

Chemical Analysis Report

WTRSHD-MGT-2011-08-04-01

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

Event Description: **Suwannee Load Study**

Request ID: **RQ-2011-08-01-26**

Customer: **WTRSHD-MGT**

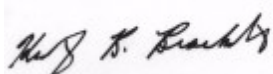
Project ID: **GRNT-10608**

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This Report replaces the previous Report Serial Number: 0057130

Revision certified by: Kathryn Brackett, Environmental Administrator Date Certified: 22-MAR-2012 14:43



NON-CONFORMANCE REPORT INCLUDED

Report Comments:

Unauthorized to edit field IDs.

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.

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).

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-2011-08-04-87

Group: Nutrients

Job: TLH-2011-08-04-88

Group: Metals

Job: TLH-2011-08-04-90

Group: Nutrients

Job: TLH-2011-08-04-91

Group: Metals

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 04:15 PM****Field ID: BATHTUB SPRING**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369250	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P229494	
1369270	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.090	I	mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P229888	
1369290	EPA 200.7 Rev. 4.4	Potassium	0.30	I	mg/L	P229420	

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 01:00 PM****Field ID: MEARSON SPRING**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369259	EPA 300.0 Rev. 2.1	Chloride	6.7		mg Cl/L	P229494	
1369279	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.6		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P229888	
1369299	EPA 200.7 Rev. 4.4	Potassium	1.6		mg/L	P229420	

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 10:15 AM****Field ID: MSR10**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369254	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P229494	
1369274	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.88		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229295	
1369294	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 12:16 PM****Field ID: MSR12**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369260	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229494	
1369280	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.92		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369300	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 12:40 PM**

Field ID: MSR13

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369261	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229494	
1369281	EPA 350.1 Rev. 2.0	Ammonia-N	0.064		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.94		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369301	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 01:50 PM****Field ID: MSR14**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369262	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229494	
1369282	EPA 350.1 Rev. 2.0	Ammonia-N	0.065		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.98		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369302	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 02:15 PM****Field ID: MSR15**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369256	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229494	
1369276	EPA 350.1 Rev. 2.0	Ammonia-N	0.062		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.99		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369296	EPA 200.7 Rev. 4.4	Potassium	1.4		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 02:20 PM****Field ID: MSR16**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369258	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229494	
1369278	EPA 350.1 Rev. 2.0	Ammonia-N	0.068		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.99		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369298	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 03:00 PM**

Field ID: MSR17

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369263	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229494	
1369283	EPA 350.1 Rev. 2.0	Ammonia-N	0.069		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369303	EPA 200.7 Rev. 4.4	Potassium	1.6		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 03:00 PM****Field ID: MSR17 DUPLICATE**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369324	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229484	
1369330	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.0		mg N/L	P229478	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229296	
1369336	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229421	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 02:50 PM****Field ID: MSR18**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369325	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229495	
1369331	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P229329	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.0		mg N/L	P229478	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229297	
1369337	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229421	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 03:10 PM****Field ID: MSR19**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369326	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229495	
1369332	EPA 350.1 Rev. 2.0	Ammonia-N	0.065		mg N/L	P229164	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P229329	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.0		mg N/L	P229478	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229297	
1369338	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229421	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 12:00 PM**

Field ID: MSR2

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369244	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369264	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P229161	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P229239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.72		mg N/L	P229437	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229312	
1369284	EPA 200.7 Rev. 4.4	Potassium	1.6		mg/L	P229420	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 03:15 PM****Field ID: MSR20**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369327	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229495	
1369333	EPA 350.1 Rev. 2.0	Ammonia-N	0.066		mg N/L	P229164	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P229329	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.0		mg N/L	P229478	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229297	
1369339	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229421	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 03:25 PM****Field ID: MSR21**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369328	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P229495	
1369334	EPA 350.1 Rev. 2.0	Ammonia-N	0.064		mg N/L	P229164	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P229329	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.0		mg N/L	P229478	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P229297	
1369340	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229421	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 03:45 PM****Field ID: MSR22**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369329	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229495	
1369335	EPA 350.1 Rev. 2.0	Ammonia-N	0.066		mg N/L	P229164	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P229329	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.99		mg N/L	P229478	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P229297	
1369341	EPA 200.7 Rev. 4.4	Potassium	1.6		mg/L	P229421	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 12:30 PM**

