

Chemical Analysis Report

WTRSHD-MGT-2012-05-24-01

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

Event Description: **SPRG1204**
Request ID: **RQ-2012-05-21-30**
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

For additional information please contact
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Kathryn Brackett
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 08-JUN-2012 12:47



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-2012-05-24-04

Group: Nutrients

Job: TLH-2012-05-24-05

Group: Metals

Job: TLH-2012-05-24-06

Group: Pesticides

Job: TLH-2012-05-24-66

Group: Nutrients

Job: TLH-2012-05-24-67

Group: Metals

Job: TLH-2012-05-24-68

Group: Pesticides

Sample Location: 011371**Collection Date/Time: 05/23/2012 01:07 PM****Field ID: CYPRESS SPRING****Matrix: W-OTHER**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431420	EPA 180.1 Rev. 2.0	Turbidity	0.40		NTU	P240174	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P240510	
		Sulfate	1.3		mg SO4/L	P240511	
		Color (true)	2.5	U	PCU	P240170	
	SM 2320 B-97	Alkalinity	109	A	mg CaCO3/L	P240351	
	SM 2540 C-97	TDS	117		mg/L	P240456	
1431424	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P240381	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P240338	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P240276	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P240294	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240309	
1431428	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P240199	
1431432	EPA 200.7 Rev. 4.4	Boron	15	U	ug/L	P240439	
		Calcium	34.5		mg/L	P240439	
		Magnesium	5.17		mg/L	P240439	
		Potassium	0.40	I	mg/L	P240439	
		Sodium	2.8		mg/L	P240439	
1431436	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.0098	U	ug/L	P240345	

Sample Location: 011386**Collection Date/Time: 05/23/2012 03:09 PM****Field ID: MORRISON SPRING****Matrix: W-OTHER**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431421	EPA 180.1 Rev. 2.0	Turbidity	0.15		NTU	P240174	
	EPA 300.0 Rev. 2.1	Chloride	2.8		mg Cl/L	P240510	
		Sulfate	3.5		mg SO4/L	P240511	
		Color (true)	2.5	U	PCU	P240170	
	SM 2320 B-97	Alkalinity	114	A	mg CaCO3/L	P240351	
	SM 2540 C-97	TDS	118		mg/L	P240456	
1431425	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P240381	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P240339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P240276	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P240294	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240309	
1431429	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P240199	
1431433	EPA 200.7 Rev. 4.4	Boron	15	U	ug/L	P240439	
		Calcium	32.2		mg/L	P240439	
		Magnesium	8.76		mg/L	P240439	
		Potassium	0.60	I	mg/L	P240439	
		Sodium	1.9	I	mg/L	P240439	
1431437	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.0097	U	ug/L	P240345	

Sample Location: 0999512040101000**Collection Date/Time: 05/23/2012 08:00 AM**

Field ID: QAQC BLANK 1

Matrix: W-EQPMT-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431423	EPA 180.1 Rev. 2.0	Turbidity	0.15		NTU	P240174	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P240510	
		Sulfate	0.20	U	mg SO4/L	P240511	
		Color (true)	2.5	U	PCU	P240170	
	SM 2320 B-97	Alkalinity	0.65	U	mg CaCO3/L	P240351	
	SM 2540 C-97	TDS	15	U	mg/L	P240456	
1431427	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P240384	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P240339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P240276	
	EPA 365.1 Rev. 2.0	Total-P	0.004	U	mg P/L	P240294	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240309	
1431431	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P240199	
1431435	EPA 200.7 Rev. 4.4	Boron	15	U	ug/L	P240439	
		Calcium	0.075	U	mg/L	P240439	
		Magnesium	0.040	U	mg/L	P240439	
		Potassium	0.30	U	mg/L	P240439	
		Sodium	0.50	U	mg/L	P240439	
1431439	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.0098	U	ug/L	P240345	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The result was confirmed on 05/24/2012.

