

October 06, 2017

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

Re: Sample Analysis
Work Order: 430635

Dear Bob Walker:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 15, 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: 430635 GEL Work Order: 430635

The Qualifiers in this report are defined as follows:

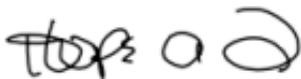
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package,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

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: L&D #1
Sample ID: 430635001
Matrix: Water
Collect Date: 14-AUG-17 07:15
Receive Date: 15-AUG-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>												
Nafion Byproduct 1	X	10.5			ng/L	0.0177	5	JLS	09/08/17	0932	1698648	1
Nafion Byproduct 2	X	58.4			ng/L	0.0177	5					
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	X	9.77			ng/L	0.0177	5					
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	X	31.3			ng/L	0.0177	5					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	X	63.8			ng/L	0.0177	5					
Perfluoro-2-methoxyacetic acid (PFMOAA)	X	2.46			ng/L	0.0177	5					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	X	13.7			ng/L	0.0177	5					
Perfluoro-4-methoxybutanic acid (PFMOBA)	X	4.63			ng/L	0.0177	5					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.17	3.33	ng/L	0.0177	1	JLS	08/24/17	0158	1694307	2
Fluorotelomer sulfonate 6:2 (6:2 FTS)	J	1.33	1.17	3.36	ng/L	0.0177	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.17	3.40	ng/L	0.0177	1					
Perfluorobutanesulfonate (PFBS)		4.63	0.584	1.57	ng/L	0.0177	1					
Perfluorobutyric acid (PFBA)		12.5	0.584	1.77	ng/L	0.0177	1					
Perfluorodecanesulfonate (PFDS)	U	ND	0.584	1.72	ng/L	0.0177	1					
Perfluorodecanoic acid (PFDA)		2.01	0.584	1.77	ng/L	0.0177	1					

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Company : H2GO Brunswick Regional Water &
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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: L&D #1
Sample ID: 430635001

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>												
Perfluorododecanoic acid (PFDoA)	U	ND	0.584	1.77	ng/L	0.0177	1					
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.584	1.68	ng/L	0.0177	1					
Perfluoroheptanoic acid (PFHpA)		18.2	0.584	1.77	ng/L	0.0177	1					
Perfluorohexanesulfonate (PFHxS)		8.38	0.584	1.61	ng/L	0.0177	1					
Perfluorohexanoic acid (PFHxA)		24.4	0.584	1.77	ng/L	0.0177	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.584	1.70	ng/L	0.0177	1					
Perfluorononanoic acid (PFNA)		2.75	0.584	1.77	ng/L	0.0177	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.584	1.65	ng/L	0.0177	1					
Perfluorooctanesulfonate (PFOS)		17.1	0.584	1.77	ng/L	0.0177	1					
Perfluorooctanoic acid (PFOA)		13.0	0.584	1.77	ng/L	0.0177	1					
Perfluoropentanesulfonate (PFPeS)	J	1.21	0.584	1.66	ng/L	0.0177	1					
Perfluoropentanoic acid (PFPeA)		29.6	0.584	1.77	ng/L	0.0177	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.584	1.77	ng/L	0.0177	1					
Perfluorotridecanoic acid (PFTTrDA)	U	ND	0.584	1.77	ng/L	0.0177	1					
Perfluoroundecanoic acid (PFUdA)	J	0.612	0.584	1.77	ng/L	0.0177	1					
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)		59.4	2.92	8.85	ng/L	0.0177	5	JLS	08/24/17	1127	1694307	3
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	08/18/17	0241	1692436	4
1,2,4,5-	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: L&D #1
Sample ID: 430635001

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>												
Tetrachlorobenzene												
2,3,4,6-	U	ND	2.86	9.52	ug/L	0.000952	1					
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-	U	ND	2.86	9.52	ug/L	0.000952	1					
dinitrophenol												
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-	U	ND	2.86	9.52	ug/L	0.000952	1					
Bromophenylphenylethe												
r												
4-Chloro-3-	U	ND	2.86	9.52	ug/L	0.000952	1					
methylphenol												
4-Chloroaniline	U	ND	3.14	9.52	ug/L	0.000952	1					
4-	U	ND	2.86	9.52	ug/L	0.000952	1					
Chlorophenylphenylethe												
r												
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					

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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: L&D #1
Sample ID: 430635001

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>												
Caprolactam	U	ND	2.86	9.52	ug/L	0.000952	1					
Carbazole	U	ND	0.286	0.952	ug/L	0.000952	1					
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					

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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: L&D #1
Sample ID: 430635001

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"

Surrogate/Tracer recovery	Result	Nominal	Recovery%	Acceptable Limits	Date Time:	08/18/17 02 41
Phenol-d5	20.2 ug/L	95.2	21	(15%-91%)		
2-Fluorophenol	27.8 ug/L	95.2	29	(15%-88%)		
2-Fluorobiphenyl	27.9 ug/L	47.6	59	(32%-112%)		
p-Terphenyl-d14	35.8 ug/L	47.6	75	(36%-121%)		
Nitrobenzene-d5	36.7 ug/L	47.6	77	(36%-115%)		
2,4,6-Tribromophenol	54.6 ug/L	95.2	57	(32%-124%)		

Tentatively Identified Compound (TIC)	CAS No.	RT	Est. Concentration	Fit	Qual	Date Time:	08/18/17 02 41
unknown		2.045	8.28 ug/L	0	J		
unknown		2.125	41.2 ug/L	0	J		
unknown		2.157	19.1 ug/L	0	J		
di-t-Butylacetylene	017530-24-4	4.703	11.1 ug/L	87	NJ		
unknown		5.051	4.06 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	08/22/17	1430	1694306
SW846 3510C	3510C BNA Liq. Prep-8270 Analysis	DXF4	08/17/17	0412	1692434

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 537	
2	EPA 537	
3	EPA 537	
4	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
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Report Date: October 6, 2017

