



## ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

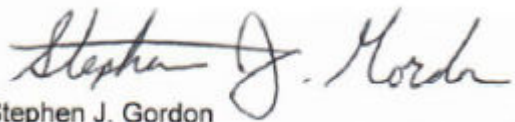
CWM Environmental  
11931 State Route 85  
Suite B  
Kittanning PA 16201

Report Date: February 20, 2020 00:15

**Project: WATER**

Account #: 20413  
Group Number: 2086952  
State of Sample Origin: PA

Respectfully Submitted,



Stephen J. Gordon  
Project Manager

(724) 597-2027

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



### SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
(178)-EP101 Grab Potable Water	02/06/2020 10:45	1255964
(178)-Raw 300 Grab Potable Water	02/06/2020 10:20	1255965
(201) EP101 Grab Potable Water	02/06/2020 10:45	1255966
(201) Raw 300 Grab Potable Water	02/06/2020 10:20	1255967
(173) EP101 Grab Potable Water	02/06/2020 10:45	1255968
(173) Raw 300 Grab Potable Water	02/06/2020 10:20	1255969
(173) EP101-Field Blank Grab Water	02/06/2020 10:45	1255970
(173) Raw 300-Field Blank Grab Water	02/06/2020 10:20	1255971

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

**Sample Description:** (178)-EP101 Grab Potable Water  
WATER

CWM Environmental  
ELLE Sample #: PW 1255964  
ELLE Group #: 2086952  
Matrix: Potable Water

**Project Name:** WATER

Submittal Date/Time: 02/07/2020 09:55  
Collection Date/Time: 02/06/2020 10:45

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
06386	Perchlorate in Water LC/MS/MS <sup>1</sup>	SW-846 6850 1/2007 14797-73-0	ug/l < 1.0	ug/l 1.0	ug/l 0.20	1

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

<sup>1</sup> = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	200430012A	02/12/2020 17:38	Richard A Shober	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (178)-Raw 300 Grab Potable Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255965  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submission Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:20

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
06386	Perchlorate in Water LC/MS/MS <sup>1</sup>	SW-846 6850 1/2007 14797-73-0	ug/l < 1.0	ug/l 1.0	ug/l 0.20	1

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

<sup>1</sup> = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	200430012A	02/12/2020 18:03	Richard A Shober	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (201) EP101 Grab Potable Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255966  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submittal Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:45

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>						
			ng/l	ng/l	ng/l	
14070	NEtFOSAA	2991-50-6	N.D.	0.43	1.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14070	NMeFOSAA	2355-31-9	N.D.	0.43	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14070	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.43	1.7	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	0.43	1.7	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	0.43	1.7	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.43	1.7	1
14070	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.43	1.7	1
14070	Perfluorohexanoic acid	307-24-4	0.48 J	0.43	1.7	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.43	1.7	1
14070	Perfluorooctanesulfonic acid	1763-23-1	0.75 J	0.43	1.7	1
14070	Perfluorooctanoic acid	335-67-1	0.59 J	0.43	1.7	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	0.43	1.7	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	0.43	1.7	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	0.43	1.7	1

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 compounds in drinking water	EPA 537 Version 1.1	1	20044020	02/17/2020 20:39	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20044020	02/13/2020 16:30	Isaac Phillips-Cary	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (201) Raw 300 Grab Potable Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255967  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submittal Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:20

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	N.D.	0.45	1.8	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	N.D.	0.45	1.8	1
14070	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.45	1.8	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	0.45	1.8	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	0.45	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.45	1.8	1
14070	Perfluorohexanoic acid	307-24-4	0.49 J	0.45	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14070	Perfluorooctanesulfonic acid	1763-23-1	0.77 J	0.45	1.8	1
14070	Perfluorooctanoic acid	335-67-1	0.61 J	0.45	1.8	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	0.45	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	0.45	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	0.45	1.8	1

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 compounds in drinking water	EPA 537 Version 1.1	1	20044020	02/17/2020 20:51	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20044020	02/13/2020 16:30	Isaac Phillips-Cary	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (173) EP101 Grab Potable Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255968  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submission Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:45

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	10:2Fluorotelomersulfonic acid <sup>1</sup>	120226-60-0	N.D. Z	0.85	4.3	1
14473	4:2-Fluorotelomersulfonic acid <sup>1</sup>	757124-72-4	N.D.	0.43	1.7	1
14473	6:2-Fluorotelomersulfonic acid <sup>1</sup>	27619-97-2	N.D.	1.7	4.3	1
14473	8:2-Fluorotelomersulfonic acid <sup>1</sup>	39108-34-4	N.D.	0.85	2.6	1
14473	NEtFOSAA <sup>1</sup>	2991-50-6	N.D.	0.43	2.6	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NEtPFOSA <sup>1</sup>	4151-50-2	N.D.	0.85	4.3	1
NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide						
14473	NEtPFOSAE <sup>1</sup>	1691-99-2	N.D.	0.85	2.6	1
NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol						
14473	NMeFOSAA <sup>1</sup>	2355-31-9	N.D.	0.51	1.7	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMePFOSA <sup>1</sup>	31506-32-8	N.D.	0.85	2.6	1
NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide						
14473	NMePFOSAE <sup>1</sup>	24448-09-7	N.D.	0.85	2.6	1
NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol						
14473	Perfluorobutanesulfonic acid <sup>1</sup>	375-73-5	0.45 J	0.43	1.7	1
14473	Perfluorobutanoic acid <sup>1</sup>	375-22-4	N.D.	1.7	4.3	1
14473	Perfluorodecanesulfonic acid <sup>1</sup>	335-77-3	N.D.	0.43	1.7	1
14473	Perfluorodecanoic acid <sup>1</sup>	335-76-2	N.D.	0.43	1.7	1
14473	Perfluorododecanesulfonic acid <sup>1</sup>	79780-39-5	N.D.	0.43	2.6	1
14473	Perfluorododecanoic acid <sup>1</sup>	307-55-1	N.D.	0.43	1.7	1
14473	Perfluoroheptanesulfonic acid <sup>1</sup>	375-92-8	N.D.	0.43	1.7	1
14473	Perfluoroheptanoic acid <sup>1</sup>	375-85-9	0.44 J	0.43	1.7	1
14473	Perfluorohexadecanoic acid <sup>1</sup>	67905-19-5	N.D.	0.85	2.6	1
14473	Perfluorohexanesulfonic acid <sup>1</sup>	355-46-4	N.D.	0.43	1.7	1
14473	Perfluorohexanoic acid <sup>1</sup>	307-24-4	0.54 J	0.43	1.7	1
14473	Perfluorononanesulfonic acid <sup>1</sup>	68259-12-1	N.D.	0.43	1.7	1
14473	Perfluorononanoic acid <sup>1</sup>	375-95-1	N.D.	0.43	1.7	1
14473	Perfluorooctadecanoic acid <sup>1</sup>	16517-11-6	N.D.	0.85	2.6	1
14473	Perfluorooctanesulfonamide <sup>1</sup>	754-91-6	N.D.	0.43	1.7	1
14473	Perfluorooctanesulfonic acid <sup>1</sup>	1763-23-1	0.69 J	0.43	1.7	1
14473	Perfluorooctanoic acid <sup>1</sup>	335-67-1	0.76 J	0.43	1.7	1
14473	Perfluoropentanesulfonate <sup>1</sup>	2706-91-4	N.D.	0.43	1.7	1
14473	Perfluoropentanoic acid <sup>1</sup>	2706-90-3	0.47 J	0.43	1.7	1
14473	Perfluorotetradecanoic acid <sup>1</sup>	376-06-7	N.D.	0.43	1.7	1
14473	Perfluorotridecanoic acid <sup>1</sup>	72629-94-8	N.D.	0.43	1.7	1
14473	Perfluoroundecanoic acid <sup>1</sup>	2058-94-8	N.D.	0.43	1.7	1

Z = A target analyte(s) in the opening continuing calibration verification standard is outside the QC acceptance limits. Since the result is high

\*=This limit was used in the evaluation of the final result

**Sample Description:** (173) EP101 Grab Potable Water  
WATER

CWM Environmental  
ELLE Sample #: PW 1255968  
ELLE Group #: 2086952  
Matrix: Potable Water

**Project Name:** WATER

Submittal Date/Time: 02/07/2020 09:55  
Collection Date/Time: 02/06/2020 10:45

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	and the target analyte(s) is not detected in the sample, the data is reported.					

