Chemical Analysis Report

NE-DIST-2019-02-15-01

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

Event Description: **LSJR Lake**
Request ID: **RQ-2019-02-11-18**
Customer: **NE-DIST**
Project ID: **SMP**

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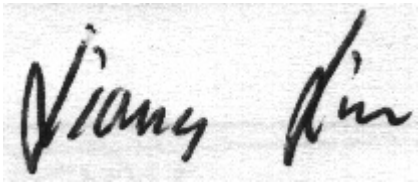
Date Certified: 05-MAR-2019 14:23



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: DUNNS CREEK 0.4 MILES UPSTREAM OF US17 **Collection Date/Time: 02/14/2019 09:50**

Field ID: FB 02132019 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2062802	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P359007	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P359572	
		Sulfate	0.20	U	mg SO4/L	P359574	
	SM 2120 B	Color (true)	2.5	U	PCU	P359013	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P359382	
	SM 2540 C-97	TDS	15	U	mg/L	P359532	
	SM 2540 D-97	TSS	2	U	mg/L	P359438	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P359389	
2062803	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P359241	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P359086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P359357	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P359077	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P359416	
2062804	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P359023	
2062812	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P359105	
		Calcium	0.075	U	mg/L	P359105	
		Iron	30	U	ug/L	P359105	
		Magnesium	0.040	U	mg/L	P359105	
		Potassium	0.30	U	mg/L	P359105	
		Sodium	0.50	U	mg/L	P359105	
		Zinc	5.0	U	ug/L	P359105	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P359105	
		Antimony	0.050	U	ug/L	P359105	
		Arsenic	0.050	U	ug/L	P359105	
		Boron**	2.0	U	ug/L	P359105	
		Cadmium	0.020	U	ug/L	P359105	
		Chromium	0.40	U	ug/L	P359105	
		Copper	0.40	U	ug/L	P359105	
		Lead	0.20	U	ug/L	P359105	
		Nickel	0.50	U	ug/L	P359105	
		Selenium	0.20	U	ug/L	P359105	
		Silver	0.010	U	ug/L	P359105	
		Thallium	0.10	U	ug/L	P359105	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: DUNNS CREEK 0.4 MILES UPSTREAM OF US17 **Collection Date/Time: 02/14/2019 10:00**

Field ID: G2NE1187 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2062793	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P359011	
	EPA 300.0 Rev. 2.1	Chloride	62		mg Cl/L	P359564	
		Sulfate	20		mg SO4/L	P359566	
	SM 2120 B	Color (true)	320		PCU	P359013	
	SM 2320 B-97	Total Alkalinity	36		mg CaCO3/L	P359382	
	SM 2540 C-97	TDS	227		mg/L	P359532	
	SM 2540 D-97	TSS	6	I	mg/L	P359438	
	SM 4500 F-C-97	Fluoride	0.077	I	mg F/L	P359389	
2062795	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P359241	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P359086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P359357	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P359091	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P359416	
2062797	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P359023	
2062810	EPA 200.7 Rev. 4.4	Barium	11.2		ug/L	P359105	
		Calcium	22.4		mg/L	P359105	
		Iron	700		ug/L	P359105	
		Magnesium	6.71		mg/L	P359105	
		Potassium	2.0		mg/L	P359105	
		Sodium	31.3		mg/L	P359105	
		Zinc	5.0	U	ug/L	P359105	
	EPA 200.8 Rev. 5.4	Aluminum	190		ug/L	P359105	
		Antimony	0.050	U	ug/L	P359105	
		Arsenic	0.79		ug/L	P359105	
		Boron**	30.7		ug/L	P359105	
		Cadmium	0.020	U	ug/L	P359105	
		Chromium	0.58	I	ug/L	P359105	
		Copper	0.59	I	ug/L	P359105	
		Lead	0.65		ug/L	P359105	
		Nickel	0.50	U	ug/L	P359105	
		Selenium	0.20	U	ug/L	P359105	
		Silver	0.010	U	ug/L	P359105	
		Thallium	0.10	U	ug/L	P359105	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: DUNNS CREEK 0.4 MILES UPSTREAM OF US17 **Collection Date/Time: 02/14/2019 10:05**

Field ID: G2NE1187DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2062794	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P359011	
	EPA 300.0 Rev. 2.1	Chloride	61		mg Cl/L	P359564	
		Sulfate	20		mg SO4/L	P359566	
	SM 2120 B	Color (true)	320		PCU	P359013	
	SM 2320 B-97	Total Alkalinity	34		mg CaCO3/L	P359382	
	SM 2540 C-97	TDS	221		mg/L	P359532	
	SM 2540 D-97	TSS	6	I	mg/L	P359438	
	SM 4500 F-C-97	Fluoride	0.077	I	mg F/L	P359389	
2062796	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P359241	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P359086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P359357	
	EPA 365.1 Rev. 2.0	Total-P	0.076		mg P/L	P359091	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P359416	
2062798	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P359023	
2062811	EPA 200.7 Rev. 4.4	Barium	11.3		ug/L	P359105	
		Calcium	22.9		mg/L	P359105	
		Iron	670		ug/L	P359105	
		Magnesium	6.76		mg/L	P359105	
		Potassium	2.0		mg/L	P359105	
		Sodium	31.9		mg/L	P359105	
		Zinc	5.0	U	ug/L	P359105	
	EPA 200.8 Rev. 5.4	Aluminum	184		ug/L	P359105	
		Antimony	0.050	U	ug/L	P359105	
		Arsenic	0.81		ug/L	P359105	
		Boron**	31.0		ug/L	P359105	
		Cadmium	0.020	U	ug/L	P359105	
		Chromium	0.58	I	ug/L	P359105	
		Copper	0.58	I	ug/L	P359105	
		Lead	0.63		ug/L	P359105	
		Nickel	0.50	U	ug/L	P359105	
		Selenium	0.20	U	ug/L	P359105	
		Silver	0.010	U	ug/L	P359105	
		Thallium	0.10	U	ug/L	P359105	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE LILLIE CENTER **Collection Date/Time: 02/14/2019 11:05**

Field ID: G2NE1133 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2062799	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P359011	
	EPA 300.0 Rev. 2.1	Chloride	15	A	mg Cl/L	P359572	
		Sulfate	19	A	mg SO4/L	P359574	
	SM 2120 B	Color (true)	34	A	PCU	P359013	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P359382	
	SM 2540 C-97	TDS	87	A	mg/L	P359532	
	SM 2540 D-97	TSS	2	UA	mg/L	P359438	
	SM 4500 F-C-97	Fluoride	0.077	I	mg F/L	P359389	
2062800	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P359241	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P359086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P359357	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P359077	
	SM 5310 B-00	Organic Carbon	8.8		mg C/L	P359416	
2062801	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P359023	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359007

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359011

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P359105

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: P359105

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 Rev. 2.1
Batch ID: P359564

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359566

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359572

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359574

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359241

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359086

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359357

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359077

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359091

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359023

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

Reference Method: SM 2120 B
Batch ID: P359013

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P359382

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

Reference Method: SM 2540 C-97
Batch ID: P359532

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359438

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P359389

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P359416

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: P359105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	98.4		P	85 - 115
Iron	105		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	99.8		P	85 - 115
Sodium	97.6		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	107		P	85 - 115
Boron	109		P	85 - 115
Cadmium	107		P	85 - 115
Chromium	105		P	85 - 115
Copper	108		P	85 - 115
Lead	107		P	85 - 115
Nickel	105		P	85 - 115
Selenium	102		P	85 - 115
Silver	103		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359564

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359566

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359572

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359574

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359086

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359357

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359077

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: P359091

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359023

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.9		P	90 - 110

Reference Method: SM 2120 B
Batch ID: P359013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.5		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P359382

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

Reference Method: SM 4500 F-C-97
Batch ID: P359389

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P359416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P359105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2063032	Barium	99.8		P	80 - 120
2063032	Calcium	98.6		P	80 - 120
2063032	Iron	104		P	80 - 120
2063032	Magnesium	102		P	80 - 120
2063032	Potassium	94.6		P	80 - 120
2063032	Sodium	100		P	80 - 120
2063032	Zinc	101		P	80 - 120
2063047	Barium	104	105	P/P	80 - 120
2063047	Calcium	98.3		P	80 - 120
2063047	Iron	104	109	P/P	80 - 120
2063047	Magnesium	104	110	P/P	80 - 120
2063047	Potassium	97.8	103	P/P	80 - 120
2063047	Sodium	98.6		P	80 - 120
2063047	Zinc	107	107	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2063032	Aluminum	100		P	80 - 120
2063032	Antimony	105		P	80 - 120
2063032	Arsenic	110		P	80 - 120
2063032	Boron	106		P	80 - 120
2063032	Cadmium	108		P	80 - 120
2063032	Chromium	105		P	80 - 120
2063032	Copper	108		P	80 - 120
2063032	Lead	108		P	80 - 120
2063032	Nickel	104		P	80 - 120
2063032	Selenium	102		P	80 - 120
2063032	Silver	103		P	80 - 120
2063032	Thallium	112		P	80 - 120
2063047	Aluminum	99.8	99.3	P/P	80 - 120
2063047	Antimony	103	103	P/P	80 - 120
2063047	Arsenic	107	107	P/P	80 - 120
2063047	Boron	106	104	P/P	80 - 120
2063047	Cadmium	106	107	P/P	80 - 120
2063047	Chromium	108	107	P/P	80 - 120
2063047	Copper	108	107	P/P	80 - 120
2063047	Lead	107	107	P/P	80 - 120
2063047	Nickel	104	105	P/P	80 - 120
2063047	Selenium	101	101	P/P	80 - 120
2063047	Silver	101	102	P/P	80 - 120
2063047	Thallium	111	110	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062599	Chloride	99.0		P	90 - 110
2062701	Chloride	99.7		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062599	Sulfate	98.6		P	90 - 110
2062701	Sulfate	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062799	Chloride	97.8		P	90 - 110
2062967	Chloride	93.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062799	Sulfate	96.3		P	90 - 110
2062967	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062748	Ammonia-N	105	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062800	Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062795	NO2NO3-N	97.5	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062800	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062944	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062801	O-Phosphate-P	93.9	94.8	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P359416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062702	Organic Carbon	96.6	96.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062940	Turbidity	1.75	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P359011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062778	Turbidity	2.33	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P359105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2063047	Barium	0.382	Spike	P	0 - 20
2063047	Calcium	3.81	Spike	P	0 - 20
2063047	Iron	4.67	Spike	P	0 - 20
2063047	Magnesium	4.09	Spike	P	0 - 20
2063047	Potassium	4.08	Spike	P	0 - 20
2063047	Sodium	4.65	Spike	P	0 - 20
2063047	Zinc	0.155	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P359105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2063047	Aluminum	0.462	Spike	P	0 - 20
2063047	Antimony	0.683	Spike	P	0 - 20
2063047	Arsenic	0.489	Spike	P	0 - 20
2063047	Boron	1.24	Spike	P	0 - 20
2063047	Cadmium	0.609	Spike	P	0 - 20
2063047	Chromium	0.737	Spike	P	0 - 20
2063047	Copper	0.159	Spike	P	0 - 20
2063047	Lead	0.746	Spike	P	0 - 20
2063047	Nickel	0.418	Spike	P	0 - 20
2063047	Selenium	0.0360	Spike	P	0 - 20
2063047	Silver	0.379	Spike	P	0 - 20
2063047	Thallium	0.392	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062599	Chloride	0.402	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062599	Sulfate	0.514	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062799	Chloride	0.0328	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062799	Sulfate	0.283	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P359241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062748	Ammonia-N	1.53	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P359086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062800	Kjeldahl Nitrogen	2.68	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062795	NO2NO3-N	0.263	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062800	Total-P	0.896	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P359091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062944	Total-P	1.82	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P359023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062801	O-Phosphate-P	0.954	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P359013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062799	Color (true)	0.414	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P359382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062955	Total Alkalinity	0.238	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P359532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062799	TDS	6.90	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P359389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062955	Fluoride	0.470	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P359416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062702	Organic Carbon	0.221	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: A89446
Included Lab Sample IDs: 2062793, 2062794, 2062799, 2062802

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

Reference Method: SM 2120 B
Run ID: A89448
Included Lab Sample IDs: 2062793, 2062794, 2062799, 2062802

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 115
Color (true)	102	100	P/P	90 - 115
Color (true)	99.8	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A89450
Included Lab Sample IDs: 2062797, 2062798, 2062801, 2062804

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.4	P/P	90 - 110
O-Phosphate-P	99.2	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A89505
Included Lab Sample IDs: 2062795, 2062796, 2062800, 2062803

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A89512
Included Lab Sample IDs: 2062810, 2062811, 2062812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.2	103	P/P	95 - 105
Calcium	97.6	96.9	P/P	95 - 105
Iron	101	99.8	P/P	95 - 105
Magnesium	100	99.8	P/P	95 - 105
Potassium	96.7	96.7	P/P	95 - 105
Sodium	95.5	96.6	P/P	95 - 105
Zinc	99.4	104	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A89528
Included Lab Sample IDs: 2062795, 2062796

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A89532
Included Lab Sample IDs: 2062800, 2062803

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A89532
Included Lab Sample IDs: 2062800, 2062803

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A89534
Included Lab Sample IDs: 2062795, 2062796, 2062800, 2062803

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	106	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A89586
Included Lab Sample IDs: 2062795, 2062796, 2062800, 2062803

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

Reference Method: SM 2320 B-97
Run ID: A89593
Included Lab Sample IDs: 2062793, 2062794, 2062799, 2062802

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A89593
Included Lab Sample IDs: 2062793, 2062794, 2062799, 2062802

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

Reference Method: SM 5310 B-00
Run ID: A89603
Included Lab Sample IDs: 2062795, 2062796, 2062800, 2062803

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.5	93.4	P/P	90 - 110
Organic Carbon	93.5	93.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A89648
Included Lab Sample IDs: 2062810, 2062811, 2062812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	99.6	P/P	90 - 110
Aluminum	99.6	99.6	P/P	90 - 110
Antimony	98.3	98.9	P/P	90 - 110
Antimony	98.9	98.6	P/P	90 - 110
Arsenic	100	102	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Boron	104	106	P/P	90 - 110
Boron	106	105	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A89648
Included Lab Sample IDs: 2062810, 2062811, 2062812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	101	101	P/P	90 - 110
Cadmium	99.8	101	P/P	90 - 110
Chromium	101	103	P/P	90 - 110
Chromium	99.5	101	P/P	90 - 110
Copper	104	107	P/P	90 - 110
Copper	104	104	P/P	90 - 110
Lead	102	103	P/P	90 - 110
Lead	103	104	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Nickel	101	103	P/P	90 - 110
Selenium	98.4	99.5	P/P	90 - 110
Selenium	98.6	98.4	P/P	90 - 110
Silver	97.4	98.0	P/P	90 - 110
Silver	98.0	97.9	P/P	90 - 110
Thallium	102	102	P/P	90 - 110
Thallium	99.4	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A89674
Included Lab Sample IDs: 2062793, 2062794, 2062799, 2062802

