



# Environmental Chemists, Inc.

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ANALYTICAL & CONSULTING CHEMISTS

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September 19, 2017

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

Report #2017-13527

Enclosed please find your analytical report.

Sincerely,

A handwritten signature in cursive script that reads "Tammy Duran".

Tammy Duran

Environmental Chemists, Inc.

# ANALYTICAL REPORT

**NORTHERN LAKE SERVICE, INC.**  
Analytical Laboratory and Environmental Services  
400 North Lake Avenue - Crandon, WI 54520  
Ph: (715)-478-2777 Fax: (715)-478-3060

Client: Environmental Chemists  
Attn: Ray Porter  
6602 Windmill Way  
Wilmington, NC 28405

WDNR Laboratory ID No. 721026460  
WDATCP Laboratory Certification No. 105-330  
EPA Laboratory ID No. WI00034

Printed: 09/18/17 Page 1 of 1  
NLS Project: 286978  
NLS Customer: 96259  
Fax: 910 392 4424 Phone: 910 392 0223

Project: GenX Samples

32474 NLS ID: 1017502	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
COC: 228324:1 Matrix: DW Collected: 09/07/17 09:13 Received: 09/13/17	yes					09/14/17	EPA 537	721026460
Parameter: Solid Phase Extraction by EPA Method 537 GenX and PFCs by EPA 537	see attached					09/15/17	EPA 537	721026460

32475 NLS ID: 1017503	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
COC: 228324:2 Matrix: DW Collected: 09/07/17 09:15 Received: 09/13/17	yes					09/14/17	EPA 537	721026460
Parameter: Solid Phase Extraction by EPA Method 537 GenX and PFCs by EPA 537	see attached					09/15/17	EPA 537	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(\*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.  
ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable  
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L  
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:  
R. T. Krueger  
President

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

Customer: Environmental Chemists  
 Project Description: GenX Samples  
 Project Title: NLS Project: 286978

Template: 537PPTGENX  
 Printed: 09/18/2017 17:21

Sample: 1017502\_32474 Collected: 09/07/17 Analyzed: 09/15/17 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	6.6	21		
perfluorohexanoic acid (PFHxA)	28.4	ppt		1	1.3	4.0		BD
perfluoro-2-propoxypropanoic acid (GenX)	26.8	ppt		1	0.73	2.3		
perfluorohexanoic acid (PFHxA)	26.1	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[7.84]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	15.4	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	[3.5]	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	14.1	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.93]	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)	73.649%							S
C13-PFDA (SURR)	83.827%							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.  
 BD = Compound was detected in the laboratory method blank.  
 perfluorohexanoic acid (PFHxA) detected at 1.61 ppt.

Sample: 1017503\_32475 Collected: 09/07/17 Analyzed: 09/15/17 - Analytes: 13

ANALYTE NAME	RESULT	UNITS	WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt		1	6.6	21		
perfluorohexanoic acid (PFHxA)	27.9	ppt		1	1.3	4.0		BD
perfluoro-2-propoxypropanoic acid (GenX)	25.9	ppt		1	0.73	2.3		
perfluorohexanoic acid (PFHxA)	23.2	ppt		1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	[5.66]	ppt		1	2.8	8.8		J
perfluorooctanoic acid (PFOA)	11.2	ppt		1	1.2	3.9		
perfluorononanoic acid (PFNA)	[2.46]	ppt		1	1.5	4.9		J
perfluorooctanesulfonic acid (PFOS)	9.42	ppt		1	1.7	5.3		
perfluorodecanoic acid (PFDA)	[1.51]	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)	80.061%							S
C13-PFDA (SURR)	87.173%							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.  
 BD = Compound was detected in the laboratory method blank.  
 perfluorohexanoic acid (PFHxA) detected at 1.61 ppt.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive. GenX analysis performed by Modified EPA Method 537.

