

Chemical Analysis Report

SO-DIST-2016-06-07-02

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

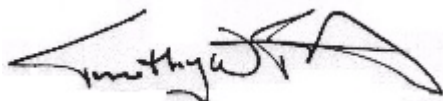
Event Description: **SMP: Highlands Canoe Lakes**
Request ID: **RQ-2016-05-30-14**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901
Attn: Ben Paswater

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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 30-JUN-2016 14:21

A handwritten signature in black ink, appearing to read "Timothy W. Fitzpatrick", with a stylized flourish at the end.

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: BUCK LAKE @ NORTH SIDE

Collection Date/Time: 06/06/2016 13:30

Field ID: G4SD0143

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806185	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P305758	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P305966	
		Sulfate	68		mg SO4/L	P305968	
	SM 2120 B	Color (true)	5.6	I	PCU	P305734	
	SM 2320 B-97	Total Alkalinity	14	A	mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	238		mg/L	P306110	
	SM 2540 D-97	TSS	2	I	mg/L	P306136	
	SM 4500 F-C-97	Fluoride	0.088	I	mg F/L	P305982	
1806196	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P306122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P306097	
	EPA 353.2 Rev. 2.0	NO2NO3-N	12		mg N/L	P305807	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P306206	
1806207	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: BUCK LAKE @ SOUTH SIDE

Collection Date/Time: 06/06/2016 13:15

Field ID: G4SD0144

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806186	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P305758	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P305966	
		Sulfate	69		mg SO4/L	P305968	
	SM 2120 B	Color (true)	6.0	I	PCU	P305734	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	251		mg/L	P306110	
	SM 2540 D-97	TSS	2	U	mg/L	P306136	
	SM 4500 F-C-97	Fluoride	0.089	I	mg F/L	P305982	
1806197	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P306122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P306097	
	EPA 353.2 Rev. 2.0	NO2NO3-N	11		mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P306206	
1806208	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: LAKE RACHARD @ CENTER

Collection Date/Time: 06/06/2016 12:30

Field ID: *26010647

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806187	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P305758	

Field ID: *26010647

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806187	EPA 300.0 Rev. 2.1	Chloride	6.6		mg Cl/L	P305966	
		Sulfate	16		mg SO4/L	P305968	
	SM 2120 B	Color (true)	8.6		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	41		mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	96		mg/L	P306110	
	SM 2540 D-97	TSS	2	U	mg/L	P306136	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P305982	
1806198	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P306122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P306287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	5.4		mg C/L	P306206	
1806209	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: BLUE LAKE @ NORTHSIDE

Collection Date/Time: 06/06/2016 11:55

Field ID: G4SD0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806188	EPA 180.1 Rev. 2.0	Turbidity	1.4	A	NTU	P305758	
	EPA 300.0 Rev. 2.1	Chloride	18	A	mg Cl/L	P305966	
		Sulfate	24	A	mg SO4/L	P305968	
	SM 2120 B	Color (true)	12		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	117		mg/L	P306110	
	SM 2540 D-97	TSS	2	U	mg/L	P306136	
1806199	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P306122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P305798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P306066	
1806210	SM 5310 B-00	Organic Carbon	8.3		mg C/L	P306206	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P305703	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: BLUE LAKE @ SW SIDE

Collection Date/Time: 06/06/2016 11:45

Field ID: G4SD0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806189	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P305966	
		Sulfate	24		mg SO4/L	P305968	
	SM 2120 B	Color (true)	12		PCU	P305735	

Field ID: G4SD0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806189	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	111		mg/L	P306110	
	SM 2540 D-97	TSS	2	I	mg/L	P306136	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
1806200	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P306122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P305798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	8.3		mg C/L	P306206	
1806211	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: BLUE LAKE @ SE SIDE

Collection Date/Time: 06/06/2016 11:35

Field ID: G4SD0124

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806190	EPA 180.1 Rev. 2.0	Turbidity	1.3	A	NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P305966	
		Sulfate	24		mg SO4/L	P305968	
	SM 2120 B	Color (true)	12		PCU	P305735	
1806201	SM 2320 B-97	Total Alkalinity	20		mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	99		mg/L	P306110	
	SM 2540 D-97	TSS	3	I	mg/L	P306136	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P306123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P305798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P305808	
1806212	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	8.4		mg C/L	P306206	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: PLATT BRANCH AT CR 731

