

Chemical Analysis Report

WTRSHD-MGT-2012-10-24-01

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

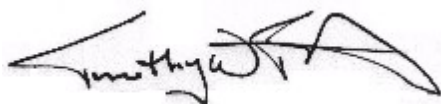
Event Description: **SPRG1210**
Request ID: **RQ-2012-10-22-16**
Customer: **WTRSHD-MGT**
Project ID: **SPG_QTR_WQ**

Send Reports to:
FDEP Ground Water Management Section
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Attn: Gary Maddox

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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 13-NOV-2012 09:39

A handwritten signature in black ink, appearing to read "Timothy Fitzpatrick", with a stylized flourish at the end.

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-2012-10-24-59

Job: TLH-2012-10-24-60

Job: TLH-2012-10-24-61

Group: Nutrients

Group: Metals

Group: Pesticides

Sample Location: 0999512100101000**Collection Date/Time: 10/24/2012 01:00 PM****Field ID: QAQC BLANK 1****Matrix: W-EQPMT-BK**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1463914	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P245905	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P246016	
		Sulfate	0.20	U	mg SO4/L	P246027	
	SM 2120 B	Color (true)	2.5	U	PCU	P245886	
	SM 2320 B-97	Alkalinity	0.65	U	mg CaCO3/L	P245952	
	SM 2540 C-97	TDS	15	U	mg/L	P246122	
1463917	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P246001	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P246038	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P245969	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P246242	
	SM 5310 B-00	Organic Carbon	0.40	U	mg C/L	P246144	
1463920	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P245897	
1463923	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P246059	
		Magnesium	0.040	U	mg/L	P246059	
		Potassium	0.30	U	mg/L	P246059	
		Sodium	0.50	U	mg/L	P246059	
	EPA 200.8 Rev. 5.4	Boron**	2.0	U	ug/L	P246066	
1463926	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.0094	U	ug/L	P245941	

Ref. Method and Comment:

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: 9717**Collection Date/Time: 10/24/2012 11:00 AM****Field ID: BIG SPRING****Matrix: W-OTHER**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1463913	EPA 180.1 Rev. 2.0	Turbidity	0.25		NTU	P245905	
	EPA 300.0 Rev. 2.1	Chloride	5.6		mg Cl/L	P246016	
		Sulfate	6.4		mg SO4/L	P246027	
	SM 2120 B	Color (true)	2.5	U	PCU	P245886	
	SM 2320 B-97	Alkalinity	175		mg CaCO3/L	P245952	
	SM 2540 C-97	TDS	198		mg/L	P246122	
1463916	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P246001	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P246038	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P245969	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P246242	
	SM 5310 B-00	Organic Carbon	0.72	I	mg C/L	P246144	
1463919	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.047		mg P/L	P245897	
1463922	EPA 200.7 Rev. 4.4	Calcium	57.1		mg/L	P246059	
		Magnesium	8.72		mg/L	P246059	
		Potassium	0.49	I	mg/L	P246059	
		Sodium	3.3		mg/L	P246059	
	EPA 200.8 Rev. 5.4	Boron**	12.7		ug/L	P246066	
1463925	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.010	U	ug/L	P245941	

Field ID: BIG SPRING

Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
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Ref. Method and Comment:

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: 9719**Collection Date/Time: 10/24/2012 10:10 AM****Field ID: WACISSA HEAD/SPRING #2**

Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
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1463912	EPA 180.1 Rev. 2.0	Turbidity	0.15		NTU	P245905	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P246016	
		Sulfate	5.1		mg SO4/L	P246027	
	SM 2120 B	Color (true)	2.5	U	PCU	P245886	
	SM 2320 B-97	Alkalinity	141		mg CaCO3/L	P245952	
	SM 2540 C-97	TDS	169		mg/L	P246122	
1463915	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P246001	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P246037	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.48		mg N/L	P245969	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P246242	
	SM 5310 B-00	Organic Carbon	0.58	I	mg C/L	P246144	
1463918	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P245897	
1463921	EPA 200.7 Rev. 4.4	Calcium	44.1		mg/L	P246059	
		Magnesium	8.85		mg/L	P246059	
		Potassium	0.57	I	mg/L	P246059	
		Sodium	3.2		mg/L	P246059	
	EPA 200.8 Rev. 5.4	Boron**	10.7		ug/L	P246066	
1463924	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.010	U	ug/L	P245941	

Ref. Method and Comment:

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)**Batch ID: P245941**

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 180.1 Rev. 2.0**Batch ID: P245905**

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4**Batch ID: P246059**

Component	Result	Code	Units
Calcium	0.21	I	mg/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P246059

Component	Result	Code	Units
Sodium	0.50	U	mg/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P246066

Component	Result	Code	Units
Boron	2.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246016

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246027

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P246001

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246037

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246038

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P245969

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P246242

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P245897

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

Reference Method: SM 2120 B

Batch ID: P245886

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97

Batch ID: P245952

Component	Result	Code	Units
Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 C-97