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

<sup>1</sup> = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	32 compounds by EPA 537 mod	EPA 537 Version 1.1 Modified	1	20043001	02/13/2020 22:43	Christine E Dolman	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20043001	02/12/2020 08:00	Austin Prince	1

\*=This limit was used in the evaluation of the final result



**Sample Description:** (173) Raw 300 Grab Potable Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255969  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submission Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:20

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	10:2Fluorotelomersulfonic acid <sup>1</sup>	120226-60-0	N.D.	0.89	4.4	1
14473	4:2-Fluorotelomersulfonic acid <sup>1</sup>	757124-72-4	N.D.	0.44	1.8	1
14473	6:2-Fluorotelomersulfonic acid <sup>1</sup>	27619-97-2	N.D.	1.8	4.4	1
14473	8:2-Fluorotelomersulfonic acid <sup>1</sup>	39108-34-4	N.D.	0.89	2.7	1
14473	NEtFOSAA <sup>1</sup>	2991-50-6	N.D.	0.44	2.7	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NEtPFOSA <sup>1</sup>	4151-50-2	N.D.	0.89	4.4	1
NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide						
14473	NEtPFOSAE <sup>1</sup>	1691-99-2	N.D.	0.89	2.7	1
NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol						
14473	NMeFOSAA <sup>1</sup>	2355-31-9	N.D.	0.53	1.8	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMePFOSA <sup>1</sup>	31506-32-8	N.D.	0.89	2.7	1
NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide						
14473	NMePFOSAE <sup>1</sup>	24448-09-7	N.D.	0.89	2.7	1
NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol						
14473	Perfluorobutanesulfonic acid <sup>1</sup>	375-73-5	N.D.	0.44	1.8	1
14473	Perfluorobutanoic acid <sup>1</sup>	375-22-4	N.D.	1.8	4.4	1
14473	Perfluorodecanesulfonic acid <sup>1</sup>	335-77-3	N.D.	0.44	1.8	1
14473	Perfluorodecanoic acid <sup>1</sup>	335-76-2	N.D.	0.44	1.8	1
14473	Perfluorododecanesulfonic acid <sup>1</sup>	79780-39-5	N.D.	0.44	2.7	1
14473	Perfluorododecanoic acid <sup>1</sup>	307-55-1	N.D.	0.44	1.8	1
14473	Perfluoroheptanesulfonic acid <sup>1</sup>	375-92-8	N.D.	0.44	1.8	1
14473	Perfluoroheptanoic acid <sup>1</sup>	375-85-9	N.D.	0.44	1.8	1
14473	Perfluorohexadecanoic acid <sup>1</sup>	67905-19-5	N.D.	0.89	2.7	1
14473	Perfluorohexanesulfonic acid <sup>1</sup>	355-46-4	N.D.	0.44	1.8	1
14473	Perfluorohexanoic acid <sup>1</sup>	307-24-4	0.46 J	0.44	1.8	1
14473	Perfluorononanesulfonic acid <sup>1</sup>	68259-12-1	N.D.	0.44	1.8	1
14473	Perfluorononanoic acid <sup>1</sup>	375-95-1	N.D.	0.44	1.8	1
14473	Perfluorooctadecanoic acid <sup>1</sup>	16517-11-6	N.D.	0.89	2.7	1
14473	Perfluorooctanesulfonamide <sup>1</sup>	754-91-6	N.D.	0.44	1.8	1
14473	Perfluorooctanesulfonic acid <sup>1</sup>	1763-23-1	0.91 J	0.44	1.8	1
14473	Perfluorooctanoic acid <sup>1</sup>	335-67-1	0.69 J	0.44	1.8	1
14473	Perfluoropentanesulfonate <sup>1</sup>	2706-91-4	N.D.	0.44	1.8	1
14473	Perfluoropentanoic acid <sup>1</sup>	2706-90-3	0.46 J	0.44	1.8	1
14473	Perfluorotetradecanoic acid <sup>1</sup>	376-06-7	N.D.	0.44	1.8	1
14473	Perfluorotridecanoic acid <sup>1</sup>	72629-94-8	N.D.	0.44	1.8	1
14473	Perfluoroundecanoic acid <sup>1</sup>	2058-94-8	N.D.	0.44	1.8	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (173) Raw 300 Grab Potable Water  
WATER

CWM Environmental  
ELLE Sample #: PW 1255969  
ELLE Group #: 2086952  
Matrix: Potable Water

**Project Name:** WATER

Submittal Date/Time: 02/07/2020 09:55  
Collection Date/Time: 02/06/2020 10:20

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

<sup>1</sup> = This analyte was not on the laboratory's PA DEP Scope of Accreditation at the time of analysis.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	32 compounds by EPA 537 mod	EPA 537 Version 1.1 Modified	1	20047006	02/18/2020 16:31	Christine E Dolman	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	2	20047006	02/17/2020 08:00	Austin Prince	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (173) EP101-Field Blank Grab Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255970  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submission Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:45

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	N.D.	0.45	1.8	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	N.D.	0.45	1.8	1
14070	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.45	1.8	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	0.45	1.8	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	0.45	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.45	1.8	1
14070	Perfluorohexanoic acid	307-24-4	N.D.	0.45	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14070	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.45	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	0.45	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	0.45	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	0.45	1.8	1

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 compounds in drinking water	EPA 537 Version 1.1	1	20044020	02/17/2020 21:14	Mark Collare	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20044020	02/13/2020 16:30	Isaac Phillips-Cary	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** (173) Raw 300-Field Blank Grab Water  
WATER

**CWM Environmental**  
**ELLE Sample #:** PW 1255971  
**ELLE Group #:** 2086952  
**Matrix:** Potable Water

**Project Name:** WATER

**Submittal Date/Time:** 02/07/2020 09:55  
**Collection Date/Time:** 02/06/2020 10:20

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>						
			ng/l	ng/l	ng/l	
14070	NEtFOSAA	2991-50-6	N.D.	0.44	1.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14070	NMeFOSAA	2355-31-9	N.D.	0.44	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14070	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.44	1.8	1
14070	Perfluorodecanoic acid	335-76-2	N.D.	0.44	1.8	1
14070	Perfluorododecanoic acid	307-55-1	N.D.	0.44	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.44	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.44	1.8	1
14070	Perfluorohexanoic acid	307-24-4	N.D.	0.44	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.44	1.8	1
14070	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.44	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.44	1.8	1
14070	Perfluorotetradecanoic acid	376-06-7	N.D.	0.44	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	N.D.	0.44	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	N.D.	0.44	1.8	1

### Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 01/31/2021.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 compounds in drinking water	EPA 537 Version 1.1	1	20044020	02/17/2020 21:25	Mark Collare	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20044020	02/13/2020 16:30	Isaac Phillips-Cary	1

\*=This limit was used in the evaluation of the final result

## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: 200430012A	Sample number(s): 1255964-1255965		
Perchlorate in Water LC/MS/MS	< 1.0	1.0	0.20

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Batch number: 20043001	Sample number(s): 1255968		
10:2Fluorotelomersulfonic acid	N.D.	1.0	5.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NEtPFOSA	N.D.	1.0	5.0
NEtPFOSAE	N.D.	1.0	3.0
NMeFOSAA	N.D.	0.60	2.0
NMePFOSA	N.D.	1.0	3.0
NMePFOSAE	N.D.	1.0	3.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanesulfonic acid	N.D.	0.50	3.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexadecanoic acid	N.D.	1.0	3.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanesulfonic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctadecanoic acid	N.D.	1.0	3.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonate	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0

Batch number: 20044020      Sample number(s): 1255966-1255967,1255970-1255971

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

### Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
NEtFOSAA	N.D.	0.50	2.0
NMeFOSAA	N.D.	0.50	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
Batch number: 20047006	Sample number(s): 1255969		
10:2-Fluorotelomersulfonic acid	N.D.	1.0	5.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NEtPFOSA	N.D.	1.0	5.0
NEtPFOSAE	N.D.	1.0	3.0
NMeFOSAA	N.D.	0.60	2.0
NMePFOSA	N.D.	1.0	3.0
NMePFOSAE	N.D.	1.0	3.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanesulfonic acid	N.D.	0.50	3.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexadecanoic acid	N.D.	1.0	3.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanesulfonic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctadecanoic acid	N.D.	1.0	3.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonate	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

### Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 200430012A	Sample number(s): 1255964-1255965								
Perchlorate in Water LC/MS/MS	5.00	4.76	5.00	4.74	95	95	80-120	0	15
	ng/l	ng/l	ng/l	ng/l					
Batch number: 20043001	Sample number(s): 1255968								
10:2Fluorotelomersulfonic acid	24.68	23.8	24.68	25.89	96	105	45-143	8	30
4:2-Fluorotelomersulfonic acid	23.92	21.18	23.92	24.19	89	101	61-131	13	30
6:2-Fluorotelomersulfonic acid	24.28	21.27	24.28	22.62	88	93	56-140	6	30
8:2-Fluorotelomersulfonic acid	24.52	22.53	24.52	24.4	92	100	58-143	8	30
NETFOSAA	25.6	22.33	25.6	23.2	87	91	53-140	4	30
NETPFOSA	25.6	26.69	25.6	28.01	104	109	56-136	5	30
NETPFOSAE	25.6	22.58	25.6	22.19	88	87	56-130	2	30
NMeFOSAA	25.6	27.33	25.6	26.99	107	105	59-141	1	30
NMePFOSA	25.6	25.73	25.6	26.04	100	102	49-134	1	30
NMePFOSAE	25.6	23.37	25.6	23.15	91	90	61-133	1	30
Perfluorobutanesulfonic acid	22.64	19.58	22.64	19.92	87	88	67-135	2	30
Perfluorobutanoic acid	25.6	23.76	25.6	23.51	93	92	63-160	1	30
Perfluorodecanesulfonic acid	24.64	22.18	24.64	21.6	90	88	62-135	3	30
Perfluorodecanoic acid	25.6	23.25	25.6	22.68	91	89	66-141	2	30
Perfluorododecanesulfonic acid	24.8	20.05	24.8	21.78	81	88	57-134	8	30
Perfluorododecanoic acid	25.6	23.91	25.6	24.95	93	97	65-143	4	30
Perfluoroheptanesulfonic acid	24.36	21.33	24.36	22.36	88	92	67-138	5	30
Perfluoroheptanoic acid	25.6	24.41	25.6	21.7	95	85	69-144	12	30
Perfluorohexadecanoic acid	25.6	20.02	25.6	19.14	78	75	60-148	5	30
Perfluorohexanesulfonic acid	24.2	20.43	24.2	19.09	84	79	63-132	7	30
Perfluorohexanoic acid	25.6	23.68	25.6	23.79	93	93	69-139	0	30
Perfluorononanesulfonic acid	24.56	24.15	24.56	24.42	98	99	70-137	1	30
Perfluorononanoic acid	25.6	24.77	25.6	22.53	97	88	66-144	9	30
Perfluorooctadecanoic acid	25.6	18.67	25.6	19.13	73	75	47-159	2	30
Perfluorooctanesulfonamide	25.6	23.47	25.6	24.98	92	98	67-126	6	30
Perfluorooctanesulfonic acid	24.48	20.01	24.48	19.67	82	80	53-129	2	30
Perfluorooctanoic acid	25.6	21.68	25.6	23.03	85	90	67-139	6	30
Perfluoropentanesulfonate	24	22.71	24	23.58	95	98	73-134	4	30