Collection Date/Time: 06/06/2016 14:15

Field ID: G4SD060616-1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806191	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	160		mg Cl/L	P305966	
		Sulfate	70		mg SO4/L	P305968	
	SM 2120 B	Color (true)	250		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	72		mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	471	A	mg/L	P306111	
	SM 2540 D-97	TSS	18	A	mg/L	P306137	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P305982	

Field ID: G4SD060616-1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806202	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P306123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P305800	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.035		mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	29		mg C/L	P306206	
1806213	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.23		mg P/L	P305703	

Sample Location: SILVER LAKE @ NORTH

Collection Date/Time: 06/06/2016 10:28

Field ID: G4SD0125

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806192	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P305966	
		Sulfate	6.0		mg SO4/L	P305968	
		Color (true)	9.3		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	2.2	I	mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	66		mg/L	P306111	
	SM 2540 D-97	TSS	2	I	mg/L	P306137	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
1806203	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P306123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P305800	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	5.3		mg C/L	P306206	
1806214	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Sample Location: SILVER LAKE @ WEST

Collection Date/Time: 06/06/2016 10:18

Field ID: G4SD0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806193	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P305966	
		Sulfate	6.0		mg SO4/L	P305968	
		Color (true)	9.5		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	1.4	I	mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	42		mg/L	P306111	
	SM 2540 D-97	TSS	3	I	mg/L	P306137	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
1806204	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P306123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P305800	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.023		mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P306066	
	SM 5310 B-00	Organic Carbon	5.3		mg C/L	P306206	
1806215	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Sample Location: SILVER LAKE @ SOUTH

Collection Date/Time: 06/06/2016 10:10

Field ID: G4SD0127

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806194	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P305966	
		Sulfate	6.0		mg SO4/L	P305968	
	SM 2120 B	Color (true)	9.8		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	1.3	I	mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	35		mg/L	P306111	
	SM 2540 D-97	TSS	2	I	mg/L	P306137	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
1806205	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P306123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P305800	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P306228	
	SM 5310 B-00	Organic Carbon	5.3		mg C/L	P306206	
1806216	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305703	

Sample Location: SILVER LAKE @ EAST

Collection Date/Time: 06/06/2016 10:00

Field ID: G4SD0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1806195	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P305759	
	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P305966	
		Sulfate	6.0		mg SO4/L	P305968	
	SM 2120 B	Color (true)	9.7		PCU	P305735	
	SM 2320 B-97	Total Alkalinity	1.4	I	mg CaCO3/L	P305979	
	SM 2540 C-97	TDS	31		mg/L	P306111	
	SM 2540 D-97	TSS	2	I	mg/L	P306137	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P305982	
1806206	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P306123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P305800	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P305808	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P306140	
	SM 5310 B-00	Organic Carbon	5.3		mg C/L	P306206	
1806217	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305704	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P305758

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P305759

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305966

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305968

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306122

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306123

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305798

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305800

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306097

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306287

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305807

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305808

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306066

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306140

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306228

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305703

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305704

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

Reference Method: SM 2120 B
Batch ID: P305734

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P305735

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P305979

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

Reference Method: SM 2540 C-97
Batch ID: P306110

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P306111

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P306136

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P306137

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P305982

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P306206

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: P305966

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305968

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305968

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306122

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306123

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305798

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: P305800

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306097

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305807

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306066

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306140

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306228

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305703

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305704

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

Reference Method: SM 2320 B-97
Batch ID: P305979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P305982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P306206

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305966

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806188	Chloride	101		P	90 - 110
1806195	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305968

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806188	Sulfate	99.7		P	90 - 110
1806195	Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306122

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806066	Ammonia-N	97.7	99.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306123

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806201	Ammonia-N	98.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806177	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806203	Kjeldahl Nitrogen	99.9	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305807

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806066	NO2NO3-N	101	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806200	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806196	Total-P	101	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806206	Total-P	101	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806205	Total-P	99.0	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806209	O-Phosphate-P	95.3	95.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806217	O-Phosphate-P	95.9	96.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P305982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806185	Fluoride	95.9	97.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P306206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1806067	Organic Carbon	95.4	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P305758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806188	Turbidity	7.14	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P305759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806190	Turbidity	0.755	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806188	Chloride	0.0569	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806188	Sulfate	0.458	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306122

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806066	Ammonia-N	1.22	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806201	Ammonia-N	1.60	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806177	Kjeldahl Nitrogen	0.0698	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806203	Kjeldahl Nitrogen	0.937	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306097

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807069	Kjeldahl Nitrogen	5.31	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807905	Kjeldahl Nitrogen	4.86	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806066	NO2NO3-N	1.26	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P305808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806200	NO2NO3-N	0.985	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806196	Total-P	4.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806206	Total-P	0.847	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806205	Total-P	0.274	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806209	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806217	O-Phosphate-P	0.934	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P305734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806044	Color (true)	1.27	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P305735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806218	Color (true)	0.834	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P305979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806185	Total Alkalinity	0.806	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P306110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806065	TDS	6.67	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P306111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806191	TDS	6.79	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P306137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806191	TSS	4.44	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P305982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806185	Fluoride	1.48	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P306206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1806067	Organic Carbon	0.0941	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 365.1 Rev. 2.0 dissolved

Run ID: A69887

Included Lab Sample IDs: 1806207, 1806208, 1806209, 1806210, 1806211, 1806212, 1806213, 1806214, 1806215, 1806216, 1806217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	100	P/P	90 - 110
O-Phosphate-P	99.6	99.6	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A69896

Included Lab Sample IDs: 1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	101	102	P/P	90 - 115
Color (true)	103	104	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A69908

Included Lab Sample IDs: 1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	101	P/P	95 - 105
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A69924

Included Lab Sample IDs: 1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	97.8	99.6	P/P	90 - 110
Sulfate	98.7	99.9	P/P	90 - 110
Sulfate	99.9	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69925

Included Lab Sample IDs: 1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69961

Included Lab Sample IDs: 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	97.2	P/P	90 - 110
Kjeldahl Nitrogen	109	109	P/P	90 - 110
Kjeldahl Nitrogen	97.2	95.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A69968

Included Lab Sample IDs: 1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195

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

Reference Method: SM 4500 F-C-97

Run ID: A69968

Included Lab Sample IDs: 1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.5	P/P	90 - 110
Fluoride	99.0	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A70016

Included Lab Sample IDs: 1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.8	P/P	90 - 110
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	98.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A70019

Included Lab Sample IDs: 1806202

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A70039

Included Lab Sample IDs: 1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806203, 1806204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	97.2	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A70044

Included Lab Sample IDs: 1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	95.4	P/P	90 - 110
Organic Carbon	95.4	95.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A70045

Included Lab Sample IDs: 1806185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	96.7	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A70061

Included Lab Sample IDs: 1806206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A70075

Included Lab Sample IDs: 1806196, 1806197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.9	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A70093

Included Lab Sample IDs: 1806205

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A70112

Included Lab Sample IDs: 1806198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.5	99.5	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				7.14	
	Turbidity				0.755	
EPA 300.0 Rev. 2.1	Chloride	101	101	101	0.0569	
	Sulfate	99.1	99.7	97.8	0.458	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	97.7	99.4		1.22
	Ammonia-N	98.3	98.5	100		1.60
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	102	102		0.0698
	Kjeldahl Nitrogen	105	99.9	101		0.937
	Kjeldahl Nitrogen	108				5.31
	Kjeldahl Nitrogen	96.6				4.86
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	101	103		1.26
	NO2NO3-N	99.5	101	102		0.985
EPA 365.1 Rev. 2.0	Total-P	102	101	105		4.21
	Total-P	105	101	99.8		0.847
	Total-P	96.8	99.0	98.7		0.274
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	95.3	95.3		0.0
	O-Phosphate-P	102	95.9	96.8		0.934
SM 2120 B	Color (true)				1.27	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 2120 B	Color (true)				0.834	
SM 2320 B-97	Total Alkalinity	103			0.806	
SM 2540 C-97	TDS				6.67	
	TDS				6.79	
SM 2540 D-97	TSS				4.44	
SM 4500 F-C-97	Fluoride	98.9	95.9 97.7			1.48
SM 5310 B-00	Organic Carbon	96.3	95.4 95.6			0.0941

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1806207, 1806208, 1806209, 1806210, 1806211, 1806212, 1806213, 1806214, 1806215, 1806216, 1806217
SM 2120 B / E31780	True Color measured at 450 nm	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206

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	06/07/2016			06/07/2016 16:52	Rochelle Y Jackson	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
EPA 300.0 Rev. 2.1	06/07/2016			06/09/2016	Julia Storbeck	1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
EPA 350.1 Rev. 2.0	06/07/2016			06/14/2016	Elisa J Lutz	1806185
	06/07/2016			06/13/2016	Diana M. Turner	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
EPA 351.2 Rev. 2.0	06/07/2016	06/08/2016	Sofia Elnemr	06/10/2016	Christopher Armour	1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
	06/07/2016	06/14/2016	Sofia Elnemr	06/15/2016	Christopher Armour	1806196, 1806197
	06/07/2016	06/16/2016	Sofia Elnemr	06/17/2016	Christopher Armour	1806198
EPA 353.2 Rev. 2.0	06/07/2016			06/08/2016	Beverly Y. Sanders	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206
EPA 365.1 Rev. 2.0	06/07/2016	06/13/2016	Vijayalakshmi Reddy	06/14/2016	Lipi Saha	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204
	06/07/2016	06/14/2016	Vijayalakshmi Reddy	06/15/2016	Lipi Saha	1806206
	06/07/2016	06/15/2016	Vijayalakshmi Reddy	06/16/2016	Lipi Saha	1806205
EPA 365.1 Rev. 2.0 dissolved	06/07/2016			06/07/2016 13:44	Julia Storbeck	1806209
	06/07/2016			06/07/2016 13:49	Julia Storbeck	1806217
	06/07/2016			06/07/2016 14:08	Julia Storbeck	1806207
	06/07/2016			06/07/2016 14:09	Julia Storbeck	1806208
	06/07/2016			06/07/2016 14:10	Julia Storbeck	1806210
	06/07/2016			06/07/2016 14:11	Julia Storbeck	1806211
	06/07/2016			06/07/2016 14:12	Julia Storbeck	1806212, 1806213
	06/07/2016			06/07/2016 14:13	Julia Storbeck	1806214
	06/07/2016			06/07/2016 14:14	Julia Storbeck	1806215
	06/07/2016			06/07/2016 14:15	Julia Storbeck	1806216
SM 2120 B	06/07/2016			06/07/2016 16:13	Chrisoulla Rakowski	1806185, 1806186
	06/07/2016			06/07/2016 16:16	Chrisoulla Rakowski	1806187
	06/07/2016			06/07/2016 16:17	Chrisoulla Rakowski	1806188
	06/07/2016			06/07/2016 16:18	Chrisoulla Rakowski	1806189
	06/07/2016			06/07/2016 16:19	Chrisoulla Rakowski	1806190
	06/07/2016			06/07/2016 16:20	Chrisoulla Rakowski	1806192
	06/07/2016			06/07/2016 16:21	Chrisoulla Rakowski	1806193
	06/07/2016			06/07/2016 16:22	Chrisoulla Rakowski	1806194, 1806195
	06/07/2016			06/07/2016 16:46	Chrisoulla Rakowski	1806191

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	06/07/2016			06/10/2016	Dale L. Simmons	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 2540 C-97	06/07/2016			06/08/2016	Yijie Li	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 2540 D-97	06/07/2016			06/08/2016	Yijie Li	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 4500 F-C-97	06/07/2016			06/10/2016	Dale L. Simmons	1806185, 1806186, 1806187, 1806188, 1806189, 1806190, 1806191, 1806192, 1806193, 1806194, 1806195
SM 5310 B-00	06/07/2016			06/15/2016	Diana M. Turner	1806196, 1806197, 1806198, 1806199, 1806200, 1806201, 1806202, 1806203, 1806204, 1806205, 1806206