

Chemical Analysis Report

NW-DIST-2013-08-27-01

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

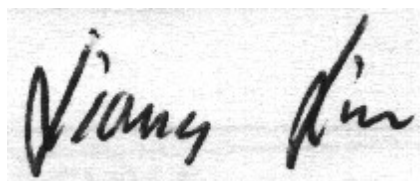
Event Description: **Project Greenshores**
Request ID: **RQ-2013-08-26-08**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 13-SEP-2013 10:08

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

Abbreviations and data remark codes

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

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

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

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

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

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

RSD – Relative Standard Deviation expressed as a percentage.

SMP – Sample.

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

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

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

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

J - Estimated value

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

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

N - Presumptive evidence of presence of material.

O - Sampled, but analysis lost or not performed.

Q - Sample held beyond normal holding time.

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

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

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

X - Too few individuals to calculate SCI value.

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

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

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

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

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

Sample Location: 1/2 BRIDGE AND MUSCOGEE

Collection Date/Time: 08/26/2013 10:28 AM

Field ID: #2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528922	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P256961	
	SM 2120 B	Color (true)	41	A	PCU	P256929	
	SM 2540 D-97	TSS	6	I	mg/L	P257192	
1528936	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P257042	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P257055	

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 BRIDGE AND PORT

Collection Date/Time: 08/26/2013 11:10 AM

Field ID: #7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528927	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P256962	
	SM 2120 B	Color (true)	44		PCU	P256929	
	SM 2540 D-97	TSS	6	I	mg/L	P257192	
1528941	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P257055	

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 AND HAWKSHAW 400FT FROM SHORE

Collection Date/Time: 08/26/2013 11:06 AM

Field ID: #6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528926	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P256962	
	SM 2120 B	Color (true)	40		PCU	P256929	
	SM 2540 D-97	TSS	8	I	mg/L	P257192	
1528940	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P257055	

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: 1/4 BETWEEN BRIDGE AND PORT 400FT FROM SHORE

Collection Date/Time: 08/26/2013 11:17 AM

Field ID: #12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528932	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P256962	
	SM 2120 B	Color (true)	46	A	PCU	P256930	
	SM 2540 D-97	TSS	4	I	mg/L	P257192	

Field ID: #12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528946	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P257003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P257056	

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: 100FT S. OF STORM DRAIN

Collection Date/Time: 08/26/2013 10:43 AM

Field ID: #4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528924	EPA 180.1 Rev. 2.0	Turbidity	2.7	A	NTU	P256962	
	SM 2120 B	Color (true)	43		PCU	P256929	
	SM 2540 D-97	TSS	7	I	mg/L	P257194	
1528938	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.051		mg N/L	P257042	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P257055	

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: 08/26/2013 11:32 AM

Field ID: #10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528930	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P256962	
	SM 2120 B	Color (true)	39		PCU	P256929	
	SM 2540 D-97	TSS	5	I	mg/L	P257192	
1528944	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.050		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P257056	

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 PRIMARY STORM DRAIN

Collection Date/Time: 08/26/2013 10:36 AM

Field ID: #3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528923	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P256961	
	SM 2120 B	Color (true)	43		PCU	P256929	
	SM 2540 D-97	TSS	5	I	mg/L	P257194	
1528937	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P257042	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P257055	

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 PGS2

Collection Date/Time: 08/26/2013 12:00 PM

Field ID: #14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528934	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P256963	
	SM 2120 B	Color (true)	32		PCU	P256930	
	SM 2540 D-97	TSS	11	A	mg/L	P257193	
1528948	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P257003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	I	mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P257056	

Sample Location: END OF CHASE ST.

Collection Date/Time: 08/26/2013 10:50 AM

Field ID: #5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528925	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P256962	
	SM 2120 B	Color (true)	36		PCU	P256929	
	SM 2540 D-97	TSS	4	I	mg/L	P257192	
1528939	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.071		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P257055	

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: ENTRANCE OF MARINA

Collection Date/Time: 08/26/2013 11:26 AM

Field ID: #11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528931	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P256962	
	SM 2120 B	Color (true)	33		PCU	P256929	
	SM 2540 D-97	TSS	5	I	mg/L	P257192	
1528945	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P257003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P257056	

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: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 08/26/2013 11:50 AM

Field ID: #13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528933	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P256962	
	SM 2120 B	Color (true)	22		PCU	P256930	
	SM 2540 D-97	TSS	8	I	mg/L	P257192	
1528947	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P257003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P257043	

Field ID: #13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528947	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P257056	

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: RANGE MARKER E. OF TEXAR

Collection Date/Time: 08/26/2013 10:16 AM

Field ID: #1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528921	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P256961	
	SM 2120 B	Color (true)	37	A	PCU	P256928	
	SM 2540 D-97	TSS	6	I	mg/L	P257191	
1528935	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P257063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032		mg N/L	P257042	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P257055	

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

Collection Date/Time: 08/26/2013 11:41 AM

Field ID: #9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528929	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P256962	
	SM 2120 B	Color (true)	38		PCU	P256929	
	SM 2540 D-97	TSS	6	I	mg/L	P257192	
1528943	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35	I	mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.055		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P257056	

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 OF STORM DRAIN, INSIDE ROCK

Collection Date/Time: 08/26/2013 10:59 AM

Field ID: #8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1528928	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P256962	
	SM 2120 B	Color (true)	32		PCU	P256929	
	SM 2540 D-97	TSS	5	I	mg/L	P257192	
1528942	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P257002	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P257103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.082		mg N/L	P257043	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P257055	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P256961

