

Chemical Analysis Report

TLH-ROC-2019-01-17-01

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

Event Description: **Run 12**
Request ID: **RQ-2019-01-21-15**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
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Certified by: Colin Wright, Program Administrator

Date Certified: 11-FEB-2019 11:15

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored rectangular background.

Case Narrative

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

Results for the following analytical groups are included in this report: Metals and Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: GULLY BRANCH 80M NORTH OF GULLY
 BRANCH RD**

Collection Date/Time: 01/17/2019 10:35

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055411	EPA 180.1 Rev. 2.0	Turbidity	50		NTU	P357560	
	EPA 300.0 Rev. 2.1	Chloride	6.3		mg Cl/L	P357691	
		Sulfate	0.25	I	mg SO4/L	P357692	
	SM 2120 B	Color (true)	280	A	PCU	P357585	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P357951	
	SM 2540 C-97	TDS	86		mg/L	P357679	
	SM 2540 D-97	TSS	29		mg/L	P357698	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P357954	
2055412	EPA 350.1 Rev. 2.0	Ammonia-N	0.45		mg N/L	P357878	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P357626	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P357736	
	EPA 365.1 Rev. 2.0	Total-P	0.093		mg P/L	P357708	
	SM 5310 B-00	Organic Carbon	25		mg C/L	P357654	
2055413	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P357579	
2055427	EPA 200.7 Rev. 4.4	Barium	5.4		ug/L	P357479	
		Calcium	2.00		mg/L	P357479	
		Iron	1.79E+03		ug/L	P357479	
		Magnesium	0.47		mg/L	P357479	
		Potassium	0.30	U	mg/L	P357479	
		Sodium	3.3		mg/L	P357479	
		Zinc	5.0	U	ug/L	P357479	
	EPA 200.8 Rev. 5.4	Aluminum	1.34E+03		ug/L	P357479	
		Antimony	0.050	U	ug/L	P357479	
		Arsenic	0.33		ug/L	P357479	
		Boron**	7.7	I	ug/L	P357479	
		Cadmium	0.020	U	ug/L	P357479	
		Chromium	1.2	I	ug/L	P357479	
		Copper	1.69		ug/L	P357479	
		Lead	1.22		ug/L	P357479	
		Nickel	0.66	I	ug/L	P357479	
		Selenium	0.24	I	ug/L	P357479	
		Silver	0.010	U	ug/L	P357479	
		Thallium	0.10	U	ug/L	P357479	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed on 02/01/2019.

Sample Location: CROOKED RIVER @ POST 46

Collection Date/Time: 01/17/2019 11:20

Field ID: G2TLHR0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055414	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P357559	
	EPA 300.0 Rev. 2.1	Chloride	35	A	mg Cl/L	P357691	
		Sulfate	2.6	A	mg SO4/L	P357692	
	SM 2120 B	Color (true)	310		PCU	P357582	
	SM 2320 B-97	Total Alkalinity	5.5		mg CaCO3/L	P357951	
	SM 2540 C-97	TDS	125		mg/L	P357679	
	SM 2540 D-97	TSS	4	I	mg/L	P357698	
	SM 4500 F-C-97	Fluoride	0.043	I	mg F/L	P357954	
2055415	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P358015	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P357626	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P357736	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P357708	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P357654	
2055416	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P357579	

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: ALLIGATOR HARBOR

Collection Date/Time: 01/17/2019 13:20

Field ID: G2TLHR0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055417	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P357559	
	EPA 300.0	Bromide	57		mg Br/L	P358025	
	SM 2320 B-97	Total Alkalinity	107		mg CaCO3/L	P357968	
	SM 2540 D-97	TSS	3	UA	mg/L	P357982	
	SM 4500 F-C-97	Fluoride	1.0		mg F/L	P357970	
2055418	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P357689	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30	I	mg N/L	P357625	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P357615	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P357645	
	SM 5310 B-00	Organic Carbon	3.5		mg C/L	P357594	
2055419	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P357581	

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: P357559

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P357560

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P357479

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P357479

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

Reference Method: EPA 300.0
Batch ID: P358025

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357691

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357692

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357689

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357878

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358015

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357625

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357626

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357615

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357736

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357645

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357708

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357579

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357581

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

Reference Method: SM 2120 B
Batch ID: P357582

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P357585

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P357951

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

Reference Method: SM 2320 B-97
Batch ID: P357968

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

Reference Method: SM 2540 C-97
Batch ID: P357679

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P357698

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P357982

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P357954

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P357970

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P357594

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

Reference Method: SM 5310 B-00
Batch ID: P357654

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P357479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	105		P	85 - 115
Iron	106		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	105		P	85 - 115
Sodium	105		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P357479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	98.5		P	85 - 115
Arsenic	102		P	85 - 115
Boron	106		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	98.9		P	85 - 115
Copper	99.4		P	85 - 115
Lead	98.4		P	85 - 115
Nickel	97.7		P	85 - 115
Selenium	101		P	85 - 115
Silver	103		P	85 - 115
Thallium	98.7		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P358025

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357691

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	91.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357878

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358015

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357625

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357626

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357615

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357736

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357645

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: P357708

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357579

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357581

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

Reference Method: SM 2120 B
Batch ID: P357582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.5		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P357585

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.7		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P357951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P357968

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

Reference Method: SM 4500 F-C-97
Batch ID: P357954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P357970

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

Reference Method: SM 5310 B-00
Batch ID: P357594

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P357654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P357479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054962	Barium	99.3		P	80 - 120
2054962	Calcium	97.6		P	80 - 120
2054962	Iron	103		P	80 - 120
2054962	Magnesium	104		P	80 - 120
2054962	Potassium	102		P	80 - 120
2054962	Sodium	108		P	80 - 120
2054962	Zinc	103		P	80 - 120
2055124	Barium	98.6	98.2	P/P	80 - 120
2055124	Calcium	102	103	P/P	80 - 120
2055124	Iron	103	104	P/P	80 - 120
2055124	Magnesium	106	105	P/P	80 - 120
2055124	Potassium	104	104	P/P	80 - 120
2055124	Sodium	105		P	80 - 120
2055124	Zinc	101	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P357479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054962	Aluminum	97.5		P	80 - 120
2054962	Antimony	96.5		P	80 - 120
2054962	Arsenic	101		P	80 - 120
2054962	Boron	99.8		P	80 - 120
2054962	Cadmium	98.7		P	80 - 120
2054962	Chromium	95.2		P	80 - 120
2054962	Copper	95.6		P	80 - 120
2054962	Lead	97.7		P	80 - 120
2054962	Nickel	96.5		P	80 - 120
2054962	Selenium	96.8		P	80 - 120
2054962	Silver	100		P	80 - 120
2054962	Thallium	103		P	80 - 120
2055124	Aluminum	99.1	101	P/P	80 - 120
2055124	Antimony	96.6	97.7	P/P	80 - 120
2055124	Arsenic	103	105	P/P	80 - 120
2055124	Boron	101	103	P/P	80 - 120
2055124	Cadmium	100	101	P/P	80 - 120
2055124	Chromium	98.6	99.5	P/P	80 - 120
2055124	Copper	96.4	98.4	P/P	80 - 120
2055124	Lead	97.0	98.7	P/P	80 - 120
2055124	Nickel	97.4	99.0	P/P	80 - 120
2055124	Selenium	102	103	P/P	80 - 120
2055124	Silver	103	104	P/P	80 - 120
2055124	Thallium	105	107	P/P	80 - 120

Reference Method: EPA 300.0
Batch ID: P358025

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054875	Bromide	107	92.9	P/P	90 - 110
2056871	Bromide	104	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055093	Chloride	98.2		P	90 - 110
2055414	Chloride	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055093	Sulfate	95.8		P	90 - 110
2055414	Sulfate	92.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055053	Ammonia-N	93.7	91.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055288	Ammonia-N	100	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358015

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055244	Ammonia-N	99.6	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055196	Kjeldahl Nitrogen	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055446	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055194	NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357736

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055288	NO2NO3-N	103	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357645

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055491	Total-P	94.8	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055446	Total-P	99.9	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055488	O-Phosphate-P	93.9	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055499	O-Phosphate-P	93.9	96.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P357954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055094	Fluoride	96.9	96.9	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P357970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055021	Fluoride	97.1	97.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P357594

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055022	Organic Carbon	98.7	97.0	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P357654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2055412	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P357559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055451	Turbidity	7.35	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P357560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055474	Turbidity	9.86	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P357479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055124	Barium	0.448	Spike	P	0 - 20
2055124	Calcium	0.603	Spike	P	0 - 20
2055124	Iron	0.902	Spike	P	0 - 20
2055124	Magnesium	0.116	Spike	P	0 - 20
2055124	Potassium	0.145	Spike	P	0 - 20
2055124	Sodium	0.847	Spike	P	0 - 20
2055124	Zinc	0.442	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P357479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055124	Aluminum	1.43	Spike	P	0 - 20
2055124	Antimony	1.15	Spike	P	0 - 20
2055124	Arsenic	1.88	Spike	P	0 - 20
2055124	Boron	1.96	Spike	P	0 - 20
2055124	Cadmium	0.790	Spike	P	0 - 20
2055124	Chromium	0.943	Spike	P	0 - 20
2055124	Copper	1.95	Spike	P	0 - 20
2055124	Lead	1.72	Spike	P	0 - 20
2055124	Nickel	1.57	Spike	P	0 - 20
2055124	Selenium	1.01	Spike	P	0 - 20
2055124	Silver	1.13	Spike	P	0 - 20
2055124	Thallium	1.52	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P358025

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054875	Bromide	14.1	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055414	Chloride	0.921	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055414	Sulfate	0.779	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055053	Ammonia-N	1.12	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055288	Ammonia-N	1.51	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055244	Ammonia-N	1.92	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055196	Kjeldahl Nitrogen	1.54	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055446	Kjeldahl Nitrogen	0.884	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055194	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055288	NO2NO3-N	1.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055491	Total-P	2.26	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055446	Total-P	1.48	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055488	O-Phosphate-P	2.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055499	O-Phosphate-P	1.74	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P357582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055443	Color (true)	0.396	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P357585

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055411	Color (true)	0.921	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P357951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055094	Total Alkalinity	0.187	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P357968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055021	Total Alkalinity	0.435	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P357679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055243	TDS	2.65	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P357954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055094	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P357970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055021	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P357594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055022	Organic Carbon	1.47	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P357654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055412	Organic Carbon	0.538	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
 Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A88912

Included Lab Sample IDs: 2055411, 2055414, 2055417

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A88916

Included Lab Sample IDs: 2055413, 2055416, 2055419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	98.2	P/P	90 - 110
O-Phosphate-P	98.9	98.1	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A88917

Included Lab Sample IDs: 2055411, 2055414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 115
Color (true)	101	102	P/P	90 - 115

Reference Method: SM 5310 B-00

Run ID: A88923

Included Lab Sample IDs: 2055418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	98.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A88925

Included Lab Sample IDs: 2055427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	96.9	96.0	P/P	90 - 110
Calcium	95.9	92.5	P/P	90 - 110
Iron	97.6	96.8	P/P	90 - 110
Magnesium	97.0	96.1	P/P	90 - 110
Potassium	93.7	92.2	P/P	90 - 110
Zinc	98.3	97.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A88931

Included Lab Sample IDs: 2055411, 2055414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	100	P/P	90 - 110
Chloride	100	100	P/P	90 - 110
Sulfate	97.8	98.1	P/P	90 - 110
Sulfate	98.1	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A88934

Included Lab Sample IDs: 2055427

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88937

Included Lab Sample IDs: 2055418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A88948

Included Lab Sample IDs: 2055412, 2055415

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88964

Included Lab Sample IDs: 2055418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88976

Included Lab Sample IDs: 2055412, 2055415

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A88979

Included Lab Sample IDs: 2055427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Antimony	98.9	98.2	P/P	90 - 110
Arsenic	105	105	P/P	90 - 110
Boron	105	107	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Chromium	102	102	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	105	105	P/P	90 - 110
Silver	104	104	P/P	90 - 110
Thallium	96.1	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A88990

Included Lab Sample IDs: 2055412, 2055415, 2055418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.5	99.4	P/P	90 - 110
Kjeldahl Nitrogen	98.2	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89017

Included Lab Sample IDs: 2055412

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A89029

Included Lab Sample IDs: 2055412

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89033

Included Lab Sample IDs: 2055418

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A89035

Included Lab Sample IDs: 2055415

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

Reference Method: SM 2320 B-97

Run ID: A89058

Included Lab Sample IDs: 2055411, 2055414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A89058

Included Lab Sample IDs: 2055411, 2055414

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

Reference Method: SM 2320 B-97

Run ID: A89064

Included Lab Sample IDs: 2055417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A89064

Included Lab Sample IDs: 2055417

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A89078

Included Lab Sample IDs: 2055415

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

Reference Method: EPA 300.0

Run ID: A89080

Included Lab Sample IDs: 2055417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	104	93.6	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						7.35	
	Turbidity						9.86	
EPA 200.7 Rev. 4.4	Barium	102	99.3	98.6	98.2			0.448
	Calcium	105	97.6	102	103			0.603
	Iron	106	103	103	104			0.902
	Magnesium	109	104	106	105			0.116
	Potassium	105	102	104	104			0.145
	Sodium	105	108	105				0.847
	Zinc	102	103	101	100			0.442
EPA 200.8 Rev. 5.4	Aluminum	101	97.5	99.1	101			1.43
	Antimony	98.5	96.5	96.6	97.7			1.15
	Arsenic	102	101	103	105			1.88
	Boron	106	99.8	101	103			1.96
	Cadmium	101	98.7	100	101			0.790
	Chromium	98.9	95.2	98.6	99.5			0.943
	Copper	99.4	95.6	96.4	98.4			1.95
	Lead	98.4	97.7	97.0	98.7			1.72
	Nickel	97.7	96.5	97.4	99.0			1.57
	Selenium	101	96.8	102	103			1.01
	Silver	103	100	103	104			1.13
	Thallium	98.7	103	105	107			1.52
EPA 300.0	Bromide	106	107	92.9	104			14.1
			103					
EPA 300.0 Rev. 2.1	Chloride	100	96.4	98.2			0.921	
	Sulfate	91.4	92.7	95.8			0.779	
EPA 350.1 Rev. 2.0	Ammonia-N	95.3	93.7	91.9				1.12
	Ammonia-N	102	100	102				1.51
	Ammonia-N	99.4	99.6	102				1.92
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	103	101				1.54
	Kjeldahl Nitrogen	103	105	104				0.884
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	97.5	97.5				0.0
	NO2NO3-N	101	103	101				1.52
EPA 365.1 Rev. 2.0	Total-P	102	94.8	97.0				2.26
	Total-P	98.6	99.9	98.2				1.48
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.4	93.9	95.9				2.11
	O-Phosphate-P	96.6	93.9	96.1				1.74
SM 2120 B	Color (true)	97.5					0.396	
	Color (true)	97.7					0.921	
SM 2320 B-97	Total Alkalinity	101					0.187	
	Total Alkalinity	102					0.435	
SM 2540 C-97	TDS						2.65	
SM 4500 F-C-97	Fluoride	97.9	96.9	96.9				0.0
	Fluoride	97.2	97.1	97.1				0.0
SM 5310 B-00	Organic Carbon	99.8	98.7	97.0				1.47
	Organic Carbon	96.4	103					0.538

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2055411, 2055414, 2055417
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2055427

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2055427
EPA 300.0 / E31780	Bromide in aqueous matrices	2055417
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2055411, 2055414
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2055411, 2055414
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2055412, 2055415, 2055418
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2055412, 2055415, 2055418
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2055412, 2055415, 2055418
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2055412, 2055415, 2055418
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2055413, 2055416, 2055419
SM 2120 B / E31780	True Color measured at 450 nm	2055411, 2055414
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2055411, 2055414, 2055417
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2055411, 2055414
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2055411, 2055414, 2055417
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2055411, 2055414, 2055417
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2055412, 2055415, 2055418

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	01/17/2019			01/18/2019 14:49	Megan Treadwell	2055411, 2055414, 2055417
EPA 200.7 Rev. 4.4	01/17/2019	01/17/2019 18:40	Elliott D. Healy	01/18/2019 18:04	Betina Topolski	2055427
	01/17/2019	01/17/2019 18:40	Elliott D. Healy	01/22/2019 12:46	Betina Topolski	2055427
EPA 200.8 Rev. 5.4	01/17/2019	01/17/2019 18:40	Elliott D. Healy	01/23/2019 21:40	Robert K Palmer	2055427
EPA 300.0	01/17/2019			01/29/2019 21:12	Lipi Saha	2055417
EPA 300.0 Rev. 2.1	01/17/2019			01/22/2019 17:10	Lipi Saha	2055414
	01/17/2019			01/22/2019 20:15	Lipi Saha	2055411
EPA 350.1 Rev. 2.0	01/17/2019			01/22/2019 13:12	Ping Hua	2055418
	01/17/2019			01/25/2019 14:41	Adrian Shelby	2055412
	01/17/2019			01/29/2019 13:12	Ping Hua	2055415
EPA 351.2 Rev. 2.0	01/17/2019	01/22/2019 12:00	Adrian Shelby	01/24/2019 10:19	Joseph Suarez	2055418
	01/17/2019	01/22/2019 12:00	Adrian Shelby	01/24/2019 10:36	Joseph Suarez	2055412
	01/17/2019	01/22/2019 12:00	Adrian Shelby	01/24/2019 10:37	Joseph Suarez	2055415
EPA 353.2 Rev. 2.0	01/17/2019			01/22/2019 12:02	Beverly Y. Sanders	2055418
	01/17/2019			01/23/2019 11:45	Beverly Y. Sanders	2055415
	01/17/2019			01/23/2019 12:14	Beverly Y. Sanders	2055412
EPA 365.1 Rev. 2.0	01/17/2019	01/22/2019 11:40	Sima Feizi	01/25/2019 16:15	Rosalyn Ballman	2055418
	01/17/2019	01/23/2019 11:50	Sima Feizi	01/24/2019 17:49	Rosalyn Ballman	2055412
	01/17/2019	01/23/2019 11:50	Sima Feizi	01/25/2019 17:04	Rosalyn Ballman	2055415
EPA 365.1 Rev. 2.0 dissolved	01/17/2019			01/18/2019 15:09	Jhamieka S. Greenwood	2055416
	01/17/2019			01/18/2019 15:10	Jhamieka S. Greenwood	2055413
	01/17/2019			01/18/2019 15:17	Jhamieka S. Greenwood	2055419
SM 2120 B	01/17/2019			01/18/2019 17:00	Julia Storbeck	2055414
	01/17/2019			01/18/2019 17:21	Julia Storbeck	2055411
SM 2320 B-97	01/17/2019			01/24/2019 10:33	Dale L. Simmons	2055411
	01/17/2019			01/24/2019 10:44	Dale L. Simmons	2055414
	01/17/2019			01/25/2019 06:06	Dale L. Simmons	2055417
SM 2540 C-97	01/17/2019			01/18/2019 20:10	Mariam Hanna	2055411, 2055414
SM 2540 D-97	01/17/2019			01/18/2019 20:10	Mariam Hanna	2055411, 2055414
	01/17/2019			01/23/2019 15:21	Yijie Li	2055417
SM 4500 F-C-97	01/17/2019			01/24/2019 10:33	Dale L. Simmons	2055411
	01/17/2019			01/24/2019 10:44	Dale L. Simmons	2055414
	01/17/2019			01/25/2019 03:29	Dale L. Simmons	2055417
SM 5310 B-00	01/17/2019			01/19/2019 07:26	Megan Treadwell	2055418
	01/17/2019			01/22/2019 20:21	Megan Treadwell	2055412
	01/17/2019			01/22/2019 22:13	Megan Treadwell	2055415