Chemical Analysis Report

NW-DIST-2013-05-21-01

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

Event Description: **Project Greenshores**
Request ID: **RQ-2013-05-20-24**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
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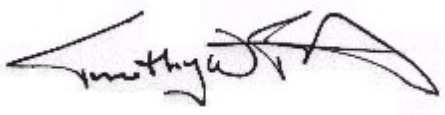
Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 07-JUN-2013 10:35



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.

Sample Location: 1/2 BETWEEN BRIDGE AND PORT 400FT FROM SHORE **Collection Date/Time: 05/20/2013 11:55 AM**

Field ID: 12 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505369	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P253015	
	SM 2120 B	Color (true)	2.5	I	PCU	P252992	
	SM 2540 D-97	TSS	5	I	mg/L	P253370	
1505383	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P253084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P253195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P253114	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: 1/2 BRIDGE & PORT **Collection Date/Time: 05/20/2013 11:50 AM**

Field ID: 7 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505364	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P253015	
	SM 2120 B	Color (true)	3.7	I	PCU	P252992	
	SM 2540 D-97	TSS	5	I	mg/L	P253369	
1505378	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P253117	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: 1/2 BRUDGE AND MUSCOGEE **Collection Date/Time: 05/20/2013 11:15 AM**

Field ID: 2 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505359	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P253014	
	SM 2120 B	Color (true)	4.1	I	PCU	P252991	
	SM 2540 D-97	TSS	6	I	mg/L	P253369	
1505373	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P253067	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P253117	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: 1/2 MUSCOGEE & HAWKSHAW 400FT FROM SHARE **Collection Date/Time: 05/20/2013 11:45 AM**

Field ID: 6 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505363	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P253015	
	SM 2120 B	Color (true)	3.2	I	PCU	P252992	

Field ID: 6 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505363	SM 2540 D-97	TSS	4	I	mg/L	P253369	
1505377	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P253117	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: 100FT. SOUTH OF STORMDRAIN **Collection Date/Time: 05/20/2013 11:26 AM**

Field ID: 4 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505361	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P253014	
	SM 2120 B	Color (true)	3.3	I	PCU	P252991	
	SM 2540 D-97	TSS	5	I	mg/L	P253369	
1505375	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P253117	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: BETWEEN MARINA AND OUTFALL **Collection Date/Time: 05/20/2013 12:08 PM**

Field ID: 10 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505367	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P253015	
	SM 2120 B	Color (true)	3.2	I	PCU	P252992	
	SM 2540 D-97	TSS	3	U	mg/L	P253370	
1505381	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P253084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	I	mg N/L	P253195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P253114	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: EAST OF PRIMARY STORMDRAIN **Collection Date/Time: 05/20/2013 11:20 AM**

Field ID: 3 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505360	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P253014	
	SM 2120 B	Color (true)	2.5	I	PCU	P252991	
	SM 2540 D-97	TSS	5	I	mg/L	P253369	
1505374	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.022		mg N/L	P253067	

Field ID: 3 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505374	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P253117	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: EAST OF STORMDRAIN INSIDE PGS SITE 2 **Collection Date/Time: 05/20/2013 12:35 PM**

Field ID: 14 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505371	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P253015	
	SM 2120 B	Color (true)	3.8	I	PCU	P252992	
	SM 2540 D-97	TSS	7	I	mg/L	P253370	
1505385	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P253084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	I	mg N/L	P253195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P253069	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P253114	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: END OF CHASE STREET **Collection Date/Time: 05/20/2013 11:40 AM**

Field ID: 5 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505362	EPA 180.1 Rev. 2.0	Turbidity	1.8	A	NTU	P253015	
	SM 2120 B	Color (true)	3.5	I	PCU	P252992	
	SM 2540 D-97	TSS	6	I	mg/L	P253369	
1505376	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032		mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P253117	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: ENTRANCE OF MARINA **Collection Date/Time: 05/20/2013 12:01 PM**

Field ID: 11 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505368	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P253015	
	SM 2120 B	Color (true)	4.4	I	PCU	P252992	
	SM 2540 D-97	TSS	5	I	mg/L	P253370	
1505382	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P253084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40	I	mg N/L	P253195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.088		mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P253114	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: INSIDE HAWSHAW **Collection Date/Time: 05/20/2013 12:25 PM**

Field ID: 13 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505370	EPA 180.1 Rev. 2.0	Turbidity	8.0		NTU	P253015	
	SM 2120 B	Color (true)	11		PCU	P252992	
	SM 2540 D-97	TSS	15		mg/L	P253370	
1505384	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P253084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P253195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P253114	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: RANGEMAKER E. L TEXAR **Collection Date/Time: 05/20/2013 10:58 AM**

Field ID: 1 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505358	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P253014	
	SM 2120 B	Color (true)	3.1	I	PCU	P252991	
	SM 2540 D-97	TSS	6	I	mg/L	P253369	
1505372	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P253067	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P253117	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: WEST END OF HAWKSHAW 100 FT SOUTH OF OUTFALL **Collection Date/Time: 05/20/2013 12:14 PM**

Field ID: 9 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505366	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P253015	
	SM 2120 B	Color (true)	3.9	I	PCU	P252992	
	SM 2540 D-97	TSS	5	I	mg/L	P253369	
1505380	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P253083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P253117	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: WEST OF STORMDRAIN INSIDE ROCKS **Collection Date/Time: 05/20/2013 11:32 AM**

