Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

January 29, 2019

Lubeck Public Services District
301 Ox Johnson LN
Washington, WV 26181

RE: Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Dear :
Enclosed are the analytical results for sample(s) received by the laboratory on December 18, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

pacelabs.com

Enclosures

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CERTIFICATIONS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
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
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
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
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
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: EP after Treatment **Lab ID: 35437668001** Collected: 12/17/18 08:41 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
530 UCMR4 Semivolatiles	Analytical Method: EPA 530 Preparation Method: EPA 530							
Butylated Hydroxyanisole	**0.010U**	ug/L	0.030	1	12/26/18 08:08	12/27/18 21:10	25013-16-5	N2
Quinoline	**0.0067U**	ug/L	0.020	1	12/26/18 08:08	12/27/18 21:10	91-22-5	N2
O-Toluidine	**0.0023U**	ug/L	0.0070	1	12/26/18 08:08	12/27/18 21:10	95-53-4	N2
Surrogates								
Quinoline -d7 (S)	73	%	70-130	1	12/26/18 08:08	12/27/18 21:10	34071-94-8	
O-Toluidine-d9 (S)	54	%	50-130	1	12/26/18 08:08	12/27/18 21:10	194423-47-7	
541 UCMR4 Alcohols	Analytical Method: EPA 541 Preparation Method: EPA 541							
n-Butanol	**0.67U**	ug/L	2.0	1	01/03/19 16:49	01/08/19 11:33	71-36-3	N2
2-Methoxyethanol	**0.13U**	ug/L	0.40	1	01/03/19 16:49	01/08/19 11:33	109-86-4	N2
2-Propen-1-ol (Allyl alcohol)	**0.17U**	ug/L	0.50	1	01/03/19 16:49	01/08/19 11:33	107-18-6	N2
Surrogates								
2-Propen-1-ol-d6 (S)	89	%	70-130	1	01/03/19 16:49	01/08/19 11:33	1173018-56-	
n-Butanol-d10 (S)	91	%	70-130	1	01/03/19 16:49	01/08/19 11:33	34193-38-9	
200.8 MET ICPMS UCMR	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Germanium	**0.10U**	ug/L	0.30	1.25	12/27/18 01:55	12/27/18 22:36	7440-56-4	N2
Manganese	**0.41**	ug/L	0.40	1.25	12/27/18 01:55	12/27/18 22:36	7439-96-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well F **Lab ID: 35437668002** Collected: 12/17/18 10:08 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**53.0**	ug/L	20.0	4		01/12/19 17:57	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**500U**	ug/L	1000	1		01/03/19 18:39	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well E **Lab ID: 35437668003** Collected: 12/17/18 09:31 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**88.5**	ug/L	20.0	4		01/12/19 18:41	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**697J**	ug/L	1000	1		01/03/19 19:33	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well D **Lab ID: 35437668004** Collected: 12/17/18 09:25 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**70.0**	ug/L	20.0	4		01/12/19 20:53	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**887J**	ug/L	1000	1		01/03/19 19:46	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well C **Lab ID: 35437668005** Collected: 12/17/18 09:19 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**54.3**	ug/L	20.0	4		01/12/19 21:37	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**503J**	ug/L	1000	1		01/03/19 20:00	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well B **Lab ID: 35437668006** Collected: 12/17/18 09:10 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**57.4**	ug/L	20.0	4		01/12/19 22:21	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**882J**	ug/L	1000	1		01/03/19 20:13	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well A **Lab ID: 35437668007** Collected: 12/17/18 08:58 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**88.9**	ug/L	20.0	4		01/08/19 18:00	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**731J**	ug/L	1000	1		01/03/19 20:27	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: Well G **Lab ID: 35437668008** Collected: 12/17/18 10:15 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1							