Batch ID: P246122

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 5310 B-00

Batch ID: P246144

Component	Result	Code	Units
Organic Carbon	0.40	U	mg C/L

Quality Assurance Report

Laboratory Control Sample Accuracy

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

Batch ID: P245941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	51.6	50.0	P/P	40 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P246059

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	106		P	85 - 115
Sodium	97.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P246066

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Boron	97.7		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246016

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P246001

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246037

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	91.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246038

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P245969

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P246242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P245897

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

Reference Method: SM 2320 B-97

Batch ID: P245952

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alkalinity	107		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00

Batch ID: P246144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

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

Batch ID: P245941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463678	Sucralose	58.4	65.6	P/P	40 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P246059

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1462969	Calcium	100		P	80 - 120
1462969	Magnesium	106	107	P/P	80 - 120
1462969	Potassium	104	102	P/P	80 - 120
1462969	Sodium	104	104	P/P	80 - 120
1463699	Calcium	101		P	80 - 120
1463699	Magnesium	107		P	80 - 120
1463699	Potassium	110		P	80 - 120
1463699	Sodium	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P246066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1462969	Boron	96.4	98.1	P/P	80 - 120
1463699	Boron	99.8		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246016

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463666	Chloride	99.7	98.8	P/P	90 - 110
1463691	Chloride	99.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463666	Sulfate	96.4	96.4	P/P	90 - 110
1463691	Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P246001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463998	Ammonia-N	95.6	93.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463749	Kjeldahl Nitrogen	101	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463953	Kjeldahl Nitrogen	98.1	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P245969

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463750	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P246242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463751	Total-P	92.5	94.8	P/P	90 - 110

Reference Method: SM 5310 B-00

Batch ID: P246144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1463748	Organic Carbon	96.7	99.2	P/P	85 - 115

Quality Assurance Report Precision

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

Batch ID: P245941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463678	Sucralose	11.6	Spike	P	0 - 30
LFB	Sucralose	3.15	LCS	P	0 - 30

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P245905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463952	Turbidity	7.62	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P246059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1462969	Calcium	0.910	Sample	P	0 - 20
1462969	Magnesium	1.19	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P246059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1462969	Potassium	1.32	Spike	P	0 - 20
1462969	Sodium	0.557	Sample	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P246066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1462969	Boron	0.955	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246016

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463666	Chloride	0.815	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P246027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463666	Sulfate	0.0557	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P246001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463998	Ammonia-N	2.55	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463749	Kjeldahl Nitrogen	3.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P246038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463953	Kjeldahl Nitrogen	3.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P245969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463750	NO2NO3-N	0.312	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P246242

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463751	Total-P	1.32	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P245897

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1464003	O-Phosphate-P	1.70	Spike	P	0 - 20

Reference Method: SM 2120 B

Batch ID: P245886

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463935	Color (true)	4.84	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P245952

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463737	Alkalinity	0.370	Sample	P	0 - 20
1464055	Alkalinity	0.835	Sample	P	0 - 20

Reference Method: SM 2540 C-97

Batch ID: P246122

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463952	TDS	1.71	Sample	P	0 - 10

Reference Method: SM 5310 B-00

Batch ID: P246144

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1463748	Organic Carbon	1.69	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: 1463924

Field Sample ID: WACISSA HEAD/SPRING #2

Reference Method

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

Surrogate

Sucralose-d6

% Rec.

49.3

Pass/Fail

P

Control Limits

40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1463925

Field Sample ID: BIG SPRING

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	45.7	P	40 - 150

Lab Sample ID: 1463926

Field Sample ID: QAQC BLANK 1

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: SM 2120 B

Run ID: A47616

Included Lab Sample IDs: 1463912, 1463913, 1463914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.7	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A47620

Included Lab Sample IDs: 1463918, 1463919, 1463920

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	102	P/P	90 - 110
O-Phosphate-P	102	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A47624

Included Lab Sample IDs: 1463912, 1463913, 1463914

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

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

Run ID: A47638

Included Lab Sample IDs: 1463924, 1463925, 1463926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	110	107	P/P	70 - 140

Reference Method: SM 2320 B-97

Run ID: A47644

Included Lab Sample IDs: 1463912, 1463913, 1463914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alkalinity	106	105	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A47649

Included Lab Sample IDs: 1463915, 1463916, 1463917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A47662

Included Lab Sample IDs: 1463915, 1463916, 1463917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A47668

Included Lab Sample IDs: 1463912, 1463913, 1463914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	94.9	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A47672

Included Lab Sample IDs: 1463915, 1463916, 1463917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	102	P/P	90 - 110
Kjeldahl Nitrogen	98.4	99.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A47684

Included Lab Sample IDs: 1463921, 1463922, 1463923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	100	P/P	90 - 110
Calcium	99.9	100	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Sodium	101	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A47689