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

### LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluoropentanoic acid	25.6	23.71	25.6	23.86	93	93	73-135	1	30
Perfluorotetradecanoic acid	25.6	24.4	25.6	22.55	95	88	69-141	8	30
Perfluorotridecanoic acid	25.6	24.29	25.6	26.77	95	105	66-146	10	30
Perfluoroundecanoic acid	25.6	21.76	25.6	21.03	85	82	66-140	3	30
Batch number: 20044020	Sample number(s): 1255966-1255967,1255970-1255971								
NEtFOSAA	20.48	17.37	20.48	18.9	85	92	70-130	8	30
NMeFOSAA	20.48	17.08	20.48	17.76	83	87	70-130	4	30
Perfluorobutanesulfonic acid	18.12	15.2	18.12	16.03	84	88	70-130	5	30
Perfluorodecanoic acid	20.48	17.65	20.48	18.62	86	91	70-130	5	30
Perfluorododecanoic acid	20.48	18.45	20.48	20.58	90	100	70-130	11	30
Perfluoroheptanoic acid	20.48	18.02	20.48	17.73	88	87	70-130	2	30
Perfluorohexanesulfonic acid	18.68	16.08	18.68	15.63	86	84	70-130	3	30
Perfluorohexanoic acid	20.48	17.77	20.48	18.55	87	91	70-130	4	30
Perfluorononanoic acid	20.48	18.47	20.48	18.89	90	92	70-130	2	30
Perfluorooctanesulfonic acid	18.96	16.27	18.96	17.39	86	92	70-130	7	30
Perfluorooctanoic acid	20.48	17.55	20.48	18.47	86	90	70-130	5	30
Perfluorotetradecanoic acid	20.48	17.47	20.48	18.55	85	91	70-130	6	30
Perfluorotridecanoic acid	20.48	18.42	20.48	20.01	90	98	70-130	8	30
Perfluoroundecanoic acid	20.48	18.37	20.48	19.14	90	93	70-130	4	30
Batch number: 20047006	Sample number(s): 1255969								
10:2-Fluorotelomersulfonic acid	24.68	23.54	24.68	24.86	95	101	45-143	5	30
4:2-Fluorotelomersulfonic acid	23.92	27.92	23.92	23.59	117	99	61-131	17	30
6:2-Fluorotelomersulfonic acid	24.28	23.85	24.28	26.09	98	107	56-140	9	30
8:2-Fluorotelomersulfonic acid	24.52	23.73	24.52	25.16	97	103	58-143	6	30
NEtFOSAA	25.6	25.72	25.6	27.01	100	106	53-140	5	30
NEtPFOSA	25.6	28.15	25.6	27.86	110	109	56-136	1	30
NEtPFOSAE	25.6	24.49	25.6	25.15	96	98	56-130	3	30
NMeFOSAA	25.6	26.5	25.6	24.04	104	94	59-141	10	30
NMePFOSA	25.6	29.04	25.6	27.45	113	107	49-134	6	30
NMePFOSAE	25.6	26.59	25.6	25.42	104	99	61-133	5	30
Perfluorobutanesulfonic acid	22.64	20.32	22.64	22.08	90	98	67-135	8	30
Perfluorobutanoic acid	25.6	25.46	25.6	25.74	99	101	63-160	1	30
Perfluorodecanesulfonic acid	24.64	23.19	24.64	24.06	94	98	62-135	4	30
Perfluorodecanoic acid	25.6	21.63	25.6	24.76	84	97	66-141	14	30
Perfluorododecanesulfonic acid	24.8	23.74	24.8	23.09	96	93	57-134	3	30
Perfluorododecanoic acid	25.6	23.4	25.6	25.01	91	98	65-143	7	30
Perfluoroheptanesulfonic acid	24.36	24.32	24.36	24.2	100	99	67-138	1	30
Perfluoroheptanoic acid	25.6	24.16	25.6	25.58	94	100	69-144	6	30
Perfluorohexadecanoic acid	25.6	23.16	25.6	26.56	90	104	60-148	14	30
Perfluorohexanesulfonic acid	24.2	22.66	24.2	23.2	94	96	63-132	2	30
Perfluorohexanoic acid	25.6	23.82	25.6	24.91	93	97	69-139	4	30
Perfluorononanesulfonic acid	24.56	24.94	24.56	24.57	102	100	70-137	1	30
Perfluorononanoic acid	25.6	26.18	25.6	24.66	102	96	66-144	6	30

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

### LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorooctadecanoic acid	25.6	25.88	25.6	28.16	101	110	47-159	8	30
Perfluorooctanesulfonamide	25.6	23.64	25.6	23.97	92	94	67-126	1	30
Perfluorooctanesulfonic acid	24.48	21.98	24.48	22.06	90	90	53-129	0	30
Perfluorooctanoic acid	25.6	23.63	25.6	24.75	92	97	67-139	5	30
Perfluoropentanesulfonate	24	21.31	24	23.03	89	96	73-134	8	30
Perfluoropentanoic acid	25.6	24.55	25.6	25.59	96	100	73-135	4	30
Perfluorotetradecanoic acid	25.6	22.38	25.6	25.96	87	101	69-141	15	30
Perfluorotridecanoic acid	25.6	22.26	25.6	25.41	87	99	66-146	13	30
Perfluoroundecanoic acid	25.6	25.53	25.6	24.04	100	94	66-140	6	30

### Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 32 compounds by EPA 537 mod  
Batch number: 20043001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1255968	97	103	106	104	92	88
Blank	88	88	85	88	86	86
LCS	102	100	95	97	90	94
LCSD	94	91	86	89	88	92
Limits:	43-130	38-150	23-175	22-169	36-137	35-143
	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
1255968	90	112	99	95	98	93
Blank	85	105	92	88	86	90
LCS	92	110	101	99	97	95
LCSD	95	100	92	90	96	91
Limits:	33-140	29-182	52-124	52-121	48-130	50-124
	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA
1255968	107	99	100	117	93	89
Blank	112	104	101	139	97	104
LCS	100	107	101	124	95	96
LCSD	91	97	100	120	94	103
Limits:	37-169	36-143	44-128	42-149	36-127	21-134

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

### Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 32 compounds by EPA 537 mod  
Batch number: 20043001

	13C8-PFOSA	d7-NMePFOSAE	d3-NMePFOSA	d9-NEiPFOSAE	d5-NEiPFOSA
1255968	84	77	44	73	39
Blank	70	73	23	75	25
LCS	88	81	36	80	36
LCSD	83	74	35	74	34
Limits:	10-134	10-137	10-107	10-135	10-107

Analysis Name: 14 compounds in drinking water  
Batch number: 20044020

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1255966	97	95	99
1255967	98	94	90
1255970	96	92	93
1255971	100	96	95
Blank	89	91	93
LCS	99	99	95
LCSD	96	100	97
Limits:	70-130	70-130	70-130

Analysis Name: 32 compounds by EPA 537 mod  
Batch number: 20047006

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1255969	100	111	113	127	91	90
Blank	97	95	93	102	92	93
LCS	92	99	95	98	94	95
LCSD	89	91	87	102	86	86
Limits:	43-130	38-150	23-175	22-169	36-137	35-143

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
1255969	89	115	90	88	98	99
Blank	96	119	98	93	92	100
LCS	93	117	99	94	93	98
LCSD	83	101	83	85	87	91
Limits:	33-140	29-182	52-124	52-121	48-130	50-124

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEiFOSAA	13C2-PFDoDA	13C2-PFTeDA
1255969	113	98	102	122	93	79
Blank	109	119	103	108	105	91
LCS	111	109	89	109	98	93

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CWM Environmental  
Reported: 02/20/2020 00:15

Group Number: 2086952

### Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 32 compounds by EPA 537 mod  
Batch number: 20047006

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA
LCSD	107	107	94	102	90	83
Limits:	37-169	36-143	44-128	42-149	36-127	21-134
	13C8-PFOSA	d7-NMePFOSAE	d3-NMePFOSA	d9-NEIPFOSAE	d5-NEIPFOSA	
1255969	95	66	27	66	25	
Blank	94	69	34	69	33	
LCS	91	81	51	83	56	
LCSD	90	74	41	74	40	
Limits:	10-134	10-137	10-107	10-135	10-107	

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

# Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 20413 Group # 2086952 Sample # 1255964-71

COC # 599550

Client Information				Matrix				Analysis Requested										For Lab Use Only							
Client:		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> NPDES <input type="checkbox"/> Surface		Other:		Preservation and Filtration Codes										FSC: <u>254390</u>							
Project Name/#:		PWSID #:																SCR#: <u>254390</u>							
Project Manager:		P.O. #:																<b>Preservation Codes</b> H=HCl                      T=Thiosulfate N=HNO <sub>3</sub> B=NaOH S=H <sub>2</sub> SO <sub>4</sub> P=H <sub>3</sub> PO <sub>4</sub> F=Field Filtered        O=Other							
Sampler: <u>Robert Gomez</u>		Quote #:																<b>Remarks</b>							
State where samples were collected: <u>PA</u>		For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>																							
Sample Identification			Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers															
			Date	Time																					
<u>(178) - EP101</u>			<u>2/6/20</u>	<u>1045</u>	<input checked="" type="checkbox"/>					<u>2</u>	<input checked="" type="checkbox"/>	<u>Perchlorate in water</u>													
<u>(178) - Raw 300</u>			<u>2/6/20</u>	<u>1020</u>	<input checked="" type="checkbox"/>					<u>1</u>	<input checked="" type="checkbox"/>														
<u>(201) EP101</u>			<u>2/6/20</u>	<u>1045</u>	<input checked="" type="checkbox"/>					<u>2</u>		<input checked="" type="checkbox"/>													
<u>(201) Raw 300</u>			<u>2/6/20</u>	<u>1020</u>	<input checked="" type="checkbox"/>					<u>2</u>		<input checked="" type="checkbox"/>													
<u>(173) EP101</u>			<u>2/6/20</u>	<u>1045</u>	<input checked="" type="checkbox"/>					<u>2</u>			<input checked="" type="checkbox"/>												
<u>(173) Raw 300</u>			<u>2/6/20</u>	<u>1020</u>	<input checked="" type="checkbox"/>					<u>2</u>			<input checked="" type="checkbox"/>												
<u>(173) EP101 - Field Blank</u>			<u>2/6/20</u>	<u>1045</u>	<input checked="" type="checkbox"/>					<u>2</u>		<input checked="" type="checkbox"/>													
<u>(173) Raw 300 - Field Blank</u>			<u>2/6/20</u>	<u>1020</u>	<input checked="" type="checkbox"/>					<u>2</u>		<input checked="" type="checkbox"/>													

<b>Turnaround Time (TAT) Requested</b> (please circle) Standard _____ Rush _____ (Rush TAT is subject to laboratory approval and surcharge.)		Relinquished by <u>[Signature]</u>	Date <u>1-15-20</u>	Time <u>11:13</u>	Received by _____	Date _____	Time _____
Requested TAT in business days: _____		Relinquished by <u>Robert Gomez</u>	Date <u>2/6/20</u>	Time <u>1335</u>	Received by _____	Date _____	Time _____
E-mail address: _____		Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
<b>Data Package Options</b> (circle if required) Type I (EPA Level 3 Equivalent/non-CLP)      Type VI (Raw Data Only) Type III (Reduced non-CLP)      NJ DKQP      TX TRRP-13 NYSDEC Category A or B      MA MCP      CT RCP		Relinquished by _____	Date _____	Time _____	Received by <u>[Signature]</u>	Date <u>2/7/20</u>	Time <u>0955</u>
		EDD Required? Yes No If yes, format: _____			Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____		
		Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)			Temperature upon receipt <u>1.8</u> °C		



Client: CWM ENVIRONMENTAL

**Delivery and Receipt Information**

Delivery Method: UPS                      Arrival Date: 02/07/2020  
 Number of Packages: 1                      Number of Projects: 1  
 State/Province of Origin: Pennsylvania

**Arrival Condition Summary**

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Julissa Rivera-Santa*

**Samples Chilled Details**

Thermometer Types:    *DT = Digital (Temp. Bottle)*    *IR = Infrared (Surface Temp)*    *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.8	DT	Wet	Y	Bagged	N

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>BMQL</b>	Below Minimum Quantitation Level	<b>mL</b>	milliliter(s)
<b>C</b>	degrees Celsius	<b>MPN</b>	Most Probable Number
<b>cfu</b>	colony forming units	<b>N.D.</b>	non-detect
<b>CP Units</b>	cobalt-chloroplatinate units	<b>ng</b>	nanogram(s)
<b>F</b>	degrees Fahrenheit	<b>NTU</b>	nephelometric turbidity units
<b>g</b>	gram(s)	<b>pg/L</b>	picogram/liter
<b>IU</b>	International Units	<b>RL</b>	Reporting Limit
<b>kg</b>	kilogram(s)	<b>TNTC</b>	Too Numerous To Count
<b>L</b>	liter(s)	<b>µg</b>	microgram(s)
<b>lb.</b>	pound(s)	<b>µL</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>umhos/cm</b>	micromhos/cm
<b>meq</b>	milliequivalents	<b>MCL</b>	Maximum Contamination Limit
<b>mg</b>	milligram(s)		
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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# Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$ . The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$ . The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$ . The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report
B	Detection in the Method Blank
Q0	LCS/LCSD Low
Q1	LCS/LCSD High
Q2	MS/MSD Low
Q3	MS/MSD High
Q7	LCS/LCSD RPD
Q8	DUP RPD
Q9	MS/MSD RPD

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.