

Chemical Analysis Report

SE-DIST-2020-01-10-01

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

Event Description: **SMP-Central**
Request ID: **RQ-2020-01-06-33**
Customer: **SE-DIST**
Project ID: **SMP**

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

Date Certified: 28-JAN-2020 08:38

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, 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: Gore Branch @ 724

Collection Date/Time: 01/09/2020 13:10

Field ID: G4SE0130

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148554	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P376938	
	EPA 300.0 Rev. 2.1	Chloride	57		mg Cl/L	P377141	
		Sulfate	27		mg SO4/L	P377142	
		Color (true)	140		PCU	P376941	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P377393	
	SM 2540 C-2011	TDS	270		mg/L	P377412	
	SM 2540 D-2011	TSS	2	I	mg/L	P377203	
	SM 4500 F-C-2011	Fluoride	0.16		mg F/L	P377395	
2148555	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P377169	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P377274	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P377216	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P377292	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P377258	
2148556	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.077		mg P/L	P377279	
2148571	SM 2340B	Hardness	131		mg/L	P377073	

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: Padgett Branch @ 441

Collection Date/Time: 01/09/2020 13:55

Field ID: G3SE0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148542	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P376938	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P377141	
		Sulfate	11		mg SO4/L	P377142	
	SM 2120 B-2011	Color (true)	340		PCU	P376941	
	SM 2320 B-2011	Total Alkalinity	23		mg CaCO3/L	P377393	
	SM 2540 C-2011	TDS	155		mg/L	P377412	
	SM 2540 D-2011	TSS	3	I	mg/L	P377203	
	SM 4500 F-C-2011	Fluoride	0.059	I	mg F/L	P377395	
2148543	EPA 350.1 Rev. 2.0	Ammonia-N	0.067		mg N/L	P377168	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P377274	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P377216	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P377292	
	SM 5310 B-2011	Organic Carbon	41		mg C/L	P377258	
2148544	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.16		mg P/L	P377279	

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: Sweetwater Branch @ 441

Collection Date/Time: 01/09/2020 14:10

Field ID: G3SE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148551	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P376938	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P377141	
		Sulfate	6.1		mg SO4/L	P377142	
	SM 2120 B-2011	Color (true)	150		PCU	P376941	
	SM 2320 B-2011	Total Alkalinity	16		mg CaCO3/L	P377393	
	SM 2540 C-2011	TDS	116		mg/L	P377412	
	SM 2540 D-2011	TSS	3	I	mg/L	P377203	
	SM 4500 F-C-2011	Fluoride	0.056	I	mg F/L	P377395	
2148552	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P377169	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95	J	mg N/L	P377274	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P377216	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P377292	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P377258	
2148553	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P377279	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Fort Drum Creek @ 441

Collection Date/Time: 01/09/2020 14:30

Field ID: G3SE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148545	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P376938	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P377141	
		Sulfate	8.2		mg SO4/L	P377142	
	SM 2120 B-2011	Color (true)	190		PCU	P376941	
	SM 2320 B-2011	Total Alkalinity	48		mg CaCO3/L	P377393	
	SM 2540 C-2011	TDS	168		mg/L	P377412	
	SM 2540 D-2011	TSS	3	I	mg/L	P377203	
	SM 4500 F-C-2011	Fluoride	0.083	I	mg F/L	P377395	
2148547	EPA 350.1 Rev. 2.0	Ammonia-N	0.045		mg N/L	P377169	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P377274	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P377216	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P377292	
	SM 5310 B-2011	Organic Carbon	29		mg C/L	P377258	
2148549	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.093		mg P/L	P377279	
2148567	EPA 8321B	2,4-D	0.0020	U	ug/L	P377040	
		Acesulfame K**	0.10	U	ug/L	P377170	
		AMPA**	0.15	I	ug/L	P377170	
		Sucralose**	0.013	I	ug/L	P377170	
		Acetaminophen**	0.0080	U	ug/L	P377040	MS
		Acetamiprid**	0.0020	U	ug/L	P377040	
		Endothall**	0.25	U	ug/L	P377170	
		Glufosinate**	0.10	U	ug/L	P377170	
		Glyphosate**	0.22	I	ug/L	P377170	
		Afidopyropen**	0.0020	UJ	ug/L	P377040	
		Bentazon	0.0025	I	ug/L	P377040	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377040	
		Carbamazepine**	8.0E-04	U	ug/L	P377040	
		Clothianidin**	0.0020	U	ug/L	P377040	
		Dinotefuran**	0.0020	U	ug/L	P377040	MS
		Diuron	0.0020	U	ug/L	P377040	
		Fenuron	0.016	U	ug/L	P377040	
		Fluridone**	9.7E-04	I	ug/L	P377040	
		Imazapyr**	0.0040	U	ug/L	P377040	
		Hydrocodone**	0.0020	U	ug/L	P377040	MS
		Ibuprofen**	0.020	U	ug/L	P377040	
		Imidacloprid	0.012		ug/L	P377040	MS
		Linuron	0.0040	U	ug/L	P377040	
		Mandestrobin**	0.0020	UJ	ug/L	P377040	
		MCP	0.0020	U	ug/L	P377040	
		Naproxen**	0.0080	U	ug/L	P377040	
		Primidone**	0.0040	U	ug/L	P377040	
		Pyraclostrobin**	0.0020	U	ug/L	P377040	
		Thiamethoxam**	0.0020	U	ug/L	P377040	MS

