13-SEP-17
Collector: Client

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>NC 6 PFCs by LC-MS/MS "As Received"</i>												
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.0195	1	JLS	09/22/17	0633	1700173	1
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.0195	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	X	0.732			ng/L	0.0195	1					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	X	11.2			ng/L	0.0195	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	X	3.16			ng/L	0.0195	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	X	47.6			ng/L	0.0195	5	JLS	09/22/17	0446	1700173	2
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.28	3.66	ng/L	0.0195	1	JLS	09/22/17	0633	1700173	3
Fluorotelomer sulfonate 8:2 (8:2 FTS)	J	1.74	1.28	3.74	ng/L	0.0195	1					
Perfluorobutanesulfonate (PFBS)		5.27	0.642	1.73	ng/L	0.0195	1					
Perfluorobutyric acid (PFBA)		18.9	0.642	1.95	ng/L	0.0195	1					
Perfluorodecanesulfonate (PFDS)	U	ND	0.642	1.89	ng/L	0.0195	1					
Perfluorodecanoic acid (PFDA)		3.02	0.642	1.95	ng/L	0.0195	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.642	1.95	ng/L	0.0195	1					
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.642	1.85	ng/L	0.0195	1					

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Lock & Dam #1
Sample ID: 432574003

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Perfluoroheptanoic acid (PFHpA)		29.0	0.642	1.95	ng/L	0.0195	1					
Perfluorohexanesulfonate (PFHxS)		9.97	0.642	1.77	ng/L	0.0195	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.642	1.87	ng/L	0.0195	1					
Perfluorononanoic acid (PFNA)		4.11	0.642	1.95	ng/L	0.0195	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.642	1.81	ng/L	0.0195	1					
Perfluorooctanesulfonate (PFOS)		20.0	0.642	1.95	ng/L	0.0195	1					
Perfluorooctanoic acid (PFOA)		18.4	0.642	1.95	ng/L	0.0195	1					
Perfluoropentanesulfonate (PFPeS)	J	1.51	0.642	1.83	ng/L	0.0195	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.642	1.95	ng/L	0.0195	1					
Perfluorotridecanoic acid (PFTTrDA)	U	ND	0.642	1.95	ng/L	0.0195	1					
Perfluoroundecanoic acid (PFUdA)	J	0.657	0.642	1.95	ng/L	0.0195	1					
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)		46.5	3.21	9.73	ng/L	0.0195	5	JLS	09/22/17	0446	1700173	4
Fluorotelomer sulfonate 6:2 (6:2 FTS)	B	113	6.42	18.5	ng/L	0.0195	5					
Perfluorohexanoic acid (PFHxA)		45.5	3.21	9.73	ng/L	0.0195	5					
Perfluoropentanoic acid (PFPeA)		48.5	3.21	9.73	ng/L	0.0195	5					
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
1,1'-Biphenyl	U	ND	3.00	10.0	ug/L	0.001	1	JLD1	09/14/17	1722	1700313	5
1,2,4,5-Tetrachlorobenzene	U	ND	3.00	10.0	ug/L	0.001	1					
2,3,4,6-	U	ND	3.00	10.0	ug/L	0.001	1					

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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Lock & Dam #1
Sample ID: 432574003

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"												
Tetrachlorophenol												
2,4,5-Trichlorophenol	U	ND	3.00	10.0	ug/L	0.001	1					
2,4,6-Trichlorophenol	U	ND	3.00	10.0	ug/L	0.001	1					
2,4-Dichlorophenol	U	ND	3.00	10.0	ug/L	0.001	1					
2,4-Dimethylphenol	U	ND	3.00	10.0	ug/L	0.001	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/L	0.001	1					
2,4-Dinitrotoluene	U	ND	3.00	10.0	ug/L	0.001	1					
2,6-Dinitrotoluene	U	ND	3.00	10.0	ug/L	0.001	1					
2-Chloronaphthalene	U	ND	0.410	1.00	ug/L	0.001	1					
2-Chlorophenol	U	ND	3.00	10.0	ug/L	0.001	1					
2-Methyl-4,6-dinitrophenol	U	ND	3.00	10.0	ug/L	0.001	1					
2-Methylnaphthalene	U	ND	0.300	1.00	ug/L	0.001	1					
2-Nitrophenol	U	ND	3.00	10.0	ug/L	0.001	1					
3,3'-Dichlorobenzidine	U	ND	3.00	10.0	ug/L	0.001	1					
4-Bromophenylphenylether	U	ND	3.00	10.0	ug/L	0.001	1					
4-Chloro-3-methylphenol	U	ND	3.00	10.0	ug/L	0.001	1					
4-Chloroaniline	U	ND	3.30	10.0	ug/L	0.001	1					
4-Chlorophenylphenylether	U	ND	3.00	10.0	ug/L	0.001	1					
4-Nitrophenol	U	ND	3.00	10.0	ug/L	0.001	1					
Acenaphthene	U	ND	0.300	1.00	ug/L	0.001	1					
Acenaphthylene	U	ND	0.300	1.00	ug/L	0.001	1					
Acetophenone	U	ND	3.00	10.0	ug/L	0.001	1					
Anthracene	U	ND	0.300	1.00	ug/L	0.001	1					
Atrazine	U	ND	3.00	10.0	ug/L	0.001	1					
Benzaldehyde	U	ND	3.00	10.0	ug/L	0.001	1					
Benzo(a)anthracene	U	ND	0.300	1.00	ug/L	0.001	1					
Benzo(a)pyrene	U	ND	0.300	1.00	ug/L	0.001	1					
Benzo(b)fluoranthene	U	ND	0.300	1.00	ug/L	0.001	1					
Benzo(ghi)perylene	U	ND	0.300	1.00	ug/L	0.001	1					
Benzo(k)fluoranthene	U	ND	0.300	1.00	ug/L	0.001	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.001	1					
Caprolactam	U	ND	3.00	10.0	ug/L	0.001	1					
Carbazole	U	ND	0.300	1.00	ug/L	0.001	1					

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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Lock & Dam #1
Sample ID: 432574003

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
Chrysene	U	ND	0.300	1.00	ug/L	0.001	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.001	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.001	1					
Dibenzo(a,h)anthracene	U	ND	0.300	1.00	ug/L	0.001	1					
Dibenzofuran	U	ND	3.00	10.0	ug/L	0.001	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.001	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.001	1					
Diphenylamine	U	ND	3.00	10.0	ug/L	0.001	1					
Fluoranthene	U	ND	0.300	1.00	ug/L	0.001	1					
Fluorene	U	ND	0.300	1.00	ug/L	0.001	1					
Hexachlorobenzene	U	ND	3.00	10.0	ug/L	0.001	1					
Hexachlorobutadiene	U	ND	3.00	10.0	ug/L	0.001	1					
Hexachlorocyclopentadiene	U	ND	3.00	10.0	ug/L	0.001	1					
Hexachloroethane	U	ND	3.00	10.0	ug/L	0.001	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.300	1.00	ug/L	0.001	1					
Isophorone	U	ND	3.50	10.0	ug/L	0.001	1					
N-Nitrosodipropylamine	U	ND	3.00	10.0	ug/L	0.001	1					
Naphthalene	U	ND	0.300	1.00	ug/L	0.001	1					
Nitrobenzene	U	ND	3.00	10.0	ug/L	0.001	1					
Pentachlorophenol	U	ND	3.00	10.0	ug/L	0.001	1					
Phenanthrene	U	ND	0.300	1.00	ug/L	0.001	1					
Phenol	U	ND	3.00	10.0	ug/L	0.001	1					
Pyrene	U	ND	0.300	1.00	ug/L	0.001	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	3.00	10.0	ug/L	0.001	1					
bis(2-Chloroethoxy)methane	U	ND	3.00	10.0	ug/L	0.001	1					
bis(2-Chloroethyl) ether	U	ND	3.00	10.0	ug/L	0.001	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.001	1					
m,p-Cresols	U	ND	3.70	10.0	ug/L	0.001	1					
m-Nitroaniline	U	ND	3.00	10.0	ug/L	0.001	1					
o-Cresol	U	ND	3.00	10.0	ug/L	0.001	1					
o-Nitroaniline	U	ND	3.00	10.0	ug/L	0.001	1					
p-Nitroaniline	U	ND	3.00	10.0	ug/L	0.001	1					
Surrogate/Tracer recovery		Result	Nominal	Recovery%	Acceptable Limits			Date Time:	09/14/17 17 22			

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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Lock & Dam #1
Sample ID: 432574003

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Semi-Volatile-GC/MS

SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"

