

## LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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### STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	4074-001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA160002	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

\*NELAP/TNI Recognized Accreditation Bodies



Eaton Analytical

110 South Hill Street  
South Bend, IN 46617  
Tel: (574) 233-4777  
Fax: (574) 233-8207  
1 800 332 4345

## Laboratory Report

Client: North Wales Water Authority

Attn: Tom Bradbury  
200 W. Walnut St.  
North Wales, PA 19454

Report: 361135  
Priority: Standard Written  
Status: Final  
PWS ID: PA1460048  
PA Lab ID: 68466

### Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3430857	North Wales-Horsham Trans	537	04/13/16 12:50	Client	04/14/16 08:30

### Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Jim Vernon at (574) 233-4777.

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ASIM

Authorized Signature

Title

05/03/2016

Date

Client Name: North Wales Water Authority

Report #: 361135

Sampling Point: North Wales-Horsham Trans

PWS ID: PA1460048

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537	---	9.0	< 9.0	ng/L	04/26/16 08:28	04/27/16 04:59	3430857
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	1.0	< 1.0	ng/L	04/26/16 08:28	04/27/16 04:59	3430857
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	3.0	< 3.0	ng/L	04/26/16 08:28	04/27/16 04:59	3430857
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 04:59	3430857
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	4.0	< 4.0	ng/L	04/26/16 08:28	04/27/16 04:59	3430857
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	04/26/16 08:28	04/27/16 04:59	3430857

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

## Lab Definitions

**Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC)** - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

**Internal Standards (IS)** - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

**Laboratory Duplicate (LD)** - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

**Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS)** - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

**Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB)** - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

**Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB)** - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

**Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD)** - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

**Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM)** - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

**Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV)** - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

**Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS)** - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

**Surrogate Standard (SS) / Surrogate Analyte (SUR)** - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.



Eaton Analytical

110 S. Hill Street  
 South Bend, IN 46617  
 T: 1.800.332.4345  
 F: 1.574.233.8207

Order # 2922833  
 Batch # 361135

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Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

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REPORT TO:		SAMPLER (Signature): <u>[Signature]</u>		PWS ID #	STATE (sample origin)	PROJECT NAME	PO#	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
TOM BRADBURY				1460048	PA					
BILL TO:		COMPLIANCE MONITORING		Yes	No	SOURCE WATER		CHLORINATED		
NORTH WALES WATER AUTH.								YES		NO
200 W. WALNUT ST.		SAMPLING SITE		X		TEST NAME		SAMPLE REMARKS		
NORTH WALES, PA 19454		NORTH WALES - HORSHAM TRANSFER				PFC'S EPA 537		A		
LAB Number		COLLECTION		DATE		TIME		AM		PM
1 3430857		4/13/16 12:50		X						
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
RELINQUISHED BY: (Signature)		DATE		TIME		RECEIVED BY: (Signature)		DATE		TIME
<u>[Signature]</u>		4/13/16 13:30								AM   PM
RELINQUISHED BY: (Signature)		DATE		TIME		RECEIVED BY: (Signature)		DATE		TIME
										AM   PM
RELINQUISHED BY: (Signature)		DATE		TIME		RECEIVED FOR LABORATORY BY:		DATE		TIME
						<u>[Signature]</u>		4-14-16		AM   PM
MATRIX CODES:		TURN-AROUND TIME (TAT) - SURCHARGES		SW = Standard Winton: (15 working days) 0%		IV* = Immediate Verbal (3 working days) 100%		W* = Weekend, Holiday		STAT = Less than 48 hours
D/W/DRINKING WATER		RV* = Rush Verbal (5 working days) 50%		RW* = Rush Winton: (5 working days) 75%		* Please call, expedited service not available for all testing		N/A		
P/W/REGENT WATER		SW = Standard Winton: (15 working days) 0%		IV* = Immediate Verbal (3 working days) 100%		W* = Weekend, Holiday		STAT = Less than 48 hours		
O/W/GROUND WATER		RV* = Rush Verbal (5 working days) 50%		RW* = Rush Winton: (5 working days) 75%		* Please call, expedited service not available for all testing		N/A		
E/W/EXPOSURE WATER		SW = Standard Winton: (15 working days) 0%		IV* = Immediate Verbal (3 working days) 100%		W* = Weekend, Holiday		STAT = Less than 48 hours		
S/W/SURFACE WATER		RV* = Rush Verbal (5 working days) 50%		RW* = Rush Winton: (5 working days) 75%		* Please call, expedited service not available for all testing		N/A		
P/W/POOL WATER		SW = Standard Winton: (15 working days) 0%		IV* = Immediate Verbal (3 working days) 100%		W* = Weekend, Holiday		STAT = Less than 48 hours		
W/H/WASTE WATER		RV* = Rush Verbal (5 working days) 50%		RW* = Rush Winton: (5 working days) 75%		* Please call, expedited service not available for all testing		N/A		
LAB COMMENTS		LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT		CONDITIONS UPON RECEIPT (check one):		Ice/Wet/Blue		Ambient		°C Upon Receipt

Sample received unaccompanied with less than 48 hours holding time, remaining may be subject to additional charges.

06-LO-F0435 Issue 4.0 Effective Date: 2014-05-01

Sample analysis will be provided according to the standard EEA Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA