

Chemical Analysis Report

SO-DIST-2019-11-20-01

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

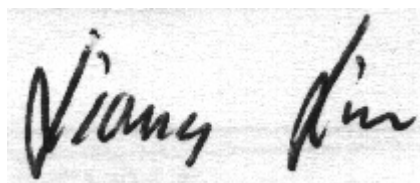
Event Description: **2019 SMP : Keys**
Request ID: **RQ-2019-11-18-64**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 09-DEC-2019 10:07

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical 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 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: 8073 @ENRG1 DredgersKey

Collection Date/Time: 11/19/2019 08:25

Field ID: G5SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137444	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P374537	
	EPA 300.0	Bromide	73		mg Br/L	P375024	
	SM 2320 B-97	Total Alkalinity	117		mg CaCO3/L	P374790	
	SM 2540 D-97	TSS	4	I	mg/L	P375110	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374793	
2137458	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	I	mg N/L	P374787	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374572	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P374916	
	SM 5310 B-00	Organic Carbon	2.2		mg C/L	P375007	
2137472	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

Ref. Method and Comment:

EPA 300.0: Bromide: 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: 8073 @ENRG1 Dredgers#2

Collection Date/Time: 11/19/2019 08:40

Field ID: G5SD0096

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137445	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P374541	
	EPA 300.0	Bromide	73		mg Br/L	P375024	
	SM 2320 B-97	Total Alkalinity	116		mg CaCO3/L	P374790	
	SM 2540 D-97	TSS	3	U	mg/L	P375110	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374793	
2137459	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	I	mg N/L	P374787	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374572	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I	mg P/L	P374916	
	SM 5310 B-00	Organic Carbon	2.2		mg C/L	P375007	
2137473	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

Ref. Method and Comment:

EPA 300.0: Bromide: 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: 8073 @ENRG2 Bayside #1

Collection Date/Time: 11/19/2019 09:10

Field ID: G5SD0065

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137446	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P374540	
	EPA 300.0	Bromide	73		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	117		mg CaCO3/L	P374790	
	SM 2540 D-97	TSS	4	I	mg/L	P375110	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374793	
2137460	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374787	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P374572	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P374916	
	SM 5310 B-00	Organic Carbon	1.7	I	mg C/L	P375007	
2137474	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

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: 8073 @ENRG2 Bayside #2

Collection Date/Time: 11/19/2019 09:25

Field ID: G5SD0082

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137447	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P374542	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	118	A	mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	U	mg/L	P375110	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137461	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P374787	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P374572	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P374916	
	SM 5310 B-00	Organic Carbon	1.7	I	mg C/L	P375007	
2137475	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

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: 8073@ENRG4 WofKeywest#1

Collection Date/Time: 11/19/2019 10:25

Field ID: G5SD0063

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137448	EPA 180.1 Rev. 2.0	Turbidity	0.30		NTU	P374542	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	U	mg/L	P375110	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137462	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374572	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.5	I	mg C/L	P375007	
2137476	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

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: 8073 @ENRG6 Out@Reef #2

Collection Date/Time: 11/19/2019 10:45

Field ID: G5SD0083

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137449	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P374537	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	I	mg/L	P375110	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137463	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P375007	
2137477	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

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: 8073 @ENRG6 Out@Reef #1

Collection Date/Time: 11/19/2019 11:05

Field ID: G5SD0064

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137450	EPA 180.1 Rev. 2.0	Turbidity	0.20		NTU	P374542	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	I	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137464	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374836	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P375007	
2137478	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374575	

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: 8079 @ENRG6 Out@Reef#1

Collection Date/Time: 11/19/2019 11:45

Field ID: G5SD0068

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137451	EPA 180.1 Rev. 2.0	Turbidity	0.30		NTU	P374537	
	EPA 300.0	Bromide	73		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	U	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137465	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P375007	
2137479	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

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: 8079 @ENRG6 Out@Reef#2

Collection Date/Time: 11/19/2019 12:05

Field ID: G5SD0085

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137452	EPA 180.1 Rev. 2.0	Turbidity	0.25		NTU	P374542	
	EPA 300.0	Bromide	75		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	I	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137466	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P375007	
2137480	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

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: 8079 @ENRG3 StockIsland

Collection Date/Time: 11/19/2019 12:25

Field ID: G5SD0067

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137453	EPA 180.1 Rev. 2.0	Turbidity	0.45		NTU	P374542	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	U	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137467	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.6	I	mg C/L	P375007	
2137481	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

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: 8079 @ENRG3 Nearshore#2

Collection Date/Time: 11/19/2019 12:45

Field ID: G5SD0084

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137454	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P374541	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	U	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137468	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.1	I	mg C/L	P374889	
2137482	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

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: 8073@ENRG4 WofKeywest#2

Collection Date/Time: 11/19/2019 10:10

Field ID: G5SD0081

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137455	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P374537	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	4	I	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137469	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.1	I	mg C/L	P374889	
2137483	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

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: 8073#2 S of FtZachENRG3

Collection Date/Time: 11/19/2019 13:25

Field ID: G5SD0095

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137456	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P374541	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	I	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137470	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.1	I	mg C/L	P374889	
2137484	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

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: 8073#1 S of Ft Zach

Collection Date/Time: 11/19/2019 13:10

Field ID: G5SD0062

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137457	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P374538	
	EPA 300.0	Bromide	74		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	3	IA	mg/L	P375111	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374794	
2137471	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374837	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P374788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P374573	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P374960	
	SM 5310 B-00	Organic Carbon	1.1	I	mg C/L	P374889	
2137485	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374576	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374537

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374538

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374540

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374541

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374542

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P374772

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0
Batch ID: P375024

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374836

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374837

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374787

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374788

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374572

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374573

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374916

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374960

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374575

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

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

Reference Method: SM 2320 B-97
Batch ID: P374790

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P374791

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

Reference Method: SM 2540 D-97
Batch ID: P375110

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P375111

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374793

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374889

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

Reference Method: SM 5310 B-00
Batch ID: P375007

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P374772

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

Reference Method: EPA 300.0
Batch ID: P375024

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374836

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374787

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374788

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374572

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374573

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374916

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374960

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374575

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

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

Reference Method: SM 2320 B-97
Batch ID: P374790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P374791

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374793

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374889

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

Reference Method: SM 5310 B-00
Batch ID: P375007

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P374772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137703	Bromide	95.9	96.0	P/P	90 - 110
2137706	Bromide	96.1		P	90 - 110

Reference Method: EPA 300.0
Batch ID: P375024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138346	Bromide	94.4	94.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137458	Ammonia-N	106	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137465	Ammonia-N	108	110	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137347	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137462	Kjeldahl Nitrogen	101	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137348	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137463	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137347	Total-P	98.7	95.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374960

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137462	Total-P	91.1	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137475	O-Phosphate-P	98.5	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137480	O-Phosphate-P	96.8	98.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P374793

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137079	Fluoride	94.1	94.9	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137447	Fluoride	94.6	94.6	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P374889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137468	Organic Carbon	102	102	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P375007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137458	Organic Carbon	103	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137604	Turbidity	5.76	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137214	Turbidity	1.60	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137524	Turbidity	0.239	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137420	Turbidity	8.50	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137688	Turbidity	3.16	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P374772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137703	Bromide	0.0514	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P375024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138346	Bromide	0.0655	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137458	Ammonia-N	1.61	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137465	Ammonia-N	1.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137347	Kjeldahl Nitrogen	0.0684	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137462	Kjeldahl Nitrogen	1.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137348	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137463	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137347	Total-P	3.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137462	Total-P	5.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137475	O-Phosphate-P	1.41	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137480	O-Phosphate-P	1.64	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P374790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137079	Total Alkalinity	0.203	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P374791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137447	Total Alkalinity	0.496	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P374793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137079	Fluoride	0.483	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137447	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137468	Organic Carbon	0.478	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P375007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137458	Organic Carbon	0.459	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95857

Included Lab Sample IDs: 2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105
Turbidity	101	101	P/P	95 - 105
Turbidity	101	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95869

Included Lab Sample IDs: 2137472, 2137473, 2137474, 2137475, 2137476, 2137477, 2137478, 2137479, 2137480, 2137481, 2137482, 2137483, 2137484, 2137485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.6	100	P/P	90 - 110
O-Phosphate-P	99.8	99.9	P/P	90 - 110
O-Phosphate-P	99.9	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95875

Included Lab Sample IDs: 2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A95940

Included Lab Sample IDs: 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	102	104	P/P	90 - 110
Bromide	106	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A95947

Included Lab Sample IDs: 2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	103	100	P/P	90 - 110
Total Alkalinity	99.0	106	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95947