Bromide	**33.6**	ug/L	20.0	4		01/12/19 23:04	24959-67-9	
5310B TOC UCMR	Analytical Method: SM 5310B							
Total Organic Carbon	**500U**	ug/L	1000	1		01/03/19 21:10	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: 9267 Wadesville Rd. **Lab ID: 35437668009** Collected: 12/17/18 11:50 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
552.3 UCMR4 Haloacetic Acids	Analytical Method: EPA 552.3 Preparation Method: EPA 552.3							
Bromochloroacetic Acid	**1.7**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:36	5589-96-8	
Bromodichloroacetic Acid	**1.1**	ug/L	0.50	1	12/20/18 12:02	12/21/18 03:36	71133-14-7	N2
Chlorodibromoacetic Acid	**0.90**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:36	5278-95-5	N2
Dibromoacetic Acid	**1.3**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:36	631-64-1	
Dichloroacetic Acid	**1.4**	ug/L	0.20	1	12/20/18 12:02	12/21/18 03:36	79-43-6	
HAA9 Group	**6.4**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:36		
Total Brominated HAAs	**5.0**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:36		
Haloacetic Acids (Total)	**2.7**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:36		
Monobromoacetic Acid	**0.10U**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:36	79-08-3	
Monochloroacetic Acid	**0.67U**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:36	79-11-8	
Tribromoacetic Acid	**0.67U**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:36	75-96-7	N2
Trichloroacetic Acid	**0.48J**	ug/L	0.50	1	12/20/18 12:02	12/21/18 03:36	76-03-9	
Surrogates								
2,3-Dibromopropanoic Acid (S)	92	%	70-130	1	12/20/18 12:02	12/21/18 03:36	600-05-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Sample: 1528 New England Ridge Rd. **Lab ID: 35437668010** Collected: 12/17/18 11:20 Received: 12/18/18 10:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
552.3 UCMR4 Haloacetic Acids	Analytical Method: EPA 552.3 Preparation Method: EPA 552.3							
Bromochloroacetic Acid	**2.4**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:58	5589-96-8	
Bromodichloroacetic Acid	**1.2**	ug/L	0.50	1	12/20/18 12:02	12/21/18 03:58	71133-14-7	N2
Chlorodibromoacetic Acid	**0.82**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:58	5278-95-5	M1,N2
Dibromoacetic Acid	**1.7**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:58	631-64-1	M1
Dichloroacetic Acid	**2.2**	ug/L	0.20	1	12/20/18 12:02	12/21/18 03:58	79-43-6	
HAA9 Group	**9.1**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:58		
Total Brominated HAAs	**6.2**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:58		
Haloacetic Acids (Total)	**4.7**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:58		
Monobromoacetic Acid	**0.10U**	ug/L	0.30	1	12/20/18 12:02	12/21/18 03:58	79-08-3	M1
Monochloroacetic Acid	**0.67U**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:58	79-11-8	M1
Tribromoacetic Acid	**0.67U**	ug/L	2.0	1	12/20/18 12:02	12/21/18 03:58	75-96-7	M1,N2
Trichloroacetic Acid	**0.77**	ug/L	0.50	1	12/20/18 12:02	12/21/18 03:58	76-03-9	
Surrogates								
2,3-Dibromopropanoic Acid (S)	91	%	70-130	1	12/20/18 12:02	12/21/18 03:58	600-05-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 504144
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET UCMR Drinking Water
Associated Lab Samples: 35437668001

