



January 21, 2026

Timmy Lynn
City of Cullman Water and Waste (UCMR5)
1717 Eva Road
Cullman, AL 35055

RE: Project: UCMR5_SE4_Dec2025
Pace Project No.: 35002148

Dear Timmy Lynn:

Enclosed are the analytical results for sample(s) received by the laboratory on December 11, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Rebecca Selph".

Rebecca Selph
rebecca.selph@pacelabs.com
(386)672-5668
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

California Certification# 3096

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

DoD-ANAB #:ADE-3199

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Massachusetts Certification #: M-FL1264

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

Nevada Certification: FL NELAC Reciprocity

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Utah FL NELAC Reciprocity

Utah

Virginia Environmental Certification #: 460165

Washington Certification #: C955

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: UCMR5_SE4_Dec2025
Pace Project No.: 35002148

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35002148001	07978 Cullman Utilities Intert	Drinking Water	12/09/25 06:47	12/11/25 11:55
35002148002	FRB-07978 Cullman Utilities In	Drinking Water	12/09/25 06:40	12/11/25 11:55

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SAMPLE ANALYTE COUNT

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35002148001	07978	Cullman Utilities Intert			
		EPA 200.7	ASB	1	PASI-O
		EPA 533	SWR	41	PASI-O
		EPA 537.1	TMM1	8	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

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ANALYTICAL RESULTS

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

Sample: 07978 **Cullman Utilities** **Lab ID: 35002148001** Collected: 12/09/25 06:47 Received: 12/11/25 11:55 Matrix: Drinking Water
Intert

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL									
Pace Analytical Services - Ormond Beach									
Lithium	7.5 U	ug/L	22.5	7.5	2.5	12/12/25 04:04	12/26/25 12:00	7439-93-2	N2
533 PFAS Compounds, UCMR									
Analytical Method: EPA 533 Preparation Method: EPA 533									
Initial Volume/Weight: 249.08 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	0.0017 U	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 22:42	763051-92-9	
4:2 FTS	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	757124-72-4	
6:2 FTS	0.0017 U	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 22:42	27619-97-2	
8:2 FTS	0.0017 U	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 22:42	39108-34-4	
9CI-PF3ONS	0.0007 U	ug/L	0.0020	0.0007	1	12/12/25 10:21	12/14/25 22:42	756426-58-1	
ADONA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	919005-14-4	
HFPO-DA	0.0017 U	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 22:42	13252-13-6	
NFDHA	0.0067 U	ug/L	0.020	0.0067	1	12/12/25 10:21	12/14/25 22:42	151772-58-6	
PFBS	0.0014 I	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	375-73-5	
PFDA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	335-76-2	
PFHxA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	307-24-4	
PFBA	0.0037 I	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 22:42	375-22-4	
PFEESA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	113507-82-7	
PFHpS	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	375-92-8	
PFMBA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	863090-89-5	
PFMPA	0.0013 U	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 22:42	377-73-1	
PFPeA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	2706-90-3	
PFPeS	0.0013 U	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 22:42	2706-91-4	
PFDoA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	307-55-1	
PFHpA	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	375-85-9	
PFHxS	0.0010 U	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 22:42	355-46-4	
PFNA	0.0013 U	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 22:42	375-95-1	
PFOS	0.0020 I	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 22:42	1763-23-1	
PFOA	0.0013 U	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 22:42	335-67-1	
PFUnA	0.0007 U	ug/L	0.0020	0.0007	1	12/12/25 10:21	12/14/25 22:42	2058-94-8	
Surrogates									
13C24:2FTS (S)	108	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C26:2FTS (S)	85	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C28:2FTS (S)	87	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C2-PFDoA (S)	63	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C3HFPO-DA(S)	74	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C3-PFBS (S)	74	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C3-PFHxS (S)	78	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C4-PFBA (S)	80	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C4-PFHpA (S)	76	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C5-PFHxA (S)	75	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C5-PFPeA (S)	70	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C6-PFDA (S)	69	%	50-200		1	12/12/25 10:21	12/14/25 22:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

Sample: 07978 Cullman Utilities Lab ID: 35002148001 Collected: 12/09/25 06:47 Received: 12/11/25 11:55 Matrix: Drinking Water
Intert