Included Lab Sample IDs: 1463921, 1463922, 1463923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	100	101	P/P	90 - 110
Boron	106	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A47725

Included Lab Sample IDs: 1463915, 1463916, 1463917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.4	P/P	90 - 110
Organic Carbon	99.1	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A47742

Included Lab Sample IDs: 1463915, 1463916, 1463917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	97.8	P/P	90 - 110
Total-P	98.0	98.0	P/P	90 - 110

* 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	MS
							SMP	
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose	51.6	50.0	58.4	65.6	3.15		11.6
EPA 180.1 Rev. 2.0	Turbidity						7.62	
EPA 200.7 Rev. 4.4	Calcium	100		100	101		0.910	
	Magnesium	108		106	107	107	1.19	
	Potassium	106		104	102	110		1.32
	Sodium	97.4		104	104	103	0.557	
EPA 200.8 Rev. 5.4	Boron	97.7		96.4	98.1	99.8	0.955	
EPA 300.0 Rev. 2.1	Chloride	98.1		99.7	98.8	99.5		0.815
	Sulfate	95.2		96.4	96.4	95.4		0.0557
EPA 350.1 Rev. 2.0	Ammonia-N	99.1		95.6	93.0			2.55
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	91.0		101	108			3.74
	Kjeldahl Nitrogen	96.8		98.1	103			3.05
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		101	100			0.312
EPA 365.1 Rev. 2.0	Total-P	98.0		92.5	94.8			1.32
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2						1.70
SM 2120 B	Color (true)						4.84	
SM 2320 B-97	Alkalinity	107					0.370	
							0.835	
SM 2540 C-97	TDS						1.71	
SM 5310 B-00	Organic Carbon	98.0		96.7	99.2			1.69

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	1463924, 1463925, 1463926
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1463912, 1463913, 1463914

Reference Method Descriptions

Method / NELAC Cert. #	Description	<u>Associated Samples</u>
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1463921, 1463922, 1463923
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1463921, 1463922, 1463923
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1463912, 1463913, 1463914
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1463912, 1463913, 1463914
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1463915, 1463916, 1463917
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1463915, 1463916, 1463917
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1463915, 1463916, 1463917
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1463915, 1463916, 1463917
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1463918, 1463919, 1463920
SM 2120 B / E31780	True Color measured at 450 nm or Apparent Color	1463912, 1463913, 1463914
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1463912, 1463913, 1463914
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1463912, 1463913, 1463914
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1463915, 1463916, 1463917

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)	10/24/2012	10/25/2012	Hoor Shaik	10/25/2012	S. M. Reddy	1463924, 1463925, 1463926
EPA 180.1 Rev. 2.0	10/24/2012			10/25/2012 12:50	Blanca Fach	1463912, 1463913, 1463914
EPA 200.7 Rev. 4.4	10/24/2012	10/29/2012	Elliott D. Healy	10/30/2012	Joshua Ayres	1463921, 1463922, 1463923
EPA 200.8 Rev. 5.4	10/24/2012	10/29/2012	Elliott D. Healy	10/30/2012	Charles J. Peterson	1463921, 1463922, 1463923
EPA 300.0 Rev. 2.1	10/24/2012			10/26/2012	Gary Dearman	1463912, 1463913, 1463914
EPA 350.1 Rev. 2.0	10/24/2012			10/29/2012	Peter D. Kaus	1463915, 1463916, 1463917
EPA 351.2 Rev. 2.0	10/24/2012	10/26/2012	Christopher Armour	10/29/2012	Bryan A. Werth	1463915, 1463916, 1463917
EPA 353.2 Rev. 2.0	10/24/2012			10/26/2012	Sima Feizi	1463915, 1463916, 1463917
EPA 365.1 Rev. 2.0	10/24/2012	10/29/2012	Christopher Armour	11/02/2012	Virginia P. Bryant	1463915, 1463916, 1463917
EPA 365.1 Rev. 2.0 dissolved	10/24/2012			10/25/2012 17:02	Bryan A. Werth	1463918
	10/24/2012			10/25/2012 17:06	Bryan A. Werth	1463919
	10/24/2012			10/25/2012 17:07	Bryan A. Werth	1463920
SM 2120 B	10/24/2012			10/25/2012 14:14	Rochelle Y Jackson	1463912
	10/24/2012			10/25/2012 14:15	Rochelle Y Jackson	1463913
	10/24/2012			10/25/2012 14:16	Rochelle Y Jackson	1463914
SM 2320 B-97	10/24/2012			10/26/2012	Rochelle Y Jackson	1463912, 1463913, 1463914
SM 2540 C-97	10/24/2012			10/30/2012	Yijie Li	1463912, 1463913, 1463914
SM 5310 B-00	10/24/2012			11/02/2012	Rochelle Y Jackson	1463915, 1463916, 1463917