METHOD BLANK: 2723886 Matrix: Water
Associated Lab Samples: 35437668001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Germanium	ug/L	0.10U	0.30	12/27/18 22:21	N2
Manganese	ug/L	0.13U	0.40	12/27/18 22:21	

LABORATORY CONTROL SAMPLE: 2723887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Germanium	ug/L	0.3	0.34	115	50-150	N2
Manganese	ug/L	0.4	0.41	102	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2723888 2723889

Parameter	Units	35437651001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Germanium	ug/L	0.10U	0.3	0.3	0.32	0.37	97	113	0-200	14	N2
Manganese	ug/L	0.59	0.4	0.4	1.0	1.1	111	131	0-200	8	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2723890 2723891

Parameter	Units	35438050001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Germanium	ug/L	0.10U	5	5	4.9	4.6	97	92	0-200	6	N2
Manganese	ug/L	3.3	5	5	8.5	8.0	104	95	0-200	5	

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: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 503735
QC Batch Method: EPA 530
Analysis Method: EPA 530
Analysis Description: 530 UCMR4 Semivolatiles
Associated Lab Samples: 35437668001

METHOD BLANK: 2722511 Matrix: Water
Associated Lab Samples: 35437668001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Butylated Hydroxyanisole	ug/L	0.010U	0.030	12/27/18 12:49	N2
O-Toluidine	ug/L	0.0023U	0.0070	12/27/18 12:49	N2
Quinoline	ug/L	0.0067U	0.020	12/27/18 12:49	N2
O-Toluidine-d9 (S)	%	58	50-130	12/27/18 12:49	
Quinoline -d7 (S)	%	70	70-130	12/27/18 12:49	

LABORATORY CONTROL SAMPLE: 2722512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Butylated Hydroxyanisole	ug/L	0.03	0.021J	69	50-150	N2
O-Toluidine	ug/L	0.007	0.0058J	82	50-150	N2
Quinoline	ug/L	0.02	0.012J	61	50-150	N2
O-Toluidine-d9 (S)	%			66	50-130	
Quinoline -d7 (S)	%			72	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2722814 2722815

Parameter	Units	35438237001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Butylated Hydroxyanisole	ug/L	0.0099 U	0.029	0.03	0.026J	0.027J	88	90	0-200		N2
O-Toluidine	ug/L	0.0023 U	0.0069	0.007	0.0063J	0.0063J	91	91	0-200		N2
Quinoline	ug/L	0.0066 U	0.02	0.02	0.017J	0.017J	85	84	0-200		N2
O-Toluidine-d9 (S)	%						55	57	50-130		
Quinoline -d7 (S)	%						69	66	70-130		S0

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 505401
QC Batch Method: EPA 541
Analysis Method: EPA 541
Analysis Description: 541 UCMR4 Alcohols
Associated Lab Samples: 35437668001

METHOD BLANK: 2729280 Matrix: Water
Associated Lab Samples: 35437668001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2-Methoxyethanol	ug/L	0.13U	0.40	01/08/19 08:57	N2
2-Propen-1-ol (Allyl alcohol)	ug/L	0.17U	0.50	01/08/19 08:57	N2
n-Butanol	ug/L	0.67U	2.0	01/08/19 08:57	N2
2-Propen-1-ol-d6 (S)	%	88	70-130	01/08/19 08:57	
n-Butanol-d10 (S)	%	91	70-130	01/08/19 08:57	

LABORATORY CONTROL SAMPLE: 2729281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Methoxyethanol	ug/L	0.4	0.39J	97	50-150	N2
2-Propen-1-ol (Allyl alcohol)	ug/L	0.5	0.31J	62	50-150	N2
n-Butanol	ug/L	2	2.1	106	50-150	N2
2-Propen-1-ol-d6 (S)	%			89	70-130	
n-Butanol-d10 (S)	%			92	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2729821 2729822

Parameter	Units	35439314001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
2-Methoxyethanol	ug/L	0.13U	0.4	0.4	0.46	0.45	114	112	0-200	2	N2
2-Propen-1-ol (Allyl alcohol)	ug/L	0.17U	0.5	0.5	0.33J	0.35J	66	70	0-200		N2
n-Butanol	ug/L	0.67U	2	2	2.1	2.1	94	95	0-200	1	N2
2-Propen-1-ol-d6 (S)	%						90	84	70-130		
n-Butanol-d10 (S)	%						90	87	70-130		

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QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 502648 Analysis Method: EPA 552.3
QC Batch Method: EPA 552.3 Analysis Description: 5523 UCMR Haloacetic Acids
Associated Lab Samples: 35437668009, 35437668010

METHOD BLANK: 2717071 Matrix: Water
Associated Lab Samples: 35437668009, 35437668010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromochloroacetic Acid	ug/L	0.10U	0.30	12/21/18 03:15	
Bromodichloroacetic Acid	ug/L	0.17U	0.50	12/21/18 03:15	N2
Chlorodibromoacetic Acid	ug/L	0.10U	0.30	12/21/18 03:15	N2
Dibromoacetic Acid	ug/L	0.10U	0.30	12/21/18 03:15	
Dichloroacetic Acid	ug/L	0.067U	0.20	12/21/18 03:15	
HAA9 Group	ug/L	0.67U	2.0	12/21/18 03:15	
Haloacetic Acids (Total)	ug/L	0.67U	2.0	12/21/18 03:15	
Monobromoacetic Acid	ug/L	0.10U	0.30	12/21/18 03:15	
Monochloroacetic Acid	ug/L	0.67U	2.0	12/21/18 03:15	
Total Brominated HAAs	ug/L	0.67U	2.0	12/21/18 03:15	
Tribromoacetic Acid	ug/L	0.67U	2.0	12/21/18 03:15	N2
Trichloroacetic Acid	ug/L	0.17U	0.50	12/21/18 03:15	
2,3-Dibromopropanoic Acid (S)	%	93	70-130	12/21/18 03:15	