Field ID: MSR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369245	EPA 300.0 Rev. 2.1	Chloride	7.2		mg Cl/L	P229494	
1369265	EPA 350.1 Rev. 2.0	Ammonia-N	0.083		mg N/L	P229161	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P229239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.72		mg N/L	P229437	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229295	
1369285	EPA 200.7 Rev. 4.4	Potassium	1.6		mg/L	P229420	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 01:00 PM****Field ID: MSR4**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369246	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369266	EPA 350.1 Rev. 2.0	Ammonia-N	0.078		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P229239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.75		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P229295	
1369286	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 01:20 PM****Field ID: MSR5**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369247	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369267	EPA 350.1 Rev. 2.0	Ammonia-N	0.078		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.79		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229295	
1369287	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 01:40 PM****Field ID: MSR6**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369248	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369268	EPA 350.1 Rev. 2.0	Ammonia-N	0.080		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.78		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229295	
1369288	EPA 200.7 Rev. 4.4	Potassium	1.5	A	mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 03:50 PM****Field ID: MSR7**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369249	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369269	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.83		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229295	
1369289	EPA 200.7 Rev. 4.4	Potassium	1.6		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 04:40 PM****Field ID: MSR8**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369251	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369271	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.85		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229295	
1369291	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/02/2011 04:50 PM****Field ID: MSR9**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369252	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P229494	
1369272	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.86		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P229295	
1369292	EPA 200.7 Rev. 4.4	Potassium	1.5		mg/L	P229420	

Ref. Method and Comment:

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

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 10:37 AM****Field ID: SUW718971 SPRING**

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369255	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P229494	
1369275	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P229328	
	EPA 353.2 Rev. 2.0	NO2NO3-N	7.4		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P229888	
1369295	EPA 200.7 Rev. 4.4	Potassium	2.8		mg/L	P229420	

Sample Location: SUWANNEE RIVER**Collection Date/Time: 08/03/2011 11:25 AM**

Field ID: SUW725971 SPRING

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369257	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P229494	
1369277	EPA 350.1 Rev. 2.0	Ammonia-N	0.017	I	mg N/L	P229163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P229613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	15		mg N/L	P229441	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P229888	
1369297	EPA 200.7 Rev. 4.4	Potassium	5.2		mg/L	P229420	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: The MDL was elevated due to high nitrate concentration in the sample.

Sample Location: SUWANNEE RIVER

Collection Date/Time: 08/02/2011 05:10 PM

Field ID: SUWANNEE BLUE SPRING

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1369253	EPA 300.0 Rev. 2.1	Chloride	6.0		mg Cl/L	P229494	
1369273	EPA 350.1 Rev. 2.0	Ammonia-N	0.012	I	mg N/L	P229162	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P229348	
	EPA 353.2 Rev. 2.0	NO2NO3-N	3.1		mg N/L	P229438	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P229888	
1369293	EPA 200.7 Rev. 4.4	Potassium	0.85	I	mg/L	P229420	

Non-Conformance Report

NCR ID: 3849

Event(s)

WTRSHD-MGT-2011-08-04-01

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Receiving

Observation: Containers weren't received for one sample listed on the field sheet.
Field id SUW725971 SPRING. Containers were received for sample SUW72591, also listed on the field form.

Resolution: Customer was contacted, Kathryn Holland. A message was left regarding the containers that weren't received.
Debra Harrington contacted the lab and said that the sample listed as SU72591 was actually SUW725971. The COC form was corrected and LIMS was updated.

