



Advanced
Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580

Phone: (813)630-9616
Fax: (813)630-4327

SAMPLE SUMMARY

Workorder: T1803749 UCMR4

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1803749001	RAW 1 (North)	Drinking Water	3/6/2018 09:05	3/6/2018 14:00
T1803749002	RAW 2 (South)	Drinking Water	3/6/2018 09:00	3/6/2018 14:00

Report ID: 541882

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CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: T1803749 UCMR4

Lab ID: **T1803749001** Date Received: 03/06/18 14:00 Matrix: Drinking Water
Sample ID: **RAW 1 (North)** Date Collected: 03/06/18 09:05

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC, E300.0 Water Analytical Method: EPA 300.0								
Bromide	0.75		mg/L	2	0.080	0.040	3/12/2018 16:36	T
Analysis Desc: TOC, SM5310B Water Analytical Method: SM 5310B								
Total Organic Carbon	2.2		mg/L	1	1.0	0.57	3/15/2018 21:57	T

Lab ID: **T1803749002** Date Received: 03/06/18 14:00 Matrix: Drinking Water
Sample ID: **RAW 2 (South)** Date Collected: 03/06/18 09:00

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC, E300.0 Water Analytical Method: EPA 300.0								
Bromide	0.94		mg/L	2	0.080	0.040	3/12/2018 16:49	T
Analysis Desc: TOC, SM5310B Water Analytical Method: SM 5310B								
Total Organic Carbon	2.5		mg/L	1	1.0	0.57	3/15/2018 22:16	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T1803749 UCMR4

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

- T DOH Certification #E84589(AEL-T)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: T1803749 UCMR4

QC Batch: WCA/2298 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: T1803749001, T1803749002

METHOD BLANK: 2646427

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Bromide	mg/L	0.020	0.020 U

QC Batch: WCA/2414 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Prepared:
Associated Lab Samples: T1803749001, T1803749002

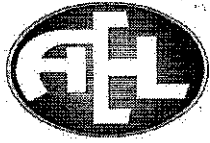
METHOD BLANK: 2652145

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Total Organic Carbon	mg/L	0.57	0.57 U

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1803749 UCMR4

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1803749001	RAW 1 (North)			EPA 300.0	WCAI/2298
T1803749002	RAW 2 (South)			EPA 300.0	WCAI/2298
T1803749001	RAW 1 (North)			SM 5310B	WCAI/2414
T1803749002	RAW 2 (South)			SM 5310B	WCAI/2414

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8001 Sandpoint Pkwy. - Jacksonville, FL 32216 - 904-363-8850 - Fax 904-363-8954 • 659574
9810 Paradise Palm Ave. - Tampa, FL 33618 - 813-888-5818 - Fax 813-888-4327 • 659588
6615 SW Archer Road - Gainesville, FL 32608 - 352-377-2346 - Fax 352-395-6539 • 652001
528 S. North Lake Blvd., Ste. 1016 - Altamonte Springs, FL 32701 - 407-907-1594 - Fax 407-907-1587 • 653076

Page _____ of _____

LAB NUMBER

1103749

Client Name: City of Dunedin Water Dept

Address: 1401 County Rd 1

Dunedin, FL

727-738-1840

ONE

PROJECT LOCATION: REPAIRS/SPECIAL INSTRUCTIONS:

ANALYSIS REQUIRED

PREPARED BY: John Van Amburg

TURNAROUND TIME: Andrew Shaffer

Grabbed Run

BOTTLE SIZE & TYPE

Bromide

TOC

LABORATORY I.D. NUMBER

SAMPLE ID

SAMPLE DESCRIPTION

Grab Comp

SAMPLING DATE

TIME

MATRIX

NO. COUNTS

PRESERVATION

RAW 1 (North)

0

3/6/18

0905

GW

3

X

X

RAW 2 (South)

5

3/2/18

0900

GW

3

X

X

Matrix Code: MW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge

collected on for Yes No

Specific location from sample

Target from temp stick

Where required, pH checked

Prepared by: [Signature]

Date: 3/6/18

Time: 10:55

Received by: [Signature]

Date: 3/6/18

Time: 05:11

Device used for measuring Temp by unique identifier (each IR temp gun used)

J. SA

G.L.T. 1

T. 10A

A. 3A

Preservation Code: I = Ice HI (Cl) S = H2SO4 N = (NH4) T = (Sodium Thiosulfate)