Contact: Bob Walker

Project: **Sample Analysis**

Client Sample ID: O'HUSKE L&D
Sample ID: 430635003
Matrix: Water
Collect Date: 14-AUG-17 08:30
Receive Date: 15-AUG-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>												
Nafion Byproduct 1	X	0.00			ng/L	0.0173	1000	JLS	09/08/17	0953	1698648	1
Nafion Byproduct 2	X	0.00			ng/L	0.0173	1000					
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	X	1890			ng/L	0.0173	1000					
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	X	8890			ng/L	0.0173	1000					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	X	19300			ng/L	0.0173	1000					
Perfluoro-2-methoxyacetic acid (PFMOAA)	X	651			ng/L	0.0173	1000					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	X	2290			ng/L	0.0173	1000					
Perfluoro-4-methoxybutanic acid (PFMOBA)	X	623			ng/L	0.0173	1000					
<i>PFOA, PFOS by LC-MS/MS "As Received"</i>												
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.14	3.25	ng/L	0.0173	1	JLS	08/24/17	0220	1694307	2
Fluorotelomer sulfonate 6:2 (6:2 FTS)	J	1.31	1.14	3.29	ng/L	0.0173	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.14	3.32	ng/L	0.0173	1					
Perfluorobutanesulfonate (PFBS)		4.41	0.571	1.54	ng/L	0.0173	1					
Perfluorodecanesulfonate (PFDS)	U	ND	0.571	1.68	ng/L	0.0173	1					
Perfluorodecanoic acid (PFDA)		2.86	0.571	1.73	ng/L	0.0173	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.571	1.73	ng/L	0.0173	1					

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

Report Date: October 6, 2017

Client Sample ID: O'HUSKE L&D
Sample ID: 430635003

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)	J	0.941	0.571	1.64	ng/L	0.0173	1					
Perfluorohexanesulfonate (PFHxS)		10.1	0.571	1.58	ng/L	0.0173	1					
Perfluorohexanoic acid (PFHxA)		32.7	0.571	1.73	ng/L	0.0173	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.571	1.66	ng/L	0.0173	1					
Perfluorononanoic acid (PFNA)		4.46	0.571	1.73	ng/L	0.0173	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.571	1.61	ng/L	0.0173	1					
Perfluorooctanoic acid (PFOA)		25.5	0.571	1.73	ng/L	0.0173	1					
Perfluoropentanesulfonate (PFPeS)	J	1.43	0.571	1.63	ng/L	0.0173	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.571	1.73	ng/L	0.0173	1					
Perfluorotridecanoic acid (PFTrDA)	U	ND	0.571	1.73	ng/L	0.0173	1					
Perfluoroundecanoic acid (PFUdA)	J	0.726	0.571	1.73	ng/L	0.0173	1					
Perfluorobutyric acid (PFBA)		129	5.71	17.3	ng/L	0.0173	10	JLS	08/24/17	1335	1694307	3
Perfluoroheptanoic acid (PFHpA)		66.6	5.71	17.3	ng/L	0.0173	10					
Perfluorooctanesulfonate (PFOS)		57.0	5.71	17.3	ng/L	0.0173	10					
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)		12600	286	866	ng/L	0.0173	500	JLS	08/24/17	1314	1694307	4
Perfluoropentanoic acid (PFPeA)		869	286	866	ng/L	0.0173	500					
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	08/18/17	0312	1692436	5
1,2,4,5-	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
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Contact: Bob Walker
Project: **Sample Analysis**

Report Date: October 6, 2017

Client Sample ID: O'HUSKE L&D
Sample ID: 430635003

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>												
Tetrachlorobenzene												
2,3,4,6-	U	ND	2.86	9.52	ug/L	0.000952	1					
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-	U	ND	2.86	9.52	ug/L	0.000952	1					
dinitrophenol												
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-	U	ND	2.86	9.52	ug/L	0.000952	1					
Bromophenylphenylethe												
r												
4-Chloro-3-	U	ND	2.86	9.52	ug/L	0.000952	1					
methylphenol												
4-Chloroaniline	U	ND	3.14	9.52	ug/L	0.000952	1					
4-	U	ND	2.86	9.52	ug/L	0.000952	1					
Chlorophenylphenylethe												
r												
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					

GEL LABORATORIES LLC

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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: O'HUSKE L&D
Sample ID: 430635003

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>												
Caprolactam	U	ND	2.86	9.52	ug/L	0.000952	1					
Carbazole	U	ND	0.286	0.952	ug/L	0.000952	1					
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					

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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: O'HUSKE L&D
Sample ID: 430635003

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"

Surrogate/Tracer recovery	Result	Nominal	Recovery%	Acceptable Limits	Date Time:	08/18/17 03 12
Phenol-d5	21.3 ug/L	95.2	22	(15%-91%)		
2-Fluorophenol	30.7 ug/L	95.2	32	(15%-88%)		
2-Fluorobiphenyl	31.8 ug/L	47.6	67	(32%-112%)		
p-Terphenyl-d14	37.8 ug/L	47.6	79	(36%-121%)		
Nitrobenzene-d5	39.2 ug/L	47.6	82	(36%-115%)		
2,4,6-Tribromophenol	65.1 ug/L	95.2	68	(32%-124%)		

Tentatively Identified Compound (TIC)	CAS No.	RT	Est. Concentration	Fit	Qual	Date Time:	08/18/17 03 12
unknown		2.125	44.1 ug/L	0	J		
unknown		2.157	20 ug/L	0	J		
Cyclopentene, 1,2,3,3,4-pentamethy	197390-29-7	4.709	11.7 ug/L	86	NJ		
unknown		5.051	4.09 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	08/22/17	1430	1694306
SW846 3510C	3510C BNA Liq. Prep-8270 Analysis	DXF4	08/17/17	0412	1692434

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

GEL LABORATORIES LLC

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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: TRIP BLANK
Sample ID: 430635004
Matrix: Water
Collect Date: 14-AUG-17 08:30
Receive Date: 15-AUG-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>												
Nafion Byproduct 1	UX	ND			ng/L	0.0197	1	JLS	09/08/17	1201	1698648	1
Nafion Byproduct 2	UX	ND			ng/L	0.0197	1					
Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	UX	ND			ng/L	0.0197	1					
Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	UX	ND			ng/L	0.0197	1					
Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	UX	ND			ng/L	0.0197	1					
Perfluoro-2-methoxyacetic acid (PFMOAA)	UX	ND			ng/L	0.0197	1					
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	UX	ND			ng/L	0.0197	1					
Perfluoro-4-methoxybutanic acid (PFMOBA)	UX	ND			ng/L	0.0197	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	0.649	1.97	ng/L	0.0197	1	JLS	08/24/17	1106	1694307	2
Fluorotelomer sulfonate 4:2 (4:2 FTS)	U	ND	1.30	3.70	ng/L	0.0197	1					
Fluorotelomer sulfonate 6:2 (6:2 FTS)	U	ND	1.30	3.74	ng/L	0.0197	1					
Fluorotelomer sulfonate 8:2 (8:2 FTS)	U	ND	1.30	3.78	ng/L	0.0197	1					
Perfluorobutanesulfonate (PFBS)	U	ND	0.649	1.75	ng/L	0.0197	1					
Perfluorobutyric acid	U	ND	0.649	1.97	ng/L	0.0197	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: TRIP BLANK
Sample ID: 430635004

