

Chemical Analysis Report

NW-DIST-2016-08-30-02

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

Event Description: **WBID 1004 462A 784**

Request ID: **RQ-2016-08-29-10**

Customer: **NW-DIST**

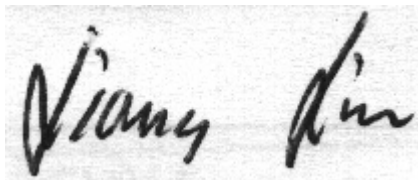
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 22-SEP-2016 15:29

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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 groups are included in this report: Metals and 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: BIG LAGOON HWY 292 ICW BRIDGE ESC CO **Collection Date/Time: 08/29/2016 11:10**

Field ID: G5NW0121

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827974	EPA 180.1 Rev. 2.0	Turbidity	1.8	A	NTU	P310589	
	SM 2320 B-97	Total Alkalinity	93		mg CaCO3/L	P310717	
	SM 2540 D-97	TSS	4	I	mg/L	P310857	
	SM 4500 F-C-97	Fluoride	0.93		mg F/L	P310720	
1827977	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P310564	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P310703	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310672	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P310730	MS
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P311054	
1827980	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310569	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BIG LAGOON STATE PARK-SEAGRASS STATION **Collection Date/Time: 08/29/2016 11:40**

Field ID: G5NW0122

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827975	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P310589	
	SM 2320 B-97	Total Alkalinity	94	A	mg CaCO3/L	P310717	
	SM 2540 D-97	TSS	5	I	mg/L	P310857	
	SM 4500 F-C-97	Fluoride	0.94		mg F/L	P310720	
1827978	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P310564	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40	I	mg N/L	P310703	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310672	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P310730	MS
	SM 5310 B-00	Organic Carbon	3.5		mg C/L	P311054	
1827981	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310569	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: PERDIDIO RIVER **Collection Date/Time: 08/29/2016 13:15**

Field ID: G5NW0070

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827962	EPA 180.1 Rev. 2.0	Turbidity	4.9		NTU	P310588	
	SM 2320 B-97	Total Alkalinity	7.5		mg CaCO3/L	P310716	
	SM 2540 D-97	TSS	6	I	mg/L	P310856	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P310719	
1827966	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P310654	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P310705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P310889	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P310971	
	SM 5310 B-00	Organic Carbon	8.1		mg C/L	P311046	
1827970	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310568	

Field ID: G5NW0070

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827990	EPA 200.7 Rev. 4.4	Iron	820		ug/L	P310841	
	EPA 200.8 Rev. 5.4	Arsenic	0.62		ug/L	P310841	
		Cadmium	0.020	U	ug/L	P310841	
		Chromium	0.40		ug/L	P310841	
		Copper	0.60	I	ug/L	P310841	
		Lead	0.31		ug/L	P310841	
		Nickel	0.63	I	ug/L	P310841	
		Silver	0.0050	U	ug/L	P310841	
		Zinc	3.7	I	ug/L	P310841	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 350.1 Rev. 2.0: The result was confirmed on 8/31/2016.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 353.2 Rev. 2.0: NO2NO3-N: The result was confirmed on 09/09/2016.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 09/16/2016.

Sample Location: PERDIDIO RIVER

Collection Date/Time: 08/29/2016 13:20

Field ID: G5NW0070DUPLICATE

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827963	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P310588	
	SM 2320 B-97	Total Alkalinity	7.3		mg CaCO3/L	P310716	
	SM 2540 D-97	TSS	5	I	mg/L	P310856	
	SM 4500 F-C-97	Fluoride	0.063	I	mg F/L	P310719	
1827967	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P310654	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P310705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P310889	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P310971	
	SM 5310 B-00	Organic Carbon	8.1		mg C/L	P311054	
1827971	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310568	
1827991	EPA 200.7 Rev. 4.4	Iron	830		ug/L	P310841	
	EPA 200.8 Rev. 5.4	Arsenic	0.58		ug/L	P310841	
		Cadmium	0.020	U	ug/L	P310841	
		Chromium	0.43		ug/L	P310841	
		Copper	0.50	U	ug/L	P310841	
		Lead	0.32		ug/L	P310841	
		Nickel	0.63	I	ug/L	P310841	
		Silver	0.0050	U	ug/L	P310841	
		Zinc	2.7	I	ug/L	P310841	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 350.1 Rev. 2.0: The result was confirmed on 8/31/2016.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 353.2 Rev. 2.0: NO2NO3-N: The result was confirmed on 09/09/2016.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 09/16/2016.

Sample Location: PERDIDIO RIVER

Collection Date/Time: 08/29/2016 13:25

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827964	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P310588	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P310716	
	SM 2540 D-97	TSS	2	U	mg/L	P310856	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P310719	
1827968	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P310564	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P310705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310831	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P310971	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P311046	
1827972	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310568	
1827992	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P310841	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P310841	
		Cadmium	0.020	U	ug/L	P310841	
		Chromium	0.050	U	ug/L	P310841	
		Copper	0.50	U	ug/L	P310841	
		Lead	0.050	U	ug/L	P310841	
		Nickel	0.25	U	ug/L	P310841	
		Silver	0.0050	U	ug/L	P310841	
		Zinc	1.0	U	ug/L	P310841	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: PERDIDIO RIVER ABOVE HURST LANDING

Collection Date/Time: 08/29/2016 13:45

Field ID: G5NW0016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827965	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P310588	
	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P310716	
	SM 2540 D-97	TSS	5	I	mg/L	P310856	
	SM 4500 F-C-97	Fluoride	0.088	I	mg F/L	P310719	
1827969	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P310564	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P310705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P310831	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P310971	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P311052	
1827973	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310568	
1827993	EPA 200.7 Rev. 4.4	Iron	690		ug/L	P310841	
	EPA 200.8 Rev. 5.4	Arsenic	0.70		ug/L	P310841	
		Cadmium	0.020	U	ug/L	P310841	
		Chromium	0.38		ug/L	P310841	
		Copper	0.52	I	ug/L	P310841	
		Lead	0.30		ug/L	P310841	
		Nickel	0.65	I	ug/L	P310841	
		Silver	0.0050	U	ug/L	P310841	

Field ID: G5NW0016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827993	EPA 200.8 Rev. 5.4	Zinc	1.9	I	ug/L	P310841	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: TEE LAKE CENTER

Collection Date/Time: 08/29/2016 14:10

Field ID: G5NW0035

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1827976	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P310589	
	SM 2320 B-97	Total Alkalinity	29		mg CaCO3/L	P310716	
	SM 2540 D-97	TSS	4	I	mg/L	P310856	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P310719	
1827979	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P310564	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P310703	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310672	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P310730	MS
	SM 5310 B-00	Organic Carbon	9.1		mg C/L	P311046	
1827982	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P310569	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P310588

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P310589

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P310841

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P310841

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L
Copper	0.50	U	ug/L
Lead	0.050	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P310841

Component	Result	Code	Units
Nickel	0.25	U	ug/L
Silver	0.0050	U	ug/L
Zinc	1.0	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310564

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310654

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310703

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310672

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310831

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310889

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310730

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310971

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310568

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310569

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: SM 2320 B-97
Batch ID: P310716

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2320 B-97
Batch ID: P310717

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 D-97
Batch ID: P310856

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P310857

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P310719

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P310720

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P311046

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P311052

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P311054

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P310841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P310841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	96.7		P	85 - 115
Cadmium	92.9		P	85 - 115
Chromium	96.1		P	85 - 115
Copper	92.9		P	85 - 115
Lead	94.8		P	85 - 115
Nickel	90.2		P	85 - 115
Silver	98.4		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310564

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310654

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310703

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: P310705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310672

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: P310831

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: P310889

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310971

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	93.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310568

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310569

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P310716

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P310717

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P310719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P310720

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P311046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P311052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	102		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P311054

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P310841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1828827	Iron	105	105	P/P	80 - 120
1829134	Iron	105		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P310841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1828827	Arsenic	97.5	98.4	P/P	80 - 120
1828827	Cadmium	96.1	96.7	P/P	80 - 120
1828827	Chromium	98.4	99.0	P/P	80 - 120
1828827	Copper	99.5	96.0	P/P	80 - 120
1828827	Lead	97.3	98.4	P/P	80 - 120
1828827	Nickel	96.4	83.7	P/P	80 - 120
1828827	Silver	100	98.6	P/P	80 - 120
1828827	Zinc	94.8	108	P/P	80 - 120
1829134	Arsenic	104		P	80 - 120
1829134	Cadmium	98.6		P	80 - 120
1829134	Chromium	100		P	80 - 120
1829134	Copper	86.1		P	80 - 120
1829134	Lead	101		P	80 - 120
1829134	Nickel	81.8		P	80 - 120
1829134	Silver	98.8		P	80 - 120
1829134	Zinc	97.0		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827966	Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827966	Ammonia-N	107	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827392	Kjeldahl Nitrogen	102	95.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826991	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310831

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827944	NO2NO3-N	99.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1828224	NO2NO3-N	95.1	94.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826894	Total-P	90.5	87.7	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310971

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827895	Total-P	97.8	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827970	O-Phosphate-P	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827939	O-Phosphate-P	99.4	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P310719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827943	Fluoride	98.5	98.5	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P310720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827975	Fluoride	97.2	98.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P311046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827894	Organic Carbon	99.9	99.9	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P311052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1828443	Organic Carbon	106		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P311054

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1827967	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P310588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827890	Turbidity	1.71	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P310589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827974	Turbidity	7.78	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P310841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1828827	Iron	0.524	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P310841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1828827	Arsenic	0.920	Spike	P	0 - 20
1828827	Cadmium	0.692	Spike	P	0 - 20
1828827	Chromium	0.600	Spike	P	0 - 20
1828827	Copper	3.56	Spike	P	0 - 20
1828827	Lead	1.10	Spike	P	0 - 20
1828827	Nickel	14.1	Spike	P	0 - 20
1828827	Silver	1.62	Spike	P	0 - 20
1828827	Zinc	12.2	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827966	Ammonia-N	0.919	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827966	Ammonia-N	1.48	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827392	Kjeldahl Nitrogen	4.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827956	Kjeldahl Nitrogen	4.20	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826991	NO2NO3-N	0.917	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310831

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827944	NO2NO3-N	0.173	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1828224	NO2NO3-N	0.512	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826894	Total-P	3.05	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827895	Total-P	0.903	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827970	O-Phosphate-P	1.19	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827939	O-Phosphate-P	1.10	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P310716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827943	Total Alkalinity	0.663	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P310717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827975	Total Alkalinity	0.532	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P310719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827943	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P310720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827975	Fluoride	0.979	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P311046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827894	Organic Carbon	0.0	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P311052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1828443	Organic Carbon	1.63	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P311054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1827967	Organic Carbon	0.245	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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A71409

Included Lab Sample IDs: 1827968, 1827969, 1827977, 1827978, 1827979

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A71410

Included Lab Sample IDs: 1827970, 1827971, 1827972, 1827973, 1827980, 1827981, 1827982

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A71417

Included Lab Sample IDs: 1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A71438

Included Lab Sample IDs: 1827966, 1827967

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A71443

Included Lab Sample IDs: 1827977, 1827978, 1827979

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

Reference Method: SM 2320 B-97

Run ID: A71460

Included Lab Sample IDs: 1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A71460

Included Lab Sample IDs: 1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A71489

Included Lab Sample IDs: 1827977, 1827978, 1827979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	97.2	P/P	90 - 110
Total-P	98.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A71490