LABORATORY CONTROL SAMPLE: 2717072

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromochloroacetic Acid	ug/L	0.3	0.32	108	50-150	
Bromodichloroacetic Acid	ug/L	0.5	0.61	123	50-150	
Chlorodibromoacetic Acid	ug/L	0.3	0.35	116	50-150	
Dibromoacetic Acid	ug/L	0.3	0.30	101	50-150	
Dichloroacetic Acid	ug/L	0.2	0.23	117	50-150	
Haloacetic Acids (Total)	ug/L		0.90J			
Monobromoacetic Acid	ug/L	0.3	0.36	119	50-150	
Monochloroacetic Acid	ug/L	2	1.9J	93	50-150	
Tribromoacetic Acid	ug/L	2	2.6	128	50-150	
Trichloroacetic Acid	ug/L	0.5	0.48J	96	50-150	
2,3-Dibromopropanoic Acid (S)	%			94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2717918 2717919

Parameter	Units	35437668010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromochloroacetic Acid	ug/L	2.4	0.3	0.3	2.7	2.8	105	117	70-130	1	
Bromodichloroacetic Acid	ug/L	1.2	0.5	0.5	1.7	1.7	100	100	70-130	0	
Chlorodibromoacetic Acid	ug/L	0.82	0.3	0.3	1.3	1.3	152	146	70-130	1	M1
Dibromoacetic Acid	ug/L	1.7	0.3	0.3	2.1	2.1	112	131	70-130	3	M1
Dichloroacetic Acid	ug/L	2.2	0.2	0.2	2.4	2.4	87	120	70-130	3	

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2717918 2717919

Parameter	Units	35437668010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Haloacetic Acids (Total)	ug/L	4.7			6.5	9.8				41	
Monobromoacetic Acid	ug/L	0.10U	0.3	0.3	0.80	0.91	267	305	70-130	13	M1
Monochloroacetic Acid	ug/L	0.67U	2	2	0.67U	3.0	0	149	70-130		M1
Tribromoacetic Acid	ug/L	0.67U	2	2	2.9	3.3	147	166	70-130	12	M1
Trichloroacetic Acid	ug/L	0.77	0.5	0.5	1.3	1.4	98	123	70-130	9	
2,3-Dibromopropanoic Acid (S)	%						97	95	70-130		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 506387
QC Batch Method: EPA 300.1
Analysis Method: EPA 300.1
Analysis Description: 300.1 UCMR Oxihalides IC Anions
Associated Lab Samples: 35437668007

METHOD BLANK: 2733964 Matrix: Water
Associated Lab Samples: 35437668007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	ug/L	0.90U	5.0	01/08/19 07:14	

LABORATORY CONTROL SAMPLE: 2733965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	ug/L	40	40.1	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2733966 2733967

Parameter	Units	35437644002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromide	ug/L	317	160	160	469	469	95	95	80-120	0	

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 507621 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 UCMR Oxihalides IC Anions
Associated Lab Samples: 35437668002, 35437668003, 35437668004, 35437668005, 35437668006, 35437668008

METHOD BLANK: 2741856 Matrix: Water
Associated Lab Samples: 35437668002, 35437668003, 35437668004, 35437668005, 35437668006, 35437668008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	ug/L	0.90U	5.0	01/12/19 12:50	

LABORATORY CONTROL SAMPLE: 2741857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	ug/L	40	41.6	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2741858 2741859

Parameter	Units	35437651002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromide	ug/L	187	160	160	346	342	99	97	80-120	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2741860 2741861

Parameter	Units	35438025004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromide	ug/L	240	80	80	318	318	98	97	80-120	0	

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

QC Batch: 505379 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC UCMR
Associated Lab Samples: 35437668002, 35437668003, 35437668004, 35437668005, 35437668006, 35437668007, 35437668008