Sample Location: 9739**Collection Date/Time: 05/23/2012 11:26 AM****Field ID: GAINER #1C**

Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431422	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P240174	
	EPA 300.0 Rev. 2.1	Chloride	3.2		mg Cl/L	P240510	
		Sulfate	2.7		mg SO4/L	P240511	
		Color (true)	2.5	U	PCU	P240170	
	SM 2320 B-97	Alkalinity	67		mg CaCO3/L	P240351	
	SM 2540 C-97	TDS	76		mg/L	P240456	
1431426	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P240381	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P240339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P240276	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P240294	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240309	
1431430	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P240199	
1431434	EPA 200.7 Rev. 4.4	Boron	15	U	ug/L	P240439	
		Calcium	21.6		mg/L	P240439	
		Magnesium	3.26		mg/L	P240439	
		Potassium	0.31	I	mg/L	P240439	
		Sodium	1.9	I	mg/L	P240439	
1431438	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.0096	U	ug/L	P240345	

Sample Location: WAKULLA B TUNNEL**Collection Date/Time: 05/24/2012 11:17 AM**

Field ID: WAKULLA B TUNNEL

Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431722	EPA 180.1 Rev. 2.0	Turbidity	0.35		NTU	P240177	
	EPA 300.0 Rev. 2.1	Chloride	9.4		mg Cl/L	P240514	
		Sulfate	12		mg SO4/L	P240515	
	SM 2120 B	Color (true)	2.5	U	PCU	P240173	
	SM 2320 B-97	Alkalinity	145		mg CaCO3/L	P240412	
	SM 2540 C-97	TDS	174		mg/L	P240456	
1431725	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P240527	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.10	I	mg N/L	P240419	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.92		mg N/L	P240443	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P240416	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240356	
1431728	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P240200	
1431731	EPA 200.7 Rev. 4.4	Boron	21	I	ug/L	P240439	
		Calcium	43.9		mg/L	P240439	
		Magnesium	10.8		mg/L	P240439	
		Potassium	0.67	I	mg/L	P240439	
		Sodium	6.3		mg/L	P240439	
1431734	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.035	I	ug/L	P240346	

Ref. Method and Comment:

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

Sample Location: WAKULLA C TUNNEL

Collection Date/Time: 05/24/2012 11:06 AM

Field ID: WAKULLA C TUNNEL

Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431723	EPA 180.1 Rev. 2.0	Turbidity	0.25		NTU	P240177	
	EPA 300.0 Rev. 2.1	Chloride	9.1		mg Cl/L	P240514	
		Sulfate	13		mg SO4/L	P240515	
	SM 2120 B	Color (true)	2.5	U	PCU	P240173	
	SM 2320 B-97	Alkalinity	146		mg CaCO3/L	P240412	
	SM 2540 C-97	TDS	177		mg/L	P240456	
1431726	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P240527	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P240419	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.78		mg N/L	P240443	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P240416	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240356	
1431729	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P240200	
1431732	EPA 200.7 Rev. 4.4	Boron	19	I	ug/L	P240439	
		Calcium	45.8		mg/L	P240439	
		Magnesium	10.5		mg/L	P240439	
		Potassium	0.67	I	mg/L	P240439	
		Sodium	6.2		mg/L	P240439	
1431735	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.030	I	ug/L	P240346	

Ref. Method and Comment:

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

Sample Location: WAKULLA MAIN SPRING**Collection Date/Time: 05/24/2012 12:09 PM****Field ID: WAKULLA MAIN SPRING****Matrix: W-OTHER**

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1431721	EPA 180.1 Rev. 2.0	Turbidity	0.35		NTU	P240177	
	EPA 300.0 Rev. 2.1	Chloride	8.8		mg Cl/L	P240514	
		Sulfate	12		mg SO4/L	P240515	
	SM 2120 B	Color (true)	2.5	U	PCU	P240173	
	SM 2320 B-97	Alkalinity	139		mg CaCO3/L	P240412	
	SM 2540 C-97	TDS	175		mg/L	P240456	
1431724	EPA 350.1 Rev. 2.0	Ammonia-N	0.014	I	mg N/L	P240526	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P240419	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.53		mg N/L	P240443	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P240416	
	SM 5310 B-00	Organic Carbon	1.0	U	mg C/L	P240356	
1431727	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P240200	
1431730	EPA 200.7 Rev. 4.4	Boron	16	I	ug/L	P240439	
		Calcium	43.2		mg/L	P240439	
		Magnesium	10.3		mg/L	P240439	
		Potassium	0.60	I	mg/L	P240439	
		Sodium	5.7		mg/L	P240439	
1431733	DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose**	0.023	I	ug/L	P240346	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)**Batch ID: P240345**

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: DEP SOP: LC-001-2 (based on EPA 8321B)**Batch ID: P240346**

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 180.1 Rev. 2.0**Batch ID: P240174**