Authorised by/Date: Kathryn Brackett 3/22/2012

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry Tim Fitzpatrick (850) 245-8085
Biology David D. Whiting (850) 245-8177

Quality Assurance Report

Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P229420

Component	Result	Code	Units
Potassium	0.30	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229421

Component	Result	Code	Units
Potassium	0.30	U	mg/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229484

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229494

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229495

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229161

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229162

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229163

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229164

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229239

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229328

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229329

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229348

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229613

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229437

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229438

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229441

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229478

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229295

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229296

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229297

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229312

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229888

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229420

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Potassium	103		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Potassium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229484

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229494

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229495

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229495

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229161

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229162

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229163

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229164

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229239

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229329

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229348

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229613

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229437

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229438

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229441

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229295

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229296

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229297

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229312

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229888

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369288	Potassium	104		P	80 - 120
1369298	Potassium	104		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369339	Potassium	103		P	80 - 120
1369373	Potassium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369711	Chloride	98.4		P	90 - 110
1369761	Chloride	98.9	99.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229494

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369244	Chloride	103	103	P/P	90 - 110
1369262	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369325	Chloride	103	103	P/P	90 - 110
1369359	Chloride	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229161

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369120	Ammonia-N	111	113	F/F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229162

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369274	Ammonia-N	106	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369277	Ammonia-N	107	109	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229164

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369367	Ammonia-N	94.1	94.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369279	Kjeldahl Nitrogen	90.3	95.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369350	Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369273	Kjeldahl Nitrogen	94.3	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1370827	Kjeldahl Nitrogen	96.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369120	NO2NO3-N	99.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369266	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369276	NO2NO3-N	107	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369351	NO2NO3-N	108	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1369101	Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1372096	Total-P	103	99.3	P/P	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369288	Potassium	1.36	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P229421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369373	Potassium	9.77	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369761	Chloride	0.505	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369244	Chloride	0.113	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P229495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369325	Chloride	0.267	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229161

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369120	Ammonia-N	1.13	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229162

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369274	Ammonia-N	0.244	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229163

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369277	Ammonia-N	1.07	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P229164

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369367	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229239

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369101	Kjeldahl Nitrogen	7.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229328

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369279	Kjeldahl Nitrogen	4.86	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229329

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369350	Kjeldahl Nitrogen	2.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229348

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369273	Kjeldahl Nitrogen	7.40	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P229613

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1370827	Kjeldahl Nitrogen	1.64	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229437

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369120	NO2NO3-N	0.705	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229438

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369266	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229441

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369276	NO2NO3-N	0.963	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P229478

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369351	NO2NO3-N	0.524	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229295

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369267	Total-P	2.12	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229296

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369278	Total-P	0.937	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229297

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369333	Total-P	0.834	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229312

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1369101	Total-P	0.402	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P229888

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1372096	Total-P	3.17	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 Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A40569

Included Lab Sample IDs: 1369264, 1369265, 1369266, 1369267, 1369268, 1369269, 1369270, 1369271, 1369272, 1369273, 1369274, 1369275, 1369276, 1369277, 1369278, 1369279, 1369280, 1369281, 1369282, 1369283, 1369330, 1369331, 1369332, 1369333, 1369334, 1369335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	97.5	P/P	90 - 110
Ammonia-N	103	99.1	P/P	90 - 110
Ammonia-N	97.5	103	P/P	90 - 110
Ammonia-N	99.1	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A40593

Included Lab Sample IDs: 1369264, 1369265, 1369266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.0	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A40621

Included Lab Sample IDs: 1369265, 1369266, 1369267, 1369268, 1369269, 1369271, 1369272, 1369274, 1369276, 1369278, 1369280, 1369281, 1369282, 1369283, 1369330, 1369331, 1369332, 1369333

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	105	P/P	90 - 110
Total-P	102	103	P/P	90 - 110
Total-P	103	102	P/P	90 - 110
Total-P	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A40622