Phenol-d5	22.3 ug/L	100	22	(15%-91%)
p-Terphenyl-d14	33.1 ug/L	50.0	66	(36%-121%)
Nitrobenzene-d5	35.1 ug/L	50.0	70	(36%-115%)
2-Fluorobiphenyl	35.3 ug/L	50.0	71	(32%-112%)
2-Fluorophenol	36.2 ug/L	100	36	(15%-88%)
2,4,6-Tribromophenol	62.0 ug/L	100	62	(32%-124%)

Tentatively Identified Compound (TIC)	CAS No.	RT	Est. Concentration	Fit	Qual	Date Time:	09/14/17 17 22
unknown		2.179	4.32 ug/L	0	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	09/14/17	0830	1700171
SW846 3510C	3510C BNA Liq. Prep-8270 Analysis	DXF4	09/14/17	0430	1700312

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 537	
2	EPA 537	
3	EPA 537	
4	EPA 537	
5	SW846 3510C/8270D	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Lock & Dam #1 Trip Blank
Sample ID: 432574004
Matrix: Water
Collect Date: 07-SEP-17 10:30
Receive Date: 13-SEP-17
Collector: Client

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>NC 6 PFCs by LC-MS/MS "As Received"</i>												
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.0195	1	JLS	09/22/17	1009	1700173	1
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.0195	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	UX	ND			ng/L	0.0195	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	UX	ND			ng/L	0.0195	1					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	UX	ND			ng/L	0.0195	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	UX	ND			ng/L	0.0195	1					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	U	ND	0.643	1.95	ng/L	0.0195	1	JLS	09/22/17	1009	1700173	2
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.29	3.66	ng/L	0.0195	1					
Fluorotelomer sulfonate 6:2 (6:2 FTS)	U	ND	1.29	3.70	ng/L	0.0195	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.29	3.74	ng/L	0.0195	1					
Perfluorobutanesulfonate (PFBS)	U	ND	0.643	1.73	ng/L	0.0195	1					
Perfluorobutyric acid (PFBA)	U	ND	0.643	1.95	ng/L	0.0195	1					
Perfluorodecanesulfonate	U	ND	0.643	1.89	ng/L	0.0195	1					

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Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Lock & Dam #1 Trip Blank
Sample ID: 432574004

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
e (PFDS)												
Perfluorodecanoic acid	U	ND	0.643	1.95	ng/L	0.0195	1					
(PFDA)												
Perfluorododecanoic	U	ND	0.643	1.95	ng/L	0.0195	1					
acid (PFDoA)												
Perfluoroheptanesulfona	U	ND	0.643	1.85	ng/L	0.0195	1					
te (PFHpS)												
Perfluoroheptanoic acid	U	ND	0.643	1.95	ng/L	0.0195	1					
(PFHpA)												
Perfluorohexanesulfonat	U	ND	0.643	1.77	ng/L	0.0195	1					
e (PFHxS)												
Perfluorohexanoic acid	U	ND	0.643	1.95	ng/L	0.0195	1					
(PFHxA)												
Perfluorononanesulfonat	U	ND	0.643	1.87	ng/L	0.0195	1					
e (PFNS)												
Perfluorononanoic acid	U	ND	0.643	1.95	ng/L	0.0195	1					
(PFNA)												
Perfluorooctanesulfona	U	ND	0.643	1.81	ng/L	0.0195	1					
mide (PFOSA)												
Perfluorooctanesulfonat	U	ND	0.643	1.95	ng/L	0.0195	1					
e (PFOS)												
Perfluorooctanoic acid	U	ND	0.643	1.95	ng/L	0.0195	1					
(PFOA)												
Perfluoropentanesulfona	U	ND	0.643	1.83	ng/L	0.0195	1					
te (PFPeS)												
Perfluoropentanoic acid	U	ND	0.643	1.95	ng/L	0.0195	1					
(PFPeA)												
Perfluorotetradecanoic	U	ND	0.643	1.95	ng/L	0.0195	1					
acid (PFTeDA)												
Perfluorotridecanoic	U	ND	0.643	1.95	ng/L	0.0195	1					
acid (PFTrDA)												
Perfluoroundecanoic	U	ND	0.643	1.95	ng/L	0.0195	1					
acid (PFUdA)												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	09/14/17	0830	1700171

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Report Date: October 6, 2017

Contact: Bob Walker

Project: **Sample Analysis**

Client Sample ID: Lock & Dam #1 Trip Blank
Sample ID: 432574004

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	EPA 537		
2	EPA 537		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Address : 516 Village Road, NE
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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault
Sample ID: 432574005
Matrix: Water
Collect Date: 08-SEP-17 14:05
Receive Date: 13-SEP-17
Collector: Client

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>NC 6 PFCs by LC-MS/MS "As Received"</i>												
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.018	1	JLS	09/22/17	0655	1700173	1
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.018	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	X	34.5			ng/L	0.018	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	X	0.620			ng/L	0.018	1					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	X	9.40			ng/L	0.018	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	X	2.79			ng/L	0.018	1					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.19	3.39	ng/L	0.018	1	JLS	09/22/17	0655	1700173	2
Fluorotelomer sulfonate 6:2 (6:2 FTS)	U	ND	1.19	3.42	ng/L	0.018	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.19	3.46	ng/L	0.018	1					
Perfluorobutanesulfonate (PFBS)		5.41	0.594	1.60	ng/L	0.018	1					
Perfluorobutyric acid (PFBA)		19.3	0.594	1.80	ng/L	0.018	1					
Perfluorodecanesulfonate (PFDS)	U	ND	0.594	1.75	ng/L	0.018	1					
Perfluorodecanoic acid (PFDA)		2.36	0.594	1.80	ng/L	0.018	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.594	1.80	ng/L	0.018	1					

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Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault
Sample ID: 432574005
Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.594	1.71	ng/L	0.018	1					
Perfluoroheptanoic acid (PFHpA)		28.3	0.594	1.80	ng/L	0.018	1					
Perfluorohexanesulfonate (PFHxS)		10.2	0.594	1.64	ng/L	0.018	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.594	1.73	ng/L	0.018	1					
Perfluorononanoic acid (PFNA)		3.07	0.594	1.80	ng/L	0.018	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.594	1.67	ng/L	0.018	1					
Perfluorooctanesulfonate (PFOS)		15.1	0.594	1.80	ng/L	0.018	1					
Perfluorooctanoic acid (PFOA)		16.3	0.594	1.80	ng/L	0.018	1					
Perfluoropentanesulfonate (PFPeS)	J	1.48	0.594	1.69	ng/L	0.018	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.594	1.80	ng/L	0.018	1					
Perfluorotridecanoic acid (PFTTrDA)	U	ND	0.594	1.80	ng/L	0.018	1					
Perfluoroundecanoic acid (PFUdA)	U	ND	0.594	1.80	ng/L	0.018	1					
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)		46.4	2.97	9.00	ng/L	0.018	5	JLS	09/22/17	0529	1700173	3
Perfluorohexanoic acid (PFHxA)		43.6	2.97	9.00	ng/L	0.018	5					
Perfluoropentanoic acid (PFPeA)		45.1	2.97	9.00	ng/L	0.018	5					
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
1,1'-Biphenyl	U	ND	2.86	9.52	ug/L	0.000952	1	JLD1	09/14/17	1753	1700313	4
1,2,4,5-Tetrachlorobenzene	U	ND	2.86	9.52	ug/L	0.000952	1					
2,3,4,6-	U	ND	2.86	9.52	ug/L	0.000952	1					

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault
Sample ID: 432574005

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"												
Tetrachlorophenol												
2,4,5-Trichlorophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
2,4,6-Trichlorophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
2,4-Dichlorophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
2,4-Dimethylphenol	U	ND	2.86	9.52	ug/L	0.000952	1					
2,4-Dinitrophenol	U	ND	4.76	19.0	ug/L	0.000952	1					
2,4-Dinitrotoluene	U	ND	2.86	9.52	ug/L	0.000952	1					
2,6-Dinitrotoluene	U	ND	2.86	9.52	ug/L	0.000952	1					
2-Chloronaphthalene	U	ND	0.390	0.952	ug/L	0.000952	1					
2-Chlorophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
2-Methyl-4,6-dinitrophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
2-Methylnaphthalene	U	ND	0.286	0.952	ug/L	0.000952	1					
2-Nitrophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
3,3'-Dichlorobenzidine	U	ND	2.86	9.52	ug/L	0.000952	1					
4-Bromophenylphenylether	U	ND	2.86	9.52	ug/L	0.000952	1					
4-Chloro-3-methylphenol	U	ND	2.86	9.52	ug/L	0.000952	1					
4-Chloroaniline	U	ND	3.14	9.52	ug/L	0.000952	1					
4-Chlorophenylphenylether	U	ND	2.86	9.52	ug/L	0.000952	1					
4-Nitrophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
Acenaphthene	U	ND	0.286	0.952	ug/L	0.000952	1					
Acenaphthylene	U	ND	0.286	0.952	ug/L	0.000952	1					
Acetophenone	U	ND	2.86	9.52	ug/L	0.000952	1					
Anthracene	U	ND	0.286	0.952	ug/L	0.000952	1					
Atrazine	U	ND	2.86	9.52	ug/L	0.000952	1					
Benzaldehyde	U	ND	2.86	9.52	ug/L	0.000952	1					
Benzo(a)anthracene	U	ND	0.286	0.952	ug/L	0.000952	1					
Benzo(a)pyrene	U	ND	0.286	0.952	ug/L	0.000952	1					
Benzo(b)fluoranthene	U	ND	0.286	0.952	ug/L	0.000952	1					
Benzo(ghi)perylene	U	ND	0.286	0.952	ug/L	0.000952	1					
Benzo(k)fluoranthene	U	ND	0.286	0.952	ug/L	0.000952	1					
Butylbenzylphthalate	U	ND	2.86	9.52	ug/L	0.000952	1					
Caprolactam	U	ND	2.86	9.52	ug/L	0.000952	1					
Carbazole	U	ND	0.286	0.952	ug/L	0.000952	1					

