Chemical Analysis Report

NW-DIST-2018-04-11-01

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

Event Description: **Eglin Run East**
Request ID: **RQ-2018-04-09-33**
Customer: **NW-DIST**
Project ID: **SMP**

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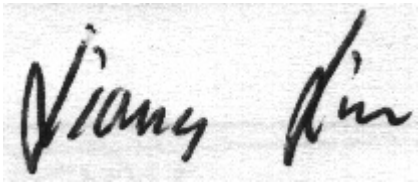
Date Certified: 02-MAY-2018 14:38



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: Little Alaqua Creek Below 282 Bridge **Collection Date/Time: 04/10/2018 10:20**

Field ID: G3NW0065 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983314	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	2.3		mg Cl/L	P343317	
		Sulfate	0.75		mg SO4/L	P343319	
	SM 2120 B	Color (true)	37	A	PCU	P343209	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	2	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983321	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P343557	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P343267	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P343478	
	SM 5310 B-00	Organic Carbon	3.0		mg C/L	P343397	
1983328	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343216	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Alaqua Creek at Park boat ramp **Collection Date/Time: 04/10/2018 10:35**

Field ID: G3NW0163 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983315	EPA 180.1 Rev. 2.0	Turbidity	3.9	A	NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	23	A	mg Cl/L	P343317	
		Sulfate	3.9	A	mg SO4/L	P343319	
	SM 2120 B	Color (true)	54		PCU	P343209	
	SM 2320 B-97	Total Alkalinity	2.1	I	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	59		mg/L	P343619	
	SM 2540 D-97	TSS	2	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983322	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P343267	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P343478	
	SM 5310 B-00	Organic Carbon	4.4		mg C/L	P343398	
1983329	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343216	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Open Branch above Eglin 374 **Collection Date/Time: 04/10/2018 11:15**

Field ID: G3NW0105 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

Field ID: G3NW0105 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983316	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	1.7		mg Cl/L	P343317	
		Sulfate	0.56		mg SO4/L	P343319	
	SM 2120 B	Color (true)	13		PCU	P343209	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	3	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983323	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P343267	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P343479	
	SM 5310 B-00	Organic Carbon	1.3		mg C/L	P343398	
1983330	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343216	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Rocky Creek @ 200,201 **Collection Date/Time: 04/10/2018 11:35**

Field ID: G3NW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983317	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	2.1		mg Cl/L	P343317	
		Sulfate	0.63		mg SO4/L	P343319	
	SM 2120 B	Color (true)	14		PCU	P343209	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	2	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983324	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.11	I	mg N/L	P343267	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.099		mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P343479	
	SM 5310 B-00	Organic Carbon	1.2		mg C/L	P343398	
1983331	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343216	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Little Rocky Creek upstream of Eglinf Rd 200 **Collection Date/Time: 04/10/2018 12:05**

Field ID: G3NW0104 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983318	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P343260	

Field ID: G3NW0104 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983318	EPA 300.0 Rev. 2.1	Chloride	2.4		mg Cl/L	P343317	
		Sulfate	0.86		mg SO4/L	P343319	
	SM 2120 B	Color (true)	25		PCU	P343209	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	3	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983325	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P343267	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P343479	
	SM 5310 B-00	Organic Carbon	2.1		mg C/L	P343398	
1983332	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343216	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Titi Creek above SR 285 **Collection Date/Time: 04/10/2018 12:40**

Field ID: G4NW0365 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983319	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	2.0		mg Cl/L	P343317	
		Sulfate	0.60		mg SO4/L	P343319	
	SM 2120 B	Color (true)	16		PCU	P343209	
	SM 2320 B-97	Total Alkalinity	0.99	I	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	2	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983326	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.087	I	mg N/L	P343267	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P343479	
	SM 5310 B-00	Organic Carbon	1.5		mg C/L	P343398	
1983333	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343216	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Titi Creek above SR 285 **Collection Date/Time: 04/10/2018 12:45**

Field ID: G4NW0365_DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983320	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	2.0		mg Cl/L	P343317	

Field ID: G4NW0365_DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983320	EPA 300.0 Rev. 2.1	Sulfate	0.59		mg SO4/L	P343319	
	SM 2120 B	Color (true)	16	A	PCU	P343210	
	SM 2320 B-97	Total Alkalinity	0.86	I	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	3	I	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983327	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P343268	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P343479	
	SM 5310 B-00	Organic Carbon	1.6		mg C/L	P343398	
1983334	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343217	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: PENSACOLA ICE ROOM **Collection Date/Time: 04/10/2018 12:50**

Field ID: BLANK_04102018 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983335	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P343260	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P343317	
		Sulfate	0.20	U	mg SO4/L	P343319	
	SM 2120 B	Color (true)	2.5	U	PCU	P343210	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P343805	
	SM 2540 C-97	TDS	15	U	mg/L	P343619	
	SM 2540 D-97	TSS	2	U	mg/L	P343871	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343808	
1983336	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343558	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P343268	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P343566	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P343479	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P343740	
1983337	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343217	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
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: P343260

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343317

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343319

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343557

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343558

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343267

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343268

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343566

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343478

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343479

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 dissolved
Batch ID: P343216

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343217

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

Reference Method: SM 2120 B
Batch ID: P343209

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P343210

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P343805

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

Reference Method: SM 2540 C-97
Batch ID: P343619

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343871

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P343808

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P343397

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: P343398

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

Reference Method: SM 5310 B-00
Batch ID: P343740

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343317

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343319

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343558

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343267

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343268

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343566

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343566

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: P343478

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343479

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343217

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

Reference Method: SM 2320 B-97
Batch ID: P343805

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

Reference Method: SM 4500 F-C-97
Batch ID: P343808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P343740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983315	Chloride	97.1		P	90 - 110
1983364	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983315	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983212	Ammonia-N	93.9	95.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983322	Ammonia-N	94.4	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983324	Kjeldahl Nitrogen	96.5	96.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983365	Kjeldahl Nitrogen	105	90.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983321	NO2NO3-N	102	103	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983296	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983365	Total-P	99.9	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983298	O-Phosphate-P	97.2	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983334	O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P343808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983292	Fluoride	94.1	95.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983001	Organic Carbon	97.6	96.3	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983322	Organic Carbon	98.2	98.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984744	Organic Carbon	103		P	85 - 115

Quality Assurance Report
Precision

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P343260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983315	Turbidity	6.37	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983315	Chloride	0.186	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983315	Sulfate	0.153	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983212	Ammonia-N	1.56	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983322	Ammonia-N	0.614	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983324	Kjeldahl Nitrogen	0.166	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983365	Kjeldahl Nitrogen	11.1	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983321	NO2NO3-N	0.475	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983296	Total-P	0.163	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983365	Total-P	0.557	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983298	O-Phosphate-P	0.336	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983334	O-Phosphate-P	0.300	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P343209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983314	Color (true)	4.64	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P343210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983320	Color (true)	2.67	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P343805

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983292	Total Alkalinity	0.184	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P343619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983338	TDS	2.38	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P343808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983292	Fluoride	0.998	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P343397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983001	Organic Carbon	1.17	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P343398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983322	Organic Carbon	0.457	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P343740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984744	Organic Carbon	0.758	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: SM 2120 B
Run ID: A83166
Included Lab Sample IDs: 1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	90 - 115
Color (true)	99.2	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A83167
Included Lab Sample IDs: 1983328, 1983329, 1983330, 1983331, 1983332, 1983333, 1983334, 1983337

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	99.5	P/P	90 - 110
O-Phosphate-P	99.5	99.6	P/P	90 - 110
O-Phosphate-P	99.6	99.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83184
Included Lab Sample IDs: 1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	98.5	P/P	95 - 105
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A83234
Included Lab Sample IDs: 1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	99.7	P/P	90 - 110
Chloride	99.7	101	P/P	90 - 110
Sulfate	100	99.6	P/P	90 - 110
Sulfate	99.6	101	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A83237
Included Lab Sample IDs: 1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	97.1	P/P	90 - 110
Organic Carbon	97.7	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A83263
Included Lab Sample IDs: 1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	104	P/P	90 - 110
Kjeldahl Nitrogen	104	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A83285
Included Lab Sample IDs: 1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A83287
Included Lab Sample IDs: 1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A83340
Included Lab Sample IDs: 1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.8	P/P	90 - 110
Total-P	98.8	99.0	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A83342
Included Lab Sample IDs: 1983336

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	99.0	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A83368
Included Lab Sample IDs: 1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A83368
Included Lab Sample IDs: 1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.6	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					6.37	
EPA 300.0 Rev. 2.1	Chloride	98.6	97.1	97.6		0.186	
	Sulfate	97.5	95.8			0.153	
EPA 350.1 Rev. 2.0	Ammonia-N	94.4	93.9	95.8			1.56
	Ammonia-N	96.4	94.4	95.0			0.614
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	96.5	96.3			0.166
	Kjeldahl Nitrogen	106	105	90.4			11.1
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	103			0.475
EPA 365.1 Rev. 2.0	Total-P	107	101	101			0.163
	Total-P	104	99.9	99.0			0.557
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5	97.2	97.6			0.336
	O-Phosphate-P	99.4	99.9	100			0.300
SM 2120 B	Color (true)					4.64	
	Color (true)					2.67	
SM 2320 B-97	Total Alkalinity	102				0.184	
SM 2540 C-97	TDS					2.38	
SM 4500 F-C-97	Fluoride	95.1	94.1	95.2			0.998
SM 5310 B-00	Organic Carbon	97.6	97.6	96.3			1.17
	Organic Carbon	98.4	98.2	98.8			0.457
	Organic Carbon	95.2	103				0.758

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1983328, 1983329, 1983330, 1983331, 1983332, 1983333, 1983334, 1983337
SM 2120 B / E31780	True Color measured at 450 nm	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1983321, 1983322, 1983323, 1983324, 1983325, 1983326, 1983327, 1983336

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	04/11/2018			04/11/2018 17:57	William L. Brown IV	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
EPA 300.0 Rev. 2.1	04/11/2018			04/12/2018 18:21	Lipi Saha	1983315
	04/11/2018			04/12/2018 19:09	Lipi Saha	1983314
	04/11/2018			04/12/2018 19:21	Lipi Saha	1983316
	04/11/2018			04/12/2018 19:32	Lipi Saha	1983317
	04/11/2018			04/12/2018 19:44	Lipi Saha	1983318
	04/11/2018			04/12/2018 20:20	Lipi Saha	1983319
	04/11/2018			04/12/2018 20:32	Lipi Saha	1983320
	04/11/2018			04/12/2018 20:44	Lipi Saha	1983335
EPA 350.1 Rev. 2.0	04/11/2018			04/16/2018 14:11	Ping Hua	1983321
	04/11/2018			04/16/2018 14:17	Ping Hua	1983322
	04/11/2018			04/16/2018 14:28	Ping Hua	1983323
	04/11/2018			04/16/2018 14:29	Ping Hua	1983324
	04/11/2018			04/16/2018 14:31	Ping Hua	1983325
	04/11/2018			04/16/2018 14:32	Ping Hua	1983326
	04/11/2018			04/16/2018 14:34	Ping Hua	1983327
	04/11/2018			04/16/2018 14:37	Ping Hua	1983336
EPA 351.2 Rev. 2.0	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:23	Joseph Suarez	1983321
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:25	Joseph Suarez	1983322
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:26	Joseph Suarez	1983323
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:31	Joseph Suarez	1983324
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:36	Joseph Suarez	1983325
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:37	Joseph Suarez	1983326
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:42	Joseph Suarez	1983327
	04/11/2018	04/12/2018 09:00	Adrian Shelby	04/13/2018 15:43	Joseph Suarez	1983336
EPA 353.2 Rev. 2.0	04/11/2018			04/17/2018 12:36	Lauren Bottorf	1983321
	04/11/2018			04/17/2018 12:42	Lauren Bottorf	1983336
	04/11/2018			04/17/2018 12:43	Lauren Bottorf	1983326
	04/11/2018			04/17/2018 12:44	Lauren Bottorf	1983327
	04/11/2018			04/17/2018 12:45	Lauren Bottorf	1983322
	04/11/2018			04/17/2018 12:47	Lauren Bottorf	1983323
	04/11/2018			04/17/2018 12:48	Lauren Bottorf	1983324
	04/11/2018			04/17/2018 12:49	Lauren Bottorf	1983325
EPA 365.1 Rev. 2.0	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:33	Beverly Y. Sanders	1983321
	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:34	Beverly Y. Sanders	1983322
	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:36	Beverly Y. Sanders	1983323
	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:37	Beverly Y. Sanders	1983324
	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:38	Beverly Y. Sanders	1983325
	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:46	Beverly Y. Sanders	1983326

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:47	Beverly Y. Sanders	1983327
	04/11/2018	04/16/2018 13:16	Sima Feizi	04/19/2018 11:48	Beverly Y. Sanders	1983336
EPA 365.1 Rev. 2.0 dissolved	04/11/2018			04/11/2018 14:54	Megan Treadwell	1983334
	04/11/2018			04/11/2018 15:07	Megan Treadwell	1983328
	04/11/2018			04/11/2018 15:08	Megan Treadwell	1983329
	04/11/2018			04/11/2018 15:13	Megan Treadwell	1983330
	04/11/2018			04/11/2018 15:14	Megan Treadwell	1983331
	04/11/2018			04/11/2018 15:15	Megan Treadwell	1983332
	04/11/2018			04/11/2018 15:16	Megan Treadwell	1983333
	04/11/2018			04/11/2018 15:17	Megan Treadwell	1983337
SM 2120 B	04/11/2018			04/11/2018 15:43	Tanya Welborn	1983314
	04/11/2018			04/11/2018 15:44	Tanya Welborn	1983315
	04/11/2018			04/11/2018 15:45	Tanya Welborn	1983316
	04/11/2018			04/11/2018 15:46	Tanya Welborn	1983317, 1983318
	04/11/2018			04/11/2018 15:47	Tanya Welborn	1983319
	04/11/2018			04/11/2018 15:51	Tanya Welborn	1983320
	04/11/2018			04/11/2018 15:52	Tanya Welborn	1983335
SM 2320 B-97	04/11/2018			04/19/2018 00:41	Dale L. Simmons	1983314
	04/11/2018			04/19/2018 00:53	Dale L. Simmons	1983315
	04/11/2018			04/19/2018 01:04	Dale L. Simmons	1983316
	04/11/2018			04/19/2018 01:14	Dale L. Simmons	1983317
	04/11/2018			04/19/2018 01:24	Dale L. Simmons	1983318
	04/11/2018			04/19/2018 01:35	Dale L. Simmons	1983319
	04/11/2018			04/19/2018 01:44	Dale L. Simmons	1983320
	04/11/2018			04/19/2018 01:54	Dale L. Simmons	1983335
SM 2540 C-97	04/11/2018			04/13/2018 15:23	Yijie Li	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 2540 D-97	04/11/2018			04/13/2018 15:23	Yijie Li	1983314, 1983315, 1983316, 1983317, 1983318, 1983319, 1983320, 1983335
SM 4500 F-C-97	04/11/2018			04/19/2018 00:41	Dale L. Simmons	1983314
	04/11/2018			04/19/2018 00:53	Dale L. Simmons	1983315
	04/11/2018			04/19/2018 01:04	Dale L. Simmons	1983316
	04/11/2018			04/19/2018 01:14	Dale L. Simmons	1983317
	04/11/2018			04/19/2018 01:24	Dale L. Simmons	1983318
	04/11/2018			04/19/2018 01:35	Dale L. Simmons	1983319
	04/11/2018			04/19/2018 01:44	Dale L. Simmons	1983320
	04/11/2018			04/19/2018 01:54	Dale L. Simmons	1983335
SM 5310 B-00	04/11/2018			04/13/2018 10:27	Julia Storbeck	1983321
	04/11/2018			04/13/2018 11:12	Julia Storbeck	1983322
	04/11/2018			04/13/2018 12:12	Julia Storbeck	1983323

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	04/11/2018			04/13/2018 12:26	Julia Storbeck	1983324
	04/11/2018			04/13/2018 12:42	Julia Storbeck	1983325
	04/11/2018			04/13/2018 13:32	Julia Storbeck	1983326
	04/11/2018			04/13/2018 13:46	Julia Storbeck	1983327
	04/11/2018			04/19/2018 10:26	Megan Treadwell	1983336