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR									
Analytical Method: EPA 533 Preparation Method: EPA 533									
Initial Volume/Weight: 249.08 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Ormond Beach									
Surrogates									
13C7-PFUDA (S)	64	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C8-PFOA (S)	74	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C8-PFOS (S)	77	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
13C9-PFNA (S)	72	%	50-200		1	12/12/25 10:21	12/14/25 22:42		
537.1 PFAS Compounds, UCMR									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Initial Volume/Weight: 232.58 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Ormond Beach									
NEtFOSAA	0.0018 U	ug/L	0.0064	0.0018	1	12/11/25 23:53	12/13/25 03:59	2991-50-6	
NMeFOSAA	0.0021 U	ug/L	0.0064	0.0021	1	12/11/25 23:53	12/13/25 03:59	2355-31-9	
PFTeDA	0.0029 U	ug/L	0.0086	0.0029	1	12/11/25 23:53	12/13/25 03:59	376-06-7	
PFTrDA	0.0025 U	ug/L	0.0075	0.0025	1	12/11/25 23:53	12/13/25 03:59	72629-94-8	
Surrogates									
13C2-PFDA (S)	90	%	70-130		1	12/11/25 23:53	12/13/25 03:59		
13C2-PFHxA (S)	92	%	70-130		1	12/11/25 23:53	12/13/25 03:59		
NEtFOSAA-d5 (S)	93	%	70-130		1	12/11/25 23:53	12/13/25 03:59		
HFPO-DAS (S)	82	%	70-130		1	12/11/25 23:53	12/13/25 03:59		

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QUALITY CONTROL DATA

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

QC Batch:	1151802	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET Drinking Water
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35002148001

METHOD BLANK: 6312766 Matrix: Drinking Water

Associated Lab Samples: 35002148001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	7.5 U	22.5	7.5	12/26/25 11:10	N2

LABORATORY CONTROL SAMPLE: 6312767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	9	7.9 I	87	50-150	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6312768 6312769

Parameter	Units	35000564001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	7.5 U	100	100	98.1	96.3	98	96	0-200	2	30	N2

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QUALITY CONTROL DATA

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

QC Batch: 1151880

Analysis Method: EPA 533

QC Batch Method: EPA 533

Analysis Description: 533 PFAS Compounds, UCMR

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35002148001

METHOD BLANK: 6313101

Matrix: Drinking Water

Associated Lab Samples: 35002148001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11CI-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
9CI-PF3ONS	ug/L	0.0007 U	0.0020	0.0007	12/14/25 20:42	
ADONA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
NFDHA	ug/L	0.0067 U	0.020	0.0067	12/14/25 20:42	
PFBA	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
PFBS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFDA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFDaA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFNA	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFOA	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFOS	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFUnA	ug/L	0.0007 U	0.0020	0.0007	12/14/25 20:42	
13C2-PFDaA (S)	%	75	50-200		12/14/25 20:42	
13C24:2FTS (S)	%	83	50-200		12/14/25 20:42	
13C26:2FTS (S)	%	77	50-200		12/14/25 20:42	
13C28:2FTS (S)	%	82	50-200		12/14/25 20:42	
13C3-PFBS (S)	%	83	50-200		12/14/25 20:42	
13C3-PFHxS (S)	%	84	50-200		12/14/25 20:42	
13C3HFPO-DA(S)	%	73	50-200		12/14/25 20:42	
13C4-PFBA (S)	%	79	50-200		12/14/25 20:42	
13C4-PFHpA (S)	%	79	50-200		12/14/25 20:42	
13C5-PFHxA (S)	%	80	50-200		12/14/25 20:42	
13C5-PFPeA (S)	%	79	50-200		12/14/25 20:42	
13C6-PFDA (S)	%	78	50-200		12/14/25 20:42	
13C7-PFUDaA (S)	%	76	50-200		12/14/25 20:42	
13C8-PFOA (S)	%	79	50-200		12/14/25 20:42	
13C8-PFOS (S)	%	81	50-200		12/14/25 20:42	