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0**Batch ID: P240177**

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report

Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P240439

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: P240510

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240511

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240514

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240515

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240381

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240384

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240526

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240527

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240527

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240338

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240339

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240419

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240276

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240443

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240294

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240416

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240199

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240200

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

Reference Method: SM 2120 B

Batch ID: P240170

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B

Batch ID: P240173

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97

Batch ID: P240351

Component	Result	Code	Units
Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2320 B-97

Batch ID: P240412

Component	Result	Code	Units
Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 C-97

Batch ID: P240456

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 5310 B-00

Batch ID: P240309

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

Reference Method: SM 5310 B-00

Batch ID: P240356

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: P240345

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report

Laboratory Control Sample Accuracy

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

Batch ID: P240345

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	74.4	79.2	P/P	40 - 130

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

Batch ID: P240346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	70.8	70.4	P/P	40 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P240439

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Boron	96.7		P	85 - 115
Calcium	101		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	107		P	85 - 115
Sodium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240510

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240511

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240514

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240515

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240381

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240384

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240384

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240527

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240338

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240339

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	105		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240419

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240276

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240443

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240294

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240416

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240199

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240200

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

Reference Method: SM 2320 B-97

Batch ID: P240351

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

Reference Method: SM 2320 B-97

Batch ID: P240412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alkalinity	112		P	85 - 115

Reference Method: SM 5310 B-00

Batch ID: P240309

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Reference Method: SM 5310 B-00

Batch ID: P240356

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

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

Batch ID: P240345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1430775	Sucralose	64.8	66.3	P/P	40 - 130

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

Batch ID: P240346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

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

Batch ID: P240346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431994	Sucralose	55.6	60.0	P/P	40 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P240439

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1430815	Boron	101		P	80 - 120
1430815	Calcium	99.6		P	80 - 120
1430815	Magnesium	102		P	80 - 120
1430815	Potassium	105		P	80 - 120
1430815	Sodium	101		P	80 - 120
1431655	Boron	102	104	P/P	80 - 120
1431655	Calcium	98.4		P	80 - 120
1431655	Magnesium	101	103	P/P	80 - 120
1431655	Potassium	107	106	P/P	80 - 120
1431655	Sodium	99.8		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431391	Chloride	102		P	90 - 110
1431862	Chloride	102	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240511

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431391	Sulfate	94.5		P	90 - 110
1431862	Sulfate	99.2	96.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240514

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431751	Chloride	102		P	90 - 110
1432086	Chloride	101	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431751	Sulfate	97.6		P	90 - 110
1432086	Sulfate	95.9	96.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431396	Ammonia-N	94.8	94.6	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431490	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431649	Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240527

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431774	Ammonia-N	105	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240338

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431398	Kjeldahl Nitrogen	101	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431501	Kjeldahl Nitrogen	93.6	92.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431773	Kjeldahl Nitrogen	92.3	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431087	NO2NO3-N	98.6	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431757	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431087	Total-P	102	104	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431646	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240199

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431428	O-Phosphate-P	97.1	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240200

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431607	O-Phosphate-P	95.5	97.7	P/P	90 - 110

Reference Method: SM 5310 B-00

Batch ID: P240309

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431491	Organic Carbon	94.6	93.9	P/P	85 - 115

Reference Method: SM 5310 B-00

Batch ID: P240356

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1431822	Organic Carbon	102	99.2	P/P	85 - 115

Quality Assurance Report

Precision

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

Batch ID: P240345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1430775	Sucralose	0.299	Spike	P	0 - 30
LFB	Sucralose	6.25	LCS	P	0 - 30

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

Batch ID: P240346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431994	Sucralose	7.61	Spike	P	0 - 30
LFB	Sucralose	0.567	LCS	P	0 - 30

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P240174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431488	Turbidity	1.10	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P240177

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431643	Turbidity	8.25	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P240439

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431655	Boron	1.35	Spike	P	0 - 20
1431655	Calcium	1.96	Sample	P	0 - 20
1431655	Magnesium	2.76	Sample	P	0 - 20
1431655	Potassium	1.08	Sample	P	0 - 20
1431655	Sodium	2.48	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240510

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431862	Chloride	1.10	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240511

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431862	Sulfate	2.25	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240514

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1432086	Chloride	0.361	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P240515

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1432086	Sulfate	0.389	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240381

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431396	Ammonia-N	0.231	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240384