Field ID: G3SE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148567	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377040	
		Triclopyr**	0.0040	U	ug/L	P377040	
2148569	SM 2340B	Hardness	72.7		mg/L	P377073	

Ref. Method and Comment:

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Fort Drum Creek @ 441

Collection Date/Time: 01/09/2020 14:35

Field ID: G3SE0024_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148546	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P376938	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P377141	
		Sulfate	8.0		mg SO4/L	P377142	
	SM 2120 B-2011	Color (true)	190		PCU	P376941	
	SM 2320 B-2011	Total Alkalinity	48		mg CaCO3/L	P377393	
	SM 2540 C-2011	TDS	172		mg/L	P377412	
	SM 2540 D-2011	TSS	2	I	mg/L	P377203	
	SM 4500 F-C-2011	Fluoride	0.083	I	mg F/L	P377395	
2148548	EPA 350.1 Rev. 2.0	Ammonia-N	0.043		mg N/L	P377169	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P377274	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P377216	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P377292	
	SM 5310 B-2011	Organic Carbon	29		mg C/L	P377258	
2148550	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.094		mg P/L	P377279	
2148568	EPA 8321B	2,4-D	0.0020	U	ug/L	P377040	
		Acesulfame K**	0.10	U	ug/L	P377170	
		AMPA**	0.14	I	ug/L	P377170	
		Sucralose**	0.016	I	ug/L	P377170	
		Acetaminophen**	0.0080	U	ug/L	P377040	MS
		Acetamiprid**	0.0020	U	ug/L	P377040	
		Endothall**	0.25	U	ug/L	P377170	
		Glufosinate**	0.10	U	ug/L	P377170	
		Glyphosate**	0.24	I	ug/L	P377170	
		Afidopyropen**	0.0020	UJ	ug/L	P377040	
		Bentazon	0.0024	I	ug/L	P377040	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377040	
		Carbamazepine**	8.0E-04	U	ug/L	P377040	
		Clothianidin**	0.0020	U	ug/L	P377040	
		Dinotefuran**	0.0020	U	ug/L	P377040	MS
		Diuron	0.0020	U	ug/L	P377040	
		Fenuron	0.016	U	ug/L	P377040	
		Fluridone**	9.5E-04	I	ug/L	P377040	
		Imazapyr**	0.0040	U	ug/L	P377040	
		Hydrocodone**	0.0020	U	ug/L	P377040	MS
		Ibuprofen**	0.020	U	ug/L	P377040	
		Imidacloprid	0.011		ug/L	P377040	MS
		Linuron	0.0040	U	ug/L	P377040	
		Mandestrobin**	0.0020	UJ	ug/L	P377040	
		MCP	0.0020	U	ug/L	P377040	
		Naproxen**	0.0080	U	ug/L	P377040	
		Primidone**	0.0040	U	ug/L	P377040	
		Pyraclostrobin**	0.0020	U	ug/L	P377040	
		Thiamethoxam**	0.0020	U	ug/L	P377040	MS

Field ID: G3SE0024_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2148568	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377040	
		Triclopyr**	0.0040	U	ug/L	P377040	
2148570	SM 2340B	Hardness	72.7		mg/L	P377073	

Ref. Method and Comment:

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376938

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377141

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377142

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377168

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377169

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377274

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377216

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377292

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377279

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: P377040

Component	Result	Code	Units
2,4-D	0.0020	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: P377170

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: P376941

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
 Batch ID: P377393

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: P377412

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377203

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377395

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377258

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: P377141

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377142

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377168

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377169

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377274

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377292

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377279

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

Reference Method: EPA 8321B
Batch ID: P377040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	152		P	40 - 160
Acetaminophen	135		P	30 - 160
Acetamiprid	105		P	40 - 160
Afidopyropen	103		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	87.8		P	30 - 160
Benzovindiflupyr	83.1		P	40 - 160
Carbamazepine	123		P	40 - 160
Clothianidin	90.7		P	40 - 160
Dinotefuran	119		P	40 - 160
Diuron	104		P	40 - 160
Fenuron	122		P	40 - 160
Fluridone	99.1		P	40 - 160
Hydrocodone	129		P	40 - 160
Ibuprofen	84.4		P	30 - 160
Imazapyr	120		P	40 - 160
Imidacloprid	110		P	40 - 160
Linuron	86.0		P	40 - 160
Mandestrobin	92.2		P	40 - 160
MCPP	126		P	40 - 160
Naproxen	91.2		P	40 - 160
Primidone	111		P	40 - 160
Pyraclostrobin	87.3		P	30 - 160
Thiamethoxam	123		P	40 - 160
Tolfenpyrad	58.0		P	40 - 160
Triclopyr	117		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P377170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	85.5		P	40 - 150
Glufosinate	99.1		P	40 - 150
Glyphosate	104		P	40 - 140
Sucralose	90.9		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P376941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.9		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P377393

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P377395

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 103

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P377258

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377141

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148510	Chloride	99.9		P	90 - 110
2148578	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377142

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148510	Sulfate	99.9		P	90 - 110
2148578	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148511	Ammonia-N	108	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377169

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148547	Ammonia-N	102	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148552	Kjeldahl Nitrogen	114	112	F/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148526	NO2NO3-N	97.4	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148543	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148529	O-Phosphate-P	96.7	97.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P377040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148727	2,4-D	112	112	P/P	40 - 160
2148727	Acetaminophen	142	164	P/F	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P377040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148727	Acetamiprid	106	92.2	P/P	40 - 160
2148727	Afidopyropen	96.1	97.7	P/P	40 - 160
2148727	Benzovindiflupyr	81.4	90.5	P/P	40 - 160
2148727	Carbamazepine	92.2	109	P/P	40 - 160
2148727	Clothianidin	118	143	P/P	40 - 160
2148727	Dinotefuran	209	244	F/F	40 - 160
2148727	Diuron	81.5	94.1	P/P	40 - 160
2148727	Fenuron	118	132	P/P	40 - 160
2148727	Fluridone	86.8	95.5	P/P	40 - 160
2148727	Hydrocodone	144	172	P/F	40 - 160
2148727	Ibuprofen	79.5	87.5	P/P	30 - 160
2148727	Imazapyr	128	154	P/P	40 - 160
2148727	Imidacloprid	173	204	F/F	40 - 160
2148727	Linuron	81.2	86.1	P/P	40 - 160
2148727	Mandestrobin	87.7	99.3	P/P	40 - 160
2148727	MCCP	112	122	P/P	40 - 160
2148727	Naproxen	83.6	90.0	P/P	40 - 160
2148727	Primidone	115	132	P/P	40 - 160
2148727	Pyraclostrobin	86.2	97.6	P/P	30 - 160
2148727	Thiamethoxam	189	205	F/F	40 - 160
2148727	Tolfenpyrad	53.3	58.4	P/P	40 - 160
2148727	Triclopyr	90.3	117	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P377170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148567	Acesulfame K	57.7	59.1	P/P	40 - 150
2148567	AMPA	88.0	87.8	P/P	40 - 150
2148567	Endothall	115	125	P/P	40 - 150
2148567	Glufosinate	83.8	76.0	P/P	40 - 150
2148567	Glyphosate	76.8	84.8	P/P	40 - 140
2148567	Sucralose	96.1	97.0	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P377395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148673	Fluoride	96.9	96.3	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P377258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148675	Organic Carbon	97.7	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P376938

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148524	Turbidity	5.83	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148510	Chloride	0.454	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377142

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148510	Sulfate	0.541	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148511	Ammonia-N	0.926	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377169

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148547	Ammonia-N	2.98	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148552	Kjeldahl Nitrogen	0.966	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148526	NO2NO3-N	0.416	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148543	Total-P	0.718	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148529	O-Phosphate-P	0.869	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P377040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148727	2,4-D	0.105	Spike	P	0 - 30
2148727	Acetaminophen	14.0	Spike	P	0 - 30
2148727	Acetamiprid	14.2	Spike	P	0 - 30
2148727	Afidopyropen	1.65	Spike	P	0 - 30
2148727	Bentazon	0.606	Spike	P	0 - 30
2148727	Benzovindiflupyr	10.7	Spike	P	0 - 30
2148727	Carbamazepine	15.6	Spike	P	0 - 30
2148727	Clothianidin	19.0	Spike	P	0 - 30
2148727	Dinotefuran	11.4	Spike	P	0 - 30
2148727	Diuron	14.3	Spike	P	0 - 30
2148727	Fenuron	10.8	Spike	P	0 - 30
2148727	Fluridone	9.19	Spike	P	0 - 30
2148727	Hydrocodone	17.9	Spike	P	0 - 30
2148727	Ibuprofen	9.62	Spike	P	0 - 30
2148727	Imazapyr	11.3	Spike	P	0 - 30
2148727	Imidacloprid	15.8	Spike	P	0 - 30
2148727	Linuron	5.87	Spike	P	0 - 30
2148727	Mandestrobin	12.4	Spike	P	0 - 30
2148727	MCP	8.65	Spike	P	0 - 30
2148727	Naproxen	7.37	Spike	P	0 - 30
2148727	Primidone	13.1	Spike	P	0 - 30
2148727	Pyraclostrobin	12.5	Spike	P	0 - 30
2148727	Thiamethoxam	7.76	Spike	P	0 - 30
2148727	Tolfenpyrad	9.10	Spike	P	0 - 30
2148727	Triclopyr	25.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148567	Acesulfame K	2.53	Spike	P	0 - 30
2148567	AMPA	0.188	Spike	P	0 - 30
2148567	Endothall	8.10	Spike	P	0 - 30
2148567	Glufosinate	9.77	Spike	P	0 - 30
2148567	Glyphosate	7.79	Spike	P	0 - 30
2148567	Sucralose	0.884	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P376941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148525	Color (true)	1.06	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P377393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148673	Total Alkalinity	0.594	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P377412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148525	TDS	2.92	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P377395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148673	Fluoride	0.477	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P377258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148675	Organic Carbon	0.356	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2148567
Field Sample ID: G3SE0024

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	148	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.2	P	30 - 160
EPA 8321B	Diuron-d6	76.4	P	30 - 160
EPA 8321B	Endothall-d6	141	P	30 - 160
EPA 8321B	Endothall-d6	141	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.1	P	30 - 160
EPA 8321B	Primidone-d5	98.4	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160

Lab Sample ID: 2148568
Field Sample ID: G3SE0024_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	141	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.6	P	30 - 160
EPA 8321B	Diuron-d6	77.7	P	30 - 160
EPA 8321B	Endothall-d6	158	P	30 - 160
EPA 8321B	Endothall-d6	158	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.9	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A96815

Included Lab Sample IDs: 2148542, 2148545, 2148546, 2148551, 2148554

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A96816

Included Lab Sample IDs: 2148542, 2148545, 2148546, 2148551, 2148554

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	85 - 115
Color (true)	101	102	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96853

Included Lab Sample IDs: 2148542, 2148545, 2148546, 2148551, 2148554

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A96895

Included Lab Sample IDs: 2148543, 2148547, 2148548, 2148552, 2148555

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96897

Included Lab Sample IDs: 2148543, 2148547, 2148548, 2148552, 2148555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	103	P/P	90 - 110
Ammonia-N	103	98.2	P/P	90 - 110
Ammonia-N	103	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A96933

Included Lab Sample IDs: 2148543, 2148547, 2148548, 2148552, 2148555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	105	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96937

Included Lab Sample IDs: 2148567, 2148568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.3	111	P/P	50 - 150
Acetaminophen	86.0	80.7	P/P	60 - 160
Acetamiprid	107	119	P/P	50 - 150
Afidopyropen	106	119	P/P	50 - 150
Bentazon	114	113	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A96937

Included Lab Sample IDs: 2148567, 2148568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Benzovindiflupyr	104	107	P/P	50 - 150
Carbamazepine	110	110	P/P	60 - 150
Clothianidin	106	109	P/P	60 - 150
Dinotefuran	116	127	P/P	50 - 150
Diuron	114	94.0	P/P	60 - 150
Fenuron	95.2	97.5	P/P	60 - 150
Fluridone	105	112	P/P	60 - 160
Hydrocodone	120	120	P/P	60 - 150
Ibuprofen	85.2	91.4	P/P	50 - 160
Imazapyr	73.1	76.6	P/P	50 - 150
Imidacloprid	102	101	P/P	60 - 150
Linuron	104	105	P/P	60 - 150
Mandestrobin	108	109	P/P	50 - 150
MCPP	98.0	99.5	P/P	50 - 150
Naproxen	90.0	109	P/P	50 - 160
Primidone	121	122	P/P	60 - 150
Pyraclostrobin	102	104	P/P	60 - 150
Thiamethoxam	116	123	P/P	50 - 150
Tolfenpyrad	98.0	95.3	P/P	60 - 150
Triclopyr	98.1	90.3	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A96938

Included Lab Sample IDs: 2148544, 2148549, 2148550, 2148553, 2148556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A96984

Included Lab Sample IDs: 2148543, 2148547, 2148548, 2148552, 2148555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	103	P/P	90 - 110
Kjeldahl Nitrogen	107	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A96987

Included Lab Sample IDs: 2148542, 2148545, 2148546, 2148551, 2148554

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	105	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A96987

Included Lab Sample IDs: 2148542, 2148545, 2148546, 2148551, 2148554

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A96999

Included Lab Sample IDs: 2148567, 2148568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	96.8	94.9	P/P	60 - 160
Glufosinate	89.5	86.9	P/P	60 - 160
Glyphosate	85.0	85.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97000

Included Lab Sample IDs: 2148567, 2148568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	115	115	P/P	60 - 160
Endothall	112	89.1	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97048

Included Lab Sample IDs: 2148543, 2148547, 2148548, 2148552, 2148555

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

Reference Method: EPA 8321B

Run ID: A97109

Included Lab Sample IDs: 2148567, 2148568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.7	94.2	P/P	60 - 160

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					5.83	
EPA 300.0 Rev. 2.1	Chloride	99.2	99.9	101		0.454	
	Sulfate	99.5	99.9	100		0.541	
EPA 350.1 Rev. 2.0	Ammonia-N	102	108	106			0.926
	Ammonia-N	105	102	108			2.98
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	114	112			0.966
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	97.4	97.8			0.416
EPA 365.1 Rev. 2.0	Total-P	103	103	102			0.718
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	96.7	97.7			0.869
EPA 8321B	2,4-D	152	112	112			0.105
	Acesulfame K	103	57.7	59.1			2.53
	Acetaminophen	135	142	164			14.0
	Acetamiprid	105	106	92.2			14.2
	Afidopyropen	103	96.1	97.7			1.65
	AMPA	96.4	88.0	87.8			0.188
	Bentazon	87.8					0.606
	Benzovindiflupyr	83.1	81.4	90.5			10.7
	Carbamazepine	123	92.2	109			15.6
	Clothianidin	90.7	118	143			19.0
	Dinotefuran	119	209	244			11.4
	Diuron	104	81.5	94.1			14.3
	Endothall	85.5	115	125			8.10
	Fenuron	122	118	132			10.8
	Fluridone	99.1	86.8	95.5			9.19
	Glufosinate	99.1	83.8	76.0			9.77
	Glyphosate	104	76.8	84.8			7.79
	Hydrocodone	129	144	172			17.9
	Ibuprofen	84.4	79.5	87.5			9.62
	Imazapyr	120	128	154			11.3
	Imidacloprid	110	173	204			15.8
	Linuron	86.0	81.2	86.1			5.87
	Mandestrobin	92.2	87.7	99.3			12.4
	MCPP	126	112	122			8.65
	Naproxen	91.2	83.6	90.0			7.37
	Primidone	111	115	132			13.1
	Pyraclostrobin	87.3	86.2	97.6			12.5
	Sucralose	90.9	96.1	97.0			0.884
	Thiamethoxam	123	189	205			7.76
	Tolfenpyrad	58.0	53.3	58.4			9.10
	Triclopyr	117	90.3	117			25.6
SM 2120 B-2011	Color (true)	98.9				1.06	
SM 2320 B-2011	Total Alkalinity	105				0.594	
SM 2540 C-2011	TDS					2.92	
SM 4500 F-C-2011	Fluoride	96.7	96.9	96.3			0.477
SM 5310 B-2011	Organic Carbon	97.8	97.7	98.2			0.356