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QUALITY CONTROL DATA

Project: UCMR5_SE4_Dec2025
Pace Project No.: 35002148

METHOD BLANK: 6313101 Matrix: Drinking Water
Associated Lab Samples: 35002148001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	77	50-200		12/14/25 20:42	

LABORATORY CONTROL SAMPLE: 6313102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ug/L	0.0019	0.0018 I	93	50-150	
4:2 FTS	ug/L	0.0019	0.0021 I	109	50-150	
6:2 FTS	ug/L	0.0019	0.0018 I	93	50-150	
8:2 FTS	ug/L	0.0019	0.0018 I	96	50-150	
9CI-PF3ONS	ug/L	0.0019	0.0018 I	96	50-150	
ADONA	ug/L	0.0019	0.0017 I	89	50-150	
HFPO-DA	ug/L	0.002	0.0018 I	88	50-150	
NFDHA	ug/L	0.02	0.017 I	84	50-150	
PFBA	ug/L	0.002	0.0020 I	98	50-150	
PFBS	ug/L	0.0018	0.0018 I	102	50-150	
PFDA	ug/L	0.002	0.0019 I	93	50-150	
PFDaA	ug/L	0.002	0.0019 I	95	50-150	
PFEESA	ug/L	0.0018	0.0016 I	92	50-150	
PFHpA	ug/L	0.002	0.0020 I	98	50-150	
PFHpS	ug/L	0.0019	0.0020 I	107	50-150	
PFHxA	ug/L	0.002	0.0019 I	96	50-150	
PFHxS	ug/L	0.0018	0.0019 I	104	50-150	
PFMBA	ug/L	0.002	0.0018 I	92	50-150	
PFMPA	ug/L	0.002	0.0019 I	93	50-150	
PFNA	ug/L	0.002	0.0019 I	95	50-150	
PFOA	ug/L	0.002	0.0018 I	91	50-150	
PFOS	ug/L	0.0019	0.0019 I	102	50-150	
PFPeA	ug/L	0.002	0.0019 I	95	50-150	
PFPeS	ug/L	0.0019	0.0019 I	98	50-150	
PFUnA	ug/L	0.002	0.0018 I	90	50-150	
13C2-PFDaA (S)	%			77	50-200	
13C24:2FTS (S)	%			80	50-200	
13C26:2FTS (S)	%			76	50-200	
13C28:2FTS (S)	%			82	50-200	
13C3-PFBS (S)	%			83	50-200	
13C3-PFHxS (S)	%			84	50-200	
13C3HFPO-DA(S)	%			82	50-200	
13C4-PFBA (S)	%			83	50-200	
13C4-PFHpA (S)	%			81	50-200	
13C5-PFHxA (S)	%			82	50-200	
13C5-PFPeA (S)	%			82	50-200	
13C6-PFDA (S)	%			79	50-200	
13C7-PFUDa (S)	%			79	50-200	
13C8-PFOA (S)	%			80	50-200	

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QUALITY CONTROL DATA

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

LABORATORY CONTROL SAMPLE: 6313102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			82	50-200	
13C9-PFNA (S)	%			79	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6313103 6313104