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault
Sample ID: 432574005

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
<i>SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"</i>												
Chrysene	U	ND	0.286	0.952	ug/L	0.000952	1					
Di-n-butylphthalate	U	ND	2.86	9.52	ug/L	0.000952	1					
Di-n-octylphthalate	U	ND	2.86	9.52	ug/L	0.000952	1					
Dibenzo(a,h)anthracene	U	ND	0.286	0.952	ug/L	0.000952	1					
Dibenzofuran	U	ND	2.86	9.52	ug/L	0.000952	1					
Diethylphthalate	U	ND	2.86	9.52	ug/L	0.000952	1					
Dimethylphthalate	U	ND	2.86	9.52	ug/L	0.000952	1					
Diphenylamine	U	ND	2.86	9.52	ug/L	0.000952	1					
Fluoranthene	U	ND	0.286	0.952	ug/L	0.000952	1					
Fluorene	U	ND	0.286	0.952	ug/L	0.000952	1					
Hexachlorobenzene	U	ND	2.86	9.52	ug/L	0.000952	1					
Hexachlorobutadiene	U	ND	2.86	9.52	ug/L	0.000952	1					
Hexachlorocyclopentadiene	U	ND	2.86	9.52	ug/L	0.000952	1					
Hexachloroethane	U	ND	2.86	9.52	ug/L	0.000952	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.286	0.952	ug/L	0.000952	1					
Isophorone	U	ND	3.33	9.52	ug/L	0.000952	1					
N-Nitrosodipropylamine	U	ND	2.86	9.52	ug/L	0.000952	1					
Naphthalene	U	ND	0.286	0.952	ug/L	0.000952	1					
Nitrobenzene	U	ND	2.86	9.52	ug/L	0.000952	1					
Pentachlorophenol	U	ND	2.86	9.52	ug/L	0.000952	1					
Phenanthrene	U	ND	0.286	0.952	ug/L	0.000952	1					
Phenol	U	ND	2.86	9.52	ug/L	0.000952	1					
Pyrene	U	ND	0.286	0.952	ug/L	0.000952	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	2.86	9.52	ug/L	0.000952	1					
bis(2-Chloroethoxy)methane	U	ND	2.86	9.52	ug/L	0.000952	1					
bis(2-Chloroethyl) ether	U	ND	2.86	9.52	ug/L	0.000952	1					
bis(2-Ethylhexyl)phthalate	U	ND	2.86	9.52	ug/L	0.000952	1					
m,p-Cresols	U	ND	3.52	9.52	ug/L	0.000952	1					
m-Nitroaniline	U	ND	2.86	9.52	ug/L	0.000952	1					
o-Cresol	U	ND	2.86	9.52	ug/L	0.000952	1					
o-Nitroaniline	U	ND	2.86	9.52	ug/L	0.000952	1					
p-Nitroaniline	U	ND	2.86	9.52	ug/L	0.000952	1					
Surrogate/Tracer recovery		Result	Nominal	Recovery%	Acceptable Limits			Date Time:	09/14/17 17 53			

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
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Address : 516 Village Road, NE
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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault
Sample ID: 432574005

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Semi-Volatile-GC/MS

SW846 3510C/8270D SVOA (Separatory Funnel) "As Received"

Phenol-d5	16.3 ug/L	95.2	17	(15%-91%)
Nitrobenzene-d5	34.4 ug/L	47.6	72	(36%-115%)
p-Terphenyl-d14	35.3 ug/L	47.6	74	(36%-121%)
2-Fluorophenol	37.7 ug/L	95.2	40	(15%-88%)
2-Fluorobiphenyl	38.4 ug/L	47.6	81	(32%-112%)
2,4,6-Tribromophenol	68.6 ug/L	95.2	72	(32%-124%)

<i>Tentatively Identified Compound (TIC)</i>	<i>CAS No.</i>	<i>RT</i>	<i>Est. Concentration</i>	<i>Fit</i>	<i>Qual</i>	<i>Date Time:</i>	<i>09/14/17 17 53</i>
unknown		2.259	18.3 ug/L	0	J		
Methane, dibromochloro-	000124-48-1	3.324	5.1 ug/L	96	NJ		
unknown		3.382	136 ug/L	0	J		
Butane, 2,3-dichloro-2-methyl-	000507-45-9	3.586	4.61 ug/L	90	NJ		
unknown		4.265	23.8 ug/L	0	J		
Methane, tribromo-	000075-25-2	4.377	4.27 ug/L	95	NJ		
unknown		4.661	4.07 ug/L	0	J		
unknown		5.458	3.82 ug/L	0	J		
unknown		20.867	95.1 ug/L	0	J		
unknown		21.61	168 ug/L	0	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	09/14/17	0830	1700171
SW846 3510C	3510C BNA Liq. Prep-8270 Analysis	DXF4	09/14/17	0430	1700312

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 537	
2	EPA 537	
3	EPA 537	
4	SW846 3510C/8270D	

Notes:

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
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Address : 516 Village Road, NE
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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault
Sample ID: 432574005

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault Trip Blank
Sample ID: 432574006
Matrix: Water
Collect Date: 08-SEP-17 14:05
Receive Date: 13-SEP-17
Collector: Client

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LCMSMS PFCs												
<i>NC 6 PFCs by LC-MS/MS "As Received"</i>												
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.0199	1	JLS	09/22/17	0550	1700173	1
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.0199	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	UX	ND			ng/L	0.0199	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	UX	ND			ng/L	0.0199	1					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	UX	ND			ng/L	0.0199	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	UX	ND			ng/L	0.0199	1					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	U	ND	0.657	1.99	ng/L	0.0199	1	JLS	09/22/17	0550	1700173	2
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.31	3.74	ng/L	0.0199	1					
Fluorotelomer sulfonate 6:2 (6:2 FTS)	B	25.7	1.31	3.78	ng/L	0.0199	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.31	3.82	ng/L	0.0199	1					
Perfluorobutanesulfonate (PFBS)	U	ND	0.657	1.77	ng/L	0.0199	1					
Perfluorobutyric acid (PFBA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorodecanesulfonate	U	ND	0.657	1.93	ng/L	0.0199	1					

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer
Address : 516 Village Road, NE
Leland, North Carolina 28451
Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: Buckeye Vault Trip Blank
Sample ID: 432574006

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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LCMSMS PFCs

PFOA, PFOS by LC-MS/MS "As Received"

e (PFDS)												
Perfluorodecanoic acid (PFDA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.657	1.89	ng/L	0.0199	1					
Perfluoroheptanoic acid (PFHpA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorohexanesulfonate (PFHxS)	U	ND	0.657	1.81	ng/L	0.0199	1					
Perfluorohexanoic acid (PFHxA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.657	1.91	ng/L	0.0199	1					
Perfluorononanoic acid (PFNA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.657	1.85	ng/L	0.0199	1					
Perfluorooctanesulfonate (PFOS)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorooctanoic acid (PFOA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluoropentanesulfonate (PFPeS)	U	ND	0.657	1.87	ng/L	0.0199	1					
Perfluoropentanoic acid (PFPeA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluorotridecanoic acid (PFTTrDA)	U	ND	0.657	1.99	ng/L	0.0199	1					
Perfluoroundecanoic acid (PFUdA)	U	ND	0.657	1.99	ng/L	0.0199	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	09/14/17	0830	1700171