METHOD BLANK: 2729224 Matrix: Water
Associated Lab Samples: 35437668002, 35437668003, 35437668004, 35437668005, 35437668006, 35437668007, 35437668008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	500U	1000	01/03/19 16:31	

LABORATORY CONTROL SAMPLE: 2729225

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	20000	19700	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2729226 2729227

Parameter	Units	35436819009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	ug/L	500U	20000	20000	19500	19400	97	96	80-120	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2729228 2729229

Parameter	Units	35437668007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	ug/L	731J	20000	20000	19400	19200	93	92	80-120	1	

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

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

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

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.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
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.
S0	Surrogate recovery outside laboratory control limits.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR4_SE1_DEC2018
Pace Project No.: 35437668

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35437668001	**EP after Treatment**	EPA 530	503735	EPA 530	504276
35437668001	**EP after Treatment**	EPA 541	505401	EPA 541	506011
35437668009	**9267 Wadesville Rd.**	EPA 552.3	502648	EPA 552.3	503049
35437668010	**1528 New England Ridge Rd.**	EPA 552.3	502648	EPA 552.3	503049
35437668001	**EP after Treatment**	EPA 200.8	504144	EPA 200.8	504175
35437668002	**Well F**	EPA 300.1	507621		
35437668003	**Well E**	EPA 300.1	507621		
35437668004	**Well D**	EPA 300.1	507621		
35437668005	**Well C**	EPA 300.1	507621		
35437668006	**Well B**	EPA 300.1	507621		
35437668007	**Well A**	EPA 300.1	506387		
35437668008	**Well G**	EPA 300.1	507621		
35437668002	**Well F**	SM 5310B	505379		
35437668003	**Well E**	SM 5310B	505379		
35437668004	**Well D**	SM 5310B	505379		
35437668005	**Well C**	SM 5310B	505379		
35437668006	**Well B**	SM 5310B	505379		
35437668007	**Well A**	SM 5310B	505379		
35437668008	**Well G**	SM 5310B	505379		

Pace Analytical

10#: 35437668

35437668

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Lubeck Public Services District
Address:	301 Ox Johnson LN
	Washington, WV 26181
Email:	
Phone: (304) 863-3341	Fax:
Requested Due Date:	

Required Project Information:

Report To:	Smith, Mike
Copy To:	
Purchase Order #:	
Project Name:	UCMR4_SE1_DEC2018
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	mehgan.hill@pacelabs.com,
Pace Profile #:	11146

Regulatory Agency:

State / Location: WV

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	200.8 metals - UCMR IV	EPA541 UCMR IV MS/MSD	EPA525.3 UCMR IV MS/MS	EPA530 UCMR IV MS/MSD	TOC UCMR IV	EPA300.1 UCMR IV	EPA552.3 UCMR IV	EPA552.3 UCMR IV MS/MS	Residual Chlorine (Y/N)
1	EP after Treatment	WT	G	12/17/18	0841														X	X	X	X					
2	Well F	WT		12/17/18	1008																		X	X			
3	Well E	WT		12/17/18	0931																		X	X			
4	Well D	WT		12/17/18	0925																		X	X			
5	Well C	WT		12/17/18	0919																		X	X			
6	Well B	WT		12/17/18	0910																		X	X			
7	Well A	WT	G	12/17/18	0858																		X	X			
8	Well G	WT		12/17/18	1015																		X	X			
9	9267 Wadesville Rd.	WT		12/17/18	1150																				X		
10	1528 New England Ridge Rd.	WT		12/17/18	1420																					X	
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
UCMR4_SE1_DEC2018 PWS: WV3305404 / Lubeck PSD		11-29-18	13:20							
	Chuck Belcher	12/17/18	1400	SDI / Pace	12/18/18	1045	NA	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt UCMR Document No.: F-FL-C-047 rev. 03 page 1 of 2	Document Revised: July 16, 2018 Issuing Authority: Pace Florida Quality Office

[redacted] SCUR) - UCMR 4

WO#: 35437668

PM: LLB Due Date: 01/17/19

CLIENT: LUBECKUCMR4

Project #

Project Manager:

Client:

Date and Initials of person:
Examining contents:
Label: NKB
Deliver:

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☑ Standard Overnight ☐ Ground ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☑ Unknown

Tracking # 4525 3220 9489/9478

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Comments:

Chain of Custody Present	☑Yes ☐ No	
Chain of Custody Filled Out	☑Yes ☐ No	
Relinquished Signature & Sampler Name COC	☑Yes ☐ No	
Samples Arrived within Hold Time	☑Yes ☐ No	
Sufficient Volume	☑Yes ☐ No	
Correct Containers Used	☑Yes ☐ No	
Containers Intact	☑Yes ☐ No	
Sample Labels match COC	☑Yes ☐ No	
Samples received within 48 hours of collection	☑Yes ☐ No	
If no, were samples kept ≤6°C after collection?	☐Yes ☐ No	Person contacted for verification:

Preservation Verification **Date:** 12/18/18 **Time:** 1045 **Initials:** JDJ

Temperature **IR Gun ID:** T338 **CF (°C):** +0.2

EPA 525.3 Temp°C_____(Visual) _____(Actual) 0.8

EPA 530 Temp°C_____(Visual) _____(Actual) 1.2

EPA 541 Temp°C_____(Visual) _____(Actual) 4.0

EPA 544 Temp°C_____(Visual) _____(Actual)

EPA 545 Temp°C_____(Visual) _____(Actual)

EPA 546 Temp°C_____(Visual) _____(Actual)

EPA 552.3 Temp°C 2.1 (Visual) 2.3 (Actual)

SM5310B Temp°C 3.5 (Visual) 3.7 (Actual)

EPA 300.0 Temp°C 1.9 (Visual) 2.1 (Actual)

	pH Strips:						Free Chlorine Strips*:						
Sample	545 pH ≤4.0	525.3 pH ≤4.0	530 pH 6-8	541 pH <3.0	544 pH 6.5-7.5	200.8 pH <2.0	525.3	530	541	544	545	546	552.3
EPAfter		4/4=3.5	4/4=7.0	2/2=2.5		1/1=1.0	ND	ND	ND				
WellF													
WellE													
WellD													
WellC													
WellB													
WellA													
WellG													
9267Wades													ND
1528Well													ND

*(<0.1mg/L = ND)

Sample Condition Upon Receipt Form (SCUR) - UCMR 4

	pH continued						Free Chlorine* continued						
Sample	545 pH ≤4.0	525.3 pH ≤4.0	530 pH 6-8	541 pH <3.0	544 pH 6.5-7.5	200.8 pH <2.0	525.3	530	541	544	545	546	552.3

*(<0.1mg/L = ND)

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

September 09, 2019

Lubeck Public Services District
301 Ox Johnson LN
Washington, WV 26181

RE: Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

Dear :
Enclosed are the analytical results for sample(s) received by the laboratory on August 16, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

pacelabs.com

Enclosures

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
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
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
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
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
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35490655001	**EP after Treatment**	Drinking Water	08/15/19 11:05	08/16/19 10:40

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

Lab ID	Sample ID	Method	Analysts	Analytes Reported
35490655001	**EP after Treatment**	EPA 525.3	CMB	12

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

Sample: EP after Treatment **Lab ID: 35490655001** Collected: 08/15/19 11:05 Received: 08/16/19 10:40 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
525.3 UCMR4	Analytical Method: EPA 525.3 Preparation Method: EPA 525.3								
alpha-BHC	**0.0032U**	ug/L	0.0098	0.0032	1	08/25/19 08:58	09/06/19 04:34	319-84-6	N2
Chlorpyrifos	**0.0098U**	ug/L	0.030	0.0098	1	08/25/19 08:58	09/06/19 04:34	2921-88-2	N2
Dimethipin	**0.066U**	ug/L	0.20	0.066	1	08/25/19 08:58	09/06/19 04:34	55290-64-7	N2
Ethoprop	**0.0098U**	ug/L	0.030	0.0098	1	08/25/19 08:58	09/06/19 04:34	13194-48-4	N2
Merphos-Oxone	**0.023U**	ug/L	0.069	0.023	1	08/25/19 08:58	09/06/19 04:34	78-48-8	N2
Oxyfluorfen	**0.017U**	ug/L	0.049	0.017	1	08/25/19 08:58	09/06/19 04:34	42874-03-3	N2
Permethrin	**0.013U**	ug/L	0.039	0.013	1	08/25/19 08:58	09/06/19 04:34	52645-53-1	N2
Profenofos	**0.098U**	ug/L	0.30	0.098	1	08/25/19 08:58	09/06/19 04:34	41198-08-7	N2
Tebuconazole	**0.066U**	ug/L	0.20	0.066	1	08/25/19 08:58	09/06/19 04:34	107534-96-3	N2
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	86	%	70-130		1	08/25/19 08:58	09/06/19 04:34	81209	
Benzo(a)pyrene-d12 (S)	89	%	70-130		1	08/25/19 08:58	09/06/19 04:34		
Triphenylphosphate (S)	99	%	70-130		1	08/25/19 08:58	09/06/19 04:34	115-86-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