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>												
(PFBA)												
Perfluorodecanesulfonate (PFDS)	U	ND	0.649	1.91	ng/L	0.0197	1					
Perfluorodecanoic acid (PFDA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorododecanoic acid (PFDoA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluoroheptanesulfonate (PFHpS)	U	ND	0.649	1.87	ng/L	0.0197	1					
Perfluoroheptanoic acid (PFHpA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorohexanesulfonate (PFHxS)	U	ND	0.649	1.79	ng/L	0.0197	1					
Perfluorohexanoic acid (PFHxA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorononanesulfonate (PFNS)	U	ND	0.649	1.89	ng/L	0.0197	1					
Perfluorononanoic acid (PFNA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorooctanesulfonamide (PFOSA)	U	ND	0.649	1.83	ng/L	0.0197	1					
Perfluorooctanesulfonate (PFOS)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorooctanoic acid (PFOA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluoropentanesulfonate (PFPeS)	U	ND	0.649	1.85	ng/L	0.0197	1					
Perfluoropentanoic acid (PFPeA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorotetradecanoic acid (PFTeDA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluorotridecanoic acid (PFTTrDA)	U	ND	0.649	1.97	ng/L	0.0197	1					
Perfluoroundecanoic acid (PFUdA)	U	ND	0.649	1.97	ng/L	0.0197	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 537	PFCs Extraction in Drinking Water	GXC1	08/22/17	1430	1694306

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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: TRIP BLANK
Sample ID: 430635004

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

GEL LABORATORIES LLC

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

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: 430635

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1694307										
QC1203860008	LCS										
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	19.8			22.4	ng/L		113	(70%-130%)	JLS	08/24/17	01:16
Fluorotelomer sulfonate 4:2 (4:2 FTS)	18.5			19.0	ng/L		102	(70%-130%)			
Fluorotelomer sulfonate 6:2 (6:2 FTS)	18.8			22.5	ng/L		119	(70%-130%)			
Fluorotelomer sulfonate 8:2 (8:2 FTS)	19.0			18.4	ng/L		97	(70%-130%)			
Perfluorobutanesulfonate (PFBS)	17.5			18.3	ng/L		105	(70%-130%)			
Perfluorobutyric acid (PFBA)	19.8			19.7	ng/L		100	(70%-130%)			
Perfluorodecanesulfonate (PFDS)	19.1			19.1	ng/L		100	(70%-130%)			
Perfluorodecanoic acid (PFDA)	19.8			21.9	ng/L		111	(70%-130%)			
Perfluorododecanoic acid (PFDoA)	19.8			19.5	ng/L		98	(70%-130%)			
Perfluoroheptanesulfonate (PFHpS)	18.8			19.4	ng/L		103	(70%-130%)			
Perfluoroheptanoic acid (PFHpA)	19.8			20.5	ng/L		103	(70%-130%)			
Perfluorohexanesulfonate (PFHxS)	18.1			18.9	ng/L		105	(70%-130%)			
Perfluorohexanoic acid (PFHxA)	19.8			19.6	ng/L		99	(70%-130%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 430635

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch 1694307											
Perfluorononanesulfonate (PFNS)	19.0			19.5	ng/L		102	(70%-130%)	JLS	08/24/17	01:16
Perfluorononanoic acid (PFNA)	19.8			21.1	ng/L		106	(70%-130%)			
Perfluorooctanesulfonamide (PFOSA)	18.3			18.8	ng/L		103	(70%-130%)			
Perfluorooctanesulfonate (PFOS)	19.8			19.0	ng/L		96	(70%-130%)			
Perfluorooctanoic acid (PFOA)	19.8			19.7	ng/L		99	(70%-130%)			
Perfluoropentanesulfonate (PFPeS)	18.6			19.2	ng/L		103	(70%-130%)			
Perfluoropentanoic acid (PFPeA)	19.8			20.3	ng/L		102	(70%-130%)			
Perfluorotetradecanoic acid (PFTeDA)	19.8			20.5	ng/L		103	(70%-130%)			
Perfluorotridecanoic acid (PFTrDA)	19.8			18.2	ng/L		92	(70%-130%)			
Perfluoroundecanoic acid (PFUdA)	19.8			18.8	ng/L		95	(70%-130%)			
QC1203860009 LCSD											
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	19.8			23.0	ng/L	3	116	(0%-30%)		08/24/17	01:37
Fluorotelomer sulfonate 4:2 (4:2 FTS)	18.5			21.3	ng/L	12	115	(0%-30%)			
Fluorotelomer sulfonate 6:2 (6:2 FTS)	18.8			20.3	ng/L	10	108	(0%-30%)			
Fluorotelomer sulfonate 8:2 (8:2 FTS)	19.0			17.8	ng/L	3	94	(0%-30%)			
Perfluorobutanesulfonate (PFBS)	17.5			18.0	ng/L	2	103	(0%-30%)			