Parameter	Units	35001930001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11CI-PF3OUdS	ug/L	0.0017 U	0.0018	0.0019	0.0016 U	0.0018 I	87	94	70-130		30	
4:2 FTS	ug/L	0.0010 U	0.0018	0.0019	0.0018 I	0.0019 I	93	93	70-130		30	
6:2 FTS	ug/L	0.0017 U	0.0018	0.0019	0.0017 I	0.0018 I	88	92	70-130		30	
8:2 FTS	ug/L	0.0017 U	0.0018	0.0019	0.0019 I	0.0017 I	102	89	70-130		30	
9CI-PF3ONS	ug/L	0.0007 U	0.0018	0.0019	0.0017 I	0.0018 I	91	96	70-130		30	
ADONA	ug/L	0.0010 U	0.0018	0.0019	0.0016 I	0.0017 I	88	89	70-130		30	
HFPO-DA	ug/L	0.0017 U	0.0019	0.002	0.0021 I	0.0020 I	102	94	70-130		30	
NFDHA	ug/L	0.0067 U	0.019	0.02	0.017 I	0.016 I	84	79	70-130		30	
PFBA	ug/L	0.0017 U	0.0019	0.002	0.0033 I	0.0034 I	89	92	70-130		30	
PFBS	ug/L	0.0028 I	0.0017	0.0018	0.0044	0.0045	94	96	70-130	1	30	
PFDA	ug/L	0.0010 U	0.0019	0.002	0.0017 I	0.0019 I	89	93	70-130		30	
PFDoA	ug/L	0.0010 U	0.0019	0.002	0.0018 I	0.0019 I	88	93	70-130		30	
PFEESA	ug/L	0.0010 U	0.0017	0.0018	0.0016 I	0.0017 I	93	95	70-130		30	
PFHpA	ug/L	0.0010 U	0.0019	0.002	0.0024 I	0.0024 I	92	89	70-130		30	
PFHpS	ug/L	0.0010 U	0.0018	0.0019	0.0020 I	0.0019 I	99	95	70-130		30	
PFHxA	ug/L	0.0014 I	0.0019	0.002	0.0031	0.0032	88	92	70-130	3	30	
PFHxS	ug/L	0.0012 I	0.0017	0.0018	0.0029	0.0032	100	112	70-130	8	30	
PFMBA	ug/L	0.0010 U	0.0019	0.002	0.0018 I	0.0019 I	93	97	70-130		30	
PFMPA	ug/L	0.0013 U	0.0019	0.002	0.0018 I	0.0018 I	91	93	70-130		30	
PFNA	ug/L	0.0013 U	0.0019	0.002	0.0019 I	0.0019 I	94	92	70-130		30	
PFOA	ug/L	0.0015 I	0.0019	0.002	0.0033 I	0.0033 I	92	89	70-130		30	
PFOS	ug/L	0.0020 I	0.0018	0.0019	0.0037 I	0.0037 I	92	93	70-130		30	
PFPeA	ug/L	0.0019 I	0.0019	0.002	0.0038	0.0038	103	101	70-130	0	30	
PFPeS	ug/L	0.0013 U	0.0018	0.0019	0.0018 I	0.0018 I	87	86	70-130		30	
PFUnA	ug/L	0.0007 U	0.0019	0.002	0.0018 I	0.0019 I	89	94	70-130		30	
13C2-PFDoA (S)	%						65	66	50-200			
13C24:2FTS (S)	%						87	85	50-200			
13C26:2FTS (S)	%						76	75	50-200			
13C28:2FTS (S)	%						78	79	50-200			
13C3-PFBS (S)	%						77	77	50-200			
13C3-PFHxS (S)	%						81	79	50-200			
13C3HFPO-DA(S)	%						75	83	50-200			
13C4-PFBA (S)	%						82	82	50-200			
13C4-PFHpA (S)	%						75	77	50-200			
13C5-PFHxA (S)	%						76	78	50-200			
13C5-PFPeA (S)	%						75	76	50-200			
13C6-PFDA (S)	%						73	70	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6313103 6313104												
Parameter	Units	35001930001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike	Spike								
13C7-PFUdA (S)	%						69	67	50-200			
13C8-PFOA (S)	%						75	77	50-200			
13C8-PFOS (S)	%						76	77	50-200			
13C9-PFNA (S)	%						74	75	50-200			

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QUALITY CONTROL DATA

Project: UCMR5_SE4_Dec2025
Pace Project No.: 35002148

QC Batch:	1151779	Analysis Method:	EPA 537.1
QC Batch Method:	EPA 537.1	Analysis Description:	537.1 PFOA Compounds, UCMR
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35002148001

METHOD BLANK: 6312566 Matrix: Water

Associated Lab Samples: 35002148001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
NEtFOSAA	ug/L	0.0017 U	0.0060	0.0017	12/12/25 22:46	
NMeFOSAA	ug/L	0.0020 U	0.0060	0.0020	12/12/25 22:46	
PFTeDA	ug/L	0.0027 U	0.0080	0.0027	12/12/25 22:46	
PFTrDA	ug/L	0.0024 U	0.0070	0.0024	12/12/25 22:46	
13C2-PFDA (S)	%	95	70-130		12/12/25 22:46	
13C2-PFHxA (S)	%	99	70-130		12/12/25 22:46	
HFPO-DAS (S)	%	91	70-130		12/12/25 22:46	
NEtFOSAA-d5 (S)	%	113	70-130		12/12/25 22:46	

