

Chemical Analysis Report

NW-DIST-2017-08-22-01

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-2017-07-17-24**

Customer: **NW-DIST**

Project ID: **BMAP**

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

For additional information please contact
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Certified by: Colin Wright, Program Administrator

Date Certified: 13-SEP-2017 12:53

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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: 08/21/2017 10:10

Field ID: A

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923002	EPA 180.1 Rev. 2.0	Turbidity	2.2	A	NTU	P330656	
1923007	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P330833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P330651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P330678	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P330785	

Sample Location: Bayou Chico at Mandalay Park

Collection Date/Time: 08/21/2017 10:40

Field ID: B

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923012	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P330656	
1923014	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P330833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P330651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P330678	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P330785	

Sample Location: Jones Creek at Old Corry Road

Collection Date/Time: 08/21/2017 11:10

Field ID: C

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923003	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P330656	
1923008	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P330760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P330650	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P330763	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P330706	

Sample Location: Jackson Creek at Old Corry Road

Collection Date/Time: 08/21/2017 11:45

Field ID: D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923004	EPA 180.1 Rev. 2.0	Turbidity	24		NTU	P330656	
1923009	EPA 350.1 Rev. 2.0	Ammonia-N	0.048		mg N/L	P330760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P330650	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.3		mg N/L	P330764	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P330706	

Sample Location: Jackson Creek at New Warrington Road

Collection Date/Time: 08/21/2017 12:05

Field ID: E

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923005	EPA 180.1 Rev. 2.0	Turbidity	17		NTU	P330656	
1923010	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P330760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P330650	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.1		mg N/L	P330764	
	EPA 365.1 Rev. 2.0	Total-P	0.076		mg P/L	P330706	

Sample Location: Bay Chico at Navy Blvd Bridge

Collection Date/Time: 08/21/2017 13:45

Field ID: F

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923013	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P330656	
1923015	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P330833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P330651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.43		mg N/L	P330678	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P330785	

Sample Location: Bayou Chico at W Street

Collection Date/Time: 08/21/2017 14:05

Field ID: G

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1923006	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P330656	
1923011	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P330760	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P330650	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.78		mg N/L	P330764	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P330706	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330656

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330760

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330833

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330650

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330651

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330678

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330763

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330764

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330706

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330785

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: P330760

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330833

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: P330650

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330651

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330651

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: P330678

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330763

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330764

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330706

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330785

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330760

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923008	Ammonia-N	97.4	96.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923007	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330650

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922927	Kjeldahl Nitrogen	98.0	94.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922624	Kjeldahl Nitrogen	98.8	94.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330678

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922624	NO2NO3-N	109	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923008	NO2NO3-N	108	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923031	NO2NO3-N	107	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922993	Total-P	97.6	94.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330785

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923214	Total-P	96.1	97.3	P/P	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923002	Turbidity	2.24	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923008	Ammonia-N	0.784	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923007	Ammonia-N	0.573	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922927	Kjeldahl Nitrogen	2.38	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922624	Kjeldahl Nitrogen	3.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330678

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922624	NO2NO3-N	1.39	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923008	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923031	NO2NO3-N	0.466	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922993	Total-P	2.74	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P330785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923214	Total-P	1.19	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: A78571
 Included Lab Sample IDs: 1923002, 1923003, 1923004, 1923005, 1923006, 1923012, 1923013

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

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A78575
 Included Lab Sample IDs: 1923007, 1923014, 1923015

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

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A78593
 Included Lab Sample IDs: 1923008, 1923009, 1923010, 1923011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.2	96.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A78594
 Included Lab Sample IDs: 1923008, 1923009, 1923010, 1923011

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

Reference Method: EPA 365.1 Rev. 2.0
 Run ID: A78597
 Included Lab Sample IDs: 1923009, 1923010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A78605
 Included Lab Sample IDs: 1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78605

Included Lab Sample IDs: 1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78613

Included Lab Sample IDs: 1923007, 1923014, 1923015

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78618

Included Lab Sample IDs: 1923008, 1923011

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78656

Included Lab Sample IDs: 1923007, 1923014, 1923015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	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		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					2.24	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	97.4	96.1			0.784
	Ammonia-N	101	101	101			0.573
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108	98.0	94.3			2.38
	Kjeldahl Nitrogen	102	98.8	94.0			3.33
EPA 353.2 Rev. 2.0	NO2NO3-N	108	109	108			1.39
	NO2NO3-N	108	108	108			0.0
	NO2NO3-N	108	107	108			0.466
EPA 365.1 Rev. 2.0	Total-P	99.2	97.6	94.8			2.74
	Total-P	98.9	96.1	97.3			1.19

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1923002, 1923003, 1923004, 1923005, 1923006, 1923012, 1923013

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015

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	08/22/2017			08/22/2017 17:11	Tanya Welborn	1923002, 1923003, 1923004, 1923005, 1923006, 1923012, 1923013
EPA 350.1 Rev. 2.0	08/22/2017			08/23/2017	Sofia Elnemr	1923008, 1923009, 1923010, 1923011
	08/22/2017			08/24/2017	Sofia Elnemr	1923007, 1923014, 1923015
EPA 351.2 Rev. 2.0	08/22/2017	08/23/2017	Adrian Shelby	08/24/2017	Joseph Suarez	1923007, 1923008, 1923009, 1923010, 1923011, 1923014, 1923015
EPA 353.2 Rev. 2.0	08/22/2017			08/23/2017	Beverly Y. Sanders	1923007, 1923014, 1923015
	08/22/2017			08/24/2017	Beverly Y. Sanders	1923008, 1923009, 1923010, 1923011
EPA 365.1 Rev. 2.0	08/22/2017	08/23/2017	Sima Feizi	08/24/2017	Lipi Saha	1923008, 1923009, 1923010, 1923011
	08/22/2017	08/24/2017	Sima Feizi	08/25/2017	Lipi Saha	1923007, 1923014, 1923015