



Environmental Chemists, Inc.

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ANALYTICAL & CONSULTING CHEMISTS

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October 19, 2017

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

Report #2017-14985

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: 288648
 Project Description: GenX and Other PFCs by EPA537
 Project Title: Template: 537PPTGENX Printed: 10/18/2017 13:44

Sample: 1022994_36153 Collected: 09/28/17 Analyzed: 10/13/17 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	1	6.6	21		
perfluorohexanoic acid (PFHxA)	16	ppt	1	1	1.3	4.0		
perfluoro-2-propoxypropanoic acid (GenX)	20.6	ppt	1	1	0.73	2.3		
perfluorheptanoic acid (PFHpA)	13.9	ppt	1	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[4.19]	ppt	1	1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	7.72	ppt	1	1	1.2	3.9		
perfluorononanoic acid (PFNA)	[1.84]	ppt	1	1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	7.06	ppt	1	1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.27]	ppt	1	1	0.90	2.7		J
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	1	1.0	3.0		
perfluorododecanoic acid (PFDDA)	ND	ppt	1	1	1.9	6.1		
perfluorotridecanoic acid (PFTDA)	ND	ppt	1	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	1	2.8	8.9		
C13-PFHxA (SURR)	84.153%							S
C13-PFDA (SURR)	91.918%							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.

Sample: 1022995_36154 Collected: 09/28/17 Analyzed: 10/13/17 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	1	6.6	21		
perfluorohexanoic acid (PFHxA)	16.9	ppt	1	1	1.3	4.0		
perfluoro-2-propoxypropanoic acid (GenX)	21.7	ppt	1	1	0.73	2.3		
perfluorheptanoic acid (PFHpA)	16.5	ppt	1	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[4.97]	ppt	1	1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	9.81	ppt	1	1	1.2	3.9		
perfluorononanoic acid (PFNA)	[2.46]	ppt	1	1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	10.3	ppt	1	1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.68]	ppt	1	1	0.90	2.7		J
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	1	1.0	3.0		
perfluorododecanoic acid (PFDDA)	ND	ppt	1	1	1.9	6.1		
perfluorotridecanoic acid (PFTDA)	ND	ppt	1	1	3.2	10		
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	1	2.8	8.9		
C13-PFHxA (SURR)	73.299%							S
C13-PFDA (SURR)	64.946%							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-PFDA 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.

COLLECTION AND CHAIN OF CUSTODY

CLIENT: Brunswick County Utilities PROJECT NAME: NOT P REPORT NO: 17-14985
 ADDRESS: PO Box 249 CONTACT NAME: Glenn Walker PO NO:
Belvia NC 28422 REPORT TO: same PHONE/FAX: 910-371-5755
 Copied By: Glenn Walker email: glenn.walker@brunswickcounty.nc.gov

Sampled By: Billy Benton 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
92817 - E01	9/28/17	0905	26°C	C	P			3453							EPA 537 + GENX
92817 - S01	9/28/17	0906	26°C	C	P			3454							
				C	P										
				C	P										
				C	P										
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Transfer Relinquished By: [Signature] Date/Time: 9/28/17 Received By: _____ Date/Time: _____
 1. Temperature when Received: 1.0 Accepted: _____ Rejected: _____ Resample Requested: _____
 Delivered By: Billy Benton Received By: [Signature] Date: 9/28/17 Time: 1030
 Comments: _____ TURNAROUND: _____