Temperature when received: 47 (in degrees Celsius)

(When PWS information not otherwise supplied)

PWS ID: _____

Contact Person: _____

Phone: _____

Supplier of Water: _____

Site Address: _____

FOR DRINKING WATER USE:

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

ANALYTICAL REPORT

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

Printed: 04/12/18 Page 1 of 1

Client: Advanced Environmental Laboratories - Tampa
 Attn: Heidi Brooks
 9610 Princess Palm Ave
 Tampa, FL 33619

NLS Project: 295632

NLS Customer: 96704

Fax: 813 630 4327 Phone: 813 630 9616

Project: Dunedin Water - UCMR4 PWS#FL6520486

Dist System - 11 Ventura NLS ID: 1043792

Matrix: DW

Collected: 03/06/18 10:20 Received: 03/07/18

Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
UCMR4 - EPA Method 552.3	see attached				03/20/18	EPA 552.3	721026460
UCMR4 - Micro extraction - (552.3)	yes				03/19/18	EPA 552.3	721026460

Dist System - 2180 Evans NLS ID: 1043793

Matrix: DW

Collected: 03/06/18 10:00 Received: 03/07/18

Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
UCMR4 - EPA Method 552.3	see attached				03/20/18	EPA 552.3	721026460
UCMR4 - Micro extraction - (552.3)	yes				03/19/18	EPA 552.3	721026460

Dist System - 1025 Jackmar NLS ID: 1043794

Matrix: DW

Collected: 03/06/18 11:05 Received: 03/07/18

Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
UCMR4 - EPA Method 552.3	see attached				03/20/18	EPA 552.3	721026460
UCMR4 - Micro extraction - (552.3)	yes				03/19/18	EPA 552.3	721026460

Dist System - 2 Causeway NLS ID: 1043795

Matrix: DW

Collected: 03/06/18 10:50 Received: 03/07/18

Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
UCMR4 - EPA Method 552.3	see attached				03/20/18	EPA 552.3	721026460
UCMR4 - Micro extraction - (552.3)	yes				03/19/18	EPA 552.3	721026460

Entry Point to the Distribution System NLS ID: 1043796

Matrix: DW

Collected: 03/06/18 09:30 Received: 03/07/18

Parameter	Result	Units	Dilution	MRL	Analyzed	Method	Lab
UCMR4 - Metals digestion - tot. recov.ICP-MS	yes				03/10/18	EPA 200.8	721026460
UCMR4 - Germanium by EPA Method 200.8	ND	ug/L	1	0.30	03/30/18	EPA 200.8	721026460
UCMR4 - Manganese by EPA Method 200.8	1.6	ug/L	1	0.40	03/30/18	EPA 200.8	721026460
UCMR4 - EPA Method 525.3	see attached				03/14/18	EPA 525.3	721026460
UCMR4 - EPA 525.3 Solid Phase Extraction	yes				03/13/18	EPA 525.3	721026460
UCMR4 - EPA Method 541	see attached				03/26/18	EPA 541	721026460
UCMR4 - Extraction - (541)	yes				03/15/18	EPA 541	721026460
UCMR4 - EPA Method 530	see attached				03/07/18	EPA 530	721026460
UCMR4 - Extraction - (530)	yes				03/07/18	EPA 530	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL RESULTS: 541 UCMR4 Safe Drinking Water Analysis

Customer: Advanced Environmental Laboratories - Tampa NLS Project: 295632

Project Description: Dunedin Water - UCMR4

Project Title: PWS#FL6520486

Template: 541UCMR4 Printed: 04/12/2018 05:33

Sample: 1043796 Entry Point to the Distribution System Collected: 03/06/18 Analyzed: 03/26/18 Analytes: 3

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
2-Propen-1-ol	ND	ug/L	1	0.50		
1-Butanol	ND	ug/L	1	2.0		
2-Methoxyethanol	ND	ug/L	1	0.40		
2-Propen-1-ol-d6 (SURR)	83.148%		1			S
1-Butanol-d10 (SURR)	86.368%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: 525.3 UCMR4 Safe Drinking Water Analysis

Page 1 of 1

Customer: Advanced Environmental Laboratories - Tampa NLS Project: 295632

Project Description: Dunedin Water - UCMR4

Project Title: PWS#FL6520486

Template: 5253UCMR4 Printed: 04/12/2018 05:33

Sample: 1043/96 Entry Point to the Distribution System Collected: 03/06/18 Analyzed: 03/14/18 Analytes: 9

