

Chemical Analysis Report

WTRSHD-MGT-2012-05-11-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

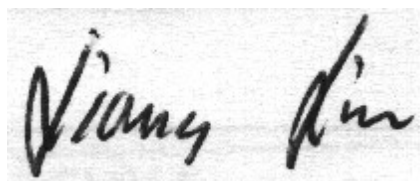
Event Description: **SPRG1204**
Request ID: **RQ-2012-05-07-38**
Customer: **WTRSHD-MGT**
Project ID: **SPG_QTR_WQ**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 04-JUN-2012 18:05

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Abbreviations and data remark codes

CERT # - NELAP (National Environmental Laboratory Accreditation Program) Certification Number of the laboratory that performed the analysis.

LCS – Laboratory Control Sample; in the QC Failures column, this notation indicates a batch recovery failure.

MS – Matrix Spike; in the QC Failures column, this notation indicates a batch recovery failure.

RPD – Relative Percent Difference; in the QC Failures column, this notation indicates a batch failure for precision.

CCV – Continuing Calibration Verification; in the QC Failures column, this notation indicates a failure of the calibration verification check sample.

SUR – Surrogate; in the QC Failures column, this notation indicates a recovery failure for the associated surrogate.

RSD – Relative Standard Deviation expressed as a percentage.

SMP – Sample.

** - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

A - Value reported is the mean of two or more determinations

B - Results based on colony counts outside the acceptable range.

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

J - Estimated value

K - Actual value is known to be less than value given

L - Actual value is known to be greater than value given

N - Presumptive evidence of presence of material.

O - Sampled, but analysis lost or not performed.

Q - Sample held beyond normal holding time.

T - Value reported is less than the criterion of detection.

U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.

V - Analyte was detected in both sample and method blank.

X - Too few individuals to calculate SCI value.

Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Z - Colonies were too numerous to count (TNTC).

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example:
1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Precision is reported as relative percent difference unless otherwise noted.

Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

All sample collection performed by Bureau of Laboratories staff followed the field Standard Operating Procedures adopted by reference in Rule 62-160 FAC unless otherwise noted.

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Results for NELAP accredited tests contained in this report meet the requirements specified by the National Environmental Laboratory Accreditation Conference (NELAC). All samples received were in acceptable condition and met NELAC requirements unless otherwise noted. Results generated in this report pertain to the samples collected and submitted for analysis.

Job: TLH-2012-05-11-59

Group: Nutrients

Job: TLH-2012-05-11-60

Group: Metals

Job: TLH-2012-05-11-61

Group: Pesticides

Sample Location: 011390**Collection Date/Time: 05/10/2012 11:11 AM****Field ID: DE LEON SPRINGS****Matrix: W-SURF-FRH**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1428745	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P239691	
	EPA 300.0 Rev. 2.1	Chloride	92		mg Cl/L	P239965	
		Sulfate	21		mg SO4/L	P239970	
		Color (true)	2.5	U	PCU	P239694	
	SM 2320 B-97	Alkalinity	126		mg CaCO3/L	P240025	
	SM 2540 C-97	TDS	278		mg/L	P240010	
1428748	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P239760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P239885	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.52		mg N/L	P239821	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P239889	MS
	SM 5310 B-00	Organic Carbon	1.0	I	mg C/L	P239947	
1428751	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P239697	
1428754	EPA 200.7 Rev. 4.4	Boron	38	I	ug/L	P239903	
		Calcium	52.0		mg/L	P239903	
		Magnesium	10.6		mg/L	P239903	
		Potassium	3.4		mg/L	P239903	
		Sodium	52.0		mg/L	P239903	
1428757	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.037	I	ug/L	P239864	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: One of the matrix spike recoveries is unavailable due to high analyte concentration in the QC sample.

SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.

DEP SOP: LC-001-2 (based on EPA 8321B): Sucralose result confirmed in re-extraction.