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Certificate of Analysis

Company : H2GO Brunswick Regional Water &
Sewer

Address : 516 Village Road, NE
Leland, North Carolina 28451

Report Date: October 6, 2017

Contact: Bob Walker

Project: **Sample Analysis**

Client Sample ID: Buckeye Vault Trip Blank
Sample ID: 432574006

Project: H2GO00117
Client ID: H2GO001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	EPA 537		
2	EPA 537		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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QC Summary

Report Date: October 6, 2017

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H2GO Brunswick Regional Water & Sewer
516 Village Road, NE
Leland, North Carolina

Contact: Bob Walker

Workorder: 432574

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1700173										
QC1203873951 LCS											
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	19.8			17.2	ng/L		87	(70%-130%)	JLS	09/22/17	09:26
Fluorotelomer sulfonate 4:2 (4:2 FTS)	18.5			18.6	ng/L		101	(70%-130%)			
Fluorotelomer sulfonate 6:2 (6:2 FTS)	18.8		B	19.1	ng/L		102	(70%-130%)			
Fluorotelomer sulfonate 8:2 (8:2 FTS)	19.0			19.4	ng/L		102	(70%-130%)			
Perfluorobutanesulfonate (PFBS)	17.5			20.2	ng/L		115	(70%-130%)			
Perfluorobutyric acid (PFBA)	19.8			20.8	ng/L		105	(70%-130%)			
Perfluorodecanesulfonate (PFDS)	19.1			17.3	ng/L		91	(70%-130%)			
Perfluorodecanoic acid (PFDA)	19.8			20.4	ng/L		103	(70%-130%)			
Perfluorododecanoic acid (PFDoA)	19.8			20.8	ng/L		105	(70%-130%)			
Perfluoroheptanesulfonate (PFHpS)	18.8			18.7	ng/L		100	(70%-130%)			
Perfluoroheptanoic acid (PFHpA)	19.8			21.9	ng/L		111	(70%-130%)			
Perfluorohexanesulfonate (PFHxS)	18.0			19.0	ng/L		106	(70%-130%)			
Perfluorohexanoic acid (PFHxA)	19.8			23.7	ng/L		120	(70%-130%)			

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QC Summary

Workorder: 432574

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch 1700173											
Perfluorononanesulfonate (PFNS)	19.0			20.1	ng/L		106	(70%-130%)	JLS	09/22/17	09:26
Perfluorononanoic acid (PFNA)	19.8			20.4	ng/L		103	(70%-130%)			
Perfluorooctanesulfonamide (PFOSA)	18.3			19.3	ng/L		105	(70%-130%)			
Perfluorooctanesulfonate (PFOS)	19.8			21.0	ng/L		106	(70%-130%)			
Perfluorooctanoic acid (PFOA)	19.8			21.3	ng/L		108	(70%-130%)			
Perfluoropentanesulfonate (PFPeS)	18.6			20.2	ng/L		109	(70%-130%)			
Perfluoropentanoic acid (PFPeA)	19.8			20.6	ng/L		104	(70%-130%)			
Perfluorotetradecanoic acid (PFTeDA)	19.8			20.5	ng/L		104	(70%-130%)			
Perfluorotridecanoic acid (PFTrDA)	19.8			20.5	ng/L		104	(70%-130%)			
Perfluoroundecanoic acid (PFUdA)	19.8			25.4	ng/L		129	(70%-130%)			
QC1203873952 LCSD											
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	19.8			16.0	ng/L	7	81	(0%-30%)		09/22/17	09:47
Fluorotelomer sulfonate 4:2 (4:2 FTS)	18.5			16.7	ng/L	11	91	(0%-30%)			
Fluorotelomer sulfonate 6:2 (6:2 FTS)	18.8		B	20.5	ng/L	7	109	(0%-30%)			
Fluorotelomer sulfonate 8:2 (8:2 FTS)	19.0			21.5	ng/L	11	113	(0%-30%)			
Perfluorobutanesulfonate (PFBS)	17.5			18.9	ng/L	7	108	(0%-30%)			

