envirochem (SM)
ANALYTICAL & CONSULTING CHEMISTS

Environmental Chemists, Inc.

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September 27, 2018

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

Report #2018-14389
Collected – August 30, 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: 307277

Project Description: PFCs by EPA 537 with GenX

Project Title: Template: 537PPTGENX Printed: 09/27/2018 14:43

Sample: 1078317 36451 Collected: 08/30/18 Analyzed: 09/17/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	6.6	21		
perfluorohexanoic acid (PFHxA)	19.1	ppt	1	1.3	4.0		
perfluoro-2-propoxypropanoic acid (GenX)	4.76	ppt	1	0.73	2.3		
perfluoroheptanoic acid (PFHpA)	20.8	ppt	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[4.03]	ppt	1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	10.5	ppt	1	1.2	3.9		
perfluorononanoic acid (PFNA)	[2.33]	ppt	1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	13.4	ppt	1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[2.52]	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 (PFTrDA)	ND	ppt	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	2.8	8.9		
C13-PFHxA (SURR)	61.133%		1				SR S
C13-PFDA (SURR)	89.663%		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.

Sample: 1078318 36452 Collected: 08/30/18 Analyzed: 09/17/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	6.6	21		
perfluorohexanoic acid (PFHxA)	6.26	ppt	1	1.3	4.0		
perfluoro-2-propoxypropanoic acid (GenX)	2.3	ppt	1	0.73	2.3		J
perfluoroheptanoic acid (PFHpA)	5.67	ppt	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	2.8	8.8		
perfluorooctanoic acid (PFOA)	4.48	ppt	1	1.2	3.9		
perfluorononanoic acid (PFNA)	ND	ppt	1	1.5	4.9		
perfluorooctanesulfonic acid (PFOS)	7.59	ppt	1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.94]	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 (PFTrDA)	ND	ppt	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	2.8	8.9		
C13-PFHxA (SURR)	62.014%		1				SR S
C13-PFDA (SURR)	88.099%		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. 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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COLLECTION AND CHAIN OF CUSTODY

CLIENT: Brunswick County Water	PROJECT NAME:	REPORT NO: 18-14389
ADDRESS: P.O. Box 249	CONTACT NAME: Glenn Walker	PO NO:
Bolivia, N.C. 28422	REPORT TO: Same	PHONE/FAX:
	COPY TO:	email: glenn.walker@brunswickcounty.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	Zn acetate	OTHER	ANALYSIS REQUESTED
083018 - S01	8-30-18	1035 Am	28.3	RAW	C	P		36451									EPA 537 + GENX
					G	G											
083018 - E01	8-30-18	1035 Am	28.5	DW	C	P		36452									
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
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					C	P											
					G	G											
					C	P											
					G	G											
					C	P											
					G	G											

Transfer	Relinquished By:	Date/Time	Received By:	Date/Time
1.	Billy Benton	8-30-18		
2.				

Temperature when Received: ______ Accepted: ______ Rejected: ______ Resample Requested: ______

Delivered By: Billy Benton Received By: [signature] Date: 8-30-18 Time: 230p.

Comments: ______ TURNAROUND: ______