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P256962

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P256963

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257002

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257003

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257103

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257042

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257043

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257055

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257056

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

Reference Method: SM 2120 B
Batch ID: P256928

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P256929

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P256930

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2540 D-97
Batch ID: P257191

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P257192

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P257193

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P257194

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: P257002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257003

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257063

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257103

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257042

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257043

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257055

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257056

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257002

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528938	Ammonia-N	99.8	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528947	Ammonia-N	96.9	97.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528935	Kjeldahl Nitrogen	102	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528942	Kjeldahl Nitrogen	100	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257042

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528049	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528939	NO2NO3-N	99.6	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528935	Total-P	109	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1528943	Total-P	107	107	P/P	90 - 110

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P256961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528840	Turbidity	3.33	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P256962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528924	Turbidity	2.64	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P256963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1529031	Turbidity	5.87	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528938	Ammonia-N	0.402	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P257003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528947	Ammonia-N	0.197	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528935	Kjeldahl Nitrogen	2.40	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P257103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528942	Kjeldahl Nitrogen	2.63	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257042

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528049	NO2NO3-N	0.449	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P257043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528939	NO2NO3-N	0.371	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528935	Total-P	3.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P257056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528943	Total-P	0.365	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P256928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528921	Color (true)	2.38	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P256929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528922	Color (true)	0.561	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P256930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528932	Color (true)	2.65	Sample	P	0 - 20

Reference Method: SM 2540 D-97
Batch ID: P257193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1528934	TSS	7.14	Sample	P	0 - 10

* 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

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A52137

Included Lab Sample IDs: 1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	98.4	P/P	85 - 115
Color (true)	98.4	99.0	P/P	85 - 115
Color (true)	99.6	100	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A52158

Included Lab Sample IDs: 1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A52172

Included Lab Sample IDs: 1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A52184

Included Lab Sample IDs: 1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.6	98.8	P/P	90 - 110
NO2NO3-N	98.8	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A52196

Included Lab Sample IDs: 1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	99.1	P/P	90 - 110
Kjeldahl Nitrogen	103	102	P/P	90 - 110
Kjeldahl Nitrogen	99.1	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A52199

Included Lab Sample IDs: 1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.8	94.5	P/P	90 - 110
Total-P	95.8	95.8	P/P	90 - 110
Total-P	97.0	95.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A52212

Included Lab Sample IDs: 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	108	P/P	90 - 110
Kjeldahl Nitrogen	104	103	P/P	90 - 110
Kjeldahl Nitrogen	108	101	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
EPA 180.1 Rev. 2.0	Turbidity				3.33	
	Turbidity				2.64	
	Turbidity				5.87	
EPA 350.1 Rev. 2.0	Ammonia-N	98.7	99.8 100			0.402
	Ammonia-N	98.7	96.9 97.1			0.197
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.7	102 105			2.40
	Kjeldahl Nitrogen	97.9	100 103			2.63
EPA 353.2 Rev. 2.0	NO2NO3-N	101	102 101			0.449
	NO2NO3-N	100	99.6 99.0			0.371
EPA 365.1 Rev. 2.0	Total-P	109	109 104			3.94
	Total-P	106	107 107			0.365
SM 2120 B	Color (true)				2.38	
	Color (true)				0.561	
	Color (true)				2.65	
SM 2540 D-97	TSS				7.14	

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948

Reference Method Descriptions

Method / NELAC Cert. #	Description	Associated Samples
SM 2120 B / E31780	True Color measured at 450 nm	1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934

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	08/27/2013			08/27/2013 16:44	Blanca Fach	1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934
EPA 350.1 Rev. 2.0	08/27/2013			08/28/2013	Diana M. Turner	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
EPA 351.2 Rev. 2.0	08/27/2013	08/28/2013	Christopher Armour	08/29/2013	Bryan A. Werth	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941
	08/27/2013	08/29/2013	Christopher Armour	08/30/2013	Bryan A. Werth	1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
EPA 353.2 Rev. 2.0	08/27/2013			08/29/2013	Sima Feizi	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
EPA 365.1 Rev. 2.0	08/27/2013	08/28/2013	Christopher Armour	08/29/2013	Pallavi R. Gadwal	1528935, 1528936, 1528937, 1528938, 1528939, 1528940, 1528941, 1528942, 1528943, 1528944, 1528945, 1528946, 1528947, 1528948
SM 2120 B	08/27/2013			08/27/2013 13:03	Rochelle Y Jackson	1528921
	08/27/2013			08/27/2013 13:08	Rochelle Y Jackson	1528922
	08/27/2013			08/27/2013 13:09	Rochelle Y Jackson	1528923
	08/27/2013			08/27/2013 13:10	Rochelle Y Jackson	1528924, 1528925
	08/27/2013			08/27/2013 13:11	Rochelle Y Jackson	1528926
	08/27/2013			08/27/2013 13:12	Rochelle Y Jackson	1528927
	08/27/2013			08/27/2013 13:13	Rochelle Y Jackson	1528928
	08/27/2013			08/27/2013 13:14	Rochelle Y Jackson	1528929
	08/27/2013			08/27/2013 13:15	Rochelle Y Jackson	1528930
	08/27/2013			08/27/2013 13:16	Rochelle Y Jackson	1528931
	08/27/2013			08/27/2013 13:20	Rochelle Y Jackson	1528932
	08/27/2013			08/27/2013 13:21	Rochelle Y Jackson	1528933
	08/27/2013			08/27/2013 13:22	Rochelle Y Jackson	1528934
SM 2540 D-97	08/27/2013			08/29/2013	Yijie Li	1528921, 1528922, 1528923, 1528924, 1528925, 1528926, 1528927, 1528928, 1528929, 1528930, 1528931, 1528932, 1528933, 1528934