GEL LABORATORIES LLC

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QC Summary

Workorder: 432574

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1700173										
Perfluorobutyric acid (PFBA)	19.8			19.8	ng/L	5	100	(0%-30%)	JLS	09/22/17	09:47
Perfluorodecanesulfonate (PFDS)	19.1			18.0	ng/L	4	94	(0%-30%)			
Perfluorodecanoic acid (PFDA)	19.8			19.6	ng/L	4	99	(0%-30%)			
Perfluorododecanoic acid (PFDoA)	19.8			19.7	ng/L	5	100	(0%-30%)			
Perfluoroheptanesulfonate (PFHpS)	18.8			16.8	ng/L	11	89	(0%-30%)			
Perfluoroheptanoic acid (PFHpA)	19.8			18.8	ng/L	16	95	(0%-30%)			
Perfluorohexanesulfonate (PFHxS)	18.0			18.3	ng/L	4	102	(0%-30%)			
Perfluorohexanoic acid (PFHxA)	19.8			21.5	ng/L	10	109	(0%-30%)			
Perfluorononanesulfonate (PFNS)	19.0			17.4	ng/L	14	92	(0%-30%)			
Perfluorononanoic acid (PFNA)	19.8			18.2	ng/L	12	92	(0%-30%)			
Perfluorooctanesulfonamide (PFOSA)	18.3			19.1	ng/L	1	104	(0%-30%)			
Perfluorooctanesulfonate (PFOS)	19.8			18.7	ng/L	12	95	(0%-30%)			
Perfluorooctanoic acid (PFOA)	19.8			19.3	ng/L	10	98	(0%-30%)			
Perfluoropentanesulfonate (PFPeS)	18.6			18.3	ng/L	10	98	(0%-30%)			
Perfluoropentanoic acid (PFPeA)	19.8			21.0	ng/L	2	107	(0%-30%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch 1700173											
Perfluorotetradecanoic acid (PFTeDA)	19.8			18.5	ng/L	10	94	(0%-30%)	JLS	09/22/17	09:47
Perfluorotridecanoic acid (PFTTrDA)	19.8			19.4	ng/L	5	98	(0%-30%)			
Perfluoroundecanoic acid (PFUdA)	19.8			20.1	ng/L	23	102	(0%-30%)			
QC1203873950 MB											
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)			U	ND	ng/L					09/22/17	02:16
Fluorotelomer sulfonate 4:2 (4:2 FTS)			U	ND	ng/L						
Fluorotelomer sulfonate 6:2 (6:2 FTS)				22.1	ng/L						
Fluorotelomer sulfonate 8:2 (8:2 FTS)			U	ND	ng/L						
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)			UX	ND	ng/L						
Perfluoro(3,5,7-trioxaooctanoic) acid (PFO3OA)			UX	ND	ng/L						
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)			UX	ND	ng/L						
Perfluoro-2-methoxyacetic acid (PFMOAA)			UX	ND	ng/L						
Perfluoro-3-methoxypropanoic acid (PFMOPrA)			UX	ND	ng/L						
Perfluoro-4-methoxybutanic acid (PFMOBA)			UX	ND	ng/L						
Perfluorobutanesulfonate (PFBS)			U	ND	ng/L						
Perfluorobutyric acid (PFBA)			U	ND	ng/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1700173										
Perfluorodecanesulfonate (PFDS)			U	ND	ng/L				JLS	09/22/17	02:16
Perfluorodecanoic acid (PFDA)			U	ND	ng/L						
Perfluorododecanoic acid (PFDoA)			U	ND	ng/L						
Perfluoroheptanesulfonate (PFHpS)			U	ND	ng/L						
Perfluoroheptanoic acid (PFHpA)			U	ND	ng/L						
Perfluorohexanesulfonate (PFHxS)			U	ND	ng/L						
Perfluorohexanoic acid (PFHxA)			U	ND	ng/L						
Perfluorononanesulfonate (PFNS)			U	ND	ng/L						
Perfluorononanoic acid (PFNA)			U	ND	ng/L						
Perfluorooctanesulfonamide (PFOSA)			U	ND	ng/L						
Perfluorooctanesulfonate (PFOS)			U	ND	ng/L						
Perfluorooctanoic acid (PFOA)			U	ND	ng/L						
Perfluoropentanesulfonate (PFPeS)			U	ND	ng/L						
Perfluoropentanoic acid (PFPeA)			U	ND	ng/L						
Perfluorotetradecanoic acid (PFTeDA)			U	ND	ng/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1700173										
Perfluorotridecanoic acid (PFTTrDA)			U	ND	ng/L				JLS	09/22/17	02:16
Perfluoroundecanoic acid (PFUdA)			U	ND	ng/L						
Semi-Volatile-GC/MS											
Batch	1700313										
QC1203874233	LCS										
1,1'-Biphenyl	50.0			39.6	ug/L		79	(46%-110%)	JLD1	09/14/17	14:46
1,2,4,5-Tetrachlorobenzene	50.0			33.1	ug/L		66	(44%-102%)			
2,3,4,6-Tetrachlorophenol	50.0			41.8	ug/L		84	(54%-122%)			
2,4,5-Trichlorophenol	50.0			41.0	ug/L		82	(55%-116%)			
2,4,6-Trichlorophenol	50.0			40.7	ug/L		81	(55%-120%)			
2,4-Dichlorophenol	50.0			39.3	ug/L		79	(53%-109%)			
2,4-Dimethylphenol	50.0			33.2	ug/L		66	(51%-104%)			
2,4-Dinitrophenol	50.0			44.5	ug/L		89	(34%-122%)			
2,4-Dinitrotoluene	50.0			42.5	ug/L		85	(57%-124%)			
2,6-Dinitrotoluene	50.0			43.3	ug/L		87	(59%-122%)			
2-Chloronaphthalene	50.0			31.9	ug/L		64	(44%-107%)			
2-Chlorophenol	50.0			37.4	ug/L		75	(49%-105%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
2-Methyl-4,6-dinitrophenol	50.0			48.8	ug/L		98	(45%-124%)	JLD1	09/14/17	14:46
2-Methylnaphthalene	50.0			32.8	ug/L		66	(42%-103%)			
2-Nitrophenol	50.0			42.2	ug/L		84	(51%-113%)			
3,3'-Dichlorobenzidine	50.0			43.9	ug/L		88	(43%-127%)			
4-Bromophenylphenylether	50.0			35.8	ug/L		72	(54%-116%)			
4-Chloro-3-methylphenol	50.0			37.3	ug/L		75	(55%-115%)			
4-Chloroaniline	50.0			44.2	ug/L		88	(65%-136%)			
4-Chlorophenylphenylether	50.0			34.3	ug/L		69	(52%-121%)			
4-Nitrophenol	50.0		J	14.0	ug/L		28	(15%-137%)			
Acenaphthene	50.0			39.2	ug/L		78	(49%-112%)			
Acenaphthylene	50.0			37.7	ug/L		75	(50%-113%)			
Acetophenone	50.0			36.5	ug/L		73	(55%-114%)			
Anthracene	50.0			37.0	ug/L		74	(56%-112%)			
Atrazine	50.0			41.0	ug/L		82	(60%-131%)			
Benzaldehyde	50.0			37.7	ug/L		75	(38%-113%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
Benzo(a)anthracene	50.0			39.6	ug/L		79	(57%-112%)	JLD1	09/14/17	14:46
Benzo(a)pyrene	50.0			37.6	ug/L		75	(40%-118%)			
Benzo(b)fluoranthene	50.0			37.5	ug/L		75	(41%-118%)			
Benzo(ghi)perylene	50.0			43.0	ug/L		86	(33%-131%)			
Benzo(k)fluoranthene	50.0			37.8	ug/L		76	(42%-121%)			
Butylbenzylphthalate	50.0			36.7	ug/L		73	(52%-125%)			
Caprolactam	50.0			12.2	ug/L		24*	(30%-61%)			
Carbazole	50.0			39.6	ug/L		79	(56%-119%)			
Chrysene	50.0			38.5	ug/L		77	(58%-117%)			
Di-n-butylphthalate	50.0			35.8	ug/L		72	(57%-123%)			
Di-n-octylphthalate	50.0			29.1	ug/L		58	(50%-129%)			
Dibenzo(a,h)anthracene	50.0			43.4	ug/L		87	(38%-129%)			
Dibenzofuran	50.0			36.7	ug/L		73	(50%-111%)			
Diethylphthalate	50.0			37.7	ug/L		75	(57%-122%)			
Dimethylphthalate	50.0			41.1	ug/L		82	(60%-122%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
Diphenylamine	50.0			38.6	ug/L		77	(55%-113%)	JLD1	09/14/17	14:46
Fluoranthene	50.0			36.9	ug/L		74	(54%-118%)			
Fluorene	50.0			35.3	ug/L		71	(52%-114%)			
Hexachlorobenzene	50.0			35.4	ug/L		71	(54%-115%)			
Hexachlorobutadiene	50.0			26.4	ug/L		53	(35%-98%)			
Hexachlorocyclopentadiene	50.0			29.4	ug/L		59	(34%-89%)			
Hexachloroethane	50.0			28.8	ug/L		58	(36%-96%)			
Indeno(1,2,3-cd)pyrene	50.0			42.2	ug/L		84	(34%-125%)			
Isophorone	50.0			39.2	ug/L		78	(56%-117%)			
N-Nitrosodipropylamine	50.0			35.4	ug/L		71	(54%-115%)			
Naphthalene	50.0			33.8	ug/L		68	(44%-102%)			
Nitrobenzene	50.0			40.4	ug/L		81	(53%-115%)			
Pentachlorophenol	50.0			46.8	ug/L		94	(41%-116%)			
Phenanthrene	50.0			37.3	ug/L		75	(55%-110%)			
Phenol	50.0			16.6	ug/L		33	(16%-82%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
Pyrene	50.0			43.6	ug/L		87	(49%-121%)	JLD1	09/14/17	14:46
bis(2-Chloro-1-methylethyl)ether	50.0			44.0	ug/L		88	(44%-123%)			
bis(2-Chloroethoxy)methane	50.0			40.3	ug/L		81	(55%-114%)			
bis(2-Chloroethyl) ether	50.0			40.2	ug/L		80	(51%-111%)			
bis(2-Ethylhexyl)phthalate	50.0			30.6	ug/L		61	(52%-125%)			
m,p-Cresols	50.0			33.5	ug/L		67	(43%-102%)			
m-Nitroaniline	50.0			48.0	ug/L		96	(61%-139%)			
o-Cresol	50.0			33.3	ug/L		67	(41%-101%)			
o-Nitroaniline	50.0			41.9	ug/L		84	(53%-121%)			
p-Nitroaniline	50.0			36.1	ug/L		72	(44%-137%)			
**2,4,6-Tribromophenol	100			70.8	ug/L		71	(32%-124%)			
**2-Fluorobiphenyl	50.0			31.4	ug/L		63	(32%-112%)			
**2-Fluorophenol	100			45.7	ug/L		46	(15%-88%)			
**Nitrobenzene-d5	50.0			36.5	ug/L		73	(36%-115%)			
**Phenol-d5	100			27.9	ug/L		28	(15%-91%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
**p-Terphenyl-d14	50.0			40.8	ug/L		82	(36%-121%)	JLD1	09/14/17	14:46
QC1203874232 MB											
1,1'-Biphenyl			U	ND	ug/L					09/14/17	14:15
1,2,4,5-Tetrachlorobenzene			U	ND	ug/L						
2,3,4,6-Tetrachlorophenol			U	ND	ug/L						
2,4,5-Trichlorophenol			U	ND	ug/L						
2,4,6-Trichlorophenol			U	ND	ug/L						
2,4-Dichlorophenol			U	ND	ug/L						
2,4-Dimethylphenol			U	ND	ug/L						
2,4-Dinitrophenol			U	ND	ug/L						
2,4-Dinitrotoluene			U	ND	ug/L						
2,6-Dinitrotoluene			U	ND	ug/L						
2-Chloronaphthalene			U	ND	ug/L						
2-Chlorophenol			U	ND	ug/L						
2-Methyl-4,6-dinitrophenol			U	ND	ug/L						
2-Methylnaphthalene			U	ND	ug/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
2-Nitrophenol			U	ND	ug/L				JLD1	09/14/17	14:15
3,3'-Dichlorobenzidine			U	ND	ug/L						
4-Bromophenylphenylether			U	ND	ug/L						
4-Chloro-3-methylphenol			U	ND	ug/L						
4-Chloroaniline			U	ND	ug/L						
4-Chlorophenylphenylether			U	ND	ug/L						
4-Nitrophenol			U	ND	ug/L						
Acenaphthene			U	ND	ug/L						
Acenaphthylene			U	ND	ug/L						
Acetophenone			U	ND	ug/L						
Anthracene			U	ND	ug/L						
Atrazine			U	ND	ug/L						
Benzaldehyde			U	ND	ug/L						
Benzo(a)anthracene			U	ND	ug/L						
Benzo(a)pyrene			U	ND	ug/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
Benzo(b)fluoranthene			U	ND	ug/L				JLD1	09/14/17	14:15
Benzo(ghi)perylene			U	ND	ug/L						
Benzo(k)fluoranthene			U	ND	ug/L						
Butylbenzylphthalate			U	ND	ug/L						
Caprolactam			U	ND	ug/L						
Carbazole			U	ND	ug/L						
Chrysene			U	ND	ug/L						
Di-n-butylphthalate			U	ND	ug/L						
Di-n-octylphthalate			U	ND	ug/L						
Dibenzo(a,h)anthracene			U	ND	ug/L						
Dibenzofuran			U	ND	ug/L						
Diethylphthalate			U	ND	ug/L						
Dimethylphthalate			U	ND	ug/L						
Diphenylamine			U	ND	ug/L						
Fluoranthene			U	ND	ug/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
Fluorene			U	ND	ug/L				JLD1	09/14/17	14:15
Hexachlorobenzene			U	ND	ug/L						
Hexachlorobutadiene			U	ND	ug/L						
Hexachlorocyclopentadiene			U	ND	ug/L						
Hexachloroethane			U	ND	ug/L						
Indeno(1,2,3-cd)pyrene			U	ND	ug/L						
Isophorone			U	ND	ug/L						
N-Nitrosodipropylamine			U	ND	ug/L						
Naphthalene			U	ND	ug/L						
Nitrobenzene			U	ND	ug/L						
Pentachlorophenol			U	ND	ug/L						
Phenanthrene			U	ND	ug/L						
Phenol			U	ND	ug/L						
Pyrene			U	ND	ug/L						
bis(2-Chloro-1-methylethyl)ether			U	ND	ug/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1700313										
bis(2-Chloroethoxy)methane			U	ND	ug/L				JLD1	09/14/17	14:15
bis(2-Chloroethyl) ether			U	ND	ug/L						
bis(2-Ethylhexyl)phthalate			U	ND	ug/L						
m,p-Cresols			U	ND	ug/L						
m-Nitroaniline			U	ND	ug/L						
o-Cresol			U	ND	ug/L						
o-Nitroaniline			U	ND	ug/L						
p-Nitroaniline			U	ND	ug/L						
**2,4,6-Tribromophenol	100			83.0	ug/L		83	(32%-124%)			
**2-Fluorobiphenyl	50.0			38.5	ug/L		77	(32%-112%)			
**2-Fluorophenol	100			48.7	ug/L		49	(15%-88%)			
**Nitrobenzene-d5	50.0			42.5	ug/L		85	(36%-115%)			
**Phenol-d5	100			31.3	ug/L		31	(15%-91%)			
**p-Terphenyl-d14	50.0			45.8	ug/L		92	(36%-121%)			
QC1203874234 432456002 MS											
1,1'-Biphenyl	100	U	ND	80.4	ug/L		80	(35%-113%)		09/14/17	15:49