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431490	Ammonia-N	1.07	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240526

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431649	Ammonia-N	1.21	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P240527

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431774	Ammonia-N	2.67	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240338

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431398	Kjeldahl Nitrogen	3.43	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240339

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431501	Kjeldahl Nitrogen	0.871	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P240419

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431773	Kjeldahl Nitrogen	1.84	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240276

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431087	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P240443

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431757	NO2NO3-N	1.47	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240294

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431087	Total-P	1.34	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P240416

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431646	Total-P	1.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240199

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431428	O-Phosphate-P	2.71	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P240200

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431607	O-Phosphate-P	1.74	Spike	P	0 - 20

Reference Method: SM 2120 B

Batch ID: P240170

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431525	Color (true)	19.2	Sample	P	0 - 20

Reference Method: SM 2120 B

Batch ID: P240173

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431643	Color (true)	10.0	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P240351

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431420	Alkalinity	2.34	Sample	P	0 - 20
1431421	Alkalinity	1.42	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P240412

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431391	Alkalinity	0.0384	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97

Batch ID: P240412

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1432034	Alkalinity	1.22	Sample	P	0 - 20

Reference Method: SM 2540 C-97

Batch ID: P240456

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431753	TDS	6.11	Sample	P	0 - 10

Reference Method: SM 5310 B-00

Batch ID: P240309

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431491	Organic Carbon	0.359	Spike	P	0 - 20

Reference Method: SM 5310 B-00

Batch ID: P240356

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1431822	Organic Carbon	2.34	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: 1431436

Field Sample ID: CYPRESS SPRING

Reference Method

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

Surrogate

Sucralose-d6

% Rec.

48.4

Pass/Fail

P

Control Limits

40 - 150

Lab Sample ID: 1431437

Field Sample ID: MORRISON SPRING

Reference Method

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

Surrogate

Sucralose-d6

% Rec.

60.7

Pass/Fail

P

Control Limits

40 - 150

Lab Sample ID: 1431438

Field Sample ID: GAINER #1C

Reference Method

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

Surrogate

Sucralose-d6

% Rec.

50.7

Pass/Fail

P

Control Limits

40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1431439

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	60.3	P	40 - 150

Lab Sample ID: 1431733

Field Sample ID: WAKULLA MAIN SPRING

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	66.2	P	40 - 150

Lab Sample ID: 1431734

Field Sample ID: WAKULLA B TUNNEL

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	66.1	P	40 - 150

Lab Sample ID: 1431735

Field Sample ID: WAKULLA C TUNNEL

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose-d6	65.6	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A45269

Included Lab Sample IDs: 1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115
Color (true)	99.0	99.6	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A45270

Included Lab Sample IDs: 1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A45280

Included Lab Sample IDs: 1431428, 1431429, 1431430, 1431431, 1431727, 1431728, 1431729

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.7	95.7	P/P	90 - 110
O-Phosphate-P	97.2	97.9	P/P	90 - 110
O-Phosphate-P	97.9	96.7	P/P	90 - 110
O-Phosphate-P	98.8	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A45315

Included Lab Sample IDs: 1431424, 1431425, 1431426, 1431427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A45323

Included Lab Sample IDs: 1431424, 1431425, 1431426, 1431427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A45327

Included Lab Sample IDs: 1431424, 1431425, 1431426, 1431427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	99.8	P/P	85 - 115

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A45341

Included Lab Sample IDs: 1431424, 1431425, 1431426, 1431427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.3	98.7	P/P	90 - 110
Kjeldahl Nitrogen	95.7	98.9	P/P	90 - 110
Kjeldahl Nitrogen	98.7	95.7	P/P	90 - 110

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

Run ID: A45347

Included Lab Sample IDs: 1431436, 1431437, 1431438, 1431439, 1431733, 1431734, 1431735

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	112	106	P/P	70 - 140
Sucralose	116	115	P/P	70 - 140

Reference Method: SM 2320 B-97

Run ID: A45349

Included Lab Sample IDs: 1431420, 1431421, 1431422, 1431423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alkalinity	102	105	P/P	85 - 115
Alkalinity	105	103	P/P	85 - 115

Reference Method: SM 5310 B-00

Run ID: A45351

Included Lab Sample IDs: 1431724, 1431725, 1431726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	100	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A45362

Included Lab Sample IDs: 1431424, 1431425, 1431426, 1431427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	98.9	P/P	90 - 110
Ammonia-N	98.4	101	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A45377