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	104	104	P/P	90 - 110
Chloride	100	100	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	104	104	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						1.75	
	Turbidity						2.33	
EPA 200.7 Rev. 4.4	Barium	102	99.8	104	105			0.382
	Calcium	98.4	98.6	98.3				3.81
	Iron	105	104	104	109			4.67
	Magnesium	108	102	104	110			4.09
	Potassium	99.8	94.6	97.8	103			4.08
	Sodium	97.6	100	98.6				4.65
	Zinc	101	101	107	107			0.155
EPA 200.8 Rev. 5.4	Aluminum	103	100	99.8	99.3			0.462
	Antimony	102	105	103	103			0.683
	Arsenic	107	110	107	107			0.489
	Boron	109	106	106	104			1.24
	Cadmium	107	108	106	107			0.609
	Chromium	105	105	108	107			0.737
	Copper	108	108	108	107			0.159
	Lead	107	108	107	107			0.746
	Nickel	105	104	104	105			0.418
	Selenium	102	102	101	101			0.0360
	Silver	103	103	101	102			0.379
	Thallium	107	112	111	110			0.392
EPA 300.0 Rev. 2.1	Chloride	102	99.0	99.7			0.402	
	Chloride	99.5	97.8	93.9			0.0328	
	Sulfate	101	98.6	98.4			0.514	
	Sulfate	98.3	96.3	95.7			0.283	
EPA 350.1 Rev. 2.0	Ammonia-N	99.9	105	107				1.53
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	101	105				2.68
EPA 353.2 Rev. 2.0	NO2NO3-N	100	97.5	97.0				0.263
EPA 365.1 Rev. 2.0	Total-P	105	102	102				0.896
	Total-P	103	102	104				1.82
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.9	93.9	94.8				0.954
SM 2120 B	Color (true)	98.5					0.414	
SM 2320 B-97	Total Alkalinity	102					0.238	
SM 2540 C-97	TDS						6.90	
SM 4500 F-C-97	Fluoride	96.9						0.470
SM 5310 B-00	Organic Carbon	96.2	96.6	96.4				0.221

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2062793, 2062794, 2062799, 2062802
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2062810, 2062811, 2062812
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2062810, 2062811, 2062812
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2062793, 2062794, 2062799, 2062802
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2062793, 2062794, 2062799, 2062802
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2062795, 2062796, 2062800, 2062803
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2062795, 2062796, 2062800, 2062803

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2062795, 2062796, 2062800, 2062803
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2062795, 2062796, 2062800, 2062803
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2062797, 2062798, 2062801, 2062804
SM 2120 B / E31780	True Color measured at 450 nm	2062793, 2062794, 2062799, 2062802
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2062793, 2062794, 2062799, 2062802
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2062793, 2062794, 2062799, 2062802
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2062793, 2062794, 2062799, 2062802
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2062793, 2062794, 2062799, 2062802
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2062795, 2062796, 2062800, 2062803

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	02/15/2019			02/15/2019 16:26	Adrian Shelby	2062793, 2062794, 2062799, 2062802
EPA 200.7 Rev. 4.4	02/15/2019	02/18/2019 17:15	Elliott D. Healy	02/19/2019 12:31	Betina Topolski	2062812
	02/15/2019	02/18/2019 17:15	Elliott D. Healy	02/19/2019 13:20	Betina Topolski	2062810
	02/15/2019	02/18/2019 17:15	Elliott D. Healy	02/19/2019 13:27	Betina Topolski	2062811
EPA 200.8 Rev. 5.4	02/15/2019	02/18/2019 17:15	Elliott D. Healy	02/25/2019 14:45	Allison Taylor	2062812
	02/15/2019	02/18/2019 17:15	Elliott D. Healy	02/25/2019 16:01	Allison Taylor	2062810
	02/15/2019	02/18/2019 17:15	Elliott D. Healy	02/25/2019 16:39	Allison Taylor	2062811
EPA 300.0 Rev. 2.1	02/15/2019			02/26/2019 10:06	Lipi Saha	2062793
	02/15/2019			02/26/2019 10:20	Lipi Saha	2062794
	02/15/2019			02/26/2019 14:04	Lipi Saha	2062799
	02/15/2019			02/26/2019 17:31	Lipi Saha	2062802
EPA 350.1 Rev. 2.0	02/15/2019			02/20/2019 12:51	Adrian Shelby	2062795
	02/15/2019			02/20/2019 12:53	Adrian Shelby	2062796
	02/15/2019			02/20/2019 12:54	Adrian Shelby	2062800
	02/15/2019			02/20/2019 12:56	Adrian Shelby	2062803
EPA 351.2 Rev. 2.0	02/15/2019	02/18/2019 13:50	Adrian Shelby	02/19/2019 12:20	Joseph Suarez	2062795
	02/15/2019	02/18/2019 13:50	Adrian Shelby	02/19/2019 12:21	Joseph Suarez	2062796
	02/15/2019	02/18/2019 13:50	Adrian Shelby	02/19/2019 12:23	Joseph Suarez	2062800
	02/15/2019	02/18/2019 13:50	Adrian Shelby	02/19/2019 12:28	Joseph Suarez	2062803
EPA 353.2 Rev. 2.0	02/15/2019			02/22/2019 10:17	Beverly Y. Sanders	2062795
	02/15/2019			02/22/2019 10:23	Beverly Y. Sanders	2062796
	02/15/2019			02/22/2019 10:24	Beverly Y. Sanders	2062800
	02/15/2019			02/22/2019 10:25	Beverly Y. Sanders	2062803
EPA 365.1 Rev. 2.0	02/15/2019	02/18/2019 13:35	Sima Feizi	02/20/2019 12:05	Rosalyn Ballman	2062795
	02/15/2019	02/18/2019 13:35	Sima Feizi	02/20/2019 12:06	Rosalyn Ballman	2062796
	02/15/2019	02/18/2019 13:35	Sima Feizi	02/20/2019 14:09	Rosalyn Ballman	2062800
	02/15/2019	02/18/2019 13:35	Sima Feizi	02/20/2019 14:10	Rosalyn Ballman	2062803
EPA 365.1 Rev. 2.0 dissolved	02/15/2019			02/15/2019 17:02	Jhamieka S. Greenwood	2062801
	02/15/2019			02/15/2019 17:40	Jhamieka S. Greenwood	2062804
	02/15/2019			02/15/2019 17:41	Jhamieka S. Greenwood	2062797
	02/15/2019			02/15/2019 17:42	Jhamieka S. Greenwood	2062798
SM 2120 B	02/15/2019			02/15/2019 16:17	Chelsea Hernandez	2062799
	02/15/2019			02/15/2019 16:18	Chelsea Hernandez	2062802
	02/15/2019			02/15/2019 16:45	Chelsea Hernandez	2062793
	02/15/2019			02/15/2019 16:52	Chelsea Hernandez	2062794
SM 2320 B-97	02/15/2019			02/21/2019 01:15	Dale L. Simmons	2062793
	02/15/2019			02/21/2019 01:27	Dale L. Simmons	2062794
	02/15/2019			02/21/2019 01:38	Dale L. Simmons	2062799
	02/15/2019			02/21/2019 01:52	Dale L. Simmons	2062802
SM 2540 C-97	02/15/2019			02/20/2019 16:21	Yijie Li	2062793, 2062794, 2062799, 2062802

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	02/15/2019			02/20/2019 16:21	Yijie Li	2062793, 2062794, 2062799, 2062802
SM 4500 F-C-97	02/15/2019			02/21/2019 01:15	Dale L. Simmons	2062793
	02/15/2019			02/21/2019 01:27	Dale L. Simmons	2062794
	02/15/2019			02/21/2019 01:38	Dale L. Simmons	2062799
	02/15/2019			02/21/2019 01:52	Dale L. Simmons	2062802
SM 5310 B-00	02/15/2019			02/24/2019 01:40	Julia Storbeck	2062795
	02/15/2019			02/24/2019 01:54	Julia Storbeck	2062796
	02/15/2019			02/24/2019 02:08	Julia Storbeck	2062800
	02/15/2019			02/24/2019 02:48	Julia Storbeck	2062803