envirochem (SM)

ANALYTICAL & CONSULTING CHEMISTS

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

info@environmentalchemists.com

March 2, 2018

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

Report #2018-02475

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: 294836**

Project Description: EPA 537 With GenX

Project Title: **Template: 537PPTGENX Printed: 03/01/2018 11:41**

Sample: 1041464 18-06137 Collected: 02/15/18 Analyzed: 02/27/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	6.6	21		
perfluorohexanoic acid (PFHxA)	[2.49]	ppt	1	1.3	4.0		J
perfluoro-2-propoxypropanoic acid (GenX)	9.07	ppt	1	0.73	2.3		
perfluoroheptanoic acid (PFHpA)	2.73	ppt	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	2.8	8.8		
perfluorooctanoic acid (PFOA)	[2.41]	ppt	1	1.2	3.9		J
perfluorononanoic acid (PFNA)	ND	ppt	1	1.5	4.9		
perfluorooctanesulfonic acid (PFOS)	[5.27]	ppt	1	1.7	5.3		J
perfluorodecanoic acid (PFDA)	ND	ppt	1	0.90	2.7		
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	1.0	3.0		
perfluorododecanoic acid (PFDoA)	ND	ppt	1	1.9	6.1		
perfluorotridecanoic acid (PFTrDA)	ND	ppt	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	2.8	8.9		
C13-PFHxA (SURR)	51.996%						SR S
C13-PFDA (SURR)	86.154%						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.

Sample: 1041465 18-06138 Collected: 02/15/18 Analyzed: 02/27/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	6.6	21		
perfluorohexanoic acid (PFHxA)	[2.93]	ppt	1	1.3	4.0		J
perfluoro-2-propoxypropanoic acid (GenX)	8.82	ppt	1	0.73	2.3		
perfluoroheptanoic acid (PFHpA)	3.19	ppt	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	2.8	8.8		
perfluorooctanoic acid (PFOA)	[2.63]	ppt	1	1.2	3.9		J
perfluorononanoic acid (PFNA)	ND	ppt	1	1.5	4.9		
perfluorooctanesulfonic acid (PFOS)	6.73	ppt	1	1.7	5.3		
perfluorodecanoic acid (PFDA)	ND	ppt	1	0.90	2.7		
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	1.0	3.0		
perfluorododecanoic acid (PFDoA)	ND	ppt	1	1.9	6.1		
perfluorotridecanoic acid (PFTrDA)	ND	ppt	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	2.8	8.9		
C13-PFHxA (SURR)	54.072%						SR S
C13-PFDA (SURR)	92.541%						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. GenX analysis performed by Modified EPA Method 537.

ENVIRONMENTAL CHEMISTS, INC

Analytical & Consulting Chemists

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

6602 Windmill Way Wilmington, NC 28405
OFFICE: 910-392-0223 FAX 910-392-4424
info@environmentalchemists.com

COLLECTION AND CHAIN OF CUSTODY

CLIENT: Brunswick County PUD

ADDRESS: PO Box 249
Bolivia, NC 28422

PROJECT NAME: Gen X + Compounds
CONTACT NAME: Glenn Walker
REPORT TO: Glenn Walker
COPY TO:

REPORT NO: [illegible]
PO NO: 2018-02475
PHONE/FAX: 910-371-3490
email: glenn.walker@brunswickcountync.gov

Sampled By: Billy Benton

SAMPLE TYPE: I = Influent, E = Effluent, W = Well, ST = Stream, SO = Soil, SL = Sludge, Other:

Sample Identification	Collection Date	Collection Time	Collection Temp	Sample Type	Composite or Grab	Container (P or G)	Chlorine mg/L	LAB ID NUMBER	PRESERVATION NONE	HCL	H2SO4	HNO3	NAOH	THIO	OTHER	ANALYSIS REQUESTED
021518-S01☆	2-15-18	0855	14.0°C	RAW	C	(P)		06138								EPA 537 + GenX
					(G)	G										
021518-E01	2-15-18	0855		DW	C	(P)		06137								/
					(G)	G										
					C	P										
					G	G										
					C	P										
					G	G										
					C	P										
					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.	Billy Benton		[signature]	2-15-18 1:00p
2.				

Temperature when Received: 3°C Accepted: ✓ Rejected: Resample Requested:

Delivered By: Billy Benton Received By:

Comments: Date: Time:

TURNAROUND: