Chemical Analysis Report

SO-DIST-2021-03-25-02

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

Event Description: **2021 SMP : Placid Lakes**
Request ID: **RQ-2021-03-22-45**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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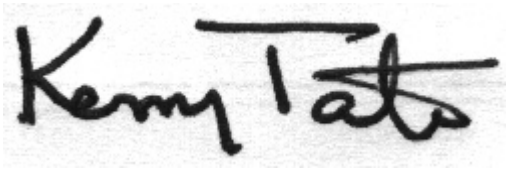
Date Certified: 15-APR-2021 10:46



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: 1.3E+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: Lake Placid @ Center **Collection Date/Time: 03/24/2021 12:00**

Field ID: G4SD0191 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233707	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P395496	
	EPA 300.0 Rev. 2.1	Chloride	15	A	mg Cl/L	P395723	
		Sulfate	17	A	mg SO4/L	P395724	
	SM 2120 B-2011	Color (true)	10		PCU	P395489	
	SM 2320 B-2011	Total Alkalinity	21		mg CaCO3/L	P395662	
	SM 2540 C-2011	TDS	77		mg/L	P396070	
	SM 2540 D-2011	TSS	4	I	mg/L	P396074	
	SM 4500 F-C-2011	Fluoride	0.048	I	mg F/L	P395665	
2233709	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P395913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P396062	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P395521	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P395730	
	SM 5310 B-2011	Organic Carbon	6.1		mg C/L	P395712	
2233711	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P395492	
2233724	EPA 8321B	2,4-D	0.0020	U	ug/L	P395359	
		Acesulfame K	0.10	U	ug/L	P395510	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	0.10	U	ug/L	P395510	
		Sucralose	0.034	I	ug/L	P395510	
		Acetaminophen	0.0080	U	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395510	
		Glufosinate	0.10	U	ug/L	P395510	
		Glyphosate	0.10	U	ug/L	P395510	
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	8.0E-04	U	ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.0E-04	U	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.0040	U	ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.013		ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	

Field ID: G4SD0191 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233724	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lake Francis **Collection Date/Time: 03/24/2021 10:05**

Field ID: G4SD0187 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233716	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P395496	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P395723	
		Sulfate	26		mg SO4/L	P395724	
	SM 2120 B-2011	Color (true)	13		PCU	P395489	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P395662	
	SM 2540 C-2011	TDS	103		mg/L	P396070	
	SM 2540 D-2011	TSS	4	I	mg/L	P396074	
	SM 4500 F-C-2011	Fluoride	0.053	I	mg F/L	P395665	
2233717	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P395913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P396062	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P395522	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P395730	
	SM 5310 B-2011	Organic Carbon	7.4		mg C/L	P395712	
2233718	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P395492	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lake June in Winter **Collection Date/Time: 03/24/2021 10:45**

Field ID: G4SD0186 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233708	EPA 180.1 Rev. 2.0	Turbidity	3.5	A	NTU	P395496	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P395723	
		Sulfate	26		mg SO4/L	P395724	
	SM 2120 B-2011	Color (true)	10		PCU	P395489	
	SM 2320 B-2011	Total Alkalinity	21		mg CaCO3/L	P395662	
	SM 2540 C-2011	TDS	105	A	mg/L	P396070	
	SM 2540 D-2011	TSS	6	I A	mg/L	P396074	
	SM 4500 F-C-2011	Fluoride	0.058	I	mg F/L	P395665	
2233710	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P395913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P396062	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P395521	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P395730	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P395712	
2233712	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P395492	
2233725	EPA 8321B	2,4-D	0.0042	I	ug/L	P395359	
		Acesulfame K	0.10	U	ug/L	P395510	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	0.10	U	ug/L	P395510	
		Sucralose	0.44		ug/L	P395510	
		Acetaminophen	0.0080	U	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395510	
		Glufosinate	0.10	U	ug/L	P395510	
		Glyphosate	0.10	U	ug/L	P395510	
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.0045		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.0E-04	U	ug/L	P395359	
		Clothianidin	0.011		ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.0040	U	ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.055		ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	

Field ID: G4SD0186 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233725	EPA 8321B	Thiamethoxam	0.011		ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: PlacidJuneCnl@LkeGrvsRd **Collection Date/Time: 03/24/2021 11:25**

Field ID: G4SD0209 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233713	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P395496	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P395723	
		Sulfate	20		mg SO4/L	P395724	
	SM 2120 B-2011	Color (true)	47		PCU	P395489	
	SM 2320 B-2011	Total Alkalinity	2.9		mg CaCO3/L	P395662	
	SM 2540 C-2011	TDS	97		mg/L	P396070	
	SM 2540 D-2011	TSS	2	U	mg/L	P396074	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P395665	
2233714	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P395913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P396062	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.0		mg N/L	P395522	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P395730	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P395712	
2233715	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P395492	

Ref. Method and Comment:
SM 2540 D-2011: 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: P395496

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395723

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395913

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P396062

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395521

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395522

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395730

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395492

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P395359

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	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
Mandestrobin	0.0020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P395510

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: SM 2120 B-2011
Batch ID: P395489

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P395662

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P396070

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P396074

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P395665

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395712

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: P395723

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395913

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P396062

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: P395521

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395522

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395730

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395492

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

Reference Method: EPA 8321B
Batch ID: P395359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	122		P	30 - 160
2,4,5-T	92.4		P	30 - 160
Acetaminophen	87.9		P	30 - 160
Acetamiprid	108		P	30 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P395359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Afidopyropen	81.9		P	30 - 160
Bentazon	59.0		P	30 - 160
Benzovindiflupyr	103		P	30 - 160
Carbamazepine	106		P	30 - 160
Clothianidin	121		P	30 - 160
Dinotefuran	96.3		P	30 - 160
Diuron	80.6		P	30 - 160
Fenuron	102		P	30 - 160
Fluridone	97.4		P	30 - 160
Hydrocodone	114		P	30 - 160
Ibuprofen	77.5		P	30 - 160
Imazapyr	87.4		P	30 - 160
Imidacloprid	118		P	30 - 160
Linuron	80.4		P	30 - 160
Mandestrobin	102		P	30 - 160
MCPP	113		P	30 - 160
Naproxen	68.8		P	30 - 160
Primidone	103		P	30 - 160
Pyraclostrobin	83.7		P	30 - 160
Thiamethoxam	125		P	30 - 160
Tolfenpyrad	52.6		P	30 - 160
Triclopyr	103		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P395510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	139		P	40 - 150
AMPA	115		P	40 - 150
Endothall	89.0		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	80.1		P	40 - 140
Sucralose	101		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P395489

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

Reference Method: SM 2320 B-2011
Batch ID: P395662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P395665

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	90 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P395712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233513	Chloride	102		P	90 - 110
2233707	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233513	Sulfate	102		P	90 - 110
2233707	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233710	Ammonia-N	96.4	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P396062

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233709	Kjeldahl Nitrogen	110	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233596	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233717	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233640	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233597	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P395359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233518	2,4-D	97.3	97.2	P/P	30 - 160
2233518	2,4,5-T	70.7	69.6	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P395359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233518	Acetaminophen	83.0	94.8	P/P	30 - 160
2233518	Acetamiprid	114	93.5	P/P	30 - 160
2233518	Afidopyropen	76.1	60.5	P/P	30 - 160
2233518	Bentazon	32.3	37.3	P/P	30 - 160
2233518	Benzovindiflupyr	94.4	93.3	P/P	30 - 160
2233518	Carbamazepine	87.3	90.1	P/P	30 - 160
2233518	Clothianidin	123	116	P/P	30 - 160
2233518	Dinotefuran	112	99.9	P/P	30 - 160
2233518	Diuron	53.8	59.2	P/P	30 - 160
2233518	Fenuron	81.8	86.5	P/P	30 - 160
2233518	Fluridone	83.7	82.1	P/P	30 - 160
2233518	Hydrocodone	121	116	P/P	30 - 160
2233518	Ibuprofen	68.8	70.6	P/P	30 - 160
2233518	Imazapyr	82.4	83.7	P/P	30 - 160
2233518	Imidacloprid	169	160	F/F	30 - 160
2233518	Linuron	65.7	65.5	P/P	30 - 160
2233518	Mandestrobin	90.7	89.2	P/P	30 - 160
2233518	MCPP	91.9	92.0	P/P	30 - 160
2233518	Naproxen	55.5	65.4	P/P	30 - 160
2233518	Primidone	95.7	102	P/P	30 - 160
2233518	Pyraclostrobin	87.0	87.9	P/P	30 - 160
2233518	Thiamethoxam	163	153	F/P	30 - 160
2233518	Tolfenpyrad	55.4	63.0	P/P	30 - 160
2233518	Triclopyr	75.5	80.6	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P395510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233336	Acesulfame K	198	211	F/F	40 - 150
2233336	AMPA	114	136	P/P	40 - 150
2233336	Endothall	80.8	77.0	P/P	40 - 150
2233336	Glufosinate	104	103	P/P	40 - 150
2233336	Glyphosate	63.7	67.4	P/P	40 - 140
2233336	Sucralose	97.9	99.4	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P395665

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233824	Fluoride	97.6	98.2	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P395712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233610	Organic Carbon	95.4	97.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233708	Turbidity	2.89	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233707	Chloride	0.237	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233707	Sulfate	0.109	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233710	Ammonia-N	0.950	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P396062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233709	Kjeldahl Nitrogen	5.90	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233596	NO2NO3-N	0.370	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233717	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233640	Total-P	0.0165	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233597	O-Phosphate-P	0.200	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P395359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233518	2,4-D	0.191	Spike	P	0 - 30
2233518	2,4,5-T	1.64	Spike	P	0 - 30
2233518	Acetaminophen	11.5	Spike	P	0 - 30
2233518	Acetamiprid	19.4	Spike	P	0 - 30
2233518	Afidopyropen	22.8	Spike	P	0 - 30
2233518	Bentazon	14.3	Spike	P	0 - 30
2233518	Benzovindiflupyr	1.16	Spike	P	0 - 30
2233518	Carbamazepine	3.20	Spike	P	0 - 30
2233518	Clothianidin	5.50	Spike	P	0 - 30
2233518	Dinotefuran	11.6	Spike	P	0 - 30
2233518	Diuron	9.59	Spike	P	0 - 30
2233518	Fenuron	5.63	Spike	P	0 - 30
2233518	Fluridone	1.94	Spike	P	0 - 30
2233518	Hydrocodone	4.41	Spike	P	0 - 30
2233518	Ibuprofen	2.54	Spike	P	0 - 30
2233518	Imazapyr	1.53	Spike	P	0 - 30
2233518	Imidacloprid	5.22	Spike	P	0 - 30
2233518	Linuron	0.364	Spike	P	0 - 30
2233518	Mandestrobin	1.66	Spike	P	0 - 30
2233518	MCPP	0.161	Spike	P	0 - 30
2233518	Naproxen	16.4	Spike	P	0 - 30
2233518	Primidone	6.09	Spike	P	0 - 30
2233518	Pyraclostrobin	0.979	Spike	P	0 - 30
2233518	Thiamethoxam	6.43	Spike	P	0 - 30
2233518	Tolfenpyrad	12.8	Spike	P	0 - 30
2233518	Triclopyr	6.59	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233336	Acesulfame K	6.12	Spike	P	0 - 30
2233336	AMPA	17.4	Spike	P	0 - 30
2233336	Endothall	4.83	Spike	P	0 - 30
2233336	Glufosinate	0.584	Spike	P	0 - 30
2233336	Glyphosate	5.70	Spike	P	0 - 30
2233336	Sucralose	1.49	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P395489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits

Quality Assurance Report
Precision

Reference Method: SM 2120 B-2011
Batch ID: P395489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233603	Color (true)	1.08	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P395662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233824	Total Alkalinity	0.962	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P396070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233708	TDS	3.81	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P395665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233824	Fluoride	0.469	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P395712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233610	Organic Carbon	1.27	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2233724
Field Sample ID: G4SD0191

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.3	P	30 - 160
EPA 8321B	Diuron-d6	81.4	P	30 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	40 - 160
EPA 8321B	Ibuprofen-d3	79.0	P	30 - 160
EPA 8321B	Primidone-d5	99.1	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2233725
Field Sample ID: G4SD0186

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	81.9	P	30 - 160
EPA 8321B	Endothall-d6	117	P	40 - 160
EPA 8321B	Endothall-d6	117	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	90.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	90.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	87.7	P	30 - 160
EPA 8321B	Primidone-d5	119	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B-2011
Run ID: A104271
Included Lab Sample IDs: 2233707, 2233708, 2233713, 2233716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	103	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A104273
Included Lab Sample IDs: 2233711, 2233712, 2233715, 2233718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A104275
Included Lab Sample IDs: 2233707, 2233708, 2233713, 2233716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A104290
Included Lab Sample IDs: 2233709, 2233710, 2233714, 2233717

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

Reference Method: EPA 8321B
Run ID: A104297
Included Lab Sample IDs: 2233724, 2233725

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.0	89.2	P/P	50 - 150
2,4,5-T	88.6	71.3	P/P	50 - 150
Acetaminophen	87.9	93.0	P/P	60 - 160
Acetamiprid	104	107	P/P	50 - 150
Afidopyropen	94.9	96.6	P/P	50 - 150
Bentazon	71.9	67.2	P/P	50 - 160
Benzovindiflupyr	112	117	P/P	50 - 160
Carbamazepine	104	107	P/P	60 - 150
Clothianidin	105	109	P/P	60 - 150
Dinotefuran	93.4	99.6	P/P	50 - 150
Diuron	106	103	P/P	60 - 160
Fenuron	96.8	98.1	P/P	60 - 150
Fluridone	111	112	P/P	60 - 160
Hydrocodone	109	124	P/P	60 - 150
Ibuprofen	71.5	92.9	P/P	50 - 160
Imazapyr	66.5	73.8	P/P	50 - 160
Imidacloprid	99.9	105	P/P	60 - 150
Linuron	95.8	99.5	P/P	60 - 150
Mandestrobin	105	115	P/P	50 - 150
MCPP	92.8	91.2	P/P	50 - 150
Naproxen	114	75.6	P/P	50 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A104297
Included Lab Sample IDs: 2233724, 2233725

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	99.5	95.8	P/P	60 - 150
Pyraclostrobin	110	111	P/P	60 - 150
Thiamethoxam	109	120	P/P	50 - 150
Tolfenpyrad	109	114	P/P	60 - 150
Triclopyr	81.6	88.0	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A104352
Included Lab Sample IDs: 2233724, 2233725

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	144	126	P/P	40 - 160
AMPA	115	115	P/P	40 - 160
Endothall	89.7	87.5	P/P	40 - 160
Glufosinate	120	120	P/P	40 - 160
Glyphosate	158	137	P/P	40 - 160

Reference Method: SM 2320 B-2011
Run ID: A104360
Included Lab Sample IDs: 2233707, 2233708, 2233713, 2233716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.0	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A104360
Included Lab Sample IDs: 2233707, 2233708, 2233713, 2233716

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

Reference Method: SM 5310 B-2011
Run ID: A104385
Included Lab Sample IDs: 2233709, 2233710, 2233714, 2233717

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.9	98.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A104389
Included Lab Sample IDs: 2233707, 2233708, 2233713, 2233716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	99.9	101	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110
Sulfate	99.7	100	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A104454
Included Lab Sample IDs: 2233709, 2233710, 2233714, 2233717

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A104465
Included Lab Sample IDs: 2233709, 2233710, 2233714, 2233717

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	98.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A104508
Included Lab Sample IDs: 2233724, 2233725

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.5	96.5	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A104575
Included Lab Sample IDs: 2233709, 2233710, 2233714, 2233717