GEL LABORATORIES LLC

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QC Summary

Workorder: 430635

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1694307										
Perfluorobutyric acid (PFBA)	19.8			19.9	ng/L	1	101	(0%-30%)	JLS	08/24/17	01:37
Perfluorodecanesulfonate (PFDS)	19.1			18.2	ng/L	5	95	(0%-30%)			
Perfluorodecanoic acid (PFDA)	19.8			19.0	ng/L	14	96	(0%-30%)			
Perfluorododecanoic acid (PFDoA)	19.8			20.1	ng/L	3	102	(0%-30%)			
Perfluoroheptanesulfonate (PFHpS)	18.8			20.2	ng/L	4	107	(0%-30%)			
Perfluoroheptanoic acid (PFHpA)	19.8			20.4	ng/L	1	103	(0%-30%)			
Perfluorohexanesulfonate (PFHxS)	18.1			19.9	ng/L	5	110	(0%-30%)			
Perfluorohexanoic acid (PFHxA)	19.8			19.6	ng/L	0	99	(0%-30%)			
Perfluorononanesulfonate (PFNS)	19.0			17.8	ng/L	9	94	(0%-30%)			
Perfluorononanoic acid (PFNA)	19.8			20.5	ng/L	3	104	(0%-30%)			
Perfluorooctanesulfonamide (PFOSA)	18.3			18.1	ng/L	4	99	(0%-30%)			
Perfluorooctanesulfonate (PFOS)	19.8			18.1	ng/L	5	92	(0%-30%)			
Perfluorooctanoic acid (PFOA)	19.8			19.3	ng/L	2	97	(0%-30%)			
Perfluoropentanesulfonate (PFPeS)	18.6			20.0	ng/L	4	108	(0%-30%)			
Perfluoropentanoic acid (PFPeA)	19.8			19.6	ng/L	4	99	(0%-30%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 430635

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1694307										
Perfluorotetradecanoic acid (PFTeDA)	19.8			19.8	ng/L	4	100	(0%-30%)	JLS	08/24/17	01:37
Perfluorotridecanoic acid (PFTrDA)	19.8			19.7	ng/L	8	100	(0%-30%)			
Perfluoroundecanoic acid (PFUdA)	19.8			20.4	ng/L	8	103	(0%-30%)			
QC1203860007 MB											
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)			U	ND	ng/L					08/24/17	00:54
Fluorotelomer sulfonate 4:2 (4:2 FTS)			U	ND	ng/L						
Fluorotelomer sulfonate 6:2 (6:2 FTS)			U	ND	ng/L						
Fluorotelomer sulfonate 8:2 (8:2 FTS)			U	ND	ng/L						
Perfluorobutanesulfonate (PFBS)			U	ND	ng/L						
Perfluorobutyric acid (PFBA)			U	ND	ng/L						
Perfluorodecanesulfonate (PFDS)			U	ND	ng/L						
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						

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QC Summary

Workorder: 430635

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Perfluorinated Compounds											
Batch	1694307										
Perfluorohexanoic acid (PFHxA)			U	ND	ng/L				JLS	08/24/17	00:54
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						
Perfluorotridecanoic acid (PFTrDA)			U	ND	ng/L						
Perfluoroundecanoic acid (PFUdA)			U	ND	ng/L						