QC Batch: 564930
QC Batch Method: EPA 525.3
Analysis Method: EPA 525.3
Analysis Description: 525.3 UCMR
Associated Lab Samples: 35490655001

METHOD BLANK: 3067888 Matrix: Water
Associated Lab Samples: 35490655001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
alpha-BHC	ug/L	0.0033U	0.010	0.0033	09/06/19 00:33	N2
Chlorpyrifos	ug/L	0.010U	0.030	0.010	09/06/19 00:33	N2
Dimethipin	ug/L	0.067U	0.20	0.067	09/06/19 00:33	N2
Ethoprop	ug/L	0.010U	0.030	0.010	09/06/19 00:33	N2
Merphos-Oxone	ug/L	0.023U	0.070	0.023	09/06/19 00:33	N2
Oxyfluorfen	ug/L	0.017U	0.050	0.017	09/06/19 00:33	N2
Permethrin	ug/L	0.013U	0.040	0.013	09/06/19 00:33	N2
Profenofos	ug/L	0.10U	0.30	0.10	09/06/19 00:33	N2
Tebuconazole	ug/L	0.067U	0.20	0.067	09/06/19 00:33	N2
1,3-Dimethyl-2-nitrobenzene(S)	%	82	70-130		09/06/19 00:33	
Benzo(a)pyrene-d12 (S)	%	96	70-130		09/06/19 00:33	
Triphenylphosphate (S)	%	100	70-130		09/06/19 00:33	

LABORATORY CONTROL SAMPLE: 3067889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
alpha-BHC	ug/L	0.01	0.0087J	87	50-150	N2
Chlorpyrifos	ug/L	0.03	0.034	113	50-150	N2
Dimethipin	ug/L	0.2	0.20J	98	50-150	N2
Ethoprop	ug/L	0.03	0.032	105	50-150	N2
Merphos-Oxone	ug/L	0.07	0.078	112	50-150	N2
Oxyfluorfen	ug/L	0.05	0.059	118	50-150	N2
Permethrin	ug/L	0.04	0.039J	99	50-150	N2
Profenofos	ug/L	0.3	0.34	113	50-150	N2
Tebuconazole	ug/L	0.2	0.27	134	50-150	N2
1,3-Dimethyl-2-nitrobenzene(S)	%			83	70-130	
Benzo(a)pyrene-d12 (S)	%			77	70-130	
Triphenylphosphate (S)	%			94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071772 3071773

Parameter	Units	35491550001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
alpha-BHC	ug/L	0.0033U	0.01	0.0099	0.0082J	0.0084J	81	85	0-200		40	N2
Chlorpyrifos	ug/L	0.010U	0.03	0.03	0.035	0.030	116	102	0-200	15	40	N2
Dimethipin	ug/L	0.068U	0.2	0.2	0.19J	0.19J	97	94	0-200		40	N2
Ethoprop	ug/L	0.010U	0.03	0.03	0.034	0.035	114	118	0-200	2	40	N2
Merphos-Oxone	ug/L	0.023U	0.07	0.069	0.077	0.077	110	111	0-200	0	40	N2

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071772 3071773

Parameter	Units	35491550001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Oxyfluorfen	ug/L	0.017U	0.05	0.049	0.061	0.060	122	123	0-200	1	40	N2
Permethrin	ug/L	0.013U	0.04	0.039	0.037J	0.036J	92	92	0-200		40	N2
Profenofos	ug/L	0.10U	0.3	0.3	0.35	0.35	115	117	0-200	0	40	N2
Tebuconazole	ug/L	0.068U	0.2	0.2	0.27	0.26	108	106	0-200	3	40	N2
1,3-Dimethyl-2-nitrobenzene(S)	%						81	82	70-130			
Benzo(a)pyrene-d12 (S)	%						86	84	70-130			
Triphenylphosphate (S)	%						91	91	70-130			