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
1,2,4,5-Tetrachlorobenzene	100	U	ND		66.8	ug/L		67	(32%-101%)	JLD1	09/14/17	15:49
2,3,4,6-Tetrachlorophenol	100	U	ND		84.0	ug/L		84	(40%-128%)			
2,4,5-Trichlorophenol	100	U	ND		79.9	ug/L		80	(42%-120%)			
2,4,6-Trichlorophenol	100	U	ND		80.8	ug/L		81	(39%-124%)			
2,4-Dichlorophenol	100	U	ND		78.3	ug/L		78	(40%-111%)			
2,4-Dimethylphenol	100	U	ND		66.8	ug/L		67	(39%-107%)			
2,4-Dinitrophenol	100	U	ND		93.8	ug/L		94	(27%-122%)			
2,4-Dinitrotoluene	100	U	ND		86.4	ug/L		86	(45%-125%)			
2,6-Dinitrotoluene	100	U	ND		87.0	ug/L		87	(46%-124%)			
2-Chloronaphthalene	100	U	ND		63.9	ug/L		64	(29%-113%)			
2-Chlorophenol	100	U	ND		74.4	ug/L		74	(37%-108%)			
2-Methyl-4,6-dinitrophenol	100	U	ND		99.1	ug/L		99	(32%-126%)			
2-Methylnaphthalene	100	U	ND		67.5	ug/L		68	(29%-109%)			
2-Nitrophenol	100	U	ND		84.5	ug/L		84	(39%-115%)			
3,3'-Dichlorobenzidine	100	U	ND		89.6	ug/L		90	(34%-124%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
4-Bromophenylphenylether	100	U	ND		76.7	ug/L		77	(39%-121%)	JLD1	09/14/17	15:49
4-Chloro-3-methylphenol	100	U	ND		76.9	ug/L		77	(41%-122%)			
4-Chloroaniline	100	U	ND		87.7	ug/L		88	(44%-138%)			
4-Chlorophenylphenylether	100	U	ND		71.3	ug/L		71	(39%-121%)			
4-Nitrophenol	100	U	ND		39.5	ug/L		40	(17%-85%)			
Acenaphthene	100	U	ND		74.8	ug/L		75	(35%-117%)			
Acenaphthylene	100	U	ND		76.6	ug/L		77	(35%-120%)			
Acetophenone	100	U	ND		73.5	ug/L		74	(41%-119%)			
Anthracene	100	U	ND		75.4	ug/L		75	(38%-120%)			
Atrazine	100	U	ND		81.2	ug/L		81	(42%-129%)			
Benzaldehyde	100	U	ND		72.2	ug/L		72	(28%-112%)			
Benzo(a)anthracene	100	U	ND		81.3	ug/L		81	(39%-120%)			
Benzo(a)pyrene	100	U	ND		77.7	ug/L		78	(32%-118%)			
Benzo(b)fluoranthene	100	U	ND		76.8	ug/L		77	(31%-122%)			
Benzo(ghi)perylene	100	U	ND		79.4	ug/L		79	(24%-126%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
Benzo(k)fluoranthene	100	U	ND		76.7	ug/L		77	(33%-123%)	JLD1	09/14/17	15:49
Butylbenzylphthalate	100	U	ND		75.4	ug/L		75	(40%-129%)			
Caprolactam	100	U	ND		40.9	ug/L		41	(25%-79%)			
Carbazole	100	U	ND		81.0	ug/L		81	(37%-125%)			
Chrysene	100	U	ND		78.9	ug/L		79	(41%-124%)			
Di-n-butylphthalate	100	U	ND		72.6	ug/L		73	(41%-128%)			
Di-n-octylphthalate	100	U	ND		61.0	ug/L		61	(37%-134%)			
Dibenzo(a,h)anthracene	100	U	ND		81.7	ug/L		82	(30%-125%)			
Dibenzofuran	100	U	ND		74.1	ug/L		74	(38%-113%)			
Diethylphthalate	100	U	ND		76.3	ug/L		76	(43%-127%)			
Dimethylphthalate	100	U	ND		81.7	ug/L		82	(45%-128%)			
Diphenylamine	100	U	ND		77.1	ug/L		77	(37%-118%)			
Fluoranthene	100	U	ND		76.0	ug/L		76	(41%-119%)			
Fluorene	100	U	ND		73.2	ug/L		73	(39%-117%)			
Hexachlorobenzene	100	U	ND		74.0	ug/L		74	(40%-118%)			

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QC Summary

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
Hexachlorobutadiene	100	U	ND		53.6	ug/L		54	(26%-98%)	JLD1	09/14/17	15:49
Hexachlorocyclopentadiene	100	U	ND		56.8	ug/L		57	(26%-79%)			
Hexachloroethane	100	U	ND		58.2	ug/L		58	(29%-94%)			
Indeno(1,2,3-cd)pyrene	100	U	ND		80.3	ug/L		80	(27%-121%)			
Isophorone	100	U	ND		80.3	ug/L		80	(43%-120%)			
N-Nitrosodipropylamine	100	U	ND		72.9	ug/L		73	(42%-118%)			
Naphthalene	100	U	ND		69.5	ug/L		69	(31%-108%)			
Nitrobenzene	100	U	ND		81.2	ug/L		81	(38%-123%)			
Pentachlorophenol	100	U	ND		96.4	ug/L		96	(35%-121%)			
Phenanthrene	100	U	ND		77.3	ug/L		77	(40%-115%)			
Phenol	100	U	ND		43.4	ug/L		43	(23%-82%)			
Pyrene	100	U	ND		86.3	ug/L		86	(35%-128%)			
bis(2-Chloro-1-methylethyl)ether	100	U	ND		89.5	ug/L		90	(32%-127%)			
bis(2-Chloroethoxy)methane	100	U	ND		82.0	ug/L		82	(42%-118%)			
bis(2-Chloroethyl) ether	100	U	ND		79.5	ug/L		79	(39%-114%)			

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QC Summary

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
bis(2-Ethylhexyl)phthalate	100	U	ND		63.7	ug/L		64	(38%-131%)	JLD1	09/14/17	15:49
m,p-Cresols	100	U	ND		70.3	ug/L		70	(36%-120%)			
m-Nitroaniline	100	U	ND		97.0	ug/L		97	(42%-144%)			
o-Cresol	100	U	ND		67.6	ug/L		68	(34%-109%)			
o-Nitroaniline	100	U	ND		83.6	ug/L		84	(41%-121%)			
p-Nitroaniline	100	U	ND		76.5	ug/L		77	(30%-133%)			
**2,4,6-Tribromophenol	200		69.2		144	ug/L		72	(32%-124%)			
**2-Fluorobiphenyl	100		36.5		65.4	ug/L		65	(32%-112%)			
**2-Fluorophenol	200		38.3		106	ug/L		53	(15%-88%)			
**Nitrobenzene-d5	100		38.6		74.8	ug/L		75	(36%-115%)			
**Phenol-d5	200		24.8		75.7	ug/L		38	(15%-91%)			
**p-Terphenyl-d14	100		36.5		85.9	ug/L		86	(36%-121%)			
QC1203874235 432456002 MSD												
1,1'-Biphenyl	100	U	ND		77.8	ug/L	3	78	(0%-30%)		09/14/17	16:20
1,2,4,5-Tetrachlorobenzene	100	U	ND		66.1	ug/L	1	66	(0%-30%)			
2,3,4,6-Tetrachlorophenol	100	U	ND		80.6	ug/L	4	81	(0%-30%)			

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QC Summary

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
2,4,5-Trichlorophenol	100	U	ND		77.4	ug/L	3	77	(0%-30%)	JLD1	09/14/17	16:20
2,4,6-Trichlorophenol	100	U	ND		79.1	ug/L	2	79	(0%-30%)			
2,4-Dichlorophenol	100	U	ND		74.6	ug/L	5	75	(0%-30%)			
2,4-Dimethylphenol	100	U	ND		64.8	ug/L	3	65	(0%-30%)			
2,4-Dinitrophenol	100	U	ND		93.9	ug/L	0	94	(0%-30%)			
2,4-Dinitrotoluene	100	U	ND		83.2	ug/L	4	83	(0%-30%)			
2,6-Dinitrotoluene	100	U	ND		84.4	ug/L	3	84	(0%-30%)			
2-Chloronaphthalene	100	U	ND		62.9	ug/L	2	63	(0%-30%)			
2-Chlorophenol	100	U	ND		69.5	ug/L	7	70	(0%-30%)			
2-Methyl-4,6-dinitrophenol	100	U	ND		96.9	ug/L	2	97	(0%-30%)			
2-Methylnaphthalene	100	U	ND		65.2	ug/L	4	65	(0%-30%)			
2-Nitrophenol	100	U	ND		80.8	ug/L	4	81	(0%-30%)			
3,3'-Dichlorobenzidine	100	U	ND		86.1	ug/L	4	86	(0%-30%)			
4-Bromophenylphenylether	100	U	ND		72.4	ug/L	6	72	(0%-30%)			
4-Chloro-3-methylphenol	100	U	ND		72.5	ug/L	6	73	(0%-30%)			

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QC Summary

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
4-Chloroaniline	100	U	ND		82.8	ug/L	6	83	(0%-30%)	JLD1	09/14/17	16:20
4-Chlorophenylphenylether	100	U	ND		71.2	ug/L	0	71	(0%-30%)			
4-Nitrophenol	100	U	ND		40.9	ug/L	3	41	(0%-30%)			
Acenaphthene	100	U	ND		78.0	ug/L	4	78	(0%-30%)			
Acenaphthylene	100	U	ND		73.9	ug/L	4	74	(0%-30%)			
Acetophenone	100	U	ND		69.9	ug/L	5	70	(0%-30%)			
Anthracene	100	U	ND		73.6	ug/L	2	74	(0%-30%)			
Atrazine	100	U	ND		79.5	ug/L	2	79	(0%-30%)			
Benzaldehyde	100	U	ND		69.5	ug/L	4	70	(0%-30%)			
Benzo(a)anthracene	100	U	ND		77.9	ug/L	4	78	(0%-30%)			
Benzo(a)pyrene	100	U	ND		73.0	ug/L	6	73	(0%-30%)			
Benzo(b)fluoranthene	100	U	ND		74.3	ug/L	3	74	(0%-30%)			
Benzo(ghi)perylene	100	U	ND		78.2	ug/L	2	78	(0%-30%)			
Benzo(k)fluoranthene	100	U	ND		73.4	ug/L	4	73	(0%-30%)			
Butylbenzylphthalate	100	U	ND		73.9	ug/L	2	74	(0%-30%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
Caprolactam	100	U	ND		38.1	ug/L	7	38	(0%-30%)	JLD1	09/14/17	16:20
Carbazole	100	U	ND		78.3	ug/L	3	78	(0%-30%)			
Chrysene	100	U	ND		75.0	ug/L	5	75	(0%-30%)			
Di-n-butylphthalate	100	U	ND		73.3	ug/L	1	73	(0%-30%)			
Di-n-octylphthalate	100	U	ND		61.2	ug/L	0	61	(0%-30%)			
Dibenzo(a,h)anthracene	100	U	ND		79.7	ug/L	3	80	(0%-30%)			
Dibenzofuran	100	U	ND		73.2	ug/L	1	73	(0%-30%)			
Diethylphthalate	100	U	ND		74.3	ug/L	3	74	(0%-30%)			
Dimethylphthalate	100	U	ND		79.0	ug/L	3	79	(0%-30%)			
Diphenylamine	100	U	ND		73.1	ug/L	5	73	(0%-30%)			
Fluoranthene	100	U	ND		77.0	ug/L	1	77	(0%-30%)			
Fluorene	100	U	ND		71.8	ug/L	2	72	(0%-30%)			
Hexachlorobenzene	100	U	ND		70.2	ug/L	5	70	(0%-30%)			
Hexachlorobutadiene	100	U	ND		50.4	ug/L	6	50	(0%-30%)			
Hexachlorocyclopentadiene	100	U	ND		55.7	ug/L	2	56	(0%-30%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
Hexachloroethane	100	U	ND		53.9	ug/L	8	54	(0%-30%)	JLD1	09/14/17	16:20
Indeno(1,2,3-cd)pyrene	100	U	ND		77.2	ug/L	4	77	(0%-30%)			
Isophorone	100	U	ND		75.6	ug/L	6	76	(0%-30%)			
N-Nitrosodipropylamine	100	U	ND		68.4	ug/L	6	68	(0%-30%)			
Naphthalene	100	U	ND		66.6	ug/L	4	67	(0%-30%)			
Nitrobenzene	100	U	ND		78.2	ug/L	4	78	(0%-30%)			
Pentachlorophenol	100	U	ND		91.5	ug/L	5	92	(0%-30%)			
Phenanthrene	100	U	ND		74.7	ug/L	3	75	(0%-30%)			
Phenol	100	U	ND		41.3	ug/L	5	41	(0%-30%)			
Pyrene	100	U	ND		80.4	ug/L	7	80	(0%-30%)			
bis(2-Chloro-1-methylethyl)ether	100	U	ND		84.8	ug/L	5	85	(0%-30%)			
bis(2-Chloroethoxy)methane	100	U	ND		77.1	ug/L	6	77	(0%-30%)			
bis(2-Chloroethyl) ether	100	U	ND		76.0	ug/L	5	76	(0%-30%)			
bis(2-Ethylhexyl)phthalate	100	U	ND		63.5	ug/L	0	64	(0%-30%)			
m,p-Cresols	100	U	ND		68.1	ug/L	3	68	(0%-30%)			

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QC Summary

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1700313											
m-Nitroaniline	100	U	ND		93.8	ug/L	3	94	(0%-30%)	JLD1	09/14/17	16:20
o-Cresol	100	U	ND		64.4	ug/L	5	64	(0%-30%)			
o-Nitroaniline	100	U	ND		80.7	ug/L	4	81	(0%-30%)			
p-Nitroaniline	100	U	ND		77.6	ug/L	1	78	(0%-30%)			
**2,4,6-Tribromophenol	200		69.2		139	ug/L		69	(32%-124%)			
**2-Fluorobiphenyl	100		36.5		62.5	ug/L		63	(32%-112%)			
**2-Fluorophenol	200		38.3		98.2	ug/L		49	(15%-88%)			
**Nitrobenzene-d5	100		38.6		69.9	ug/L		70	(36%-115%)			
**Phenol-d5	200		24.8		71.6	ug/L		36	(15%-91%)			
**p-Terphenyl-d14	100		36.5		78.4	ug/L		78	(36%-121%)			

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J Value is estimated

GEL LABORATORIES LLC

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
JNX	Non Calibrated Compound										
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor										
N	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor										
N/A	RPD or %Recovery limits do not apply.										
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
UJ	Compound cannot be extracted										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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 QC Summary.