Semi-Volatile-GC/MS

Batch	1692436										
QC1203855850	LCS										
1,1'-Biphenyl	50.0			50.1	ug/L		100	(46%-110%)	JLD1	08/17/17	21:32
1,2,4,5-Tetrachlorobenzene	50.0			51.6	ug/L		103 *	(44%-102%)			
2,3,4,6-Tetrachlorophenol	50.0			47.6	ug/L		95	(54%-122%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
2,4,5-Trichlorophenol	50.0			47.6	ug/L		95	(55%-116%)	JLD1	08/17/17	21:32
2,4,6-Trichlorophenol	50.0			50.8	ug/L		102	(55%-120%)			
2,4-Dichlorophenol	50.0			54.8	ug/L		110 *	(53%-109%)			
2,4-Dimethylphenol	50.0			39.6	ug/L		79	(51%-104%)			
2,4-Dinitrophenol	50.0			35.3	ug/L		71	(34%-122%)			
2,4-Dinitrotoluene	50.0			51.9	ug/L		104	(57%-124%)			
2,6-Dinitrotoluene	50.0			52.5	ug/L		105	(59%-122%)			
2-Chloronaphthalene	50.0			39.7	ug/L		79	(44%-107%)			
2-Chlorophenol	50.0			44.4	ug/L		89	(49%-105%)			
2-Methyl-4,6-dinitrophenol	50.0			48.0	ug/L		96	(45%-124%)			
2-Methylnaphthalene	50.0			46.6	ug/L		93	(42%-103%)			
2-Nitrophenol	50.0			47.8	ug/L		96	(51%-113%)			
3,3'-Dichlorobenzidine	50.0			57.4	ug/L		115	(43%-127%)			
4-Bromophenylphenylether	50.0			50.6	ug/L		101	(54%-116%)			
4-Chloro-3-methylphenol	50.0			57.6	ug/L		115	(55%-115%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
4-Chloroaniline	50.0			59.6	ug/L		119	(65%-136%)	JLD1	08/17/17	21:32
4-Chlorophenylphenylether	50.0			57.8	ug/L		116	(52%-121%)			
4-Nitrophenol	50.0			11.0	ug/L		22	(15%-137%)			
Acenaphthene	50.0			47.2	ug/L		94	(49%-112%)			
Acenaphthylene	50.0			40.1	ug/L		80	(50%-113%)			
Acetophenone	50.0			58.5	ug/L		117*	(55%-114%)			
Anthracene	50.0			46.0	ug/L		92	(56%-112%)			
Atrazine	50.0			49.5	ug/L		99	(60%-131%)			
Benzaldehyde	50.0			47.0	ug/L		94	(38%-113%)			
Benzo(a)anthracene	50.0			45.9	ug/L		92	(57%-112%)			
Benzo(a)pyrene	50.0			47.6	ug/L		95	(40%-118%)			
Benzo(b)fluoranthene	50.0			50.5	ug/L		101	(41%-118%)			
Benzo(ghi)perylene	50.0			44.5	ug/L		89	(33%-131%)			
Benzo(k)fluoranthene	50.0			51.7	ug/L		103	(42%-121%)			
Butylbenzylphthalate	50.0			45.7	ug/L		91	(52%-125%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
Caprolactam	50.0			17.7	ug/L		35	(30%-61%)	JLD1	08/17/17	21:32
Carbazole	50.0			44.9	ug/L		90	(56%-119%)			
Chrysene	50.0			49.8	ug/L		100	(58%-117%)			
Di-n-butylphthalate	50.0			46.8	ug/L		94	(57%-123%)			
Di-n-octylphthalate	50.0			45.4	ug/L		91	(50%-129%)			
Dibenzo(a,h)anthracene	50.0			50.3	ug/L		101	(38%-129%)			
Dibenzofuran	50.0			46.0	ug/L		92	(50%-111%)			
Diethylphthalate	50.0			49.5	ug/L		99	(57%-122%)			
Dimethylphthalate	50.0			51.6	ug/L		103	(60%-122%)			
Diphenylamine	50.0			44.7	ug/L		89	(55%-113%)			
Fluoranthene	50.0			48.3	ug/L		97	(54%-118%)			
Fluorene	50.0			45.8	ug/L		92	(52%-114%)			
Hexachlorobenzene	50.0			48.9	ug/L		98	(54%-115%)			
Hexachlorobutadiene	50.0			55.0	ug/L		110 *	(35%-98%)			
Hexachlorocyclopentadiene	50.0			31.1	ug/L		62	(34%-89%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
Hexachloroethane	50.0			44.3	ug/L		89	(36%-96%)	JLD1	08/17/17	21:32
Indeno(1,2,3-cd)pyrene	50.0			45.2	ug/L		90	(34%-125%)			
Isophorone	50.0			58.7	ug/L		117	(56%-117%)			
N-Nitrosodipropylamine	50.0			62.7	ug/L		125 *	(54%-115%)			
Naphthalene	50.0			45.8	ug/L		92	(44%-102%)			
Nitrobenzene	50.0			63.4	ug/L		127 *	(53%-115%)			
Pentachlorophenol	50.0			37.9	ug/L		76	(41%-116%)			
Phenanthrene	50.0			47.4	ug/L		95	(55%-110%)			
Phenol	50.0			19.6	ug/L		39	(16%-82%)			
Pyrene	50.0			55.2	ug/L		110	(49%-121%)			
bis(2-Chloro-1-methylethyl)ether	50.0			47.4	ug/L		95	(44%-123%)			
bis(2-Chloroethoxy)methane	50.0			55.6	ug/L		111	(55%-114%)			
bis(2-Chloroethyl) ether	50.0			50.8	ug/L		102	(51%-111%)			
bis(2-Ethylhexyl)phthalate	50.0			54.1	ug/L		108	(52%-125%)			
m,p-Cresols	50.0			37.6	ug/L		75	(43%-102%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
m-Nitroaniline	50.0			49.6	ug/L		99	(61%-139%)	JLD1	08/17/17	21:32
o-Cresol	50.0			40.8	ug/L		82	(41%-101%)			
o-Nitroaniline	50.0			52.8	ug/L		106	(53%-121%)			
p-Nitroaniline	50.0			36.3	ug/L		73	(44%-137%)			
**2,4,6-Tribromophenol	100			78.4	ug/L		78	(32%-124%)			
**2-Fluorobiphenyl	50.0			37.5	ug/L		75	(32%-112%)			
**2-Fluorophenol	100			47.1	ug/L		47	(15%-88%)			
**Nitrobenzene-d5	50.0			49.2	ug/L		98	(36%-115%)			
**Phenol-d5	100			33.3	ug/L		33	(15%-91%)			
**p-Terphenyl-d14	50.0			53.1	ug/L		106	(36%-121%)			
QC1203855849 MB											
1,1'-Biphenyl			U	ND	ug/L					08/17/17	21:01
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						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
2,4-Dichlorophenol			U	ND	ug/L				JLD1	08/17/17	21:01
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						
2-Nitrophenol			U	ND	ug/L						
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						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
4-Nitrophenol			U	ND	ug/L				JLD1	08/17/17	21:01
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						
Benzo(b)fluoranthene			U	ND	ug/L						
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						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
Chrysene			U	ND	ug/L				JLD1	08/17/17	21:01
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						
Fluorene			U	ND	ug/L						
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						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
Isophorone			U	ND	ug/L				JLD1	08/17/17	21:01
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						
bis(2-Chloroethoxy)methane			U	ND	ug/L						
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						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
o-Nitroaniline			U	ND	ug/L				JLD1	08/17/17	21:01
p-Nitroaniline			U	ND	ug/L						
**2,4,6-Tribromophenol	100			77.0	ug/L		77	(32%-124%)			
**2-Fluorobiphenyl	50.0			43.1	ug/L		86	(32%-112%)			
**2-Fluorophenol	100			55.0	ug/L		55	(15%-88%)			
**Nitrobenzene-d5	50.0			56.1	ug/L		112	(36%-115%)			
**Phenol-d5	100			40.3	ug/L		40	(15%-91%)			
**p-Terphenyl-d14	50.0			52.4	ug/L		105	(36%-121%)			
QC1203855851 430614008 MS											
1,1'-Biphenyl	100	U	ND	84.4	ug/L		84	(35%-113%)		08/18/17	00:07
1,2,4,5-Tetrachlorobenzene	100	U	ND	79.5	ug/L		79	(32%-101%)			
2,3,4,6-Tetrachlorophenol	100	U	ND	82.5	ug/L		82	(40%-128%)			
2,4,5-Trichlorophenol	100	U	ND	78.9	ug/L		79	(42%-120%)			
2,4,6-Trichlorophenol	100	U	ND	86.0	ug/L		86	(39%-124%)			
2,4-Dichlorophenol	100	U	ND	85.9	ug/L		86	(40%-111%)			
2,4-Dimethylphenol	100	U	ND	71.0	ug/L		71	(39%-107%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1692436											
2,4-Dinitrophenol	100	U	ND		71.3	ug/L		71	(27%-122%)	JLD1	08/18/17	00:07
2,4-Dinitrotoluene	100	U	ND		89.1	ug/L		89	(45%-125%)			
2,6-Dinitrotoluene	100	U	ND		90.7	ug/L		91	(46%-124%)			
2-Chloronaphthalene	100	U	ND		64.7	ug/L		65	(29%-113%)			
2-Chlorophenol	100	U	ND		68.0	ug/L		68	(37%-108%)			
2-Methyl-4,6-dinitrophenol	100	U	ND		84.1	ug/L		84	(32%-126%)			
2-Methylnaphthalene	100	U	ND		73.5	ug/L		74	(29%-109%)			
2-Nitrophenol	100	U	ND		83.8	ug/L		84	(39%-115%)			
3,3'-Dichlorobenzidine	100	U	ND		94.4	ug/L		94	(34%-124%)			
4-Bromophenylphenylether	100	U	ND		81.1	ug/L		81	(39%-121%)			
4-Chloro-3-methylphenol	100	U	ND		96.3	ug/L		96	(41%-122%)			
4-Chloroaniline	100	U	ND		91.6	ug/L		92	(44%-138%)			
4-Chlorophenylphenylether	100	U	ND		95.9	ug/L		96	(39%-121%)			
4-Nitrophenol	100	U	ND		40.7	ug/L		41	(17%-85%)			
Acenaphthene	100	U	ND		80.5	ug/L		81	(35%-117%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1692436											
Acenaphthylene	100	U	ND		70.6	ug/L		71	(35%-120%)	JLD1	08/18/17	00:07
Acetophenone	100	U	ND		91.9	ug/L		92	(41%-119%)			
Anthracene	100	U	ND		76.9	ug/L		77	(38%-120%)			
Atrazine	100	U	ND		92.3	ug/L		92	(42%-129%)			
Benzaldehyde	100	U	ND		70.4	ug/L		70	(28%-112%)			
Benzo(a)anthracene	100	U	ND		79.8	ug/L		80	(39%-120%)			
Benzo(a)pyrene	100	U	ND		84.9	ug/L		85	(32%-118%)			
Benzo(b)fluoranthene	100	U	ND		83.2	ug/L		83	(31%-122%)			
Benzo(ghi)perylene	100	U	ND		73.1	ug/L		73	(24%-126%)			
Benzo(k)fluoranthene	100	U	ND		90.7	ug/L		91	(33%-123%)			
Butylbenzylphthalate	100	U	ND		76.8	ug/L		77	(40%-129%)			
Caprolactam	100	U	ND		31.1	ug/L		31	(25%-79%)			
Carbazole	100	U	ND		75.3	ug/L		75	(37%-125%)			
Chrysene	100	U	ND		87.7	ug/L		88	(41%-124%)			
Di-n-butylphthalate	100	U	ND		81.5	ug/L		82	(41%-128%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1692436											
Di-n-octylphthalate	100	U	ND		78.1	ug/L		78	(37%-134%)	JLD1	08/18/17	00:07
Dibenzo(a,h)anthracene	100	U	ND		79.9	ug/L		80	(30%-125%)			
Dibenzofuran	100	U	ND		79.1	ug/L		79	(38%-113%)			
Diethylphthalate	100	U	ND		88.5	ug/L		89	(43%-127%)			
Dimethylphthalate	100	U	ND		89.6	ug/L		90	(45%-128%)			
Diphenylamine	100	U	ND		79.1	ug/L		79	(37%-118%)			
Fluoranthene	100	U	ND		82.4	ug/L		82	(41%-119%)			
Fluorene	100	U	ND		80.9	ug/L		81	(39%-117%)			
Hexachlorobenzene	100	U	ND		84.1	ug/L		84	(40%-118%)			
Hexachlorobutadiene	100	U	ND		87.2	ug/L		87	(26%-98%)			
Hexachlorocyclopentadiene	100	U	ND		51.0	ug/L		51	(26%-79%)			
Hexachloroethane	100	U	ND		74.2	ug/L		74	(29%-94%)			
Indeno(1,2,3-cd)pyrene	100	U	ND		75.3	ug/L		75	(27%-121%)			
Isophorone	100	U	ND		99.6	ug/L		100	(43%-120%)			
N-Nitrosodipropylamine	100	U	ND		98.8	ug/L		99	(42%-118%)			