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

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

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

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

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.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RCLubeck_UCMR4_SE2_June2019
Pace Project No.: 35490655

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35490655001	**EP after Treatment**	EPA 525.3	564930	EPA 525.3	566094

WO# : 35490655

35490655

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: Lubeck Public Services District	Report To: Smith, Mike	Attention:	
Address: 301 Ox Johnson LN	Copy To:	Company Name:	Regulatory Agency
Washington, WV 26181		Address:	
Email: meslpsd@cascable.net	Purchase Order #:	Pace Quote:	
Phone: (304)863-3341 Fax:	Project Name: RCLubeck_UCMR4_SE2_June2019	Pace Project Manager: mehgan.hill@pacelabs.com,	State / Location
Requested Due Date:	Project #:	Pace Profile #: 11146	WV

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Analyses Test: EPA525.3 UCMR IV MS/MS	Residual Chlorine (Y/N)
1	EP after Treatment	WT		8/5/19	1105													X		
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
RCLubeck_UCMR4_SE2_June2019 PWS: WV3305404 / Lubeck PSD	Ryan P. / Pace	8/6/19	1411	BRN / Pace	8-16-19	1040	NA	X	N	X
	C Kelchen	8/5/19	1400							

T353

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:	DATE Signed:				

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt UCMR Document No.: F-FL-C-047 rev. 03 page 1 of 2	Document Revised: July 16, 2018 Issuing Authority: Pace Florida Quality Office

WO#: 35490655

PM: ADC Due Date: 09/16/19

CLIENT: LUBECKUCMR4

Sample Condition Upon Receipt - UCMR 4

Project #

Project Manager:

Client:

Date and Initials of person:
Examining contents: BRN
Label:
Deliver:

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

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☑ Standard Overnight ☐ Ground ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☑ Unknown

Tracking # 1021 2856 0114

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

		Comments:
Chain of Custody Present	☑Yes ☐ No	
Chain of Custody Filled Out	☑Yes ☐ No	
Relinquished Signature & Sampler Name COC	☑Yes ☐ No	
Samples Arrived within Hold Time	☑Yes ☐ No	
Sufficient Volume	☑Yes ☐ No	
Correct Containers Used	☑Yes ☐ No	
Containers Intact	☑Yes ☐ No	
Sample Labels match COC	☑Yes ☐ No	
Samples received within 48 hours of collection	☑Yes ☐ No	
If no, were samples kept ≤6°C after collection?	☐Yes ☐ No	Person contacted for verification:

Preservation Verification Date: 8-16-19 Time: 11:25 Initials: BRN

Temperature IR Gun ID: T353 CF (°C): -.2

EPA 525.3 Temp°C 5.6 (Visual) 5.4 (Actual)

EPA 530 Temp°C _____ (Visual) _____ (Actual)

EPA 541 Temp°C _____ (Visual) _____ (Actual)

EPA 544 Temp°C _____ (Visual) _____ (Actual)

EPA 545 Temp°C _____ (Visual) _____ (Actual)

EPA 546 Temp°C _____ (Visual) _____ (Actual)

EPA 552.3 Temp°C _____ (Visual) _____ (Actual)

SM5310B Temp°C _____ (Visual) _____ (Actual)

EPA 300.0 Temp°C _____ (Visual) _____ (Actual)

	pH Strips:						Free Chlorine Strips*:						
Sample	545 pH ≤4.0	525.3 pH ≤4.0	530 pH 6-8	541 pH ≤3.0	544 pH 6.5-7.5	200.8 pH <2.0	525.3	530	541	544	545	546	552.3
EB After Treatment		4/4=3.5					ND						

*(<0.1mg/L = ND)

Sample Condition Upon Receipt Form (SCUR) - UCMR 4

Sample	pH continued						Free Chlorine* continued						
	545 pH ≤4.0	525.3 pH ≤4.0	530 pH 6-8	541 pH ≤3.0	544 pH 6.5-7.5	200.8 pH <2.0	525.3	530	541	544	545	546	552.3

*(<0.1mg/L = ND)

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____