Field ID: 8 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505365	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P253015	
	SM 2120 B	Color (true)	2.5	U	PCU	P252992	
	SM 2540 D-97	TSS	5	I	mg/L	P253370	
1505379	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P253083	

Field ID: 8 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1505379	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P253140	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.082		mg N/L	P253068	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P253117	

Ref. Method and Comment:
SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P253014

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P253015

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253083

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253084

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253140

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253195

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253067

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253068

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253069

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253114

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253117

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

Reference Method: SM 2120 B
Batch ID: P252991

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P252992

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2540 D-97
Batch ID: P253369

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P253370

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253083

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: P253083

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253084

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253140

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253195

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253067

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253069

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253114

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253117

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505355	Ammonia-N	104	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505385	Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505355	Kjeldahl Nitrogen	109	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505381	Kjeldahl Nitrogen	97.7	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505355	NO2NO3-N	97.5	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505375	NO2NO3-N	98.1	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505385	NO2NO3-N	96.9	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253114

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505381	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1505355	Total-P	107	106	P/P	90 - 110

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P253014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505346	Turbidity	1.02	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P253015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505362	Turbidity	8.40	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505355	Ammonia-N	2.43	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P253084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505385	Ammonia-N	1.11	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505355	Kjeldahl Nitrogen	4.15	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P253195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505381	Kjeldahl Nitrogen	4.21	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505355	NO2NO3-N	0.394	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505375	NO2NO3-N	0.791	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P253069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505385	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505381	Total-P	0.477	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P253117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505355	Total-P	0.972	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P252991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1505346	Color (true)	5.66	Sample	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: SM 2120 B
Run ID: A50517
Included Lab Sample IDs: 1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115
Color (true)	102	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A50526
Included Lab Sample IDs: 1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	100	102	P/P	95 - 105

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A50543
Included Lab Sample IDs: 1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.8	98.8	P/P	90 - 110
NO2NO3-N	98.8	99.0	P/P	90 - 110
NO2NO3-N	99.0	98.8	P/P	90 - 110
NO2NO3-N	99.4	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A50549
Included Lab Sample IDs: 1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A50565
Included Lab Sample IDs: 1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.0	P/P	90 - 110
Total-P	98.0	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A50570
Included Lab Sample IDs: 1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	106	P/P	90 - 110
Kjeldahl Nitrogen	107	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A50586
Included Lab Sample IDs: 1505381, 1505382, 1505383, 1505384, 1505385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110
Kjeldahl Nitrogen	104	102	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		
				LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.02	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					8.40	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	104	101			2.43
	Ammonia-N	101	104	105			1.11
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	109	104			4.15
	Kjeldahl Nitrogen	102	97.7	103			4.21
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	97.5	97.0			0.394
	NO2NO3-N	99.0	98.1	99.1			0.791
	NO2NO3-N	98.5	96.9	95.9			0.980
EPA 365.1 Rev. 2.0	Total-P	105	105	104			0.477
	Total-P	104	107	106			0.972
SM 2120 B	Color (true)					5.66	

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
SM 2120 B / E31780	True Color measured at 450 nm	1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	05/21/2013			05/21/2013 15:01	Blanca Fach	1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371
EPA 350.1 Rev. 2.0	05/21/2013			05/22/2013	Diana M. Turner	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
EPA 351.2 Rev. 2.0	05/21/2013	05/22/2013	Christopher Armour	05/23/2013	Bryan A. Werth	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380
	05/21/2013	05/23/2013	Christopher Armour	05/24/2013	Bryan A. Werth	1505381, 1505382, 1505383, 1505384, 1505385
EPA 353.2 Rev. 2.0	05/21/2013			05/22/2013	Sima Feizi	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
EPA 365.1 Rev. 2.0	05/21/2013	05/22/2013	Christopher Armour	05/23/2013	Pallavi R. Gadwal	1505372, 1505373, 1505374, 1505375, 1505376, 1505377, 1505378, 1505379, 1505380, 1505381, 1505382, 1505383, 1505384, 1505385
SM 2120 B	05/21/2013			05/21/2013 13:44	Rochelle Y Jackson	1505358
	05/21/2013			05/21/2013 13:45	Rochelle Y Jackson	1505359, 1505360
	05/21/2013			05/21/2013 13:46	Rochelle Y Jackson	1505361
	05/21/2013			05/21/2013 13:51	Rochelle Y Jackson	1505362
	05/21/2013			05/21/2013 13:52	Rochelle Y Jackson	1505363
	05/21/2013			05/21/2013 13:53	Rochelle Y Jackson	1505364, 1505365
	05/21/2013			05/21/2013 13:54	Rochelle Y Jackson	1505366
	05/21/2013			05/21/2013 13:55	Rochelle Y Jackson	1505367
	05/21/2013			05/21/2013 13:56	Rochelle Y Jackson	1505368
	05/21/2013			05/21/2013 13:57	Rochelle Y Jackson	1505369
	05/21/2013			05/21/2013 13:58	Rochelle Y Jackson	1505370
	05/21/2013			05/21/2013 13:59	Rochelle Y Jackson	1505371
SM 2540 D-97	05/21/2013			05/23/2013	Yijie Li	1505358, 1505359, 1505360, 1505361, 1505362, 1505363, 1505364, 1505365, 1505366, 1505367, 1505368, 1505369, 1505370, 1505371