

Chemical Analysis Report

NW-DIST-2019-07-09-01

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-2019-06-10-25**
Customer: **NW-DIST**
Project ID: **BMAP**

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Date Certified: 22-JUL-2019 10:58



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: $1.3\text{E}+03$, 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 by the Florida Department of Health Environmental Laboratory Certification Program 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: 07/08/2019 11:00

Field ID: 33020J10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100711	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P366912	
2100712	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P367006	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I	mg N/L	P367063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P367203	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P366956	

Sample Location: Bayou Chico at Mandalay Drive

Collection Date/Time: 07/08/2019 11:25

Field ID: 33020JD4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100699	EPA 180.1 Rev. 2.0	Turbidity	4.3	A	NTU	P366912	
2100702	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P367001	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P367062	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P367203	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P366956	

Sample Location: Jackson Creek @ Old Corry Road

Collection Date/Time: 07/08/2019 12:30

Field ID: 33020221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100705	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P366912	
2100708	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P367003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P367288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P366949	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P366954	

Sample Location: Jackson Creek at New Warrington Road

Collection Date/Time: 07/08/2019 12:50

Field ID: 33020222

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100706	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P366912	
2100709	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P367003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P367288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.7		mg N/L	P366949	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P366954	

Sample Location: Jones Creek Upstream of New Warrington Rd Collection Date/Time: 07/08/2019 13:05

Field ID: 33020117

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100707	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P366912	
2100710	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P367003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22		mg N/L	P367288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.053		mg N/L	P366949	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P366954	

Sample Location: Bayou Chico at Navy Blvd

Collection Date/Time: 07/08/2019 14:10

Field ID: 3302JE20

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100700	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P366912	
2100703	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P367001	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P367063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P367203	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P366956	

Sample Location: Bayou Chico at at W St. Bridge

Collection Date/Time: 07/08/2019 14:30

Field ID: 33020JF1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2100701	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P366912	
2100704	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P367003	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P367288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.70		mg N/L	P366952	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P366954	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P366912

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367001

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367003

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367006

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367062

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366949

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366952

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367203

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366954

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366956

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: P367001

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367003

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367006

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367062

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366949

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366952

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: P367203

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366954

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: P366956

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100355	Ammonia-N	101	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100708	Ammonia-N	105	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100712	Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367062

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100527	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100703	Kjeldahl Nitrogen	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100708	Kjeldahl Nitrogen	98.9	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366949

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100710	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366952

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2098454	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100702	NO2NO3-N	101	99.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100708	Total-P	103	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2100598	Total-P	109	101	P/P	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P366912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100699	Turbidity	7.83	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100355	Ammonia-N	0.198	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100708	Ammonia-N	0.610	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367006

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100712	Ammonia-N	0.146	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100527	Kjeldahl Nitrogen	1.02	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100703	Kjeldahl Nitrogen	1.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100708	Kjeldahl Nitrogen	0.497	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100710	NO2NO3-N	0.769	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P366952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2098454	NO2NO3-N	0.692	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100702	NO2NO3-N	0.855	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100708	Total-P	2.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P366956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2100598	Total-P	7.77	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: A92658

Included Lab Sample IDs: 2100699, 2100700, 2100701, 2100705, 2100706, 2100707, 2100711

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92677

Included Lab Sample IDs: 2100704, 2100708, 2100709, 2100710

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92688

Included Lab Sample IDs: 2100702, 2100703, 2100704, 2100708, 2100709, 2100710, 2100712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	103	P/P	90 - 110
Ammonia-N	102	104	P/P	90 - 110
Ammonia-N	104	105	P/P	90 - 110
Ammonia-N	105	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92700

Included Lab Sample IDs: 2100702, 2100703, 2100704, 2100708, 2100709, 2100710, 2100712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	99.0	P/P	90 - 110
Total-P	98.5	99.2	P/P	90 - 110
Total-P	99.2	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92729

Included Lab Sample IDs: 2100702, 2100703, 2100712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.4	94.6	P/P	90 - 110
Kjeldahl Nitrogen	94.6	95.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92760