LABORATORY CONTROL SAMPLE: 6312567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSAA	ug/L	0.005	0.0045 I	90	50-150	
NMeFOSAA	ug/L	0.006	0.0055 I	91	50-150	
PFTeDA	ug/L	0.008	0.0068 I	85	50-150	
PFTrDA	ug/L	0.007	0.0061 I	87	50-150	
13C2-PFDA (S)	%			97	70-130	
13C2-PFHxA (S)	%			105	70-130	
HFPO-DAS (S)	%			99	70-130	
NEtFOSAA-d5 (S)	%			104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6312568 6312569

Parameter	Units	35000564001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
NEtFOSAA	ug/L	0.0016 U	0.0052	0.0051	0.0045 I	0.0048 I	87	93	70-130		30	
NMeFOSAA	ug/L	0.0020 U	0.0062	0.0061	0.0058 I	0.0060 I	93	97	70-130		30	
PFTeDA	ug/L	0.0026 U	0.0083	0.0082	0.0079 I	0.0077 I	95	94	70-130		30	
PFTrDA	ug/L	0.0023 U	0.0073	0.0071	0.0072 I	0.0069 I	99	96	70-130		30	
13C2-PFDA (S)	%						101	100	70-130			
13C2-PFHxA (S)	%						105	104	70-130			
HFPO-DAS (S)	%						97	97	70-130			
NEtFOSAA-d5 (S)	%						109	108	70-130			

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QUALIFIERS

Project: UCMR5_SE4_Dec2025

Pace Project No.: 35002148

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U Compound was analyzed for but not detected.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE4_Dec2025
Pace Project No.: 35002148

Lab ID	Sample ID		QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35002148001	07978	Cullman Utilities Intert	EPA 200.7	1151802	EPA 200.7	1151927
35002148001	07978	Cullman Utilities Intert	EPA 533	1151880	EPA 533	1152146
35002148001	07978	Cullman Utilities Intert	EPA 537.1	1151779	EPA 537.1	1151994

REPORT OF LABORATORY ANALYSIS

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

1. **DIFFERENTIAL WORKORDER** min 1 shol Here

W0#: 35002148



35002148

Contact/Report To:	Timmy Lynn
Phone #:	256-338-3251
E-Mail:	tlynn@cullmanal.gov
Cc E-Mail:	
Invoice To:	Timmy Lynn
Invoice E-Mail:	tlynn@cullmanal.gov
Purchase Order # (if applicable):	
Quote #:	

County / State origin of sample(s):	Alabama
Is applicable:	Reportable ☐ Yes ☐ No
Approval required:	DW PWSID # or WW Permit # as applicable: AL0001786
Day ☐ 3 Day ☐ Other	Field Filtered (if applicable): ☐ Yes ☐ No
Analysis:	

J., Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Biosolid (BS), Other (OT)

Composite Start		Collected or Composite End		#	Res. Chlorine	
Date	Time	Date	Time		Results	Units
12-9-25	0642	12-9-25	0647	9	1.65	mg/l
12-9-25	0638	12-9-25	0640	2	1.65	mg/l

[illegible]

Collected By: Joshua Criddle
(Printed Name)
Signature: *Joshua Criddle*

11-25 13:00	Received by(Company) (Signature)	St/Trace
	Received by(Company) (Signature)	
	Received by(Company) (Signature)	
	Received by(Company) (Signature)	

Company Name: City of Cullman Water & Waste-UCMR5
Street Address: 1717 Eva Road
Cullman, AL 35055

Customer Project #: UCMR5_SE4_Dec2025

Site Collection Info/Facility ID (as applicable):

Time Zone Collected: [] AK [] PT [] MT US CT [] ET	Regulatory Program (DW, RCRA, etc)
[] Level II [] Level III [] Level IV	Rush (Pre-a
[] EQUIS	[] Same Day [] 1 Day [] 2
[] Other	Date Results Requested: 25 BD TAT