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
Ethoprop	ND	ug/L	1	0.030		
alpha-Hexachlorocyclohexane	ND	ug/L	1	0.010		
Dimethipin	ND	ug/L	1	0.20		
Chlorpyrifos	ND	ug/L	1	0.030		
Profenofos	ND	ug/L	1	0.30		
Tribufos	ND	ug/L	1	0.070		
Oxyfluorfen	ND	ug/L	1	0.050		
Tebuconazole	ND	ug/L	1	0.20		
Total permethrin (cis & trans)	ND	ug/L	1	0.040		
1,3-dimethyl-2-nitrobenzene (SURR)	91.967%		1			S
Triphenyl phosphate (SURR)	98.913%		1			S
Benzo[a]pyrene-d12 (SURR)	95.152%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: 530 UCMR4 Safe Drinking Water Analysis

Customer: Advanced Environmental Laboratories - Tampa NLS Project: 295632

Project Description: Dunedin Water - UCMR4

Project Title: PWS#FL6520486

Template: 530UCMR4 Printed: 04/12/2018 05:33

Sample: 103796 Entry Point to the Distribution System Collected: 03/06/18 Analyzed: 03/07/18 Analytes: 3

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
o-Toluidine	ND	ug/L	1	0.0070		
Quinoline	ND	ug/L	1	0.020		
Butylated hydroxyanisole	ND	ug/L	1	0.030		
o-toluidine-d9 (SURR)	80.34%		1			S
quinoline-d7 (SURR)	74.04%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: Haloacetic Acids by EPA 552.3, Rev 1 UCMR4 Safe Drinking Water Analysis

Customer: Advanced Environmental Laboratories - Tampa NLS Project: 295632

Project Description: Dunedin Water - UCMR4

Project Title: PWS#FL6520486

Template: 5523UCMR4 Printed: 04/12/2018 05:33

Sample: 1043792 Dist System: 11 Ventura Collected: 03/06/18 Analyzed: 03/20/18 Analytes: 9

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
Bromochloroacetic acid (BCAA)	3.13	ug/L	1	0.30		
Bromodichloroacetic acid (BDCAA)	3.82	ug/L	1	0.50		
Chlorodibromoacetic acid (CDBAA)	2.25	ug/L	1	0.30		
Tribromoacetic acid (TBAA)	4.9	ug/L	1	2.0		
Monobromoacetic acid (MBAA) -	1.12	ug/L	1	0.30		
Dibromoacetic acid (DBAA) -	8.37	ug/L	1	0.30		
Dichloroacetic acid (DCAA) -	0.656	ug/L	1	0.20		
Monochloroacetic acid (MCAA) -	ND	ug/L	1	2.0		
Trichloroacetic acid (TCAA) -	ND	ug/L	1	0.50		
2-Bromobutanoic Acid (SURR)	97.84%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 1043793 Dist System: 2130 Evans Collected: 03/06/18 Analyzed: 03/20/18 Analytes: 9

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
Bromochloroacetic acid (BCAA)	2.37	ug/L	1	0.30		
Bromodichloroacetic acid (BDCAA)	4.38	ug/L	1	0.50		
Chlorodibromoacetic acid (CDBAA)	2.03	ug/L	1	0.30		
Tribromoacetic acid (TBAA)	4.2	ug/L	1	2.0		
Monobromoacetic acid (MBAA)	0.973	ug/L	1	0.30		
Dibromoacetic acid (DBAA)	6.7	ug/L	1	0.30		
Dichloroacetic acid (DCAA)	0.584	ug/L	1	0.20		
Monochloroacetic acid (MCAA)	ND	ug/L	1	2.0		
Trichloroacetic acid (TCAA)	ND	ug/L	1	0.50		
2-Bromobutanoic Acid (SURR)	96.87%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 1043794 Dist System: 1025 Jackraa Collected: 03/06/18 Analyzed: 03/20/18 Analytes: 9