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	102	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					2.89	
EPA 300.0 Rev. 2.1	Chloride	102	101	102		0.237	
	Sulfate	101	98.4	102		0.109	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	96.4	97.4			0.950
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	110	100			5.90
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103	103			0.370
	NO2NO3-N	104	104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	108	101	101			0.0165
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4	100	100			0.200
EPA 8321B	2,4-D	122	97.3	97.2			0.191
	2,4,5-T	92.4	70.7	69.6			1.64
	Acesulfame K	139	198	211			6.12
	Acetaminophen	87.9	83.0	94.8			11.5
	Acetamiprid	108	114	93.5			19.4
	Afidopyropen	81.9	76.1	60.5			22.8
	AMPA	115	114	136			17.4
	Bentazon	59.0	32.3	37.3			14.3
	Benzovindiflupyr	103	94.4	93.3			1.16
	Carbamazepine	106	87.3	90.1			3.20
	Clothianidin	121	123	116			5.50
	Dinotefuran	96.3	112	99.9			11.6
	Diuron	80.6	53.8	59.2			9.59
	Endothall	89.0	80.8	77.0			4.83
	Fenuron	102	81.8	86.5			5.63
	Fluridone	97.4	83.7	82.1			1.94
	Glufosinate	101	104	103			0.584
	Glyphosate	80.1	63.7	67.4			5.70
	Hydrocodone	114	121	116			4.41
	Ibuprofen	77.5	68.8	70.6			2.54
	Imazapyr	87.4	82.4	83.7			1.53
	Imidacloprid	118	169	160			5.22
	Linuron	80.4	65.7	65.5			0.364
	Mandestrobin	102	90.7	89.2			1.66
	MCPP	113	91.9	92.0			0.161
	Naproxen	68.8	55.5	65.4			16.4
	Primidone	103	95.7	102			6.09
	Pyraclostrobin	83.7	87.0	87.9			0.979
	Sucralose	101	97.9	99.4			1.49
	Thiamethoxam	125	163	153			6.43
	Tolfenpyrad	52.6	55.4	63.0			12.8
	Triclopyr	103	75.5	80.6			6.59
SM 2120 B-2011	Color (true)	101				1.08	
SM 2320 B-2011	Total Alkalinity	101				0.962	
SM 2540 C-2011	TDS					3.81	
SM 4500 F-C-2011	Fluoride	99.4	97.6	98.2			0.469
SM 5310 B-2011	Organic Carbon	95.4	95.4	97.4			1.27

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2233707, 2233708, 2233713, 2233716
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2233707, 2233708, 2233713, 2233716
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2233707, 2233708, 2233713, 2233716

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2233709, 2233710, 2233714, 2233717
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2233709, 2233710, 2233714, 2233717
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2233709, 2233710, 2233714, 2233717
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2233709, 2233710, 2233714, 2233717
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2233711, 2233712, 2233715, 2233718
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2233724, 2233725
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2233724, 2233725
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2233707, 2233708, 2233713, 2233716
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2233707, 2233708, 2233713, 2233716
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2233707, 2233708, 2233713, 2233716
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2233707, 2233708, 2233713, 2233716
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2233707, 2233708, 2233713, 2233716
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2233709, 2233710, 2233714, 2233717