Sample Location: 011395**Collection Date/Time: 05/10/2012 04:26 PM****Field ID: ROCK SPRINGS****Matrix: W-SURF-FRH**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1428747	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P239691	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P239965	
		Sulfate	18		mg SO4/L	P239970	
		Color (true)	2.5	U	PCU	P239694	
	SM 2320 B-97	Alkalinity	101		mg CaCO3/L	P240025	
	SM 2540 C-97	TDS	136		mg/L	P240010	
1428750	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P239760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P239885	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.2		mg N/L	P239821	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P239889	MS
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P239947	
1428753	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.082		mg P/L	P239697	
1428756	EPA 200.7 Rev. 4.4	Boron	20	I	ug/L	P239903	
		Calcium	34.8		mg/L	P239903	
		Magnesium	10.9		mg/L	P239903	
		Potassium	1.5		mg/L	P239903	
		Sodium	6.4		mg/L	P239903	

Field ID: ROCK SPRINGS

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1428759	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.017	I	ug/L	P240277	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: One of the matrix spike recoveries is unavailable due to high analyte concentration in the QC sample.

SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.

DEP SOP: LC-001-2 (based on EPA 8321B): Results confirmed in re-extraction. Matrix spike accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: 9673**Collection Date/Time: 05/10/2012 01:00 PM****Field ID: BLUE SPRING (VOLUSIA)**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1428746	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P239691	
	EPA 300.0 Rev. 2.1	Chloride	510		mg Cl/L	P239965	
		Sulfate	78		mg SO4/L	P239970	
	SM 2120 B	Color (true)	3.2	I	PCU	P239694	
	SM 2320 B-97	Alkalinity	153		mg CaCO3/L	P240025	
	SM 2540 C-97	TDS	991		mg/L	P240010	
1428749	EPA 350.1 Rev. 2.0	Ammonia-N	0.082		mg N/L	P239760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P239885	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P239821	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P239889	MS
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P239947	
1428752	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.076		mg P/L	P239697	
1428755	EPA 200.7 Rev. 4.4	Boron	110		ug/L	P239903	
		Calcium	81.2		mg/L	P239903	
		Magnesium	36.2		mg/L	P239903	
		Potassium	10.7		mg/L	P239903	
		Sodium	304		mg/L	P239903	
1428758	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.084		ug/L	P240277	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: One of the matrix spike recoveries is unavailable due to high analyte concentration in the QC sample.

SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.

DEP SOP: LC-001-2 (based on EPA 8321B): Matrix spike accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)**Batch ID: P239864**

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)**Batch ID: P240277**

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P239691

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P239903

Component	Result	Code	Units
Boron	15	U	ug/L
Calcium	0.075	U	mg/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239965

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239970

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P239760

Component	Result	Code	Units
Ammonia-N	0.010	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P239885

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P239821

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P239889

Component	Result	Code	Units
Total-P	0.004	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P239697

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P239697

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: SM 2120 B

Batch ID: P239694

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97

Batch ID: P240025

Component	Result	Code	Units
Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97

Batch ID: P240010

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 5310 B-00

Batch ID: P239947

Component	Result	Code	Units
Organic Carbon	1.0	U	mg C/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Batch ID: P239864

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	65.2	61.2	P/P	40 - 130

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Batch ID: P240277

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	46.4	51.6	P/P	40 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P239903

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Boron	102		P	85 - 115
Calcium	105		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	107		P	85 - 115
Sodium	103		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P239760

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P239885

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P239821

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P239889

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P239697

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	101		P	90 - 110

Reference Method: SM 2320 B-97

Batch ID: P240025

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alkalinity	104		P	85 - 115

Reference Method: SM 5310 B-00

Batch ID: P239947

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Batch ID: P239864

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428431	Sucralose	45.3	43.9	P/P	40 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P239903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1426780	Boron	108	109	P/P	80 - 120
1426780	Calcium	106		P	80 - 120
1426780	Magnesium	104		P	80 - 120
1426780	Potassium	107	110	P/P	80 - 120
1426780	Sodium	107		P	80 - 120
1428671	Boron	110		P	80 - 120
1428671	Calcium	106		P	80 - 120
1428671	Magnesium	106		P	80 - 120
1428671	Potassium	116		P	80 - 120
1428671	Sodium	109		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428900	Chloride	99.9	101	P/P	90 - 110
1428923	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428900	Sulfate	93.3	94.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P239760