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
Bromochloroacetic acid (BCAA)	1.9	ug/L	1	0.30		
Bromodichloroacetic acid (BDCAA)	4.57	ug/L	1	0.50		
Chlorodibromoacetic acid (CDBAA)	1.87	ug/L	1	0.30		
Tribromoacetic acid (TBAA)	3.8	ug/L	1	2.0		
Monobromoacetic acid (MBAA)	0.706	ug/L	1	0.30		
Dibromoacetic acid (DBAA)	5.23	ug/L	1	0.30		
Dichloroacetic acid (DCAA)	0.564	ug/L	1	0.20		
Monochloroacetic acid (MCAA)	ND	ug/L	1	2.0		
Trichloroacetic acid (TCAA)	ND	ug/L	1	0.50		
2-Bromobutanoic Acid (SURR)	96.25%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: Haloacetic Acids by EPA 552.3, Rev 1 UCMR4 Safe Drinking Water Analysis

Customer: Advanced Environmental Laboratories - Tampa NLS Project: 295632

Project Description: Dunedin Water - UCMR4

Project Title: PWS#FL6520486

Template: 5523UCMR4 Printed: 04/12/2018 05:33

Sample: 1043795 Dist System: 2 Causeway Collected: 03/06/18 Analyzed: 03/20/18 Analytes: 9

ANALYTE NAME	RESULT	UNITS	DIL	MRL	MCL	Note
Bromochloroacetic acid (BCAA)	2.41	ug/L	1	0.30		
Bromodichloroacetic acid (BDCAA)	4.5	ug/L	1	0.50		
Chlorodibromoacetic acid (CDBAA)	2.09	ug/L	1	0.30		
Tribromoacetic acid (TBAA)	4.51	ug/L	1	2.0		
Monobromoacetic acid (MBAA)	0.949	ug/L	1	0.30		
Dibromoacetic acid (DBAA)	6.39	ug/L	1	0.30		
Dichloroacetic acid (DCAA)	0.607	ug/L	1	0.20		
Monochloroacetic acid (MCAA)	ND	ug/L	1	2.0		
Trichloroacetic acid (TCAA)	ND	ug/L	1	0.50		
2-Bromobutanoic Acid (SURR)	95.31%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.



Customer # 96704
BO # 61869

UCMR4
SAMPLE COLLECTION AND
CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520 - 1298
Tel: (715) 478-2777 Fax (715) 478-3060

Lab Use Only Lab	Sample Point ID Code	Collection Date/Time	Sample Point Type ID Code	Point Type	AM1(EP)				AM2(DS/SR)			AM3(EP)		
					200.8	525.3	541	530	552.3	TOC	Bmrd	545	546	544
1045792	Dist System - 11 Ventura	3.6.18 1020	3	DS					X					
793	Dist System - 2180 Evans	3.6.18 1000	4	DS					X					
794	Dist System - 1025 Jackmar	3.6.18 1105	6	DS					X					
795	Dist System - 2 Causeway	3.6.18 1050	ST11	DS					X					
796	Entry Point to the Distribution System	3.6.18 0930	0486001	EP	X	X	X	X						

(Client please fill in shaded areas only)

The EPA Unregulated Contaminant Monitoring Program has specific sample receipt temperature requirements. Samples received less than 48 hours after collection must be received at <= 10 degrees C. Samples received by the laboratory more than 48 hours from collection must be received at <= 6 degrees C. Samples that are received greater than 48 hours from the time of collection require that the municipality pre-chill and maintain the samples at 6 degrees or less prior to shipment. I attest that samples collected and shipped to the laboratory meet these requirements.

Collected by (signature)	<i>[Signature]</i>
Method of Transport	UPS
Sample Collection Comments (Optional)	

PWS # FL6520486
SAMPLING EVENT: SEA1
SOURCE: GW

(To be filled out by lab upon arrival)

Received at NLS by (signature)	<i>Jodi Braun</i>	Date/Time	3/7/18 10	Condition	Null
Remarks and other information					

IMPORTANT

TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE. RETURN THIS FORM WITH SAMPLES

CLIENT PLEASE MAKE COPY FOR YOUR RECORDS

AM1		200.8	525 b1	525 b2	530 b1	530 b2	541 b1	541 b2
EP	Chlorine	/	/	/	/	/	/	
	pH			/	/	/	/	
	Temp	0.4	0.5				10.3	

AM2		DBP1	DBP2	DBP3	DBP4	DBP5	TOC
bottle 1	Chlorine						pH
	Temp	2.6					

Add'l							
-------	--	--	--	--	--	--	--