Included Lab Sample IDs: 1431721, 1431722, 1431723

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alkalinity	102	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A45379

Included Lab Sample IDs: 1431724, 1431725, 1431726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A45380

Included Lab Sample IDs: 1431724, 1431725, 1431726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.1	P/P	90 - 110
Kjeldahl Nitrogen	95.4	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A45385

Included Lab Sample IDs: 1431432, 1431433, 1431434, 1431435, 1431730, 1431731, 1431732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.8	97.9	P/P	90 - 110
Calcium	97.3	97.7	P/P	90 - 110
Calcium	97.7	96.8	P/P	90 - 110
Calcium	97.9	98.6	P/P	90 - 110
Magnesium	100	99.9	P/P	90 - 110
Magnesium	100	100	P/P	90 - 110
Magnesium	98.6	99.8	P/P	90 - 110
Magnesium	99.9	98.6	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Potassium	102	105	P/P	90 - 110
Potassium	102	102	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Sodium	99.1	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A45388

Included Lab Sample IDs: 1431724, 1431725, 1431726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A45400

Included Lab Sample IDs: 1431432, 1431433, 1431434, 1431435, 1431730, 1431731, 1431732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	99.1	99.2	P/P	90 - 110
Boron	99.5	99.1	P/P	95 - 105
Sodium	101	98.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A45421

Included Lab Sample IDs: 1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Chloride	103	102	P/P	90 - 110
Sulfate	98.5	99.8	P/P	90 - 110
Sulfate	99.0	99.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A45423

Included Lab Sample IDs: 1431724, 1431725, 1431726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	102	P/P	90 - 110
Ammonia-N	107	105	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 SMP	MS
DEP SOP: LC-001-2 (based on EPA 8321B)	Sucralose	74.4	79.2	64.8	66.3		6.25		0.299
	Sucralose	70.8	70.4	55.6	60.0		0.567		7.61
EPA 180.1 Rev. 2.0	Turbidity							1.10	
	Turbidity							8.25	
EPA 200.7 Rev. 4.4	Boron	96.7		102	104	101			1.35
	Calcium	101		99.6	98.4			1.96	
	Magnesium	103		102	101	103		2.76	
	Potassium	107		105	107	106		1.08	
	Sodium	102		101	99.8			2.48	
EPA 300.0 Rev. 2.1	Chloride	101		102	100	102			1.10
	Chloride	101		101	102	102			0.361
	Sulfate	96.5		99.2	96.6	94.5			2.25
	Sulfate	97.2		95.9	96.4	97.6			0.389
EPA 350.1 Rev. 2.0	Ammonia-N	104		94.8	94.6				0.231
	Ammonia-N	96.9		102	101				1.07
	Ammonia-N	100		103	104				1.21
	Ammonia-N	105		105	108				2.67
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.4		101	96.8				3.43

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	93.6	92.6			0.871
	Kjeldahl Nitrogen	97.8	92.3	94.5			1.84
EPA 353.2 Rev. 2.0	NO2NO3-N	103	98.6	99.1			0.494
	NO2NO3-N	107	102	101			1.47
EPA 365.1 Rev. 2.0	Total-P	103	102	104			1.34
	Total-P	102	105	106			1.13
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6	97.1	100			2.71
	O-Phosphate-P	102	95.5	97.7			1.74
SM 2120 B	Color (true)					19.2	
	Color (true)					10.0	
SM 2320 B-97	Alkalinity	105				2.34	1.42
	Alkalinity	112				0.0384	
SM 2540 C-97	TDS					1.22	
SM 5310 B-00	Organic Carbon	101	94.6	93.9		6.11	0.359
	Organic Carbon	97.9	102	99.2			2.34

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	1431436, 1431437, 1431438, 1431439, 1431733, 1431734, 1431735
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1431432, 1431433, 1431434, 1431435, 1431730, 1431731, 1431732
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1431424, 1431425, 1431426, 1431427, 1431724, 1431725, 1431726
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1431424, 1431425, 1431426, 1431427, 1431724, 1431725, 1431726
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1431424, 1431425, 1431426, 1431427, 1431724, 1431725, 1431726
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1431424, 1431425, 1431426, 1431427, 1431724, 1431725, 1431726
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1431428, 1431429, 1431430, 1431431, 1431727, 1431728, 1431729
SM 2120 B / E31780	True Color measured at 450 nm or Apparent Color	1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1431420, 1431421, 1431422, 1431423, 1431721, 1431722, 1431723
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1431424, 1431425, 1431426, 1431427, 1431724, 1431725, 1431726

