



# Environmental Chemists, Inc.

6602 Windmill Way, Wilmington, NC 28405 • 910.392.0223 Lab • 910.392.4424 Fax  
710 Bowsertown Road, Manteo, NC 27954 • 252.473.5702 Lab/Fax  
255-A Wilmington Highway, Jacksonville, NC 28540 • 910.347.5843 Lab/Fax

ANALYTICAL & CONSULTING CHEMISTS

info@environmentalchemists.com

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April 3, 2018

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

Report #2018-03634

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: 295942  
**Project Description:** EPA 537 with GenX  
**Project Title:** Template: 537PPTGENX      Printed: 04/02/2018 14:02

Sample: 1044640 8943 Collected: 03/08/18 Analyzed: 03/27/18 Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	6.6	21		
perfluorohexanoic acid (PFHxA)	17.5	ppt		1	1.3	4.0		BD
perfluoro-2-piropoxypropanoic acid (GenX)	10.6	ppt		1	0.73	2.3		
perfluorohexanoic acid (PFHpA)	13.6	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[8.32]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	7.83	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	17.5	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	[1.8]	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	17.5	ppt		1	0.90	2.7		J
perfluoroundecanoic acid (PFUnA)	[1.68]	ppt		1	1.0	3.0		
perfluorododecanoic acid (PFDoA)	ND	ppt		1	1.9	6.1		
perfluorotetradecanoic acid (PFTDA)	ND	ppt		1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt		1	2.8	8.9		
C13-PFHxA (SURR)	64.92%			1				SRS
C13-PFDA (SURR)	92.709%			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.
- BD = Compound was detected in the laboratory method blank.
- perfluorohexanoic acid (PFHxA) detected at 2.34 ppt.

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

Customer: Environmental Chemists NLS Project: 295942  
 Project Description: EPA 537 with GenX  
 Project Title: Template: 537PPTGENX Printed: 04/02/2018 14:02

Sample: 1044641 8944 Collected: 03/08/18 Analyzed: 03/27/18 Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	6.6	21		
perfluorohexanoic acid (PFHxA)	13.7	ppt		1	1.3	4.0		BD
perfluoro-2-propoxypropanoic acid (GenX)	9.97	ppt		1	0.73	2.3		
perfluorohexanoic acid (PFHxA)	11.4	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[6:17]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	7.34	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	[1:58]	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	14.5	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1:56]	ppt		1	0.90	2.7		J
perfluoroundecanoic acid (PFUnA)	ND	ppt		1	1.0	3.0		
perfluorododecanoic acid (PFDoA)	ND	ppt		1	1.9	6.1		
perfluorotridecanoic acid (PFTriDA)	ND	ppt		1	3.2	10		
perfluorotetradecanoic acid (PFTTA)	ND	ppt		1	2.8	8.9		
C13-PFHxA (SURR)	63.598%			1				SR S
C13-PFDA (SURR)	89.338%			1				S

**NOTES APPLICABLE TO THIS ANALYSIS:**

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- 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.
- BD = Compound was detected in the laboratory method blank.
- perfluorohexanoic acid (PFHxA) detected at 2.34 ppt.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive. GenX analysis performed by Modified EPA Method 537.



Analytical & Consulting Chemists

# ENVIRONMENTAL CHEMISTS, INC

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

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OFFICE: 910-392-0223 FAX 910-392-4424  
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## COLLECTION AND CHAIN OF CUSTODY

Client: Brunswick County Water PROJECT NAME: \_\_\_\_\_ REPORT NO: \_\_\_\_\_

ADDRESS: P.O. Box 244 CONTACT NAME: Gwen Walker PO NO: \_\_\_\_\_

BOLIVIA, N.C. 28422 REPORT TO: SAME PHONE/FAX: \_\_\_\_\_

COPY TO: \_\_\_\_\_ email: gwalker@brunswickcountync.gov

Sampled By: THAD HILL SAMPLE TYPE: I = Influent, E = Effluent, W = Well, ST = Stream, SO = Soil, SL = Sludge, Other: \_\_\_\_\_

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	THIO	OTHER		
30818 SO1	3-08-18	0805	14.4	Raw	C (G)	P (P)		08943									EPA 537 + GENX
30818 E01	3-08-18	0805	14.4	DW	C (G)	P (G)		08944									
					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											

Transfer Relinquished By: Billy Benton Date/Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

Temperature when Received: \_\_\_\_\_ Accepted: \_\_\_\_\_ Resampled Requested: \_\_\_\_\_

Delivered By: Billy Benton Received By: [Signature] Date: 3/8/18 Time: 1330

Comments: TURNAROUND: