

Chemical Analysis Report

CEN-DIST-2019-03-15-01

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

Event Description: **Minnie / Silver / Chain / Gleason**

Request ID: **RQ-2019-03-11-46**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

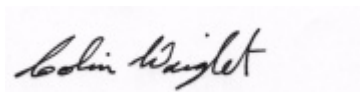
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Certified by: Colin Wright, Program Administrator

Date Certified: 04-APR-2019 14:05



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: Nutrients and Pesticides.

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: $1.3\text{E}+03$, 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: Three Island Lake @ Center of South Lobe

Collection Date/Time: 03/14/2019 09:55

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070480	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P360517	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P361008	
		Sulfate	7.2		mg SO4/L	P361013	
	SM 2120 B	Color (true)	180		PCU	P360522	
	SM 2320 B-97	Total Alkalinity	5.4		mg CaCO3/L	P361099	
	SM 2540 C-97	TDS	94		mg/L	P361034	
	SM 2540 D-97	TSS	2	I	mg/L	P361026	
	SM 4500 F-C-97	Fluoride	0.039	I	mg F/L	P360993	
2070483	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P361064	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P360874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.061		mg N/L	P360782	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P360842	MS
	SM 5310 B-00	Organic Carbon	21		mg C/L	P360898	
2070486	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P360531	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Lake Gleason @ Center

Collection Date/Time: 03/14/2019 10:47

Field ID: G2CE0114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070481	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P360517	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P361008	
		Sulfate	2.4		mg SO4/L	P361013	
	SM 2120 B	Color (true)	39	A	PCU	P360522	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P360980	RPD
	SM 2540 C-97	TDS	99		mg/L	P361034	
	SM 2540 D-97	TSS	2	I	mg/L	P361026	
	SM 4500 F-C-97	Fluoride	0.082	I	mg F/L	P360993	
2070484	EPA 350.1 Rev. 2.0	Ammonia-N	0.081		mg N/L	P361064	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P360874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P360783	
	EPA 365.1 Rev. 2.0	Total-P	0.018	J	mg P/L	P360842	MS
	SM 5310 B-00	Organic Carbon	9.5		mg C/L	P360898	
2070487	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P360531	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

EPA 365.1 Rev. 2.0: Total-P: Refer to the narrative for an explanation of QC Codes.

Sample Location: Lake Minnie @ Center

Collection Date/Time: 03/14/2019 11:45

Field ID: G2CE0108

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070477	EPA 180.1 Rev. 2.0	Turbidity	6.6	A	NTU	P360517	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P361008	
		Sulfate	2.9		mg SO4/L	P361013	
	SM 2120 B	Color (true)	260		PCU	P360521	
	SM 2320 B-97	Total Alkalinity	37		mg CaCO3/L	P360980	RPD
	SM 2540 C-97	TDS	164		mg/L	P361034	
	SM 2540 D-97	TSS	6	I	mg/L	P361026	
	SM 4500 F-C-97	Fluoride	0.066	I	mg F/L	P360993	
2070478	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P361064	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P360874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P360782	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P360842	MS
	SM 5310 B-00	Organic Carbon	25		mg C/L	P360906	
2070479	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P360531	
2070505	EPA 8321B	2,4-D	0.14		ug/L	P360490	
		Acesulfame K**	0.10	U	ug/L	P360421	
		AMPA**	0.24	I	ug/L	P360421	
		Acetaminophen**	0.0080	U	ug/L	P360490	
		Endothall**	0.25	U	ug/L	P360421	
		Glufosinate**	0.10	U	ug/L	P360421	
		Bentazon	0.022		ug/L	P360490	
		Glyphosate**	0.71		ug/L	P360421	
		Carbamazepine**	8.0E-04	U	ug/L	P360490	
		Sucralose**	0.063		ug/L	P360421	MS
		Diuron	0.0020	U	ug/L	P360490	
		Fenuron	0.016	U	ug/L	P360490	
		Fluridone**	0.0026	I	ug/L	P360490	
		Imazapyr**	0.056		ug/L	P360490	
		Hydrocodone**	0.0020	U	ug/L	P360490	
		Ibuprofen**	0.020	U	ug/L	P360490	
		Imidacloprid	0.0065	I	ug/L	P360490	MS
		Linuron	0.0040	U	ug/L	P360490	
		MCP	0.0020	U	ug/L	P360490	
		Naproxen**	0.0080	U	ug/L	P360490	
		Primidone**	0.0040	U	ug/L	P360490	
		Pyraclostrobin**	0.0020	U	ug/L	P360490	
		Triclopyr**	0.0040	U	ug/L	P360490	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Silver Lake @ Center

Collection Date/Time: 03/14/2019 12:26

Field ID: G2CE0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070482	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P360517	
	EPA 300.0 Rev. 2.1	Chloride	50	A	mg Cl/L	P361009	
		Sulfate	25	A	mg SO4/L	P361014	
	SM 2120 B	Color (true)	7.8		PCU	P360522	
	SM 2320 B-97	Total Alkalinity	8.6	AJ	mg CaCO3/L	P360980	RPD
	SM 2540 C-97	TDS	124		mg/L	P361034	
	SM 2540 D-97	TSS	2	U	mg/L	P361026	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P360993	
2070485	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P361064	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P360874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P360783	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P360842	MS
	SM 5310 B-00	Organic Carbon	4.9		mg C/L	P360898	
2070488	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P360531	

Ref. Method and Comment:

SM 2320 B-97: Refer to the narrative for an explanation of QC Codes.

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: P360517

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361008

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361009

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361013

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361014

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P361064

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360874

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360782

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360783

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360842

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360531

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

Reference Method: EPA 8321B
Batch ID: P360421

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P360490

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P360521

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P360522

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P360980

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

Reference Method: SM 2320 B-97
Batch ID: P361099

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

Reference Method: SM 2540 C-97
Batch ID: P361034

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P361026

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P360993

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P360898

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

Reference Method: SM 5310 B-00
Batch ID: P360906

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361008

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361009

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361013

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361014

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P361064

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360874

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360782

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: P360783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360842

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.5		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P360421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	87.5		P	40 - 150
AMPA	89.7		P	40 - 150
Endothall	85.7		P	40 - 150
Glufosinate	91.4		P	40 - 150
Glyphosate	79.4		P	40 - 140
Sucralose	54.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P360490

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	75.9		P	40 - 150
Acetaminophen	111		P	30 - 150
Bentazon	129		P	30 - 150
Carbamazepine	111		P	40 - 150
Diuron	120		P	40 - 150
Fenuron	127		P	40 - 150
Fluridone	127		P	40 - 150
Hydrocodone	98.2		P	40 - 150
Ibuprofen	76.0		P	40 - 150
Imazapyr	99.5		P	40 - 150
Imidacloprid	102		P	40 - 150
Linuron	103		P	40 - 150
MCPP	82.2		P	40 - 150
Naproxen	87.3		P	40 - 150
Primidone	119		P	40 - 150
Pyraclostrobin	82.3		P	40 - 150
Triclopyr	53.8		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P360521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P360522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P360980

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P361099

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P360993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360898

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P360906

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070128	Chloride	105		P	90 - 110
2070399	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070482	Chloride	104		P	90 - 110
2070850	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070399	Sulfate	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070482	Sulfate	105		P	90 - 110
2070850	Sulfate	107		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P361064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070441	Ammonia-N	99.4	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070485	Kjeldahl Nitrogen	101	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070403	NO2NO3-N	97.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070484	NO2NO3-N	97.3	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070484	Total-P	85.8	99.7	F/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070488	O-Phosphate-P	93.3	93.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P360421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069913	Acesulfame K	103	129	P/P	40 - 150
2069913	AMPA	78.4	83.1	P/P	40 - 150
2069913	Endothall	84.4	94.8	P/P	40 - 150
2069913	Glufosinate	68.3	58.8	P/P	40 - 150
2069913	Glyphosate	74.3	70.7	P/P	40 - 140
2069913	Sucralose	12.2	11.8	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P360490