Included Lab Sample IDs: 2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	105	P/P	90 - 110
Fluoride	103	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95959

Included Lab Sample IDs: 2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	100	P/P	90 - 110
Ammonia-N	100	99.7	P/P	90 - 110
Ammonia-N	99.7	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A95973

Included Lab Sample IDs: 2137468, 2137469, 2137470, 2137471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	99.8	P/P	90 - 110
Organic Carbon	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A96000

Included Lab Sample IDs: 2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	101	P/P	90 - 110
Kjeldahl Nitrogen	101	103	P/P	90 - 110
Kjeldahl Nitrogen	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96030

Included Lab Sample IDs: 2137458, 2137459, 2137460, 2137461

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

Reference Method: SM 5310 B-00

Run ID: A96031

Included Lab Sample IDs: 2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	103	P/P	90 - 110
Organic Carbon	103	102	P/P	90 - 110
Organic Carbon	105	103	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A96041

Included Lab Sample IDs: 2137444, 2137445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	98.9	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96060

Included Lab Sample IDs: 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96060

Included Lab Sample IDs: 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.5	P/P	90 - 110
Total-P	99.8	99.2	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			Precision LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						5.76	
	Turbidity						1.60	
	Turbidity						0.239	
	Turbidity						8.50	
	Turbidity						3.16	
EPA 300.0	Bromide	100	95.9	96.0	96.1			0.0514
	Bromide	98.3	94.4	94.3				0.0655
EPA 350.1 Rev. 2.0	Ammonia-N	100	106	105				1.61
	Ammonia-N	97.3	108	110				1.50
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	101	101				0.0684
	Kjeldahl Nitrogen	104	101	99.1				1.59
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	102	102				0.0
	NO ₂ NO ₃ -N	104	104	104				0.480
EPA 365.1 Rev. 2.0	Total-P	107	98.7	95.4				3.40
	Total-P	107	91.1	95.8				5.11
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	98.5	99.9				1.41
	O-Phosphate-P	98.6	96.8	98.4				1.64
SM 2320 B-97	Total Alkalinity	101					0.203	
	Total Alkalinity	102					0.496	
SM 4500 F-C-97	Fluoride	98.4	94.1	94.9				0.483
	Fluoride	99.4	94.6	94.6				0.0
SM 5310 B-00	Organic Carbon	102	102	102				0.478
	Organic Carbon	105	103	104				0.459

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
EPA 300.0 / E31780	Bromide in aqueous matrices	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2137472, 2137473, 2137474, 2137475, 2137476, 2137477, 2137478, 2137479, 2137480, 2137481, 2137482, 2137483, 2137484, 2137485

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2137458, 2137459, 2137460, 2137461, 2137462, 2137463, 2137464, 2137465, 2137466, 2137467, 2137468, 2137469, 2137470, 2137471

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	11/20/2019			11/20/2019 16:28	Samantha Davila	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
EPA 300.0	11/20/2019			11/22/2019 22:16	Lipi Saha	2137446
	11/20/2019			11/22/2019 22:33	Lipi Saha	2137447
	11/20/2019			11/22/2019 22:50	Lipi Saha	2137448
	11/20/2019			11/22/2019 23:07	Lipi Saha	2137449
	11/20/2019			11/22/2019 23:24	Lipi Saha	2137450
	11/20/2019			11/23/2019 00:16	Lipi Saha	2137451
	11/20/2019			11/23/2019 00:33	Lipi Saha	2137452
	11/20/2019			11/23/2019 00:50	Lipi Saha	2137453
	11/20/2019			11/23/2019 01:07	Lipi Saha	2137454
	11/20/2019			11/23/2019 01:24	Lipi Saha	2137455
	11/20/2019			11/23/2019 01:42	Lipi Saha	2137456
	11/20/2019			11/23/2019 01:59	Lipi Saha	2137457
	11/20/2019			11/27/2019 04:44	Julia Storbeck	2137444
	11/20/2019			11/27/2019 05:01	Julia Storbeck	2137445
EPA 350.1 Rev. 2.0	11/20/2019			11/25/2019 10:29	Ping Hua	2137458
	11/20/2019			11/25/2019 10:38	Ping Hua	2137459
	11/20/2019			11/25/2019 10:39	Ping Hua	2137460
	11/20/2019			11/25/2019 10:47	Ping Hua	2137461
	11/20/2019			11/25/2019 10:48	Ping Hua	2137462
	11/20/2019			11/25/2019 10:50	Ping Hua	2137463
	11/20/2019			11/25/2019 10:51	Ping Hua	2137464
	11/20/2019			11/25/2019 10:56	Ping Hua	2137465
	11/20/2019			11/25/2019 11:06	Ping Hua	2137466
	11/20/2019			11/25/2019 11:08	Ping Hua	2137467
	11/20/2019			11/25/2019 11:09	Ping Hua	2137468
	11/20/2019			11/25/2019 11:11	Ping Hua	2137469
	11/20/2019			11/25/2019 11:12	Ping Hua	2137470
	11/20/2019			11/25/2019 11:14	Ping Hua	2137471
EPA 351.2 Rev. 2.0	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:38	Jhamieka S. Greenwood	2137458
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:40	Jhamieka S. Greenwood	2137459
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:41	Jhamieka S. Greenwood	2137460
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:43	Jhamieka S. Greenwood	2137461
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:50	Jhamieka S. Greenwood	2137462
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:55	Jhamieka S. Greenwood	2137463
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:57	Jhamieka S. Greenwood	2137464
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 20:58	Jhamieka S. Greenwood	2137465

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 351.2 Rev. 2.0	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 21:00	Jhamieka S. Greenwood	2137466
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 21:01	Jhamieka S. Greenwood	2137467
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 21:03	Jhamieka S. Greenwood	2137468
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 21:08	Jhamieka S. Greenwood	2137469
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 21:09	Jhamieka S. Greenwood	2137470
	11/20/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 21:11	Jhamieka S. Greenwood	2137471
	11/20/2019			11/21/2019 11:29	Beverly Y. Sanders	2137458
EPA 353.2 Rev. 2.0	11/20/2019			11/21/2019 11:30	Beverly Y. Sanders	2137459
	11/20/2019			11/21/2019 11:31	Beverly Y. Sanders	2137460
	11/20/2019			11/21/2019 11:32	Beverly Y. Sanders	2137461
	11/20/2019			11/21/2019 11:34	Beverly Y. Sanders	2137462
	11/20/2019			11/21/2019 11:41	Beverly Y. Sanders	2137463
	11/20/2019			11/21/2019 11:47	Beverly Y. Sanders	2137464
	11/20/2019			11/21/2019 11:48	Beverly Y. Sanders	2137465
	11/20/2019			11/21/2019 11:49	Beverly Y. Sanders	2137466
	11/20/2019			11/21/2019 11:50	Beverly Y. Sanders	2137467
	11/20/2019			11/21/2019 11:51	Beverly Y. Sanders	2137468
	11/20/2019			11/21/2019 11:53	Beverly Y. Sanders	2137469
	11/20/2019			11/21/2019 11:54	Beverly Y. Sanders	2137470
	11/20/2019			11/21/2019 11:55	Beverly Y. Sanders	2137471
	11/20/2019					
EPA 365.1 Rev. 2.0	11/20/2019	11/26/2019 14:09	Yen Ta	11/27/2019 15:28	Benjamin T. Nordmann	2137458
	11/20/2019	11/26/2019 14:09	Yen Ta	11/27/2019 15:29	Benjamin T. Nordmann	2137459
	11/20/2019	11/26/2019 14:09	Yen Ta	11/27/2019 15:30	Benjamin T. Nordmann	2137460
	11/20/2019	11/26/2019 14:09	Yen Ta	11/27/2019 15:31	Benjamin T. Nordmann	2137461
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:27	Benjamin T. Nordmann	2137462
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:28	Benjamin T. Nordmann	2137463
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:29	Benjamin T. Nordmann	2137464
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:30	Benjamin T. Nordmann	2137465
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:31	Benjamin T. Nordmann	2137466, 2137467
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:32	Benjamin T. Nordmann	2137468
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:40	Benjamin T. Nordmann	2137469
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:41	Benjamin T. Nordmann	2137470
	11/20/2019	11/27/2019 13:48	Yen Ta	12/02/2019 16:42	Benjamin T. Nordmann	2137471
	11/20/2019			11/20/2019 14:36	Ping Hua	2137475
EPA 365.1 Rev. 2.0 dissolved	11/20/2019			11/20/2019 14:44	Ping Hua	2137480
	11/20/2019			11/20/2019 15:14	Ping Hua	2137472
	11/20/2019			11/20/2019 15:15	Ping Hua	2137473, 2137474
	11/20/2019			11/20/2019 15:21	Ping Hua	2137476, 2137477
	11/20/2019			11/20/2019 15:22	Ping Hua	2137478
	11/20/2019			11/20/2019 15:23	Ping Hua	2137479

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	11/20/2019			11/20/2019 15:24	Ping Hua	2137481
	11/20/2019			11/20/2019 15:25	Ping Hua	2137482
	11/20/2019			11/20/2019 15:26	Ping Hua	2137483
	11/20/2019			11/20/2019 15:27	Ping Hua	2137484, 2137485
SM 2320 B-97	11/20/2019			11/25/2019 06:58	Dale L. Simmons	2137444
	11/20/2019			11/25/2019 07:10	Dale L. Simmons	2137445
	11/20/2019			11/25/2019 07:22	Dale L. Simmons	2137446
	11/20/2019			11/25/2019 11:29	Dale L. Simmons	2137447
	11/20/2019			11/25/2019 11:41	Dale L. Simmons	2137448
	11/20/2019			11/25/2019 11:53	Dale L. Simmons	2137449
	11/20/2019			11/25/2019 12:05	Dale L. Simmons	2137450
	11/20/2019			11/25/2019 12:17	Dale L. Simmons	2137451
	11/20/2019			11/25/2019 12:30	Dale L. Simmons	2137452
	11/20/2019			11/25/2019 13:34	Dale L. Simmons	2137453
	11/20/2019			11/25/2019 13:45	Dale L. Simmons	2137454
	11/20/2019			11/25/2019 13:57	Dale L. Simmons	2137455
	11/20/2019			11/25/2019 14:09	Dale L. Simmons	2137456
	11/20/2019			11/25/2019 14:21	Dale L. Simmons	2137457
SM 2540 D-97	11/20/2019			11/22/2019 15:21	Yijie Li	2137444, 2137445, 2137446, 2137447, 2137448, 2137449, 2137450, 2137451, 2137452, 2137453, 2137454, 2137455, 2137456, 2137457
SM 4500 F-C-97	11/20/2019			11/25/2019 03:36	Dale L. Simmons	2137444
	11/20/2019			11/25/2019 03:40	Dale L. Simmons	2137445
	11/20/2019			11/25/2019 03:44	Dale L. Simmons	2137446
	11/20/2019			11/25/2019 09:07	Dale L. Simmons	2137447
	11/20/2019			11/25/2019 09:18	Dale L. Simmons	2137448
	11/20/2019			11/25/2019 09:22	Dale L. Simmons	2137449
	11/20/2019			11/25/2019 09:26	Dale L. Simmons	2137450
	11/20/2019			11/25/2019 09:31	Dale L. Simmons	2137451
	11/20/2019			11/25/2019 09:35	Dale L. Simmons	2137452
	11/20/2019			11/25/2019 09:39	Dale L. Simmons	2137453
	11/20/2019			11/25/2019 09:43	Dale L. Simmons	2137454
	11/20/2019			11/25/2019 09:47	Dale L. Simmons	2137455
	11/20/2019			11/25/2019 09:52	Dale L. Simmons	2137456
	11/20/2019			11/25/2019 09:56	Dale L. Simmons	2137457
SM 5310 B-00	11/20/2019			11/26/2019 09:14	Lauren Lees	2137468
	11/20/2019			11/26/2019 11:03	Lauren Lees	2137469
	11/20/2019			11/26/2019 11:47	Lauren Lees	2137470
	11/20/2019			11/26/2019 11:59	Lauren Lees	2137471

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	11/20/2019			11/27/2019 10:11	Lauren Lees	2137458
	11/20/2019			11/27/2019 12:53	Lauren Lees	2137459
	11/20/2019			11/27/2019 13:07	Lauren Lees	2137460
	11/20/2019			11/27/2019 13:32	Lauren Lees	2137461
	11/20/2019			11/27/2019 13:45	Lauren Lees	2137462
	11/20/2019			11/27/2019 13:59	Lauren Lees	2137463
	11/20/2019			11/27/2019 14:11	Lauren Lees	2137464
	11/20/2019			11/27/2019 14:24	Lauren Lees	2137465
	11/20/2019			11/27/2019 15:18	Lauren Lees	2137466
	11/20/2019			11/27/2019 15:30	Lauren Lees	2137467