Technical Case Narrative
H2GO Brunswick Regional Water & Sewer (H2GO)
SDG #: 432574

GC/MS Semivolatile

Product: Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry

Analytical Method: SW846 3510C/8270D

Analytical Procedure: GL-OA-E-009 REV# 39

Analytical Batch: 1700313

Preparation Method: SW846 3510C

Preparation Procedure: GL-OA-E-013 REV# 32

Preparation Batch: 1700312

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
432574001	Husk L&D
432574003	Lock & Dam #1
432574005	Buckeye Vault
1203874232	Method Blank (MB)
1203874233	Laboratory Control Sample (LCS)
1203874234	432456002(NonSDG) Matrix Spike (MS)
1203874235	432456002(NonSDG) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CCV Requirements

All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8270D for samples 432574001 (Husk L&D), 432574003 (Lock & Dam #1) and 432574005 (Buckeye Vault) and the associated QC. However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8270D outlier acceptance criteria. If required, a CRDL was analyzed after the CCVs to demonstrate that there is adequate sensitivity to detect the failed compounds at the applicable lower quantitation limit.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS and/or LCSD (See Below) did not meet spike recovery acceptance criteria. The failures are known to be poor responding analytes as stated per the Method. This may account for the low recoveries and the data were reported.

Sample	Analyte	Value
--------	---------	-------

1203874233 (LCS)	Caprolactam	24* (30%-61%)
------------------	-------------	---------------

Internal Standard (ISTD) Acceptance

Sample 432574005 (Buckeye Vault) failed ISTD acceptance criteria. The sample was re-analyzed and confirmed the failures. The initial analysis data are reported. The re-analysis raw data have been placed in the Miscellaneous Section where applicable.

Technical Information

Holding Time Specifications

Sample (See Below) was received from the client out of holding. The sample was analyzed and the data have been reported and qualified accordingly.

Sample	Value
432574001 (Husk L&D)	Received 13-SEP-17, out of holding 08-SEP-17

Sample Re-extraction/Re-analysis

Sample 432574005 (Buckeye Vault) re-analyzed for ISTD failure.

Miscellaneous Information

TIC Comment

Tentatively identified compounds (TIC) were requested for samples 432574001 (Husk L&D), 432574003 (Lock & Dam #1) and 432574005 (Buckeye Vault) in this SDG in this batch.

LCMSMS-Misc

Product: The Extraction and Analysis of Per and Polyfluoroalkyl Substances Using LCMSMS

Analytical Method: EPA 537

Analytical Procedure: GL-OA-E-076 REV# 2

Analytical Batches: 1700173 and 1700171

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
432574001	Husk L&D
432574002	Husk L&D Trip Blank
432574003	Lock & Dam #1
432574004	Lock & Dam #1 Trip Blank
432574005	Buckeye Vault
432574006	Buckeye Vault Trip Blank
1203873950	Method Blank (MB)
1203873951	Laboratory Control Sample (LCS)
1203873952	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and

procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Method Blank (MB) Statement

The blank analyzed with this SDG meet the established acceptance criteria. Target analyte was or was detected in the method blank and sample associated with this SDG. Due to limited sample volume, the sample could not be re-extracted. Therefore, the client was notified and the results qualified and reported.

Sample	Analyte	Value
1203873950 (MB)	Fluorotelomer sulfonate 6:2 (6:2 FTS)	22.1 * 10 > 0

Technical Information

Sample Dilutions

The following samples was/were diluted to bring the over range concentrations within the calibration range. 432574001 (Husk L&D), 432574003 (Lock & Dam #1) and 432574005 (Buckeye Vault).

Analyte	432574		
	001	003	005
Several	25X 1X	5X 1X	5X 1X

Miscellaneous Information

Additional Comments

The X qualified results are estimated concentrations and were calculated using the GenX calibration curve because authentic standards are not available for these analytes.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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Project #: _____

GEL Quote #: _____

QC Number (1): _____

PO Number: _____

GEL Chain of Custody and Analytical Request

GEL Work Order Number: **432574**

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Brunswick Regional Water & Sewer Phone #: 910-371-9949										Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																														
Project/Site Name:										Fax #: 910-371-6441										Should this sample be considered:		Total number of containers			Preservative Type (6)			Comments Note: extra sample is required for sample specific QC												
Address: P.O. Box 2230, 516 Village Rd, Leland, NC 28451										Send Results To: Bob Walker										Radioactive		TSCA Regulated			SYOC : TIC				GenX			6 PFECAs			PFC 537			Trip Blank		
Sample ID										*Date Collected (mm-dd-yy)		*Time Collected (Military) (hhmm)		QC Code ⁽⁷⁾		Field Filtered ⁽⁸⁾		Sample Matrix ⁽⁹⁾																						
* For composites - indicate start and stop date/time																																								
Husk L&D										9-1-17		1635		G				SW		X																				
Husk L&D										9-1-17		1635		G				SW		X																				
Husk L&D										9-1-17		1635		TB				SW		X																				
Lock & Dam #1										9-7-17		1030		G				SW		X																				
Lock & Dam #1										9-7-17		1030		G				SW		X																				
Lock & Dam #1										9-7-17		1030		TB						X																				
Buckeye Vault										9-8-17		1405		G				DW		X																				
Buckeye Vault										9-8-17		1405		G				DW		X																				
Buckeye Vault										9-8-17		1405		TB						X																				

TAT Requested: Normal: _____ Rush: _____ Specify: _____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Sample Collection Time Zone: Eastern Pacific Central Other _____

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 Scott Lewis	9/8/17	1630	1 Bob Walker	9/8/17	1630
2 Bob Walker	9/8/17	1730	2 [Signature]	9/13/17	9:20
3			3		

GEL PM: _____

Method of Shipment: _____ Date Shipped: _____

Airbill #: _____

Airbill #: _____

For Lab Receiving Use Only
Custody Seal Intact?
YES NO
Cooler Temp:
C

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sulfuric Acid, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Subject: Re: Sample Receipt for 091417
From: Bob Walker <bwalker@h2goonline.com>
Date: 9/13/2017 3:52 PM
To: Hope Taylor <Hope.Taylor@gel.com>

Yes, please.

Bob Walker
H2GO

Sent from my iPhone

On Sep 13, 2017, at 3:38 PM, Hope Taylor <Hope.Taylor@gel.com> wrote:

Good afternoon Bob,

We received your samples today with a temperature of 23. Please advise if you would like the lab to proceed.

Thanks,

--

Hope A. Taylor
Project Manager

<[GEL-_Labs-_Logo3.png](#)>

2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29407

Office Direct: 843.852.5814 | Office Main: 843.556.8171 | Fax: 843.766.1178

E-Mail: hope.taylor@gel.com | Website: www.gel.com

Environmental | Engineering | Surveying | Analytical Testing

Ask me about GEL's new testing capability for Perfluorinated chemicals (PFCs)!
<http://www.gellaboratories.com>

— Attachments: —

GEL-_Labs-_Logo3.png

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Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: <u>HZGO</u>		SDG/AR/COC/Work Order: <u>432574</u>	
Received By: <u>ZKW</u>		Date Received: <u>9/13/17</u>	
Carrier and Tracking Number		Circle Applicable: ☒ FedEx Express ☐ FedEx Ground ☐ UPS ☐ Field Services ☐ Courier ☐ Other	
		7336 9698 0348	
Suspected Hazard Information	Yes ☐ No ☒	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
Shipped as a DOT Hazardous?	☒	Hazard Class Shipped: _____ UN#: _____	
COC/Samples marked or classified as radioactive?	☒	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> <u>CPM</u> mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
Is package, COC, and/or Samples marked HAZ?	☒	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	☒	☒	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	☒	☒	☐	
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	☒	☒	☐	Preservation Method: ☒ Wet Ice ☐ Ice Packs ☐ Dry ice ☐ None ☐ Other: *all temperatures are recorded in Celsius TEMP: <u>23°C</u>
4 Daily check performed and passed on IR temperature gun?	☒	☒	☐	Temperature Device Serial #: <u>IR3-16</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	☒	☒	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	☒	☒	☐	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	☒	☒	☐	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes___ No___ N/A___ (If unknown, select No) VOA vials free of headspace? Yes___ No___ N/A___ Sample ID's and containers affected:
8 Samples received within holding time?	☒	☒	☐	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	☒	☒	☐	Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	☒	☒	☐	Sample ID's affected:
11 Number of containers received match number indicated on COC?	☒	☒	☐	Sample ID's affected:
12 Are sample containers identifiable as GEL provided?	☒	☒	☐	
13 COC form is properly signed in relinquished/received sections?	☒	☒	☐	

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials

H

Date

09/13/17

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GL-CHL-SR-001 Rev 5

List of current GEL Certifications as of 06 October 2017

State	Certification
Alaska	UST-0110
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA170010
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122018-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-17-12
Utah NELAP	SC000122017-23
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404