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069849	2,4-D	94.4	96.9	P/P	40 - 150
2069849	Acetaminophen	103	90.8	P/P	30 - 150
2069849	Bentazon	78.8	75.9	P/P	30 - 150
2069849	Carbamazepine	102	92.4	P/P	40 - 150
2069849	Diuron	92.1	86.4	P/P	40 - 150
2069849	Fenuron	127	128	P/P	40 - 150
2069849	Fluridone	135	107	P/P	40 - 150
2069849	Hydrocodone	94.9	95.5	P/P	40 - 150
2069849	Ibuprofen	78.9	64.6	P/P	40 - 150
2069849	Imazapyr	65.2	55.8	P/P	40 - 150
2069849	Imidacloprid	183	169	F/F	40 - 150
2069849	Linuron	87.4	86.8	P/P	40 - 150
2069849	MCP	124	110	P/P	40 - 150
2069849	Naproxen	75.2	85.0	P/P	40 - 150
2069849	Primidone	114	102	P/P	40 - 150
2069849	Pyraclostrobin	79.7	67.5	P/P	40 - 150
2069849	Triclopyr	85.9	70.6	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P360993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070482	Fluoride	96.6	96.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070485	Organic Carbon	96.4	100	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P360906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070129	Organic Carbon	96.8	96.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070477	Turbidity	10.1	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070128	Chloride	1.03	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070482	Chloride	0.291	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070128	Sulfate	1.27	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070482	Sulfate	0.229	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P361064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070441	Ammonia-N	1.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070485	Kjeldahl Nitrogen	1.68	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070403	NO2NO3-N	2.53	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070484	NO2NO3-N	1.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070484	Total-P	14.5	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070488	O-Phosphate-P	0.107	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P360421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069913	Acesulfame K	22.4	Spike	P	0 - 30
2069913	AMPA	5.79	Spike	P	0 - 30
2069913	Endothall	11.7	Spike	P	0 - 30
2069913	Glufosinate	15.0	Spike	P	0 - 30
2069913	Glyphosate	4.87	Spike	P	0 - 30
2069913	Sucralose	2.41	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P360490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069849	2,4-D	2.59	Spike	P	0 - 30
2069849	Acetaminophen	12.8	Spike	P	0 - 30
2069849	Bentazon	3.26	Spike	P	0 - 30
2069849	Carbamazepine	9.88	Spike	P	0 - 30
2069849	Diuron	6.16	Spike	P	0 - 30
2069849	Fenuron	0.378	Spike	P	0 - 30
2069849	Fluridone	19.7	Spike	P	0 - 30
2069849	Hydrocodone	0.577	Spike	P	0 - 30
2069849	Ibuprofen	19.9	Spike	P	0 - 30
2069849	Imazapyr	10.1	Spike	P	0 - 30
2069849	Imidacloprid	6.91	Spike	P	0 - 30
2069849	Linuron	0.770	Spike	P	0 - 30
2069849	MCP	11.7	Spike	P	0 - 30
2069849	Naproxen	12.1	Spike	P	0 - 30
2069849	Primidone	11.2	Spike	P	0 - 30
2069849	Pyraclostrobin	16.7	Spike	P	0 - 30
2069849	Triclopyr	19.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P360521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070435	Color (true)	1.00	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P360522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070481	Color (true)	0.316	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P360980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070482	Total Alkalinity	3.01	Sample	F	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P361099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070303	Total Alkalinity	0.287	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P361034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070407	TDS	4.06	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P360993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070482	Fluoride	0.514	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P360898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070485	Organic Carbon	3.17	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P360906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070129	Organic Carbon	0.0813	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 Surrogates

Lab Sample ID: 2070505
Field Sample ID: G2CE0108

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	85.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.9	P	30 - 160
EPA 8321B	Diuron-d6	80.0	P	30 - 160
EPA 8321B	Endothall-d6	150	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	47.1	P	30 - 160
EPA 8321B	Primidone-d5	70.3	P	30 - 160
EPA 8321B	Sucralose-d6	58.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A90043

Included Lab Sample IDs: 2070477, 2070480, 2070481, 2070482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115
Color (true)	103	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A90044

Included Lab Sample IDs: 2070477, 2070480, 2070481, 2070482

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A90045

Included Lab Sample IDs: 2070479, 2070486, 2070487, 2070488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.6	97.2	P/P	90 - 110
O-Phosphate-P	98.5	98.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A90071

Included Lab Sample IDs: 2070477, 2070480, 2070481, 2070482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Chloride	103	99.6	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110
Sulfate	104	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A90093

Included Lab Sample IDs: 2070505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	106	98.7	P/P	60 - 160
Glufosinate	95.8	86.9	P/P	60 - 160
Glyphosate	96.3	87.4	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A90128

Included Lab Sample IDs: 2070478, 2070483, 2070484, 2070485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.0	P/P	90 - 110
NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A90184

Included Lab Sample IDs: 2070483, 2070484, 2070485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A90184

Included Lab Sample IDs: 2070483, 2070484, 2070485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	99.0	P/P	90 - 110
Organic Carbon	99.0	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A90186

Included Lab Sample IDs: 2070478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90199

Included Lab Sample IDs: 2070478

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90201

Included Lab Sample IDs: 2070483, 2070485

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

Reference Method: EPA 8321B

Run ID: A90203

Included Lab Sample IDs: 2070505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.1	87.4	P/P	60 - 160
Endothall	105	112	P/P	60 - 160
Sucralose	79.9	68.0	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A90218

Included Lab Sample IDs: 2070477, 2070481, 2070482

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

Reference Method: SM 4500 F-C-97

Run ID: A90218

Included Lab Sample IDs: 2070477, 2070480, 2070481, 2070482

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A90221

Included Lab Sample IDs: 2070478, 2070483, 2070484, 2070485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.0	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A90239

