



# Environmental Chemists, Inc.

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ANALYTICAL & CONSULTING CHEMISTS

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December 14, 2018

Brunswick County Public Utilities  
Post Office Box 249  
Bolivia, NC 28422  
Attn: Glenn Walker

Report #2018-18990  
Collected – November 15, 2018

Enclosed please find your analytical report.

Sincerely,

Tammy Duran  
Environmental Chemists, Inc.

**ANALYTICAL RESULTS: Perfluorinated Chemicals by EPA 537 Rev 1.1 Safe Drinking Water Analysis**

Customer: Environmental Chemists NLS Project: 312292  
 Project Description: 537 & GenX Testing  
 Project Title: Template: 537PPT2GENX Printed: 12/11/2018 15:52

Sample: 1093898 48118 Collected: 11/15/18 Analyzed: 11/29/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	3.6	11		
perfluorohexanoic acid (PFHXA)	10.6	ppt		1	0.83	2.6		
perfluoro-2-propoxypropionic acid (GenX)	3.73	ppt		1	0.62	2.0		
perfluorohexanoic acid (PFHXA)	11.3	ppt		1	0.45	1.4		
perfluorohexanesulfonic acid (PFHxS)	[3.28]	ppt		1	1.3	4.1		J
perfluorooctanoic acid (PFOA)	7.37	ppt		1	0.70	2.2		
perfluorooctanesulfonic acid (PFOS)	ND	ppt		1	1.3	4.1		
perfluorodecanoic acid (PFDA)	10.5	ppt		1	1.5	4.7		
perfluoroundecanoic acid (PFUnA)	ND	ppt		1	1.2	3.8		
perfluorododecanoic acid (PFDDa)	ND	ppt		1	1.2	3.7		
perfluorotetradecanoic acid (PFTDA)	ND	ppt		1	0.95	3.0		
perfluorotetradecanoic acid (PFTA)	ND	ppt		1	0.97	3.1		
C13-PFHXA (SURR)	84.071%	ppt		1	0.88	2.8		S
C13-PFDA (SURR)	86.643%	ppt		1				S

**NOTES APPLICABLE TO THIS ANALYSIS:**

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.  
 S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 1093898 48118 Collected: 11/15/18 Analyzed: 11/29/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	3.6	11		
perfluorohexanoic acid (PFHXA)	12.9	ppt		1	0.83	2.6		
perfluoro-2-propoxypropionic acid (GenX)	10.1	ppt		1	0.62	2.0		
perfluorohexanoic acid (PFHXA)	12.3	ppt		1	0.45	1.4		
perfluorohexanesulfonic acid (PFHxS)	[2.77]	ppt		1	1.3	4.1		J
perfluorooctanoic acid (PFOA)	8.19	ppt		1	0.70	2.2		
perfluorooctanesulfonic acid (PFNA)	ND	ppt		1	1.3	4.1		
perfluorooctanesulfonic acid (PFOS)	12	ppt		1	1.5	4.7		
perfluorodecanoic acid (PFDA)	ND	ppt		1	1.2	3.8		
perfluoroundecanoic acid (PFUnA)	ND	ppt		1	1.2	3.7		
perfluorododecanoic acid (PFDDa)	ND	ppt		1	0.95	3.0		
perfluorotetradecanoic acid (PFTDA)	ND	ppt		1	0.97	3.1		
perfluorotetradecanoic acid (PFTA)	ND	ppt		1	0.88	2.8		
C13-PFHXA (SURR)	68.165%	ppt		1				SR S
C13-PFDA (SURR)	74.255%	ppt		1				S

**NOTES APPLICABLE TO THIS ANALYSIS:**

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.  
 S = This compound is a surrogate used to evaluate the quality control of a method.  
 SR = Surrogate recovery was outside QC limits.  
 C13-PFHXA recovered below QC limits.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive.



Analytical & Consulting Chemists

# ENVIRONMENTAL CHEMISTS, INC

NCDEMR: DWQ CERTIFICATION # 94 NCDHHS: DLS CERTIFICATION # 37729

6602 Windmill Way Wilmington, NC 28405  
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## COLLECTION AND CHAIN OF CUSTODY

CLIENT: Brunswick County Water PROJECT NAME: REPORT NO:

ADDRESS: P.O. Box 249 CONTACT NAME: Glenn Walker PO NO:

BOLIVIA, N.C. 28432 REPORT TO: SAME PHONE/FAX:

COPY TO: email: glenn.walker@brunswickcounty.gov

Sampled By: Billy Benson SAMPLE TYPE: I = Influent, E = Effluent, W = Well, ST = Stream, SO = Soil, SL = Sludge, Other: CHL

Sample Identification	Collection			Sample Type	Composite or Grab	Container (P or G)	Chlorine mg/L	LAB ID NUMBER	PRESERVATION						ANALYSIS REQUESTED	
	Date	Time	Temp						NONE	HCL	H2SO4	HNO3	NAOH	THO		Zn acetate
111518-501	11-15-18	1240pm	14°C	RWH	(G)	(P)		48114								EPA 537 + GENX
111518-EO1		1240pm	14°C	DW	(G)	(G)		48118								
					(C)	(P)										
					(G)	(P)										
					(C)	(P)										
					(G)	(G)										
					(C)	(P)										
					(G)	(G)										
					(C)	(P)										
					(G)	(G)										
					(C)	(P)										
					(G)	(G)										

Transfer	Relinquished By:	Date/Time	Received By:	Date/Time
1.	Billy Benson	11-15-18	Glenn Walker	11/15/18 1:30
2.				

Temperature when Received: \_\_\_\_\_ Accepted: \_\_\_\_\_ Resample Requested: \_\_\_\_\_  
 Delivered By: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Comments: \_\_\_\_\_ TURNAROUND: \_\_\_\_\_