



Environmental Chemists, Inc.

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ANALYTICAL & CONSULTING CHEMISTS

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April 2, 2018

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

Report #2018-04095

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: 296580
 Project Description: EPA 537 with GenX
 Project Title: Template: 537PPTGENX Printed: 03/29/2018 16:40

Sample: 104654 10104 Collected: 03/15/18 Analyzed: 03/28/18 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	6.6	21		
perfluorohexanoic acid (PFHxA)	19.9	ppt		1	1.3	4.0		BD
perfluoro-2-propoxypropionic acid (GenX)	9.04	ppt		1	0.73	2.3		
perfluoroheptanoic acid (PFHpA)	23.2	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[5.14]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	9.25	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	[1.87]	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	14.2	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.8]	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)	55.304%			1				SR S
C13-PFDA (SURR)	88.792%			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 1.5 ppt.

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

Customer: Environmental Chemists NLS Project: 296580

Project Description: EPA 537 with GenX

Project Title: Template: 537PPTGENX Printed: 03/29/2018 16:40

Sample: 1046542_10105 Collected: 03/15/18 Analyzed: 03/28/18 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		BD
perfluoro-2-propoxypropanoic acid (GenX)	8.98	ppt		1	0.73	2.3		MS
perfluorohexanoic acid (PFHpA)	21.6	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[4.77]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	8.22	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	[2.03]	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	12.1	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.67]	ppt		1	0.90	2.7		
perfluoroundecanoic acid (PFUnA)	ND	ppt		1	1.0	3.0		J
perfluorododecanoic acid (PFDoA)	ND	ppt		1	1.9	6.1		
perfluorotridecanoic acid (PFTriDA)	ND	ppt		1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt		1	2.8	8.9		
C13-PFHxA (SURR)	55.481%			1				S
C13-PFDA (SURR)	84.541%			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.

MS = Matrix spike recovery was outside QC limits.

BD = Compound was detected in the laboratory method blank.

perfluoro-2-propoxypropanoic acid (GenX) recovered below QC limits at 60%.

perfluorohexanoic acid (PFHxA) detected at 1.5 ppt.



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: 18-4095

ADDRESS: P.O. Box 244 CONTACT NAME: Gwendolyn Walker PO NO: _____

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

COPY TO: _____ email: gwalker@brunswickcountync.gov

Sampled By: _____ 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	
31518-8D1	3-15-18	0830	13.0	Raw	C	P		10104								EPA 537 + GENX
	3-15-18	0830	13.0	DW	C	P		10105								
31518-E01					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. Thadders Hill 3/15/18 [Signature] 3/15/18 11:20

2. _____

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

Delivered By: Thadders Hill Received By: _____ Date: _____ Time: _____

Comments: _____

TURNAROUND: _____