Included Lab Sample IDs: 1369334, 1369335

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A40633

Included Lab Sample IDs: 1369264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	94.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A40639

Included Lab Sample IDs: 1369275, 1369276, 1369278, 1369279, 1369280, 1369281, 1369282, 1369283, 1369330, 1369333, 1369334, 1369335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.6	P/P	90 - 110
Kjeldahl Nitrogen	102	101	P/P	90 - 110
Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A40644

Included Lab Sample IDs: 1369267, 1369268, 1369269, 1369270, 1369271, 1369272, 1369273, 1369274, 1369331, 1369332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	108	P/P	90 - 110
Kjeldahl Nitrogen	103	106	P/P	90 - 110
Kjeldahl Nitrogen	108	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A40662

Included Lab Sample IDs: 1369284, 1369285, 1369286, 1369287, 1369288, 1369289, 1369290, 1369291, 1369292, 1369293, 1369294, 1369295, 1369296, 1369297, 1369298, 1369299, 1369300, 1369301, 1369302, 1369303, 1369336, 1369337, 1369338, 1369339, 1369340, 1369341

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A40669

Included Lab Sample IDs: 1369264, 1369265, 1369266, 1369267, 1369268, 1369269, 1369270, 1369271, 1369272, 1369273, 1369274, 1369275, 1369276, 1369277, 1369278, 1369279, 1369280, 1369281, 1369282, 1369283

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	104	P/P	90 - 110
NO2NO3-N	104	105	P/P	90 - 110
NO2NO3-N	105	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A40689

Included Lab Sample IDs: 1369330, 1369331, 1369332, 1369333, 1369334, 1369335

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

Quality Assurance Report

Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A40692

Included Lab Sample IDs: 1369244, 1369245, 1369246, 1369247, 1369248, 1369249, 1369250, 1369251, 1369252, 1369253, 1369254, 1369255, 1369256, 1369257, 1369258, 1369259, 1369260, 1369261, 1369262, 1369263, 1369324, 1369325, 1369326, 1369327, 1369328, 1369329

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A40744

Included Lab Sample IDs: 1369277

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.8	95.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A40858

Included Lab Sample IDs: 1369270, 1369273, 1369275, 1369277, 1369279

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.2	96.0	P/P	90 - 110
Total-P	97.9	97.2	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			Precision SMP	MS
			LCS				
EPA 200.7 Rev. 4.4	Potassium	103	104	104		1.36	
	Potassium	103	103	104		9.77	
EPA 300.0 Rev. 2.1	Chloride	99.4	98.9	99.8	98.4		0.505
	Chloride	101	102	103	103		0.113
	Chloride	102	103	103	104		0.267
EPA 350.1 Rev. 2.0	Ammonia-N	97.9	111	113			1.13
	Ammonia-N	99.2	106	106			0.244
	Ammonia-N	102	107	109			1.07
	Ammonia-N	102	94.1	94.1			0.0
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.8					7.70
	Kjeldahl Nitrogen	95.0	90.3	95.5			4.86
	Kjeldahl Nitrogen	98.9	101	104			2.22
	Kjeldahl Nitrogen	105	94.3	102			7.40
	Kjeldahl Nitrogen	103	96.0	98.0			1.64
EPA 353.2 Rev. 2.0	NO2NO3-N	106	99.2				0.705
	NO2NO3-N	106	106	106			0.0
	NO2NO3-N	106	107	106			0.963
	NO2NO3-N	104	108	106			0.524
EPA 365.1 Rev. 2.0	Total-P	102					2.12

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 365.1 Rev. 2.0	Total-P	106				0.937
	Total-P	103				0.834
	Total-P	102	101	102		0.402
	Total-P	102	103	99.3		3.17

Reference Method Descriptions

Method / NELAC Cert. #**Description**

EPA 200.7 Rev. 4.4 / E31780

Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

EPA 300.0 Rev. 2.1 / E31780

Chloride in aqueous matrices

EPA 350.1 Rev. 2.0 / E31780

Ammonia in aqueous matrices as mg N/L

EPA 351.2 Rev. 2.0 / E31780

Total Kjeldahl Nitrogen in aqueous matrices

EPA 353.2 Rev. 2.0 / E31780

Nitrite/Nitrate in aqueous matrices as mg N/L

EPA 365.1 Rev. 2.0 / E31780

Total Phosphorus in aqueous matrices as mg P/L

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.7 Rev. 4.4	08/04/2011	08/08/2011	Elliott D. Healy	08/12/2011	Elisa J Lutz	1369284, 1369285, 1369286, 1369287, 1369288, 1369289, 1369290, 1369291, 1369292
	08/04/2011	08/08/2011	Elliott D. Healy	08/13/2011	Elisa J Lutz	1369293, 1369294, 1369295, 1369296, 1369297, 1369298, 1369299, 1369300, 1369301, 1369302, 1369303
	08/04/2011	08/09/2011	Elliott D. Healy	08/13/2011	Elisa J Lutz	1369336, 1369337, 1369338, 1369339, 1369340, 1369341
EPA 300.0 Rev. 2.1	08/04/2011			08/12/2011	Gary Dearman	1369262, 1369324
	08/04/2011			08/13/2011	Gary Dearman	1369244, 1369245, 1369246, 1369247, 1369248, 1369249, 1369250, 1369251, 1369252, 1369253, 1369254, 1369255, 1369256, 1369257, 1369258, 1369259, 1369260, 1369261, 1369263, 1369325, 1369326, 1369327, 1369328, 1369329
EPA 350.1 Rev. 2.0	08/04/2011			08/08/2011	Diana M. Dunbar	1369264, 1369265, 1369266, 1369267, 1369268, 1369269, 1369270, 1369271, 1369272, 1369273, 1369274, 1369275, 1369276, 1369277, 1369278, 1369279, 1369280, 1369281, 1369282, 1369283, 1369330, 1369331, 1369332, 1369333, 1369334, 1369335
EPA 351.2 Rev. 2.0	08/04/2011	08/08/2011	Bryan A. Werth	08/09/2011	Christopher Armour	1369264, 1369265, 1369266
	08/04/2011	08/09/2011	Bryan A. Werth	08/10/2011	Christopher Armour	1369275, 1369276, 1369278, 1369279, 1369280, 1369281, 1369282, 1369283, 1369330, 1369333, 1369334, 1369335
	08/04/2011	08/09/2011	Bryan A. Werth	08/12/2011	Christopher Armour	1369267, 1369268, 1369269, 1369270, 1369271, 1369272, 1369273, 1369274, 1369331, 1369332
EPA 353.2 Rev. 2.0	08/04/2011	08/17/2011	Bryan A. Werth	08/18/2011	Christopher Armour	1369277
	08/04/2011			08/15/2011	Sima Feizi	1369264, 1369265, 1369266, 1369267, 1369268, 1369269, 1369270, 1369271, 1369272, 1369273, 1369274, 1369275, 1369276, 1369277, 1369278, 1369279, 1369280, 1369281, 1369282, 1369283
	08/04/2011			08/16/2011	Sima Feizi	1369330, 1369331, 1369332, 1369333, 1369334, 1369335
EPA 365.1 Rev. 2.0	08/04/2011	08/10/2011	Megan E. Faircloth	08/11/2011	Megan E. Faircloth	1369264
	08/04/2011	08/10/2011	Megan E. Faircloth	08/11/2011	Peter D. Kaus	1369265, 1369266, 1369267, 1369268, 1369269, 1369271, 1369272, 1369274, 1369276, 1369278, 1369280, 1369281, 1369282, 1369283, 1369330, 1369331, 1369332, 1369333, 1369334, 1369335
	08/04/2011	08/24/2011	Megan E. Faircloth	08/25/2011	Megan E. Faircloth	1369270, 1369273, 1369275, 1369277, 1369279