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)	05/24/2012	05/24/2012	Hoor Shaik	05/25/2012	S. M. Reddy	1431436, 1431437, 1431438, 1431439
	05/24/2012	05/25/2012	Hoor Shaik	05/26/2012	S. M. Reddy	1431733, 1431734, 1431735
EPA 180.1 Rev. 2.0	05/24/2012			05/24/2012 15:54	Bryan A. Werth	1431721, 1431722, 1431723
EPA 200.7 Rev. 4.4	05/24/2012	05/25/2012	Elliott D. Healy	05/31/2012	Elisa J Lutz	1431432, 1431433, 1431434, 1431435
	05/24/2012	05/25/2012	Elliott D. Healy	06/01/2012	Elisa J Lutz	1431730, 1431731, 1431732
	05/24/2012	05/25/2012	Elliott D. Healy	06/01/2012	Joshua Ayres	1431432, 1431433, 1431434, 1431435
EPA 300.0 Rev. 2.1	05/24/2012			05/30/2012	Gary Dearman	1431420, 1431421, 1431422, 1431423
	05/24/2012			05/31/2012	Gary Dearman	1431721, 1431722, 1431723
EPA 350.1 Rev. 2.0	05/24/2012			05/29/2012	Peter D. Kaus	1431424, 1431425, 1431426, 1431427
	05/24/2012			06/04/2012	Peter D. Kaus	1431724, 1431725, 1431726
EPA 351.2 Rev. 2.0	05/24/2012	05/29/2012	Bryan A. Werth	05/30/2012	Christopher Armour	1431424, 1431425, 1431426, 1431427
EPA 353.2 Rev. 2.0	05/24/2012			05/29/2012	Sima Feizi	1431424, 1431425, 1431426, 1431427
	05/24/2012			06/01/2012	Sima Feizi	1431724, 1431725, 1431726
EPA 365.1 Rev. 2.0	05/24/2012	05/25/2012	Christopher Armour	05/29/2012	Pallavi R. Gadwal	1431424, 1431425, 1431426, 1431427
	05/24/2012	05/29/2012	Megan E. Faircloth	05/31/2012	Pallavi R. Gadwal	1431724, 1431725, 1431726
EPA 365.1 Rev. 2.0 dissolved	05/24/2012			05/24/2012 14:53	Pallavi R. Gadwal	1431428
	05/24/2012			05/24/2012 15:10	Pallavi R. Gadwal	1431429
	05/24/2012			05/24/2012 15:11	Pallavi R. Gadwal	1431430
	05/24/2012			05/24/2012 15:15	Pallavi R. Gadwal	1431431
	05/24/2012			05/24/2012 15:22	Pallavi R. Gadwal	1431727
	05/24/2012			05/24/2012 15:23	Pallavi R. Gadwal	1431728
	05/24/2012			05/24/2012 15:27	Pallavi R. Gadwal	1431729
SM 2120 B	05/24/2012			05/24/2012 14:24	Rochelle Y Jackson	1431420
	05/24/2012			05/24/2012 14:25	Rochelle Y Jackson	1431421
	05/24/2012			05/24/2012 14:26	Rochelle Y Jackson	1431422
	05/24/2012			05/24/2012 14:27	Rochelle Y Jackson	1431423
	05/24/2012			05/24/2012 15:04	Rochelle Y Jackson	1431721
	05/24/2012			05/24/2012 15:05	Rochelle Y Jackson	1431722
	05/24/2012			05/24/2012 15:06	Rochelle Y Jackson	1431723
SM 2320 B-97	05/24/2012			05/30/2012	Dale L. Simmons	1431420, 1431421
	05/24/2012			05/31/2012	Dale L. Simmons	1431422, 1431423
	05/24/2012			05/31/2012	Rochelle Y Jackson	1431721, 1431722, 1431723
SM 2540 C-97	05/24/2012			05/29/2012	Yijie Li	1431721, 1431722, 1431723
SM 5310 B-00	05/24/2012			05/29/2012	Rochelle Y Jackson	1431424, 1431425, 1431426, 1431427
	05/24/2012			05/30/2012	Rochelle Y Jackson	1431724, 1431725, 1431726