Included Lab Sample IDs: 1827968, 1827969

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A71504

Included Lab Sample IDs: 1827966, 1827967

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A71520

Included Lab Sample IDs: 1827977, 1827978, 1827979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A71521

Included Lab Sample IDs: 1827966, 1827967, 1827968, 1827969

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A71536

Included Lab Sample IDs: 1827990, 1827991, 1827992, 1827993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.3	97.2	P/P	90 - 110
Arsenic	98.7	98.3	P/P	90 - 110
Cadmium	95.2	94.2	P/P	90 - 110
Cadmium	96.7	95.2	P/P	90 - 110
Chromium	96.2	98.0	P/P	90 - 110
Chromium	98.0	97.0	P/P	90 - 110
Silver	97.3	96.7	P/P	90 - 110
Silver	98.9	97.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A71553

Included Lab Sample IDs: 1827990, 1827991, 1827992, 1827993

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A71553

Included Lab Sample IDs: 1827990, 1827991, 1827992, 1827993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	101	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A71562

Included Lab Sample IDs: 1827990, 1827991, 1827992, 1827993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	95.8	95.5	P/P	90 - 110
Lead	96.0	95.8	P/P	90 - 110
Zinc	109	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A71574

Included Lab Sample IDs: 1827966, 1827967, 1827968, 1827969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A71583

Included Lab Sample IDs: 1827966, 1827968, 1827979

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

Reference Method: SM 5310 B-00

Run ID: A71584

Included Lab Sample IDs: 1827967, 1827969, 1827977, 1827978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	99.5	P/P	90 - 110
Organic Carbon	104	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A71600

Included Lab Sample IDs: 1827991, 1827992, 1827993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	97.5	97.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A71635

Included Lab Sample IDs: 1827992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	99.6	98.3	P/P	90 - 110
Nickel	99.9	97.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A71661
Included Lab Sample IDs: 1827990, 1827991, 1827993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	101	102	P/P	90 - 110
Nickel	99.4	104	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						1.71	
	Turbidity						7.78	
EPA 200.7 Rev. 4.4	Iron	105	105	105	105			0.524
EPA 200.8 Rev. 5.4	Arsenic	96.7	97.5	98.4	104			0.920
	Cadmium	92.9	96.1	96.7	98.6			0.692
	Chromium	96.1	98.4	99.0	100			0.600
	Copper	92.9	99.5	96.0	86.1			3.56
	Lead	94.8	97.3	98.4	101			1.10
	Nickel	90.2	96.4	83.7	81.8			14.1
	Silver	98.4	100	98.6	98.8			1.62
	Zinc	102	94.8	108	97.0			12.2
EPA 350.1 Rev. 2.0	Ammonia-N	109	103	104				0.919
	Ammonia-N	105	107	106				1.48
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	102	95.3				4.45
	Kjeldahl Nitrogen	104						4.20
EPA 353.2 Rev. 2.0	NO2NO3-N	102	106	105				0.917
	NO2NO3-N	102	99.2					0.173
	NO2NO3-N	103	95.1	94.6				0.512
EPA 365.1 Rev. 2.0	Total-P	99.8	90.5	87.7				3.05
	Total-P	93.8	97.8	98.7				0.903
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	100	101				1.19
	O-Phosphate-P	100	99.4	101				1.10
SM 2320 B-97	Total Alkalinity	103					0.663	
	Total Alkalinity	104					0.532	
SM 4500 F-C-97	Fluoride	98.7	98.5	98.5				0.0
	Fluoride	98.2	97.2	98.7				0.979
SM 5310 B-00	Organic Carbon	98.6	99.9	99.9				0.0
	Organic Carbon	102	106					1.63
	Organic Carbon	104	102	102				0.245

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1827990, 1827991, 1827992, 1827993