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	03/25/2021			03/25/2021 16:43	Yen Ta	2233707, 2233708, 2233713, 2233716
EPA 300.0 Rev. 2.1	03/25/2021			03/29/2021 19:47	Lipi Saha	2233707
	03/25/2021			03/29/2021 22:49	Lipi Saha	2233708
	03/25/2021			03/29/2021 23:01	Lipi Saha	2233713
	03/25/2021			03/29/2021 23:13	Lipi Saha	2233716
EPA 350.1 Rev. 2.0	03/25/2021			04/03/2021 11:34	Ping Hua	2233710
	03/25/2021			04/03/2021 11:39	Ping Hua	2233714
	03/25/2021			04/03/2021 11:41	Ping Hua	2233717
	03/25/2021			04/03/2021 11:47	Ping Hua	2233709
EPA 351.2 Rev. 2.0	03/25/2021	04/07/2021 13:05	Benjamin T. Nordmann	04/08/2021 10:51	Virginia P. Brown	2233709
	03/25/2021	04/07/2021 13:05	Benjamin T. Nordmann	04/08/2021 10:56	Virginia P. Brown	2233710
	03/25/2021	04/07/2021 13:05	Benjamin T. Nordmann	04/08/2021 10:58	Virginia P. Brown	2233714
	03/25/2021	04/07/2021 13:05	Benjamin T. Nordmann	04/08/2021 10:59	Virginia P. Brown	2233717
EPA 353.2 Rev. 2.0	03/25/2021			03/26/2021 10:02	Beverly Y. Sanders	2233709
	03/25/2021			03/26/2021 10:03	Beverly Y. Sanders	2233710
	03/25/2021			03/26/2021 10:23	Beverly Y. Sanders	2233717
	03/25/2021			03/26/2021 10:43	Beverly Y. Sanders	2233714
EPA 365.1 Rev. 2.0	03/25/2021	03/31/2021 13:21	Yen Ta	04/02/2021 13:20	Shengyu Ding	2233709
	03/25/2021	03/31/2021 13:21	Yen Ta	04/02/2021 13:21	Shengyu Ding	2233710
	03/25/2021	03/31/2021 13:21	Yen Ta	04/02/2021 13:22	Shengyu Ding	2233714
	03/25/2021	03/31/2021 13:21	Yen Ta	04/02/2021 13:23	Shengyu Ding	2233717
EPA 365.1 Rev. 2.0 dissolved	03/25/2021			03/25/2021 15:35	Blanca Fach	2233711
	03/25/2021			03/25/2021 15:36	Blanca Fach	2233712
	03/25/2021			03/25/2021 15:37	Blanca Fach	2233715
	03/25/2021			03/25/2021 15:38	Blanca Fach	2233718
EPA 8321B	03/25/2021	03/26/2021 10:30	Rebecca Ware	03/26/2021 17:24	Rebecca Ware	2233724
	03/25/2021	03/26/2021 10:30	Rebecca Ware	03/26/2021 17:38	Rebecca Ware	2233725
	03/25/2021	03/26/2021 10:30	Rebecca Ware	04/05/2021 17:50	Rebecca Ware	2233724
	03/25/2021	03/26/2021 10:30	Rebecca Ware	04/05/2021 18:02	Rebecca Ware	2233725
	03/25/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 02:16	Juyoung Kim	2233724
	03/25/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 02:51	Juyoung Kim	2233725
SM 2120 B-2011	03/25/2021			03/25/2021 14:50	Benjamin T. Nordmann	2233707
	03/25/2021			03/25/2021 14:51	Benjamin T. Nordmann	2233708, 2233713
	03/25/2021			03/25/2021 14:52	Benjamin T. Nordmann	2233716
SM 2320 B-2011	03/25/2021			03/26/2021 20:39	Dale L. Simmons	2233707
	03/25/2021			03/26/2021 20:52	Dale L. Simmons	2233708
	03/25/2021			03/26/2021 21:01	Dale L. Simmons	2233713
	03/25/2021			03/26/2021 21:14	Dale L. Simmons	2233716
SM 2540 C-2011	03/25/2021			03/30/2021 14:36	Yijie Li	2233707, 2233708, 2233713, 2233716
SM 2540 D-2011	03/25/2021			03/30/2021 14:36	Yijie Li	2233707, 2233708, 2233713, 2233716

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-2011	03/25/2021			03/26/2021 20:39	Dale L. Simmons	2233707
	03/25/2021			03/26/2021 20:52	Dale L. Simmons	2233708
	03/25/2021			03/26/2021 21:01	Dale L. Simmons	2233713
	03/25/2021			03/26/2021 21:14	Dale L. Simmons	2233716
SM 5310 B-2011	03/25/2021			03/31/2021 04:17	Madeline Gruver	2233709
	03/25/2021			03/31/2021 04:29	Madeline Gruver	2233710
	03/25/2021			03/31/2021 04:46	Madeline Gruver	2233714
	03/25/2021			03/31/2021 04:57	Madeline Gruver	2233717