Included Lab Sample IDs: 2070478, 2070483, 2070484, 2070485

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

Reference Method: SM 2320 B-97

Run ID: A90248

Included Lab Sample IDs: 2070480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90273

Included Lab Sample IDs: 2070484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A90274

Included Lab Sample IDs: 2070505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.3	98.8	P/P	50 - 150
Acetaminophen	122	111	P/P	60 - 160
Bentazon	89.8	87.5	P/P	50 - 160
Carbamazepine	100	109	P/P	60 - 150
Diuron	114	108	P/P	60 - 150
Fenuron	113	110	P/P	60 - 150
Fluridone	66.0	104	P/P	60 - 160
Hydrocodone	121	115	P/P	60 - 150
Ibuprofen	92.7	109	P/P	50 - 160
Imazapyr	100	97.6	P/P	50 - 150
Imidacloprid	105	113	P/P	60 - 150
Linuron	99.7	94.0	P/P	60 - 150
MCP	91.5	87.7	P/P	50 - 150
Naproxen	106	89.5	P/P	50 - 160
Primidone	138	92.5	P/P	60 - 150
Pyraclostrobin	82.5	118	P/P	60 - 150
Triclopyr	96.1	95.4	P/P	50 - 150

* 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	MS
EPA 180.1 Rev. 2.0	Turbidity				10.1	
EPA 300.0 Rev. 2.1	Chloride	106	105	102	1.03	
	Chloride	107	104	105	0.291	
	Sulfate	106	107		1.27	
	Sulfate	108	105	107	0.229	
	Ammonia-N	101	99.4	101		1.17
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	101	98.4		1.68
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	97.5	100		2.53
	NO2NO3-N	98.5	97.3	98.8		1.43
EPA 365.1 Rev. 2.0	Total-P	97.2	85.8	99.7		14.5
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5	93.3	93.4		0.107
EPA 8321B	2,4-D	75.9	94.4	96.9		2.59
	Acesulfame K	87.5	103	129		22.4
	Acetaminophen	111	103	90.8		12.8
	AMPA	89.7	78.4	83.1		5.79
	Bentazon	129	78.8	75.9		3.26
	Carbamazepine	111	102	92.4		9.88
	Diuron	120	92.1	86.4		6.16
	Endothall	85.7	84.4	94.8		11.7
	Fenuron	127	127	128		0.378
	Fluridone	127	135	107		19.7
	Glufosinate	91.4	68.3	58.8		15.0
	Glyphosate	79.4	74.3	70.7		4.87
	Hydrocodone	98.2	94.9	95.5		0.577
	Ibuprofen	76.0	78.9	64.6		19.9
	Imazapyr	99.5	65.2	55.8		10.1
	Imidacloprid	102	183	169		6.91
	Linuron	103	87.4	86.8		0.770
	MCPD	82.2	124	110		11.7
	Naproxen	87.3	75.2	85.0		12.1
	Primidone	119	114	102		11.2
	Pyraclostrobin	82.3	79.7	67.5		16.7
	Sucralose	54.7	12.2	11.8		2.41
	Triclopyr	53.8	85.9	70.6		19.6
SM 2120 B	Color (true)	101			1.00	
	Color (true)	102			0.316	
SM 2320 B-97	Total Alkalinity	101			3.01	
	Total Alkalinity	103			0.287	
SM 2540 C-97	TDS				4.06	
SM 4500 F-C-97	Fluoride	98.2	96.6	96.0		0.514
SM 5310 B-00	Organic Carbon	100	96.4	100		3.17
	Organic Carbon	95.0	96.8	96.9		0.0813

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2070477, 2070480, 2070481, 2070482
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2070477, 2070480, 2070481, 2070482
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2070477, 2070480, 2070481, 2070482
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2070478, 2070483, 2070484, 2070485

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2070478, 2070483, 2070484, 2070485
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2070478, 2070483, 2070484, 2070485
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2070478, 2070483, 2070484, 2070485
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2070479, 2070486, 2070487, 2070488
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2070505
SM 2120 B / E31780	True Color measured at 450 nm	2070477, 2070480, 2070481, 2070482
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2070477, 2070480, 2070481, 2070482
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2070477, 2070480, 2070481, 2070482
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2070477, 2070480, 2070481, 2070482
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2070477, 2070480, 2070481, 2070482
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2070478, 2070483, 2070484, 2070485

