



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

April 3, 2018

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

Report #2018-03222

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: 1044632_07925 **Collected:** 03/01/18 **Analyzed:** 03/19/18 **Analyses:** 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	1	6.6	21		
perfluorohexanoic acid (PFHxA)	14.5	ppt	1	1	1.3	4.0		
perfluoro-2-propoxypropanoic acid (GenX)	9.63	ppt	1	1	0.73	2.3		
perfluorohexanoic acid (PFHpA)	11.6	ppt	1	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[4.37]	ppt	1	1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	8.66	ppt	1	1	1.2	3.9		
perfluorooctanoic acid (PFNA)	[1.8]	ppt	1	1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	14	ppt	1	1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.51]	ppt	1	1	0.90	2.7		J
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	1	1.0	3.0		
perfluorododecanoic acid (PFDoA)	ND	ppt	1	1	1.9	6.1		
perfluorotridecanoic acid (PFTriDA)	ND	ppt	1	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	1	2.8	8.9		
C13-PFHxA (SURR)	68.811%			1				SRS
C13-PFDA (SURR)	100.87%			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.
 Perfluoro-2-propoxypropanoic acid (GenX) was present in the laboratory blank at 8.52 ppt. Re-extraction was not possible due to only 1 bottle provided.

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: 1044633_07929 Collected: 03/01/18 Analyzed: 03/19/18 Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	6.6	21		
perfluorohexanoic acid (PFHxA)	12.3	ppt		1	1.3	4.0		
perfluoro-2-propoxypropanoic acid (GenX)	10.3	ppt		1	0.73	2.3		
perfluorohexanoic acid (PFHxA)	11.4	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[4.59]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	7.82	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	[1.76]	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	13.2	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.19]	ppt		1	0.90	2.7		J
perfluoroundecanoic acid (PFUnA)	ND	ppt		1	1.0	3.0		
perfluorododecanoic acid (PFDDA)	ND	ppt		1	1.9	6.1		
perfluorotridecanoic acid (PFTDA)	ND	ppt		1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt		1	2.8	8.9		
C13-PFHxA (SURR)	65.814%			1				SR S
C13-PFDA (SURR)	97.631%			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.
- Perfluoro-2-propoxypropanoic acid (GenX) was present in the laboratory blank at 8.52 ppt. Re-extraction was not possible due to only 1 bottle provided.



Analytical & Consulting Chemists

ENVIRONMENTAL CHEMISTS, INC

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

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COLLECTION AND CHAIN OF CUSTODY

Client: <u>Brunswick County Water</u>	PROJECT NAME:	REPORT NO: <u>218-03222</u>
ADDRESS: <u>P.O. Box 244</u>	CONTACT NAME: <u>Gwendolyn Walker</u>	PO NO:
<u>Bellevia, N.C. 28422</u>	REPORT TO: <u>SAME</u>	PHONE/FAX:
	COPY TO:	email: <u>glen.walker@brunswickcounty.nc.gov</u>

Sampled By: Billy Beaton 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	
030118-501	3-1-18	0830	16.6°C	C	(P)	G		07925								EPA 5374 GENX
030118-ED1	3-1-18	0830		C	(G)	G		07929								/
<u>Full Blank</u>				C		P		07930								
				G		G										
				C		P										
				G		G										
				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.	<u>Billy Beaton</u>	<u>3-1-18</u>		
2.				

Temperature when Received: not Accepted: ✓ Rejected: _____ Resample Requested: _____
 Delivered By: Billy Beaton Received By: _____ Date: 3/1/2018 Time: 2:30pm
 Comments: _____ TURNAROUND: _____