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1827990, 1827991, 1827992, 1827993
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1827966, 1827967, 1827968, 1827969, 1827977, 1827978, 1827979
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1827966, 1827967, 1827968, 1827969, 1827977, 1827978, 1827979
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1827966, 1827967, 1827968, 1827969, 1827977, 1827978, 1827979
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1827966, 1827967, 1827968, 1827969, 1827977, 1827978, 1827979
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1827970, 1827971, 1827972, 1827973, 1827980, 1827981, 1827982
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1827966, 1827967, 1827968, 1827969, 1827977, 1827978, 1827979

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	08/30/2016			08/30/2016 14:54	Sima Feizi	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
EPA 200.7 Rev. 4.4	08/30/2016	09/08/2016	Elliott D. Healy	09/12/2016	Joshua Ayres	1827990, 1827991, 1827992, 1827993
EPA 200.8 Rev. 5.4	08/30/2016	09/08/2016	Elliott D. Healy	09/09/2016	Charles J. Peterson	1827990, 1827991, 1827992, 1827993
	08/30/2016	09/08/2016	Elliott D. Healy	09/12/2016	Charles J. Peterson	1827990, 1827991, 1827992, 1827993
	08/30/2016	09/08/2016	Elliott D. Healy	09/13/2016	Charles J. Peterson	1827991, 1827992, 1827993
	08/30/2016	09/08/2016	Elliott D. Healy	09/14/2016	Robert K Palmer	1827992
	08/30/2016	09/08/2016	Elliott D. Healy	09/15/2016	Robert K Palmer	1827990, 1827991, 1827993
EPA 350.1 Rev. 2.0	08/30/2016			08/30/2016	Joseph Suarez	1827968, 1827969, 1827977, 1827978, 1827979
	08/30/2016			08/31/2016	Joseph Suarez	1827966, 1827967
EPA 351.2 Rev. 2.0	08/30/2016	09/07/2016	Adrian Shelby	09/08/2016	Virginia P. Brown	1827966, 1827967, 1827968, 1827969
	08/30/2016	09/07/2016	Adrian Shelby	09/09/2016	Virginia P. Brown	1827977, 1827978, 1827979
EPA 353.2 Rev. 2.0	08/30/2016			09/01/2016	Beverly Y. Sanders	1827977, 1827978, 1827979
	08/30/2016			09/08/2016	Beverly Y. Sanders	1827968, 1827969
	08/30/2016			09/09/2016	Beverly Y. Sanders	1827966, 1827967
EPA 365.1 Rev. 2.0	08/30/2016	09/07/2016	Vijayalakshmi Reddy	09/08/2016	Lipi Saha	1827977, 1827978, 1827979
	08/30/2016	09/12/2016	Vijayalakshmi Reddy	09/13/2016	Lipi Saha	1827966, 1827967, 1827968, 1827969
EPA 365.1 Rev. 2.0 dissolved	08/30/2016			08/30/2016 15:41	Julia Storbeck	1827970
	08/30/2016			08/30/2016 15:52	Julia Storbeck	1827971
	08/30/2016			08/30/2016 15:53	Julia Storbeck	1827972
	08/30/2016			08/30/2016 16:04	Julia Storbeck	1827973
	08/30/2016			08/30/2016 16:05	Julia Storbeck	1827980
	08/30/2016			08/30/2016 16:06	Julia Storbeck	1827981
	08/30/2016			08/30/2016 16:07	Julia Storbeck	1827982
SM 2320 B-97	08/30/2016			09/01/2016	Dale L. Simmons	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
SM 2540 D-97	08/30/2016			08/31/2016	Yijie Li	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
SM 4500 F-C-97	08/30/2016			09/01/2016	Dale L. Simmons	1827962, 1827963, 1827964, 1827965, 1827974, 1827975, 1827976
SM 5310 B-00	08/30/2016			09/12/2016	Sofia Elnemr	1827969
	08/30/2016			09/13/2016	Sofia Elnemr	1827966, 1827967, 1827968, 1827977, 1827978, 1827979