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	03/15/2019			03/15/2019 15:25	Adrian Shelby	2070477, 2070480, 2070481, 2070482
EPA 300.0 Rev. 2.1	03/15/2019			03/22/2019 09:58	Lipi Saha	2070477
	03/15/2019			03/22/2019 10:10	Lipi Saha	2070480
	03/15/2019			03/22/2019 10:22	Lipi Saha	2070481
	03/15/2019			03/22/2019 11:47	Lipi Saha	2070482
EPA 350.1 Rev. 2.0	03/15/2019			03/26/2019 13:02	Julia Storbeck	2070478
	03/15/2019			03/26/2019 13:04	Julia Storbeck	2070483
	03/15/2019			03/26/2019 13:05	Julia Storbeck	2070485
	03/15/2019			03/26/2019 13:10	Julia Storbeck	2070484
EPA 351.2 Rev. 2.0	03/15/2019	03/21/2019 16:30	Adrian Shelby	03/22/2019 14:07	Joseph Suarez	2070478
	03/15/2019	03/21/2019 16:30	Adrian Shelby	03/22/2019 14:08	Joseph Suarez	2070483
	03/15/2019	03/21/2019 16:30	Adrian Shelby	03/22/2019 14:10	Joseph Suarez	2070484
	03/15/2019	03/21/2019 16:30	Adrian Shelby	03/22/2019 14:11	Joseph Suarez	2070485
EPA 353.2 Rev. 2.0	03/15/2019			03/20/2019 12:53	Lauren Lees	2070478
	03/15/2019			03/20/2019 12:55	Lauren Lees	2070483
	03/15/2019			03/20/2019 13:02	Lauren Lees	2070484
	03/15/2019			03/20/2019 13:08	Lauren Lees	2070485
EPA 365.1 Rev. 2.0	03/15/2019	03/21/2019 12:46	Joseph Suarez	03/22/2019 15:29	Rosalyn Ballman	2070478
	03/15/2019	03/21/2019 12:46	Joseph Suarez	03/22/2019 16:56	Rosalyn Ballman	2070483
	03/15/2019	03/21/2019 12:46	Joseph Suarez	03/22/2019 16:57	Rosalyn Ballman	2070485
	03/15/2019	03/21/2019 12:46	Joseph Suarez	03/27/2019 13:00	Rosalyn Ballman	2070484
EPA 365.1 Rev. 2.0 dissolved	03/15/2019			03/15/2019 15:28	Jhamieka S. Greenwood	2070488
	03/15/2019			03/15/2019 16:06	Jhamieka S. Greenwood	2070479, 2070486
	03/15/2019			03/15/2019 16:07	Jhamieka S. Greenwood	2070487
EPA 8321B	03/15/2019	03/18/2019 12:00	Hoor Shaik	03/18/2019 21:12	Juyoung Kim	2070505
	03/15/2019	03/18/2019 12:00	Hoor Shaik	03/20/2019 23:04	Juyoung Kim	2070505
	03/15/2019	03/19/2019 10:00	Hoor Shaik	03/26/2019 11:09	Juyoung Kim	2070505
SM 2120 B	03/15/2019			03/15/2019 16:25	Blanca Fach	2070481
	03/15/2019			03/15/2019 16:26	Blanca Fach	2070482
	03/15/2019			03/15/2019 16:43	Blanca Fach	2070477
	03/15/2019			03/15/2019 16:44	Blanca Fach	2070480
SM 2320 B-97	03/15/2019			03/25/2019 07:06	Dale L. Simmons	2070482
	03/15/2019			03/25/2019 09:11	Dale L. Simmons	2070477
	03/15/2019			03/25/2019 09:34	Dale L. Simmons	2070481
	03/15/2019			03/26/2019 20:36	Dale L. Simmons	2070480
SM 2540 C-97	03/15/2019			03/20/2019 15:26	Yijie Li	2070477, 2070480, 2070481, 2070482
SM 2540 D-97	03/15/2019			03/20/2019 15:26	Yijie Li	2070477, 2070480, 2070481, 2070482
SM 4500 F-C-97	03/15/2019			03/25/2019 06:58	Dale L. Simmons	2070482
	03/15/2019			03/25/2019 09:11	Dale L. Simmons	2070477
	03/15/2019			03/25/2019 09:22	Dale L. Simmons	2070480

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	03/15/2019			03/25/2019 09:34	Dale L. Simmons	2070481
SM 5310 B-00	03/15/2019			03/21/2019 16:42	Julia Storbeck	2070485
	03/15/2019			03/21/2019 19:32	Julia Storbeck	2070483
	03/15/2019			03/21/2019 21:22	Julia Storbeck	2070484
	03/15/2019			03/22/2019 05:00	Julia Storbeck	2070478