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428766	Ammonia-N	103	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P239885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428750	Kjeldahl Nitrogen	100	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P239821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428635	NO2NO3-N	107	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P239889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P239889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428905	Total-P	110	103	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P239697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428751	O-Phosphate-P	99.2	104	P/P	90 - 110

Reference Method: SM 5310 B-00

Batch ID: P239947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1428661	Organic Carbon	99.0	99.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Batch ID: P239864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428431	Sucralose	1.36	Spike	P	0 - 30
LFB	Sucralose	6.33	LCS	P	0 - 30

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Batch ID: P240277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1429247	Sucralose	10.3	Spike	P	0 - 30
LFB	Sucralose	10.6	LCS	P	0 - 30

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P239691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428657	Turbidity	3.60	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P239903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1426780	Boron	1.12	Spike	P	0 - 20
1426780	Calcium	1.21	Sample	P	0 - 20
1426780	Magnesium	0.0926	Sample	P	0 - 20
1426780	Potassium	1.72	Spike	P	0 - 20
1426780	Sodium	1.37	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239965

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428900	Chloride	0.774	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P239970

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428900	Sulfate	0.865	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P239760

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428766	Ammonia-N	2.67	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P239885

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428750	Kjeldahl Nitrogen	3.36	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P239821

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428635	NO2NO3-N	1.39	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P239889

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428905	Total-P	4.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P239697

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428751	O-Phosphate-P	3.04	Spike	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P240025

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1429060	Alkalinity	0.753	Sample	P	0 - 20
1429214	Alkalinity	10.7	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2540 C-97

Batch ID: P240010

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428660	TDS	2.22	Sample	P	0 - 10

Reference Method: SM 5310 B-00

Batch ID: P239947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1428661	Organic Carbon	0.755	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1428757

Field Sample ID: DE LEON SPRINGS

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	46.8	P	40 - 150

Lab Sample ID: 1428758

Field Sample ID: BLUE SPRING (VOLUSIA)

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	44.2	P	40 - 150

Lab Sample ID: 1428759

Field Sample ID: ROCK SPRINGS

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	50.5	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A45058

Included Lab Sample IDs: 1428745, 1428746, 1428747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A45061

Included Lab Sample IDs: 1428745, 1428746, 1428747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	93.9	92.2	P/P	85 - 115

Quality Assurance Report

Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A45062

Included Lab Sample IDs: 1428751, 1428752, 1428753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	95.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A45091

Included Lab Sample IDs: 1428748, 1428749, 1428750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A45117

Included Lab Sample IDs: 1428748, 1428749, 1428750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	102	P/P	90 - 110

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Run ID: A45139

Included Lab Sample IDs: 1428757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	117	111	P/P	70 - 140

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A45149

Included Lab Sample IDs: 1428748, 1428749, 1428750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.6	106	P/P	90 - 110
Kjeldahl Nitrogen	99.4	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A45150

Included Lab Sample IDs: 1428748, 1428749, 1428750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.9	98.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A45155

Included Lab Sample IDs: 1428754, 1428755, 1428756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	101	105	P/P	90 - 110
Calcium	105	107	P/P	90 - 110
Magnesium	105	107	P/P	90 - 110
Potassium	105	106	P/P	90 - 110
Sodium	104	106	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A45179

Included Lab Sample IDs: 1428748, 1428749, 1428750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	89.6	91.6	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A45189

Included Lab Sample IDs: 1428745, 1428746, 1428747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	98.2	98.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A45209

Included Lab Sample IDs: 1428745, 1428746, 1428747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alkalinity	104	99.9	P/P	85 - 115

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)

Run ID: A45317

Included Lab Sample IDs: 1428758, 1428759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	98.8	109	P/P	70 - 140