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1692436											
Naphthalene	100	U	ND		71.9	ug/L		72	(31%-108%)	JLD1	08/18/17	00:07
Nitrobenzene	100	U	ND		107	ug/L		107	(38%-123%)			
Pentachlorophenol	100	U	ND		62.1	ug/L		62	(35%-121%)			
Phenanthrene	100	U	ND		81.1	ug/L		81	(40%-115%)			
Phenol	100	U	ND		41.7	ug/L		42	(23%-82%)			
Pyrene	100	U	ND		93.5	ug/L		93	(35%-128%)			
bis(2-Chloro-1-methylethyl)ether	100	U	ND		73.0	ug/L		73	(32%-127%)			
bis(2-Chloroethoxy)methane	100	U	ND		89.3	ug/L		89	(42%-118%)			
bis(2-Chloroethyl) ether	100	U	ND		79.8	ug/L		80	(39%-114%)			
bis(2-Ethylhexyl)phthalate	100	U	ND		90.5	ug/L		90	(38%-131%)			
m,p-Cresols	100	U	ND		62.8	ug/L		63	(36%-120%)			
m-Nitroaniline	100	U	ND		88.4	ug/L		88	(42%-144%)			
o-Cresol	100	U	ND		70.8	ug/L		71	(34%-109%)			
o-Nitroaniline	100	U	ND		100	ug/L		100	(41%-121%)			
p-Nitroaniline	100	U	ND		64.5	ug/L		64	(30%-133%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1692436										
**2,4,6-Tribromophenol	200	56.8		155	ug/L		77	(32%-124%)	JLD1	08/18/17	00:07
**2-Fluorobiphenyl	100	31.2		67.1	ug/L		67	(32%-112%)			
**2-Fluorophenol	200	29.7		90.1	ug/L		45	(15%-88%)			
**Nitrobenzene-d5	100	39.2		87.8	ug/L		88	(36%-115%)			
**Phenol-d5	200	22.9		75.4	ug/L		38	(15%-91%)			
**p-Terphenyl-d14	100	38.0		91.3	ug/L		91	(36%-121%)			
QC1203855852 430614008 MSD											
1,1'-Biphenyl	100	U	ND	78.5	ug/L	7	79	(0%-30%)		08/18/17	00:38
1,2,4,5-Tetrachlorobenzene	100	U	ND	79.9	ug/L	1	80	(0%-30%)			
2,3,4,6-Tetrachlorophenol	100	U	ND	87.1	ug/L	5	87	(0%-30%)			
2,4,5-Trichlorophenol	100	U	ND	82.6	ug/L	4	83	(0%-30%)			
2,4,6-Trichlorophenol	100	U	ND	87.2	ug/L	1	87	(0%-30%)			
2,4-Dichlorophenol	100	U	ND	92.1	ug/L	7	92	(0%-30%)			
2,4-Dimethylphenol	100	U	ND	66.7	ug/L	6	67	(0%-30%)			
2,4-Dinitrophenol	100	U	ND	70.4	ug/L	1	70	(0%-30%)			
2,4-Dinitrotoluene	100	U	ND	91.8	ug/L	3	92	(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	1692436											
2,6-Dinitrotoluene	100	U	ND		91.3	ug/L	1	91	(0%-30%)	JLD1	08/18/17	00:38
2-Chloronaphthalene	100	U	ND		64.3	ug/L	1	64	(0%-30%)			
2-Chlorophenol	100	U	ND		68.9	ug/L	1	69	(0%-30%)			
2-Methyl-4,6-dinitrophenol	100	U	ND		75.6	ug/L	11	76	(0%-30%)			
2-Methylnaphthalene	100	U	ND		69.1	ug/L	6	69	(0%-30%)			
2-Nitrophenol	100	U	ND		85.2	ug/L	2	85	(0%-30%)			
3,3'-Dichlorobenzidine	100	U	ND		97.2	ug/L	3	97	(0%-30%)			
4-Bromophenylphenylether	100	U	ND		75.5	ug/L	7	75	(0%-30%)			
4-Chloro-3-methylphenol	100	U	ND		98.2	ug/L	2	98	(0%-30%)			
4-Chloroaniline	100	U	ND		95.2	ug/L	4	95	(0%-30%)			
4-Chlorophenylphenylether	100	U	ND		95.1	ug/L	1	95	(0%-30%)			
4-Nitrophenol	100	U	ND		35.6	ug/L	13	36	(0%-30%)			
Acenaphthene	100	U	ND		74.9	ug/L	7	75	(0%-30%)			
Acenaphthylene	100	U	ND		67.9	ug/L	4	68	(0%-30%)			
Acetophenone	100	U	ND		99.6	ug/L	8	100	(0%-30%)			

