

Chemical Analysis Report

TLH-ROC-2019-04-10-01

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

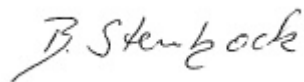
Event Description: **Run 11**
Request ID: **RQ-2019-01-21-14**
Customer: **TLH-ROC**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 30-APR-2019 18:47



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: Intercoastal 450m d-stream Pine Log boat Ramp

Collection Date/Time: 04/10/2019 11:11

Field ID: G2TLHR0034

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077290	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P361927	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P362297	
		Sulfate	4.4		mg SO4/L	P362300	
	SM 2120 B	Color (true)	33	A	PCU	P362028	
	SM 2320 B-97	Total Alkalinity	47		mg CaCO3/L	P362274	
	SM 2540 C-97	TDS	73		mg/L	P362519	
	SM 2540 D-97	TSS	9	I	mg/L	P362236	
	SM 4500 F-C-97	Fluoride	0.058	I	mg F/L	P362277	
2077291	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P362404	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P362423	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.52		mg N/L	P362418	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P362215	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P362199	
2077292	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P361933	
2077313	EPA 200.7 Rev. 4.4	Barium	22.2		ug/L	P362012	
		Calcium	17.2		mg/L	P362012	
		Iron	680		ug/L	P362012	
		Magnesium	1.96		mg/L	P362012	
		Potassium	1.4		mg/L	P362012	
		Sodium	4.6		mg/L	P362012	
		Zinc	5.0	U	ug/L	P362012	
	EPA 200.8 Rev. 5.4	Aluminum	166		ug/L	P362012	
		Antimony	0.050	U	ug/L	P362012	
		Arsenic	0.37		ug/L	P362012	
		Boron**	12.9		ug/L	P362012	
		Cadmium	0.020	U	ug/L	P362012	
		Chromium	0.40	U	ug/L	P362012	
		Copper	0.63	I	ug/L	P362012	
		Lead	0.22	I	ug/L	P362012	
		Nickel	0.50	U	ug/L	P362012	
		Selenium	0.20	U	ug/L	P362012	
		Silver	0.010	U	ug/L	P362012	
		Thallium	0.10	U	ug/L	P362012	

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: SAUL CREEK @ MOUTH

Collection Date/Time: 04/10/2019 11:55

Field ID: G2TLHR0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077293	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P361927	
	EPA 300.0 Rev. 2.1	Chloride	10	A	mg Cl/L	P362298	
		Sulfate	4.1	A	mg SO4/L	P362301	
	SM 2120 B	Color (true)	42		PCU	P362028	
	SM 2320 B-97	Total Alkalinity	49		mg CaCO3/L	P362274	
	SM 2540 C-97	TDS	78		mg/L	P362520	
	SM 2540 D-97	TSS	4	I	mg/L	P362237	
	SM 4500 F-C-97	Fluoride	0.060	I	mg F/L	P362277	
2077297	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P362404	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P362423	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P362419	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P362215	
	SM 5310 B-00	Organic Carbon	4.3		mg C/L	P362199	
2077301	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P361933	

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: Double Bayou 800m upstream from Lake Wimico

Collection Date/Time: 04/10/2019 12:20

Field ID: G2TLHR0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077294	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P361927	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P362298	
		Sulfate	5.2		mg SO4/L	P362301	
	SM 2120 B	Color (true)	36		PCU	P362028	
	SM 2320 B-97	Total Alkalinity	46		mg CaCO3/L	P362274	
	SM 2540 C-97	TDS	97		mg/L	P362520	
	SM 2540 D-97	TSS	10		mg/L	P362237	
	SM 4500 F-C-97	Fluoride	0.059	I	mg F/L	P362277	
2077298	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P362404	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P362423	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.37		mg N/L	P362419	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P362215	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P362199	
2077302	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P361933	

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: Horseshoe Creek 100m upstream from Intercoastal,Lake Wimico

Collection Date/Time: 04/10/2019 12:45

Field ID: G2TLHR0033

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077295	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P361927	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P362298	
		Sulfate	4.9		mg SO4/L	P362301	
	SM 2120 B	Color (true)	39		PCU	P362028	
	SM 2320 B-97	Total Alkalinity	42		mg CaCO3/L	P362274	
	SM 2540 C-97	TDS	86	A	mg/L	P362520	
	SM 2540 D-97	TSS	7	IA	mg/L	P362237	
	SM 4500 F-C-97	Fluoride	0.057	I	mg F/L	P362277	
2077299	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P362404	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P362424	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P362419	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P362215	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P362199	
2077303	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P361934	

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: P361927

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362012

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: P362012

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: P362297

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362298

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362300

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: P362301

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362404

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362423

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362424

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362418

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362419

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361933

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361934

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P362028

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P362274

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

Reference Method: SM 2540 C-97
Batch ID: P362519

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P362520

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P362236

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P362237

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P362277

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P362199

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: P362012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	103		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	98.8		P	85 - 115
Sodium	98.9		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	92.3		P	85 - 115
Antimony	94.7		P	85 - 115
Arsenic	96.8		P	85 - 115
Boron	92.1		P	85 - 115
Cadmium	97.0		P	85 - 115
Chromium	88.5		P	85 - 115
Copper	102		P	85 - 115
Lead	99.0		P	85 - 115
Nickel	101		P	85 - 115
Selenium	101		P	85 - 115
Silver	110		P	85 - 115
Thallium	96.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362297

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362298

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362300

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362301

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362423

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362424

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362418

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: P362419

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: P362215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361933

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361934

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

Reference Method: SM 2120 B
Batch ID: P362028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P362274

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

Reference Method: SM 4500 F-C-97
Batch ID: P362277

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P362199

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077023	Barium	101		P	80 - 120
2077023	Calcium	101		P	80 - 120
2077023	Iron	102		P	80 - 120
2077023	Magnesium	102		P	80 - 120
2077023	Potassium	99.3		P	80 - 120
2077023	Sodium	100		P	80 - 120
2077023	Zinc	101		P	80 - 120
2077340	Barium	105	106	P/P	80 - 120
2077340	Calcium	103	104	P/P	80 - 120
2077340	Iron	112	106	P/P	80 - 120
2077340	Magnesium	106	106	P/P	80 - 120
2077340	Potassium	108	107	P/P	80 - 120
2077340	Sodium	105	103	P/P	80 - 120
2077340	Zinc	103	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077023	Aluminum	91.3		P	80 - 120
2077023	Antimony	95.3		P	80 - 120
2077023	Arsenic	97.1		P	80 - 120
2077023	Boron	92.7		P	80 - 120
2077023	Cadmium	96.8		P	80 - 120
2077023	Chromium	88.7		P	80 - 120
2077023	Copper	102		P	80 - 120
2077023	Lead	101		P	80 - 120
2077023	Nickel	98.1		P	80 - 120
2077023	Selenium	101		P	80 - 120
2077023	Silver	110		P	80 - 120
2077023	Thallium	96.3		P	80 - 120
2077340	Aluminum	94.8	96.8	P/P	80 - 120
2077340	Antimony	94.3	97.7	P/P	80 - 120
2077340	Arsenic	97.6	101	P/P	80 - 120
2077340	Boron	97.2	98.1	P/P	80 - 120
2077340	Cadmium	97.1	99.7	P/P	80 - 120
2077340	Chromium	90.4	93.0	P/P	80 - 120
2077340	Copper	107	110	P/P	80 - 120
2077340	Lead	101	108	P/P	80 - 120
2077340	Nickel	104	107	P/P	80 - 120
2077340	Selenium	99.4	103	P/P	80 - 120
2077340	Silver	111	111	P/P	80 - 120
2077340	Thallium	95.2	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077065	Chloride	98.6		P	90 - 110
2077229	Chloride	99.0		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077293	Chloride	103		P	90 - 110
2077354	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077065	Sulfate	102		P	90 - 110
2077229	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362301

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077293	Sulfate	104		P	90 - 110
2077354	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077297	Ammonia-N	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362423

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077213	Kjeldahl Nitrogen	95.3	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362424

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077299	Kjeldahl Nitrogen	95.2	96.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077211	NO2NO3-N	95.5	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077297	NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077298	Total-P	102	97.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361933

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077072	O-Phosphate-P	94.5	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077303	O-Phosphate-P	98.1	99.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P362277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077321	Fluoride	99.0	99.5	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P362199

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077178	Organic Carbon	98.5	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P361927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077229	Turbidity	5.67	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P362012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077340	Barium	1.08	Spike	P	0 - 20
2077340	Calcium	0.416	Spike	P	0 - 20
2077340	Iron	6.20	Spike	P	0 - 20
2077340	Magnesium	0.596	Spike	P	0 - 20
2077340	Potassium	0.575	Spike	P	0 - 20
2077340	Sodium	1.08	Spike	P	0 - 20
2077340	Zinc	1.69	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P362012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077340	Aluminum	1.97	Spike	P	0 - 20
2077340	Antimony	3.57	Spike	P	0 - 20
2077340	Arsenic	3.11	Spike	P	0 - 20
2077340	Boron	0.784	Spike	P	0 - 20
2077340	Cadmium	2.60	Spike	P	0 - 20
2077340	Chromium	2.86	Spike	P	0 - 20
2077340	Copper	2.83	Spike	P	0 - 20
2077340	Lead	6.48	Spike	P	0 - 20
2077340	Nickel	3.36	Spike	P	0 - 20
2077340	Selenium	3.56	Spike	P	0 - 20
2077340	Silver	0.282	Spike	P	0 - 20
2077340	Thallium	6.24	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P362297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077229	Chloride	1.60	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P362298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077293	Chloride	0.0416	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077229	Sulfate	1.18	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362301

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077293	Sulfate	0.114	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077297	Ammonia-N	0.679	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077213	Kjeldahl Nitrogen	7.27	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077299	Kjeldahl Nitrogen	0.843	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077211	NO2NO3-N	0.662	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077297	NO2NO3-N	0.455	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077298	Total-P	3.92	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077072	O-Phosphate-P	0.948	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P361934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077303	O-Phosphate-P	1.32	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P362028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077290	Color (true)	0.705	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P362274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077321	Total Alkalinity	2.79	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P362519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077229	TDS	2.17	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P362520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077295	TDS	3.47	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P362277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077321	Fluoride	0.487	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P362199

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077178	Organic Carbon	0.0783	Spike	P	0 - 20

Quality Assurance Report

Precision

* 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: A90588

Included Lab Sample IDs: 2077290, 2077293, 2077294, 2077295

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A90589

Included Lab Sample IDs: 2077292, 2077301, 2077302, 2077303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.2	96.7	P/P	90 - 110
O-Phosphate-P	97.7	97.2	P/P	90 - 110
O-Phosphate-P	99.6	98.7	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A90648

Included Lab Sample IDs: 2077290, 2077293, 2077294, 2077295

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A90680

Included Lab Sample IDs: 2077313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	103	102	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	98.5	98.3	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A90738

Included Lab Sample IDs: 2077291, 2077297, 2077298, 2077299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	99.5	P/P	90 - 110
Organic Carbon	99.9	99.6	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A90759

Included Lab Sample IDs: 2077290, 2077293, 2077294, 2077295

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.7	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A90759

Included Lab Sample IDs: 2077290, 2077293, 2077294, 2077295

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

Reference Method: SM 4500 F-C-97

Run ID: A90759

Included Lab Sample IDs: 2077290, 2077293, 2077294, 2077295

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A90760

Included Lab Sample IDs: 2077290, 2077293, 2077294, 2077295

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Chloride	102	103	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110
Sulfate	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90798

Included Lab Sample IDs: 2077291, 2077297, 2077298, 2077299

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A90813

Included Lab Sample IDs: 2077291, 2077297, 2077298, 2077299

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A90815

Included Lab Sample IDs: 2077291, 2077297, 2077298, 2077299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.5	P/P	90 - 110
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A90862

Included Lab Sample IDs: 2077313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.2	94.9	P/P	90 - 110
Antimony	94.6	93.0	P/P	90 - 110
Arsenic	96.3	96.3	P/P	90 - 110
Boron	100	97.8	P/P	90 - 110
Cadmium	96.8	96.7	P/P	90 - 110
Chromium	94.9	94.6	P/P	90 - 110
Lead	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A90881

Included Lab Sample IDs: 2077291, 2077297, 2077298, 2077299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	99.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A90943

Included Lab Sample IDs: 2077313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	94.4	95.7	P/P	90 - 110
Nickel	94.0	95.2	P/P	90 - 110
Selenium	94.0	92.5	P/P	90 - 110
Silver	103	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A91043

Included Lab Sample IDs: 2077313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	91.4	91.5	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					5.67	
EPA 200.7 Rev. 4.4	Barium	102	101	105	106		1.08
	Calcium	103	101	103	104		0.416
	Iron	103	102	112	106		6.20
	Magnesium	104	102	106	106		0.596
	Potassium	98.8	99.3	108	107		0.575
	Sodium	98.9	100	105	103		1.08
	Zinc	102	101	103	105		1.69
EPA 200.8 Rev. 5.4	Aluminum	92.3	91.3	94.8	96.8		1.97
	Antimony	94.7	95.3	94.3	97.7		3.57
	Arsenic	96.8	97.1	97.6	101		3.11
	Boron	92.1	92.7	97.2	98.1		0.784
	Cadmium	97.0	96.8	97.1	99.7		2.60
	Chromium	88.5	88.7	90.4	93.0		2.86
	Copper	102	102	107	110		2.83
	Lead	99.0	101	101	108		6.48
	Nickel	101	98.1	104	107		3.36
	Selenium	101	101	99.4	103		3.56
	Silver	110	110	111	111		0.282
	Thallium	96.8	96.3	95.2	101		6.24
EPA 300.0 Rev. 2.1	Chloride	101	99.0	98.6		1.60	
	Chloride	102	103	100		0.0416	
	Sulfate	102	100	102		1.18	
	Sulfate	102	104	103		0.114	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	100	102			0.679
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	95.3	105			7.27
	Kjeldahl Nitrogen	107	95.2	96.3			0.843
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	95.5	94.5			0.662
	NO ₂ NO ₃ -N	100	96.5				0.455
EPA 365.1 Rev. 2.0	Total-P	104	102	97.7			3.92
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	105	94.5	95.4			0.948
	O-Phosphate-P	101	98.1	99.4			1.32
SM 2120 B	Color (true)	100				0.705	
SM 2320 B-97	Total Alkalinity	101				2.79	
SM 2540 C-97	TDS					2.17	
	TDS					3.47	
SM 4500 F-C-97	Fluoride	96.1	99.0	99.5			0.487
SM 5310 B-00	Organic Carbon	101	98.5	98.6			0.0783

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2077290, 2077293, 2077294, 2077295
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2077313
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2077313
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2077290, 2077293, 2077294, 2077295
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2077290, 2077293, 2077294, 2077295
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2077291, 2077297, 2077298, 2077299

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2077291, 2077297, 2077298, 2077299
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2077291, 2077297, 2077298, 2077299
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2077291, 2077297, 2077298, 2077299
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2077292, 2077301, 2077302, 2077303
SM 2120 B / E31780	True Color measured at 450 nm	2077290, 2077293, 2077294, 2077295
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2077290, 2077293, 2077294, 2077295
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2077290, 2077293, 2077294, 2077295
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2077290, 2077293, 2077294, 2077295
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2077290, 2077293, 2077294, 2077295
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2077291, 2077297, 2077298, 2077299

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	04/10/2019			04/10/2019 17:05	Adrian Shelby	2077290, 2077293, 2077294, 2077295
EPA 200.7 Rev. 4.4	04/10/2019	04/11/2019 17:20	Elliott D. Healy	04/12/2019 15:25	Betina Topolski	2077313
EPA 200.8 Rev. 5.4	04/10/2019	04/11/2019 17:20	Elliott D. Healy	04/20/2019 04:06	Robert K Palmer	2077313
	04/10/2019	04/11/2019 17:20	Elliott D. Healy	04/23/2019 18:34	Robert K Palmer	2077313
	04/10/2019	04/11/2019 17:20	Elliott D. Healy	04/26/2019 18:14	Robert K Palmer	2077313
EPA 300.0 Rev. 2.1	04/10/2019			04/16/2019 20:21	Lipi Saha	2077290
	04/10/2019			04/16/2019 21:34	Lipi Saha	2077293
	04/10/2019			04/16/2019 22:22	Lipi Saha	2077294
	04/10/2019			04/16/2019 22:34	Lipi Saha	2077295
EPA 350.1 Rev. 2.0	04/10/2019			04/17/2019 12:19	Ping Hua	2077297
	04/10/2019			04/17/2019 12:34	Ping Hua	2077291
	04/10/2019			04/17/2019 12:35	Ping Hua	2077298
	04/10/2019			04/17/2019 12:37	Ping Hua	2077299
EPA 351.2 Rev. 2.0	04/10/2019	04/18/2019 12:15	Adrian Shelby	04/22/2019 11:32	Joseph Suarez	2077291
	04/10/2019	04/18/2019 12:15	Adrian Shelby	04/22/2019 11:33	Joseph Suarez	2077297
	04/10/2019	04/18/2019 12:15	Adrian Shelby	04/22/2019 11:35	Joseph Suarez	2077298
	04/10/2019	04/18/2019 12:15	Adrian Shelby	04/22/2019 11:42	Joseph Suarez	2077299
EPA 353.2 Rev. 2.0	04/10/2019			04/18/2019 11:22	Beverly Y. Sanders	2077291
	04/10/2019			04/18/2019 11:29	Beverly Y. Sanders	2077297
	04/10/2019			04/18/2019 11:35	Beverly Y. Sanders	2077298
	04/10/2019			04/18/2019 11:36	Beverly Y. Sanders	2077299
EPA 365.1 Rev. 2.0	04/10/2019	04/16/2019 13:55	Sima Feizi	04/17/2019 19:36	Rosalyn Ballman	2077291
	04/10/2019	04/16/2019 13:55	Sima Feizi	04/17/2019 19:37	Rosalyn Ballman	2077297
	04/10/2019	04/16/2019 13:55	Sima Feizi	04/17/2019 19:38	Rosalyn Ballman	2077298
	04/10/2019	04/16/2019 13:55	Sima Feizi	04/17/2019 19:39	Rosalyn Ballman	2077299
EPA 365.1 Rev. 2.0 dissolved	04/10/2019			04/10/2019 17:38	Jhamieka S. Greenwood	2077303
	04/10/2019			04/10/2019 18:21	Jhamieka S. Greenwood	2077292
	04/10/2019			04/10/2019 18:22	Jhamieka S. Greenwood	2077301
	04/10/2019			04/10/2019 18:27	Jhamieka S. Greenwood	2077302
SM 2120 B	04/10/2019			04/11/2019 15:23	Mariam Hanna	2077290
	04/10/2019			04/11/2019 15:24	Mariam Hanna	2077293
	04/10/2019			04/11/2019 15:25	Mariam Hanna	2077294, 2077295
SM 2320 B-97	04/10/2019			04/16/2019 05:46	Samantha Davila	2077290
	04/10/2019			04/16/2019 05:58	Samantha Davila	2077293
	04/10/2019			04/16/2019 06:11	Samantha Davila	2077294
	04/10/2019			04/16/2019 06:23	Samantha Davila	2077295
SM 2540 C-97	04/10/2019			04/11/2019 16:14	Yijie Li	2077290, 2077293, 2077294, 2077295
SM 2540 D-97	04/10/2019			04/11/2019 16:14	Yijie Li	2077290, 2077293, 2077294, 2077295
SM 4500 F-C-97	04/10/2019			04/16/2019 05:46	Samantha Davila	2077290
	04/10/2019			04/16/2019 05:58	Samantha Davila	2077293

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	04/10/2019			04/16/2019 06:11	Samantha Davila	2077294
	04/10/2019			04/16/2019 06:23	Samantha Davila	2077295
SM 5310 B-00	04/10/2019			04/15/2019 15:56	Julia Storbeck	2077291
	04/10/2019			04/15/2019 19:54	Julia Storbeck	2077297
	04/10/2019			04/15/2019 20:06	Julia Storbeck	2077298
	04/10/2019			04/15/2019 20:18	Julia Storbeck	2077299