Included Lab Sample IDs: 2100702, 2100703, 2100712

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92827

Included Lab Sample IDs: 2100704, 2100708, 2100709, 2100710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	96.8	P/P	90 - 110
Kjeldahl Nitrogen	104	95.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92827

Included Lab Sample IDs: 2100704, 2100708, 2100709, 2100710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.8	97.6	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					7.83	
EPA 350.1 Rev. 2.0	Ammonia-N	101	101	100			0.198
	Ammonia-N	103	105	106			0.610
	Ammonia-N	105	104	104			0.146
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	105	104			1.02
	Kjeldahl Nitrogen	105	101	103			1.74
	Kjeldahl Nitrogen	98.2	98.9	98.4			0.497
EPA 353.2 Rev. 2.0	NO2NO3-N	102	103	104			0.769
	NO2NO3-N	104	103	104			0.692
	NO2NO3-N	98.5	101	99.8			0.855
EPA 365.1 Rev. 2.0	Total-P	103	103	100			2.03
	Total-P	109	109	101			7.77

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2100699, 2100700, 2100701, 2100705, 2100706, 2100707, 2100711
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2100702, 2100703, 2100704, 2100708, 2100709, 2100710, 2100712
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2100702, 2100703, 2100704, 2100708, 2100709, 2100710, 2100712
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2100702, 2100703, 2100704, 2100708, 2100709, 2100710, 2100712
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2100702, 2100703, 2100704, 2100708, 2100709, 2100710, 2100712

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	07/09/2019			07/09/2019 16:59	Samantha Davila	2100699, 2100700, 2100701, 2100705, 2100706, 2100707, 2100711
EPA 350.1 Rev. 2.0	07/09/2019			07/10/2019 14:54	Ping Hua	2100702
	07/09/2019			07/10/2019 14:56	Ping Hua	2100703
	07/09/2019			07/10/2019 15:50	Ping Hua	2100704
	07/09/2019			07/10/2019 15:51	Ping Hua	2100709
	07/09/2019			07/10/2019 15:53	Ping Hua	2100710
	07/09/2019			07/10/2019 17:06	Ping Hua	2100712
	07/09/2019			07/10/2019 17:48	Ping Hua	2100708
EPA 351.2 Rev. 2.0	07/09/2019	07/11/2019 12:15	Adrian Shelby	07/12/2019 11:39	Joseph Suarez	2100702
	07/09/2019	07/11/2019 12:15	Adrian Shelby	07/12/2019 11:47	Joseph Suarez	2100703
	07/09/2019	07/11/2019 12:15	Adrian Shelby	07/12/2019 11:51	Joseph Suarez	2100712
	07/09/2019	07/16/2019 11:30	Adrian Shelby	07/17/2019 10:07	Joseph Suarez	2100708
	07/09/2019	07/16/2019 11:30	Adrian Shelby	07/17/2019 10:15	Joseph Suarez	2100709
	07/09/2019	07/16/2019 11:30	Adrian Shelby	07/17/2019 10:17	Joseph Suarez	2100710
	07/09/2019	07/16/2019 11:30	Adrian Shelby	07/17/2019 12:38	Joseph Suarez	2100704
EPA 353.2 Rev. 2.0	07/09/2019			07/10/2019 10:54	Beverly Y. Sanders	2100704
	07/09/2019			07/10/2019 11:13	Beverly Y. Sanders	2100710
	07/09/2019			07/10/2019 11:17	Beverly Y. Sanders	2100708
	07/09/2019			07/10/2019 11:18	Beverly Y. Sanders	2100709
	07/09/2019			07/15/2019 10:36	Beverly Y. Sanders	2100702
	07/09/2019			07/15/2019 10:42	Beverly Y. Sanders	2100703
	07/09/2019			07/15/2019 10:43	Beverly Y. Sanders	2100712
EPA 365.1 Rev. 2.0	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 10:47	Lipi Saha	2100708
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 10:49	Lipi Saha	2100704
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 10:50	Lipi Saha	2100709
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 10:51	Lipi Saha	2100710
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:24	Lipi Saha	2100702
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:32	Lipi Saha	2100703
	07/09/2019	07/10/2019 13:20	Sima Feizi	07/11/2019 11:33	Lipi Saha	2100712