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QC Summary

Workorder: 430635

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1692436											
Anthracene	100	U	ND		76.6	ug/L	0	77	(0%-30%)	JLD1	08/18/17	00:38
Atrazine	100	U	ND		83.8	ug/L	10	84	(0%-30%)			
Benzaldehyde	100	U	ND		80.6	ug/L	14	81	(0%-30%)			
Benzo(a)anthracene	100	U	ND		76.4	ug/L	4	76	(0%-30%)			
Benzo(a)pyrene	100	U	ND		85.0	ug/L	0	85	(0%-30%)			
Benzo(b)fluoranthene	100	U	ND		82.1	ug/L	1	82	(0%-30%)			
Benzo(ghi)perylene	100	U	ND		79.2	ug/L	8	79	(0%-30%)			
Benzo(k)fluoranthene	100	U	ND		85.7	ug/L	6	86	(0%-30%)			
Butylbenzylphthalate	100	U	ND		74.6	ug/L	3	75	(0%-30%)			
Caprolactam	100	U	ND		37.8	ug/L	19	38	(0%-30%)			
Carbazole	100	U	ND		77.9	ug/L	3	78	(0%-30%)			
Chrysene	100	U	ND		82.5	ug/L	6	83	(0%-30%)			
Di-n-butylphthalate	100	U	ND		77.5	ug/L	5	78	(0%-30%)			
Di-n-octylphthalate	100	U	ND		75.6	ug/L	3	76	(0%-30%)			
Dibenzo(a,h)anthracene	100	U	ND		83.1	ug/L	4	83	(0%-30%)			

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QC Summary

Workorder: 430635

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Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch	1692436											
Dibenzofuran	100	U	ND		77.1	ug/L	3	77	(0%-30%)	JLD1	08/18/17	00:38
Diethylphthalate	100	U	ND		84.6	ug/L	5	85	(0%-30%)			
Dimethylphthalate	100	U	ND		86.7	ug/L	3	87	(0%-30%)			
Diphenylamine	100	U	ND		74.8	ug/L	6	75	(0%-30%)			
Fluoranthene	100	U	ND		86.1	ug/L	4	86	(0%-30%)			
Fluorene	100	U	ND		80.7	ug/L	0	81	(0%-30%)			
Hexachlorobenzene	100	U	ND		78.6	ug/L	7	79	(0%-30%)			
Hexachlorobutadiene	100	U	ND		88.5	ug/L	1	88	(0%-30%)			
Hexachlorocyclopentadiene	100	U	ND		50.9	ug/L	0	51	(0%-30%)			
Hexachloroethane	100	U	ND		77.2	ug/L	4	77	(0%-30%)			
Indeno(1,2,3-cd)pyrene	100	U	ND		80.6	ug/L	7	81	(0%-30%)			
Isophorone	100	U	ND		97.7	ug/L	2	98	(0%-30%)			
N-Nitrosodipropylamine	100	U	ND		104	ug/L	6	104	(0%-30%)			
Naphthalene	100	U	ND		72.4	ug/L	1	72	(0%-30%)			
Nitrobenzene	100	U	ND		114	ug/L	7	114	(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	1692436											
Pentachlorophenol	100	U	ND		60.6	ug/L	2	61	(0%-30%)	JLD1	08/18/17	00:38
Phenanthrene	100	U	ND		80.4	ug/L	1	80	(0%-30%)			
Phenol	100	U	ND		43.3	ug/L	4	43	(0%-30%)			
Pyrene	100	U	ND		86.0	ug/L	8	86	(0%-30%)			
bis(2-Chloro-1-methylethyl)ether	100	U	ND		79.0	ug/L	8	79	(0%-30%)			
bis(2-Chloroethoxy)methane	100	U	ND		91.6	ug/L	2	92	(0%-30%)			
bis(2-Chloroethyl) ether	100	U	ND		82.2	ug/L	3	82	(0%-30%)			
bis(2-Ethylhexyl)phthalate	100	U	ND		87.7	ug/L	3	88	(0%-30%)			
m,p-Cresols	100	U	ND		68.8	ug/L	9	69	(0%-30%)			
m-Nitroaniline	100	U	ND		86.6	ug/L	2	87	(0%-30%)			
o-Cresol	100	U	ND		73.0	ug/L	3	73	(0%-30%)			
o-Nitroaniline	100	U	ND		97.9	ug/L	3	98	(0%-30%)			
p-Nitroaniline	100	U	ND		77.7	ug/L	19	78	(0%-30%)			
**2,4,6-Tribromophenol	200		56.8		141	ug/L		71	(32%-124%)			
**2-Fluorobiphenyl	100		31.2		63.2	ug/L		63	(32%-112%)			

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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	1692436										
**2-Fluorophenol	200	29.7		96.4	ug/L		48	(15%-88%)	JLD1	08/18/17	00:38
**Nitrobenzene-d5	100	39.2		85.8	ug/L		86	(36%-115%)			
**Phenol-d5	200	22.9		78.5	ug/L		39	(15%-91%)			
**p-Terphenyl-d14	100	38.0		84.5	ug/L		84	(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
- 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

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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 #: 430635

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: 1692436

Preparation Method: SW846 3510C

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

Preparation Batch: 1692434

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
430635001	L&D #1
430635003	O'HUSKE L&D
1203855849	Method Blank (MB)
1203855850	Laboratory Control Sample (LCS)
1203855851	430614008(NonSDG) Matrix Spike (MS)
1203855852	430614008(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 430635001 (L&D #1) and 430635003 (O'HUSKE L&D) 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. Since the target analytes were not detected in the associated samples above the reporting limits, the positive bias had no adverse impact on the data.