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report

Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose	65.2	61.2	45.3	43.9		6.33		1.36
	Sucralose	46.4	51.6				10.6		10.3
EPA 180.1 Rev. 2.0	Turbidity							3.60	
EPA 200.7 Rev. 4.4	Boron	102		108	109	110			1.12
	Calcium	105		106	106			1.21	
	Magnesium	104		104	106			0.0926	
	Potassium	107		107	110	116			1.72
	Sodium	103		107	109			1.37	
EPA 300.0 Rev. 2.1	Chloride	102		99.9	101	100			0.774
	Sulfate	96.6		93.3	94.7				0.865
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		103	98.4				2.67
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		100	104				3.36
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	106		107	108				1.39
EPA 365.1 Rev. 2.0	Total-P	103		110	103				4.94
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		99.2	104				3.04
SM 2320 B-97	Alkalinity	104						0.753 10.7	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 2540 C-97	TDS				2.22	
SM 5310 B-00	Organic Carbon	98.6	99.0 99.7			0.755

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
DEP SOP: LC-001-2 (based on EPA 8321B) / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1428757, 1428758, 1428759
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1428745, 1428746, 1428747
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1428754, 1428755, 1428756
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1428745, 1428746, 1428747
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1428745, 1428746, 1428747
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1428748, 1428749, 1428750
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1428748, 1428749, 1428750
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1428748, 1428749, 1428750
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1428748, 1428749, 1428750
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1428751, 1428752, 1428753
SM 2120 B / E31780	True Color measured at 450 nm or Apparent Color	1428745, 1428746, 1428747
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1428745, 1428746, 1428747
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1428745, 1428746, 1428747
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1428748, 1428749, 1428750

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: LC-001-2 (based on EPA 8321B)	05/11/2012	05/14/2012	Hoor Shaik	05/15/2012	S. M. Reddy	1428757
	05/11/2012	05/16/2012	Hoor Shaik	05/16/2012	S. M. Reddy	1428758, 1428759
EPA 180.1 Rev. 2.0	05/11/2012			05/11/2012 15:34	Bryan A. Werth	1428745, 1428746, 1428747
EPA 200.7 Rev. 4.4	05/11/2012	05/14/2012	Elliott D. Healy	05/17/2012	Joshua Ayres	1428754, 1428755, 1428756
EPA 300.0 Rev. 2.1	05/11/2012			05/16/2012	Ping Hua	1428745, 1428746, 1428747
EPA 350.1 Rev. 2.0	05/11/2012			05/15/2012	Peter D. Kaus	1428748, 1428749, 1428750
EPA 351.2 Rev. 2.0	05/11/2012	05/15/2012	Bryan A. Werth	05/17/2012	Christopher Armour	1428748, 1428749, 1428750
EPA 353.2 Rev. 2.0	05/11/2012			05/16/2012	Peter D. Kaus	1428748, 1428749, 1428750
EPA 365.1 Rev. 2.0	05/11/2012	05/16/2012	Megan E. Faircloth	05/17/2012	Pallavi R. Gadwal	1428748, 1428749, 1428750
EPA 365.1 Rev. 2.0 dissolved	05/11/2012			05/11/2012 15:47	Megan E. Faircloth	1428751
	05/11/2012			05/11/2012 15:50	Megan E. Faircloth	1428752
	05/11/2012			05/11/2012 15:51	Megan E. Faircloth	1428753
SM 2120 B	05/11/2012			05/11/2012 15:38	Blanca Fach	1428745
	05/11/2012			05/11/2012 15:39	Blanca Fach	1428746
	05/11/2012			05/11/2012 15:40	Blanca Fach	1428747
SM 2320 B-97	05/11/2012			05/21/2012	Dale L. Simmons	1428745, 1428746, 1428747
SM 2540 C-97	05/11/2012			05/16/2012	Yijie Li	1428745, 1428746, 1428747
SM 5310 B-00	05/11/2012			05/17/2012	Dale L. Simmons	1428748, 1428749, 1428750