(B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CX), Leachate (L)

Customer Sample ID	Matrix *	Comp / Grab
07978Cullman Utilities Intertie	DW	G
FR8-07978Cullman Utilities Intertie	DW	G

Additional Instructions from Page 6:

Relinquished by (Company, Signature)	<i>City of J. Steven Criddle, Jr. Public Counselor</i>	Date/Time: <i>12-9-9</i>
Relinquished by (Company, Signature)		Date/Time:
Relinquished by (Company, Signature)		Date/Time:

page 15

Specify Container Size **	Identify Container Preservative Type ***	Analysis Requested
** Container Size: (1) 1L (2) 500mL (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL Vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other	*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sol. Thiosulfate, (9) Ascorbic Acid, (10)	

[illegible]

Lab Use Only	Tablet #:	Profile / Template:	Prelog / Bottle Ord ID:
		18086	

[illegible]

FRB Instructions: Make sure to transfer the provided DI water/PFAS free water into the empty container right at the sampling site (empty container provided looks empty, but it has preservation agent — so DO NOT rinse or pour it out). FRBs should not be filled with sample water. FRB should return with only one filled container/method once completed. Temperature Requirements: Sample early in the morning, and prior to shipping, please refrigerate the samples for 4-6 hours immediately after sampling. Overnight samples the same day before 3PM. Ship samples on Monday thru Wednesday only, overnight shipping label included. Samples need to arrive under 10C or will require resampling at cost to client.

Customer Remarks / Special Conditions / Possible Hazards:		Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
NO seals included for shipping						

		Tracking Number:	10
Date/Time:	12/11/25 1155	Delivered by:	☐ In-Person ☐ Courier
Date/Time:			☐ FedEx ☐ UPS ☐ Other
Date/Time:			
Date/Time:		Page:	1 of 1

WO#: 35002148

PM: RJS

Due Date: 01/19/26

CLIENT: CULLMANWW

Project #

Project Manager:

Client:

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace

☐ Other:

Tracking # 4736 1121 5178

Custody Seal: ☐ Yes ☐ No

Seal intact: ☐ Yes ☐ No

Ice: ☒ Yes ☐ No

Packing Material: ☐ Bubble Wrap

☐ Bubble Bags

☐ None

☐ Other

		Comments
Chain of Custody Present	☒ Yes ☐ No	
Chain of Custody Completed	☒ Yes ☐ No	
Relinquished & Sampler Signature	☒ Yes ☐ No	
Samples Arrived within Hold Time	☒ Yes ☐ No	No downtime on Containers
Sufficient Volume	☒ Yes ☐ No	
Correct Containers Used	☒ Yes ☐ No	
Containers Intact	☒ Yes ☐ No	
Sample Labels match COC	☒ Yes ☐ No	
Samples received ≤48 hr from collection?	☒ Yes ☐ No	
If no, were samples kept ≤6°C after 48 hrs of collection?		☐ Yes ☐ No
Person contacted for verification		

Temperature Verification

Initials: BP

Date: 12/11/25

Time: 1315

IR Gun ID: 2441

CF (°C): 20.1

	Observed (°C)	Corrected (°C)	Comments
EPA 533	1.8	1.9	
EPA 537.1	2.3	2.4	

Preservation Verification

pH strip: HC45721

pH meter: 52-2

Free Cl Strip/DPD: 25110

Cl Meter: 20-1

200.7 Lab Preserved: Nitric Acid:

Date/Time:

Initials:

Sample/Container ID	pH				Free Chlorine**		Comments
	533* (pH 6.0-8.0)	537.1 (pH 6.0-8.0)	200.7 (pH <2)	200.7 Lab Preserved	533	537.1	
07978 Cullman 1st Huc	6.4	7.1	<2		ND	ND	
214	6.3	7.3			ND	ND	
514	6.2	7.3			ND	ND	
414	6.4	7.2			ND	ND	
100-07428 Cullman 1st Huc	6.5	7.2			ND	ND	

*533 pH may be adjusted at the bench prior to extraction.

** ND = <0.1 mg/L

Labeled by: BP

Reviewed by: Jux

Delivered by: