

Chemical Analysis Report

CEN-DIST-2019-02-22-02

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

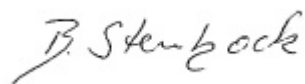
Event Description: **SJR AB LAKE POINSETT + HA + D&B**
Request ID: **RQ-2019-02-18-42**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Mike Linger

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 18-MAR-2019 14:10



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 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: RUTH LAKE @ CENTER

Collection Date/Time: 02/21/2019 11:23

Field ID: G3CE0021

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2064856	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P359366	
	EPA 300.0 Rev. 2.1	Chloride	610		mg Cl/L	P360201	
		Sulfate	230		mg SO4/L	P360206	
	SM 2120 B	Color (true)	95		PCU	P359400	
	SM 2320 B-97	Total Alkalinity	55		mg CaCO3/L	P359609	RPD
	SM 2540 C-97	TDS	1.35E+03		mg/L	P359868	
	SM 2540 D-97	TSS	8	I	mg/L	P359831	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P359611	
2064858	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P359560	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P359526	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P359732	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P359502	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P359747	
2064860	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P359398	

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: SAINT JOHNS RIVER @ 300M DS OF HATBILL PARK RAMP **Collection Date/Time: 02/21/2019 11:46**

Field ID: G3CE0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2064857	EPA 180.1 Rev. 2.0	Turbidity	6.8	A	NTU	P359367	
	EPA 300.0 Rev. 2.1	Chloride	530		mg Cl/L	P360201	
		Sulfate	200		mg SO4/L	P360206	
	SM 2120 B	Color (true)	98	A	PCU	P359400	
	SM 2320 B-97	Total Alkalinity	59		mg CaCO3/L	P359609	RPD
	SM 2540 C-97	TDS	1.39E+03		mg/L	P359868	
	SM 2540 D-97	TSS	7	I	mg/L	P359831	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P359611	
2064859	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P359687	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P359604	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P359732	
	EPA 365.1 Rev. 2.0	Total-P	0.045		mg P/L	P359502	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P359747	
2064861	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P359396	
2064877	EPA 200.7 Rev. 4.4	Barium	51.8		ug/L	P359479	
		Calcium	95.2		mg/L	P359479	
		Iron	570		ug/L	P359479	
		Magnesium	38.5		mg/L	P359479	
		Potassium	8.2		mg/L	P359479	
		Sodium	280		mg/L	P359479	
		Zinc	5.0	U	ug/L	P359479	
	EPA 200.8 Rev. 5.4	Aluminum	129		ug/L	P359479	
		Antimony	0.19	I	ug/L	P359479	
		Arsenic	0.53		ug/L	P359479	
		Boron**	97.7		ug/L	P359479	
		Cadmium	0.020	U	ug/L	P359479	
		Chromium	0.40	U	ug/L	P359479	
		Copper	0.53	I	ug/L	P359479	
		Lead	0.34	I	ug/L	P359912	
		Nickel	0.50	U	ug/L	P359479	
		Selenium	0.20	I	ug/L	P359479	
		Silver	0.017	I	ug/L	P359479	
		Thallium	0.10	U	ug/L	P359479	

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: SAINT JOHNS RIVER @ 300M DS OF HATBILL PARK RAMP **Collection Date/Time: 02/21/2019 11:49**

Field ID: G3CE0006_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2064862	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P359367	
	EPA 300.0 Rev. 2.1	Chloride	530		mg Cl/L	P360201	
		Sulfate	200		mg SO4/L	P360206	
	SM 2120 B	Color (true)	100		PCU	P359400	
	SM 2320 B-97	Total Alkalinity	59		mg CaCO3/L	P359609	RPD
	SM 2540 C-97	TDS	1.32E+03		mg/L	P359869	
	SM 2540 D-97	TSS	8	I	mg/L	P359832	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P359611	
2064863	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P359687	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P359604	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.071		mg N/L	P359732	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P359599	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P359747	
2064864	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.01	I	mg P/L	P359396	
2064878	EPA 200.7 Rev. 4.4	Barium	52.5		ug/L	P359479	
		Calcium	97.9		mg/L	P359479	
		Iron	640		ug/L	P359479	
		Magnesium	40.4		mg/L	P359479	
		Potassium	8.5		mg/L	P359479	
		Sodium	289		mg/L	P359479	
		Zinc	5.0	U	ug/L	P359479	
	EPA 200.8 Rev. 5.4	Aluminum	145		ug/L	P359479	
		Antimony	0.082	I	ug/L	P359479	
		Arsenic	0.54		ug/L	P359479	
		Boron**	102		ug/L	P359479	
		Cadmium	0.020	U	ug/L	P359479	
		Chromium	0.40	U	ug/L	P359479	
		Copper	0.57	I	ug/L	P359479	
		Lead	0.37	I	ug/L	P359912	
		Nickel	0.50	U	ug/L	P359479	
		Selenium	0.20	U	ug/L	P359479	
		Silver	0.010	U	ug/L	P359479	
		Thallium	0.10	U	ug/L	P359479	

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: FB_02212019

Collection Date/Time: 02/21/2019 12:20

Field ID: FB_02212019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2064865	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P359367	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P360201	
		Sulfate	0.20	U	mg SO4/L	P360206	
		Color (true)	2.5	U	PCU	P359400	
	SM 2120 B	Total Alkalinity	0.65	U	mg CaCO3/L	P359609	RPD
	SM 2540 C-97	TDS	15	U	mg/L	P359868	
	SM 2540 D-97	TSS	2	U	mg/L	P359831	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P359611	
2064866	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P359687	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P359604	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P359732	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P359599	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P360398	
2064867	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P359398	
2064879	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P359479	
		Calcium	0.075	U	mg/L	P359479	
		Iron	30	U	ug/L	P359479	
		Magnesium	0.040	U	mg/L	P359479	
		Potassium	0.30	U	mg/L	P359479	
		Sodium	0.50	U	mg/L	P359479	
		Zinc	5.0	U	ug/L	P359479	
		Aluminum	5.0	U	ug/L	P359479	
		Antimony	0.050	U	ug/L	P359479	
		Arsenic	0.050	U	ug/L	P359479	
		Boron**	2.0	U	ug/L	P359479	
		Cadmium	0.020	U	ug/L	P359479	
		Chromium	0.40	U	ug/L	P359479	
	EPA 200.8 Rev. 5.4	Copper	0.40	U	ug/L	P359479	
		Lead	0.20	U	ug/L	P359479	
		Nickel	0.50	U	ug/L	P359479	
		Selenium	0.20	U	ug/L	P359479	
		Silver	0.010	U	ug/L	P359479	
		Thallium	0.10	U	ug/L	P359479	

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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359366

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359367

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P359479

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359479

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359912

Component	Result	Code	Units
Lead	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360201

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360206

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359560

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359687

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359526

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359604

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359732

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359502

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359599

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359396

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359398

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

Reference Method: SM 2120 B
Batch ID: P359400

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P359609

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P359868

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P359869

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359831

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359832

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P359611

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P359747

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P360398

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: P359479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	105		P	85 - 115
Iron	104		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	101		P	85 - 115
Sodium	106		P	85 - 115
Zinc	99.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	98.5		P	85 - 115
Arsenic	101		P	85 - 115
Boron	108		P	85 - 115
Cadmium	99.6		P	85 - 115
Chromium	98.9		P	85 - 115
Copper	98.6		P	85 - 115
Lead	95.9		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	99.6		P	85 - 115
Silver	102		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359912

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	95.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360201

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360206

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.7		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359687

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: P359526

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: P359604

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359732

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359599

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359398

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

Reference Method: SM 2120 B
Batch ID: P359400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P359609

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P359611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.9		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P359747

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P360398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P359479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064381	Barium	103		P	80 - 120
2064381	Calcium	107		P	80 - 120
2064381	Iron	106		P	80 - 120
2064381	Magnesium	111		P	80 - 120
2064381	Potassium	103		P	80 - 120
2064381	Sodium	107		P	80 - 120
2064381	Zinc	102		P	80 - 120
2064852	Barium	102	99.9	P/P	80 - 120
2064852	Calcium	106		P	80 - 120
2064852	Iron	106	105	P/P	80 - 120
2064852	Magnesium	103		P	80 - 120
2064852	Potassium	103	102	P/P	80 - 120
2064852	Sodium	109	108	P/P	80 - 120
2064852	Zinc	100	98.0	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064381	Aluminum	98.9		P	80 - 120
2064381	Antimony	98.2		P	80 - 120
2064381	Arsenic	100		P	80 - 120
2064381	Boron	105		P	80 - 120
2064381	Cadmium	98.8		P	80 - 120
2064381	Chromium	99.7		P	80 - 120
2064381	Copper	98.9		P	80 - 120
2064381	Lead	95.1		P	80 - 120
2064381	Nickel	99.8		P	80 - 120
2064381	Selenium	100		P	80 - 120
2064381	Silver	103		P	80 - 120
2064381	Thallium	106		P	80 - 120
2064852	Aluminum	100	102	P/P	80 - 120
2064852	Antimony	95.1	96.7	P/P	80 - 120
2064852	Arsenic	100	101	P/P	80 - 120
2064852	Boron	105	106	P/P	80 - 120
2064852	Cadmium	99.1	102	P/P	80 - 120
2064852	Chromium	97.9	98.3	P/P	80 - 120
2064852	Copper	96.8	98.1	P/P	80 - 120
2064852	Lead	95.2	94.2	P/P	80 - 120
2064852	Nickel	96.0	97.6	P/P	80 - 120
2064852	Selenium	101	99.0	P/P	80 - 120
2064852	Silver	102	104	P/P	80 - 120
2064852	Thallium	111	110	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359912

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065812	Lead	93.7		P	80 - 120
2065815	Lead	95.4	95.4	P/P	80 - 120

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P360201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064842	Chloride	101	99.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P360206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064842	Sulfate	100	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P359560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064819	Ammonia-N	105	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P359687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065186	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P359526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064819	Kjeldahl Nitrogen	107	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P359732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064846	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P359502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064802	Total-P	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P359599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065190	Total-P	99.3	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P359396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064804	O-Phosphate-P	92.4	93.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064860	O-Phosphate-P	95.4	97.0	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P359611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064842	Fluoride	95.9	94.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P359747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2064844	Organic Carbon	97.3	96.9	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P360398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2066489	Organic Carbon	96.3	99.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064826	Turbidity	7.09	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064857	Turbidity	1.77	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P359479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064852	Barium	1.95	Spike	P	0 - 20
2064852	Calcium	1.82	Spike	P	0 - 20
2064852	Iron	0.657	Spike	P	0 - 20
2064852	Magnesium	0.675	Spike	P	0 - 20
2064852	Potassium	0.634	Spike	P	0 - 20
2064852	Sodium	0.810	Spike	P	0 - 20
2064852	Zinc	1.79	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064852	Aluminum	1.23	Spike	P	0 - 20
2064852	Antimony	1.77	Spike	P	0 - 20
2064852	Arsenic	0.407	Spike	P	0 - 20
2064852	Boron	0.455	Spike	P	0 - 20
2064852	Cadmium	2.62	Spike	P	0 - 20
2064852	Chromium	0.395	Spike	P	0 - 20
2064852	Copper	1.24	Spike	P	0 - 20
2064852	Lead	0.975	Spike	P	0 - 20
2064852	Nickel	1.59	Spike	P	0 - 20
2064852	Selenium	1.75	Spike	P	0 - 20
2064852	Silver	1.94	Spike	P	0 - 20
2064852	Thallium	1.12	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065815	Lead	0.0386	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064842	Chloride	0.729	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064842	Sulfate	1.58	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064819	Ammonia-N	3.03	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065186	Ammonia-N	0.613	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064819	Kjeldahl Nitrogen	2.02	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359604

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064859	Kjeldahl Nitrogen	0.848	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064846	NO2NO3-N	0.957	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064802	Total-P	3.02	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065190	Total-P	3.04	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064804	O-Phosphate-P	1.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064860	O-Phosphate-P	1.66	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P359400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064857	Color (true)	0.709	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P359609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064842	Total Alkalinity	1.65	Sample	F	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P359868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064794	TDS	3.19	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P359869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065263	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P359611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064842	Fluoride	0.948	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P359747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2064844	Organic Carbon	0.384	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P360398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2066489	Organic Carbon	3.02	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: A89591

Included Lab Sample IDs: 2064856, 2064857, 2064862, 2064865

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A89594

Included Lab Sample IDs: 2064860, 2064861, 2064864, 2064867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.6	P/P	90 - 110
O-Phosphate-P	99.2	98.9	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A89595

Included Lab Sample IDs: 2064856, 2064857, 2064862, 2064865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	99.9	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89659

Included Lab Sample IDs: 2064858, 2064859

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A89670

Included Lab Sample IDs: 2064858

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

Reference Method: SM 2320 B-97

Run ID: A89688

Included Lab Sample IDs: 2064856, 2064857, 2064862, 2064865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.8	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A89688

Included Lab Sample IDs: 2064856, 2064857, 2064862, 2064865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A89707

Included Lab Sample IDs: 2064877, 2064878, 2064879

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A89707

Included Lab Sample IDs: 2064877, 2064878, 2064879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	102	P/P	95 - 105
Barium	102	103	P/P	90 - 110
Calcium	105	104	P/P	95 - 105
Calcium	106	105	P/P	90 - 110
Iron	100	100	P/P	95 - 105
Iron	101	102	P/P	90 - 110
Magnesium	101	102	P/P	95 - 105
Magnesium	102	103	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Potassium	98.3	99.2	P/P	95 - 105
Sodium	102	103	P/P	95 - 105
Zinc	102	103	P/P	90 - 110
Zinc	102	102	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A89712

Included Lab Sample IDs: 2064877, 2064878, 2064879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Aluminum	102	101	P/P	90 - 110
Antimony	95.5	95.2	P/P	90 - 110
Antimony	98.0	97.1	P/P	90 - 110
Arsenic	96.8	96.3	P/P	90 - 110
Arsenic	98.4	97.0	P/P	90 - 110
Boron	103	105	P/P	90 - 110
Boron	106	106	P/P	90 - 110
Cadmium	97.4	96.1	P/P	90 - 110
Cadmium	97.8	98.4	P/P	90 - 110
Chromium	96.3	98.8	P/P	90 - 110
Chromium	96.3	96.4	P/P	90 - 110
Copper	96.9	98.8	P/P	90 - 110
Copper	97.9	97.8	P/P	90 - 110
Lead	95.9	96.7	P/P	90 - 110
Nickel	96.2	98.4	P/P	90 - 110
Nickel	96.7	96.7	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Silver	102	100	P/P	90 - 110
Thallium	92.5	92.7	P/P	90 - 110
Thallium	92.6	94.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89719

Included Lab Sample IDs: 2064858

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A89722

Included Lab Sample IDs: 2064859, 2064863, 2064866

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 353.2 Rev. 2.0

Run ID: A89725

Included Lab Sample IDs: 2064858, 2064859, 2064863, 2064866

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89727

Included Lab Sample IDs: 2064863, 2064866

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89733

Included Lab Sample IDs: 2064859, 2064863, 2064866

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	98.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A89734

Included Lab Sample IDs: 2064877, 2064878

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

Reference Method: SM 5310 B-00

Run ID: A89740

Included Lab Sample IDs: 2064858, 2064859, 2064863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.5	94.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A89757

Included Lab Sample IDs: 2064877, 2064878, 2064879

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	102	102	P/P	90 - 110
Selenium	103	99.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A89852

Included Lab Sample IDs: 2064877, 2064878

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A89852

Included Lab Sample IDs: 2064877, 2064878

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	91.8	93.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A89885

Included Lab Sample IDs: 2064856, 2064857, 2064862, 2064865

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

Reference Method: SM 5310 B-00

Run ID: A89997

Included Lab Sample IDs: 2064866

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	92.2	90.2	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						7.09	
	Turbidity						1.77	
EPA 200.7 Rev. 4.4	Barium	100	103	102	99.9			1.95
	Calcium	105	107	106				1.82
	Iron	104	106	106	105			0.657
	Magnesium	105	111	103				0.675
	Potassium	101	103	103	102			0.634
	Sodium	106	107	109	108			0.810
	Zinc	99.7	102	100	98.0			1.79
EPA 200.8 Rev. 5.4	Aluminum	102	98.9	100	102			1.23
	Antimony	98.5	98.2	95.1	96.7			1.77
	Arsenic	101	100	100	101			0.407
	Boron	108	105	105	106			0.455
	Cadmium	99.6	98.8	99.1	102			2.62
	Chromium	98.9	99.7	97.9	98.3			0.395
	Copper	98.6	98.9	96.8	98.1			1.24
	Lead	95.9	95.1	95.2	94.2			0.975
	Lead	95.0	93.7	95.4	95.4			0.0386
	Nickel	99.4	99.8	96.0	97.6			1.59
	Selenium	99.6	100	101	99.0			1.75
	Silver	102	103	102	104			1.94
	Thallium	102	106	111	110			1.12
EPA 300.0 Rev. 2.1	Chloride	101	101	99.9				0.729
	Sulfate	101	100	98.8				1.58
EPA 350.1 Rev. 2.0	Ammonia-N	97.7	105	99.6				3.03
	Ammonia-N	101	102	101				0.613
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	107	104				2.02
	Kjeldahl Nitrogen	105						0.848
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	102	101				0.957
EPA 365.1 Rev. 2.0	Total-P	98.6	101	104				3.02
	Total-P	101	99.3	103				3.04
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	92.4	93.9				1.61
	O-Phosphate-P	102	95.4	97.0				1.66
SM 2120 B	Color (true)	99.8					0.709	
SM 2320 B-97	Total Alkalinity	102					1.65	
SM 2540 C-97	TDS						3.19	
	TDS						3.31	
SM 4500 F-C-97	Fluoride	95.9	95.9	94.9				0.948
SM 5310 B-00	Organic Carbon	96.8	97.3	96.9				0.384
	Organic Carbon	93.0	96.3	99.2				3.02

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2064856, 2064857, 2064862, 2064865
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2064877, 2064878, 2064879
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2064877, 2064878, 2064879
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2064856, 2064857, 2064862, 2064865
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2064856, 2064857, 2064862, 2064865

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2064858, 2064859, 2064863, 2064866
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2064858, 2064859, 2064863, 2064866
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2064858, 2064859, 2064863, 2064866
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2064858, 2064859, 2064863, 2064866
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2064860, 2064861, 2064864, 2064867
SM 2120 B / E31780	True Color measured at 450 nm	2064856, 2064857, 2064862, 2064865
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2064856, 2064857, 2064862, 2064865
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2064856, 2064857, 2064862, 2064865
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2064856, 2064857, 2064862, 2064865
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2064856, 2064857, 2064862, 2064865
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2064858, 2064859, 2064863, 2064866

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	02/22/2019			02/22/2019 15:09	Adrian Shelby	2064856, 2064857, 2064862, 2064865
EPA 200.7 Rev. 4.4	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/27/2019 15:14	Betina Topolski	2064879
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/27/2019 18:16	Betina Topolski	2064877
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/27/2019 18:23	Betina Topolski	2064878
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/28/2019 16:54	Betina Topolski	2064877
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/28/2019 17:02	Betina Topolski	2064878
EPA 200.8 Rev. 5.4	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/27/2019 20:22	Robert K Palmer	2064879
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/28/2019 00:01	Robert K Palmer	2064877
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	02/28/2019 00:10	Robert K Palmer	2064878
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	03/01/2019 17:13	Robert K Palmer	2064879
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	03/01/2019 19:59	Robert K Palmer	2064877
	02/22/2019	02/25/2019 15:40	Elliott D. Healy	03/01/2019 20:06	Robert K Palmer	2064878
	02/22/2019	03/05/2019 16:50	Elliott D. Healy	03/06/2019 17:29	Robert K Palmer	2064877
	02/22/2019	03/05/2019 16:50	Elliott D. Healy	03/06/2019 17:35	Robert K Palmer	2064878
EPA 300.0 Rev. 2.1	02/22/2019			03/08/2019 19:50	Lipi Saha	2064856
	02/22/2019			03/08/2019 20:05	Lipi Saha	2064857
	02/22/2019			03/08/2019 20:20	Lipi Saha	2064862
	02/22/2019			03/08/2019 20:34	Lipi Saha	2064865
EPA 350.1 Rev. 2.0	02/22/2019			02/26/2019 13:02	Ping Hua	2064858
	02/22/2019			02/28/2019 10:40	Ping Hua	2064859
	02/22/2019			02/28/2019 10:42	Ping Hua	2064863
	02/22/2019			02/28/2019 10:58	Ping Hua	2064866
EPA 351.2 Rev. 2.0	02/22/2019	02/26/2019 11:30	Adrian Shelby	02/28/2019 11:37	Joseph Suarez	2064858
	02/22/2019	02/27/2019 11:45	Adrian Shelby	02/28/2019 14:04	Joseph Suarez	2064859
	02/22/2019	02/27/2019 11:45	Adrian Shelby	02/28/2019 14:09	Joseph Suarez	2064863
	02/22/2019	02/27/2019 11:45	Adrian Shelby	02/28/2019 14:10	Joseph Suarez	2064866
EPA 353.2 Rev. 2.0	02/22/2019			02/28/2019 10:37	Beverly Y. Sanders	2064858
	02/22/2019			02/28/2019 10:39	Beverly Y. Sanders	2064859
	02/22/2019			02/28/2019 10:40	Beverly Y. Sanders	2064863
	02/22/2019			02/28/2019 10:41	Beverly Y. Sanders	2064866
EPA 365.1 Rev. 2.0	02/22/2019	02/25/2019 14:05	Sima Feizi	02/26/2019 14:24	Rosalyn Ballman	2064858
	02/22/2019	02/25/2019 14:05	Sima Feizi	02/26/2019 14:25	Rosalyn Ballman	2064859
	02/22/2019	02/27/2019 12:40	Sima Feizi	02/28/2019 14:43	Rosalyn Ballman	2064863
	02/22/2019	02/27/2019 12:40	Sima Feizi	02/28/2019 14:44	Rosalyn Ballman	2064866
EPA 365.1 Rev. 2.0 dissolved	02/22/2019			02/22/2019 15:36	Jhamieka S. Greenwood	2064860
	02/22/2019			02/22/2019 15:43	Jhamieka S. Greenwood	2064867
	02/22/2019			02/22/2019 15:44	Jhamieka S. Greenwood	2064861
	02/22/2019			02/22/2019 15:45	Jhamieka S. Greenwood	2064864
SM 2120 B	02/22/2019			02/22/2019 16:03	Chelsea Hernandez	2064856
	02/22/2019			02/22/2019 16:04	Chelsea Hernandez	2064857

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B	02/22/2019			02/22/2019 16:05	Chelsea Hernandez	2064862
	02/22/2019			02/22/2019 16:06	Chelsea Hernandez	2064865
SM 2320 B-97	02/22/2019			02/27/2019 00:29	Dale L. Simmons	2064865
	02/22/2019			02/27/2019 00:50	Dale L. Simmons	2064856
	02/22/2019			02/27/2019 01:03	Dale L. Simmons	2064857
	02/22/2019			02/27/2019 01:15	Dale L. Simmons	2064862
SM 2540 C-97	02/22/2019			02/27/2019 14:29	Yijie Li	2064856, 2064857, 2064862, 2064865
SM 2540 D-97	02/22/2019			02/27/2019 14:29	Yijie Li	2064856, 2064857, 2064862, 2064865
SM 4500 F-C-97	02/22/2019			02/27/2019 00:29	Dale L. Simmons	2064865
	02/22/2019			02/27/2019 00:50	Dale L. Simmons	2064856
	02/22/2019			02/27/2019 01:03	Dale L. Simmons	2064857
	02/22/2019			02/27/2019 01:15	Dale L. Simmons	2064862
SM 5310 B-00	02/22/2019			03/01/2019 01:57	Chelsea Hernandez	2064858
	02/22/2019			03/01/2019 02:10	Chelsea Hernandez	2064859
	02/22/2019			03/01/2019 02:24	Chelsea Hernandez	2064863
	02/22/2019			03/12/2019 11:28	Chelsea Hernandez	2064866