Chemical Analysis Report

NW-DIST-2017-11-14-01

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

Event Description: **Bayou Chico BMAP**
Request ID: **RQ-2017-10-16-27**
Customer: **NW-DIST**
Project ID: **BMAP**

Send Reports to:
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160 Government Center
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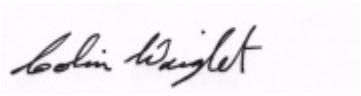
Date Certified: 04-DEC-2017 17:17



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

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.

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.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

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 and/or the analysis did not meet established quality control criteria.
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).

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.

Sample Location: Pensacola Bay at Sanders Beach **Collection Date/Time: 11/13/2017 10:50**

Field ID: A Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945900	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P335266	
1945907	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P336093	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29	I	mg N/L	P335810	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P335789	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P335356	

Sample Location: Bayou Chico at Mandalay Park **Collection Date/Time: 11/13/2017 11:15**

Field ID: B Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945901	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P335266	
1945908	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P336093	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P335810	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P335994	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P335356	

Sample Location: Jones Creek at Old Corry Road **Collection Date/Time: 11/13/2017 11:40**

Field ID: C Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945902	EPA 180.1 Rev. 2.0	Turbidity	3.7	A	NTU	P335266	
1945909	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P336091	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P335884	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P335652	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P335449	

Sample Location: Jackson Creek at Old Corry Road **Collection Date/Time: 11/13/2017 12:10**

Field ID: D Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945903	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P335266	
1945910	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P336091	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P335884	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.7		mg N/L	P335652	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P335449	

Sample Location: Jackson Creek at New Warrington Road **Collection Date/Time: 11/13/2017 12:30**

Field ID: E Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945904	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P335266	
1945911	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P336091	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P335884	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.6		mg N/L	P335652	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P335449	

Sample Location: Bayou Chico at Navy Blvd Bridge **Collection Date/Time: 11/13/2017 13:40**

Field ID: F Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945905	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P335266	
1945912	EPA 350.1 Rev. 2.0	Ammonia-N	0.070		mg N/L	P336093	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34	I	mg N/L	P335876	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.44		mg N/L	P335994	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P335356	

Sample Location: Bayou Chico at W Street **Collection Date/Time: 11/13/2017 13:55**

Field ID: G Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1945906	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P335266	
1945913	EPA 350.1 Rev. 2.0	Ammonia-N	0.067		mg N/L	P336000	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35	I	mg N/L	P335876	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.96		mg N/L	P335994	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P335510	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P335266

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336000

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336091

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336093

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335810

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: P335876

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335884

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335652

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335789

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335994

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335356

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335449

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335510

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336000

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: P336000

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336091

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335810

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335876

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335884

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335652

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335789

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335994

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335356

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335449

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: P335510

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336000

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1944521	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1944928	Ammonia-N	94.8	96.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945907	Ammonia-N	101	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945051	Kjeldahl Nitrogen	101	109	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945912	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335884

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945978	Kjeldahl Nitrogen	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945179	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945877	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945908	NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335356

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945907	Total-P	97.7	92.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945839	Total-P	98.8	96.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945913	Total-P	103	101	P/P	90 - 110

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P335266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945902	Turbidity	2.99	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336000

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1944521	Ammonia-N	0.281	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1944928	Ammonia-N	1.25	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945907	Ammonia-N	0.979	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945051	Kjeldahl Nitrogen	5.76	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945912	Kjeldahl Nitrogen	0.453	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945978	Kjeldahl Nitrogen	0.708	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945179	NO2NO3-N	0.306	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945877	NO2NO3-N	1.40	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945908	NO2NO3-N	0.599	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945907	Total-P	5.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945839	Total-P	2.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945913	Total-P	1.80	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 180.1 Rev. 2.0
Run ID: A80257
Included Lab Sample IDs: 1945900, 1945901, 1945902, 1945903, 1945904, 1945905, 1945906

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A80354
Included Lab Sample IDs: 1945907, 1945908, 1945912

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A80390
Included Lab Sample IDs: 1945909, 1945910, 1945911

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A80391
Included Lab Sample IDs: 1945909, 1945910, 1945911

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A80413
Included Lab Sample IDs: 1945913

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A80460
Included Lab Sample IDs: 1945907

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A80547
Included Lab Sample IDs: 1945908, 1945912, 1945913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110
NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A80551
Included Lab Sample IDs: 1945907, 1945908

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A80560
Included Lab Sample IDs: 1945913

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A80585
Included Lab Sample IDs: 1945909, 1945910, 1945911, 1945912, 1945913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	102	P/P	90 - 110
Kjeldahl Nitrogen	94.5	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A80596
Included Lab Sample IDs: 1945907, 1945908, 1945909, 1945910, 1945911, 1945912

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A80596
Included Lab Sample IDs: 1945907, 1945908, 1945909, 1945910, 1945911, 1945912

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	103	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					2.99	
EPA 350.1 Rev. 2.0	Ammonia-N	92.5	102	102			0.281
	Ammonia-N	97.8	94.8	96.1			1.25
	Ammonia-N	96.4	101	99.5			0.979
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	101	109			5.76
	Kjeldahl Nitrogen	107	101	102			0.453
	Kjeldahl Nitrogen	110	104	103			0.708
EPA 353.2 Rev. 2.0	NO2NO3-N	104	106	106			0.306
	NO2NO3-N	104	103	104			1.40
	NO2NO3-N	104	104				0.599
EPA 365.1 Rev. 2.0	Total-P	98.0	97.7	92.6			5.33
	Total-P	102	98.8	96.3			2.31
	Total-P	101	103	101			1.80

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1945900, 1945901, 1945902, 1945903, 1945904, 1945905, 1945906
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1945907, 1945908, 1945909, 1945910, 1945911, 1945912, 1945913
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1945907, 1945908, 1945909, 1945910, 1945911, 1945912, 1945913
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1945907, 1945908, 1945909, 1945910, 1945911, 1945912, 1945913
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1945907, 1945908, 1945909, 1945910, 1945911, 1945912, 1945913

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	11/14/2017			11/14/2017 16:23	DeAsia Armster	1945900, 1945901, 1945902, 1945903, 1945904, 1945905, 1945906
EPA 350.1 Rev. 2.0	11/14/2017			11/28/2017	Sofia Elnemr	1945913
	11/14/2017			11/29/2017	Sofia Elnemr	1945907, 1945908, 1945909, 1945910, 1945911, 1945912
EPA 351.2 Rev. 2.0	11/14/2017	11/22/2017	Adrian Shelby	11/27/2017	Joseph Suarez	1945907, 1945908
	11/14/2017	11/27/2017	Adrian Shelby	11/28/2017	Joseph Suarez	1945909, 1945910, 1945911, 1945912, 1945913
EPA 353.2 Rev. 2.0	11/14/2017			11/20/2017	Beverly Y. Sanders	1945909, 1945910, 1945911
	11/14/2017			11/22/2017	Beverly Y. Sanders	1945907
	11/14/2017			11/28/2017	Lauren Bottorf	1945908, 1945912, 1945913
EPA 365.1 Rev. 2.0	11/14/2017	11/15/2017	Sima Feizi	11/17/2017	Lipi Saha	1945907, 1945908, 1945912
	11/14/2017	11/16/2017	Sima Feizi	11/20/2017	Lipi Saha	1945909, 1945910, 1945911
	11/14/2017	11/17/2017	Sima Feizi	11/20/2017	Lipi Saha	1945913