Sample	Analyte	Value
1203855850 (LCS)	1,2,4,5-Tetrachlorobenzene	103* (44%-102%)

	2,4-Dichlorophenol	110* (53%-109%)
	Acetophenone	117* (55%-114%)
	Hexachlorobutadiene	110* (35%-98%)
	N-Nitrosodipropylamine	125* (54%-115%)
	Nitrobenzene	127* (53%-115%)

Miscellaneous Information

Manual Integrations

Samples (See Below) required manual integration in order to properly identify one or more peaks and/or to correctly position the baseline as set in the calibration standard injections.

Sample	Analyte	Value
1203855850 (LCS)	4-Nitrophenol	Result 11ug/L
1203855852 (Non SDG 430614008MSD)	4-Nitrophenol	Result 35.6ug/L

TIC Comment

Tentatively identified compounds (TIC) were requested for samples 430635001 (L&D #1) and 430635003 (O'HUSKE L&D) 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: 1694307 and 1694306

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
430635001	L&D #1
430635003	O'HUSKE L&D
430635004	TRIP BLANK
1203860007	Method Blank (MB)
1203860008	Laboratory Control Sample (LCS)
1203860009	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.

Technical Information

Sample Dilutions

The following samples was/were diluted to bring the over range concentrations within the calibration range. 430635001 (L&D #1) and 430635003 (O'HUSKE L&D).

Analyte	430635	
	001	003
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA)	5X	500X
Perfluorobutyric acid (PFBA)	1X	10X
Perfluoroheptanoic acid (PFHpA)	1X	10X
Perfluorooctanesulfonate (PFOS)	1X	10X
Perfluoropentanoic acid (PFPeA)	1X	500X

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

Analytical Method: EPA 537

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

Analytical Batches: 1698648 and 1694306

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
430635001	L&D #1
430635003	O'HUSKE L&D
430635004	TRIP BLANK

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.

Technical Information

Sample Dilutions

The following samples was/were diluted to bring the over range concentrations within the calibration range. 430635001 (L&D #1) and 430635003 (O'HUSKE L&D).

Analyte	430635	
	001	003
Several	5X	1000X

Miscellaneous Information

Additional Comments

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

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.

Page: <u>1</u> of <u>1</u>	GEL Chain of Custody and Analytical Request	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
Project #: _____		
GEL Quote #: _____		
LOC Number (1): _____		
PO Number: _____		
GEL Work Order Number: <u>430635</u>		

GEL Chain of Custody and Analytical Request

GEL Work Order Number: 430635

Client Name: Brunswick Regional Water; SewerPhone #: 910-371-9949

Project/Site Name: _____ Fax #: _____

Address: ~~Box~~ P.O. Box 2230

Collected by: Bob Walker

Send Results To: Bob Walker

[illegible]

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

None

Chain of Custody Signatures	Sample Shipping and Delivery Details
-----------------------------	--------------------------------------

Relinquished By (Signed)		Received by (signed)	
Date	Time	Date	Time
			GEL PM:

1	Bob Walker	8/4/17	1030	1	1/2 Bus	8-15-17	9:50
						Method of Shipment:	Date Shipped:

2	✓		Airbill #:
2	✓		

3	Airbill #:
3	

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	<i>For Lab Receiving Use Only</i>
--	--

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, SV=Surface Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wine, U=Urine, F=Fecal, N=Nasal

Custody Seal Intact? ☒ YES ☐ NO

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative type: **HA** = hydrochloric acid, **SA** = sulfuric acid, **AA** = acetic acid, **NA** = no preservative is added — leave field blank

Subject: RE: Sample Receipt for 081517
From: Bob Walker <bwalker@h2goonline.com>
Date: 8/15/2017 1:45 PM
To: Hope Taylor <Hope.Taylor@gel.com>

Yes. For future reference, should the samples be shipped for arrival at a higher or lower temperature?



Bob Walker, Executive Director
Brunswick Regional Water & Sewer H2GO
Office: 910-371-9949 ext. 106
Mobile: 910-279-4581
Web: www.H2GOonline.com

From: Hope Taylor [mailto:Hope.Taylor@gel.com]
Sent: Tuesday, August 15, 2017 1:42 PM
To: Bob Walker <bwalker@h2goonline.com>
Subject: Sample Receipt for 081517

Good afternoon Bob,

We received your samples at a temperature of 11c. Please advise if you would like the lab to proceed with analysis.

Thanks,

--
Hope A. Taylor
Project Manager



Laboratories LLC

2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417
Office Direct: 843.852.5814 | Office Main: 843.556.8171 | Fax: 843.766.1178
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Environmental | Engineering | Surveying | Analytical Testing

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Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: <u>H2G0</u>		SDG/AR/COC/Work Order: <u>430435</u>		
Received By: <u>Stacy Boone</u>		Date Received: <u>15 AUG 17</u>		
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground <u>UPS</u> Field Services Courier Other <u>12 BED 575 01 7358 5057</u>		
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?	Yes ☐ No ☒	Hazard Class Shipped: _____ UN#: _____		
COC/Samples marked or classified as radioactive?	Yes ☐ No ☒	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3		
Is package, COC, and/or Samples marked HAZ?	Yes ☐ No ☒	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 <u>Ice Packs</u> Dry ice None Other: *all temperatures are recorded in Celsius <u>ICE Melted</u> TEMP: <u>11</u>
4 Daily check performed and passed on IR temperature gun?	☒	☒	☐	Temperature Device Serial #: <u>123-17</u> Secondary Temperature Device Serial # (If Applicable): <u>Dial #97 13C</u>
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 HT

Date

081417

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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