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2148542, 2148545, 2148546, 2148551, 2148554
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2148542, 2148545, 2148546, 2148551, 2148554

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2148542, 2148545, 2148546, 2148551, 2148554
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2148543, 2148547, 2148548, 2148552, 2148555
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2148543, 2148547, 2148548, 2148552, 2148555
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2148543, 2148547, 2148548, 2148552, 2148555
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2148543, 2148547, 2148548, 2148552, 2148555
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2148544, 2148549, 2148550, 2148553, 2148556
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2148567, 2148568
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2148567, 2148568
SM 2120 B-2011 / E31780	True Color measured at 450 nm	2148542, 2148545, 2148546, 2148551, 2148554
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2148542, 2148545, 2148546, 2148551, 2148554
SM 2340B / E31780	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2148569, 2148570, 2148571
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2148542, 2148545, 2148546, 2148551, 2148554
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2148542, 2148545, 2148546, 2148551, 2148554
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2148542, 2148545, 2148546, 2148551, 2148554
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2148543, 2148547, 2148548, 2148552, 2148555

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	01/10/2020			01/10/2020 16:48	Yen Ta	2148542, 2148545, 2148546, 2148551, 2148554
EPA 300.0 Rev. 2.1	01/10/2020			01/14/2020 17:29	Lipi Saha	2148542
	01/10/2020			01/14/2020 17:41	Lipi Saha	2148545
	01/10/2020			01/14/2020 17:53	Lipi Saha	2148546
	01/10/2020			01/14/2020 18:05	Lipi Saha	2148551
EPA 350.1 Rev. 2.0	01/10/2020			01/14/2020 18:17	Lipi Saha	2148554
	01/10/2020			01/14/2020 14:01	Ping Hua	2148543
	01/10/2020			01/14/2020 14:15	Ping Hua	2148547
	01/10/2020			01/14/2020 14:30	Ping Hua	2148548
	01/10/2020			01/14/2020 14:31	Ping Hua	2148552
EPA 351.2 Rev. 2.0	01/10/2020			01/14/2020 14:33	Ping Hua	2148555
	01/10/2020	01/16/2020 13:40	Jhamieka S. Greenwood	01/17/2020 18:17	Virginia P. Brown	2148543
	01/10/2020	01/16/2020 13:40	Jhamieka S. Greenwood	01/17/2020 18:19	Virginia P. Brown	2148547
	01/10/2020	01/16/2020 13:40	Jhamieka S. Greenwood	01/17/2020 18:20	Virginia P. Brown	2148548
	01/10/2020	01/16/2020 13:40	Jhamieka S. Greenwood	01/17/2020 18:22	Virginia P. Brown	2148552
EPA 353.2 Rev. 2.0	01/10/2020	01/16/2020 13:40	Jhamieka S. Greenwood	01/17/2020 18:29	Virginia P. Brown	2148555
	01/10/2020			01/15/2020 09:41	Beverly Y. Sanders	2148543
	01/10/2020			01/15/2020 09:43	Beverly Y. Sanders	2148547
	01/10/2020			01/15/2020 09:44	Beverly Y. Sanders	2148548
	01/10/2020			01/15/2020 09:45	Beverly Y. Sanders	2148552
EPA 365.1 Rev. 2.0	01/10/2020			01/15/2020 09:46	Beverly Y. Sanders	2148555
	01/10/2020	01/16/2020 15:07	Yen Ta	01/21/2020 15:17	Benjamin T. Nordmann	2148543
	01/10/2020	01/16/2020 15:07	Yen Ta	01/21/2020 15:20	Benjamin T. Nordmann	2148547
	01/10/2020	01/16/2020 15:07	Yen Ta	01/21/2020 15:21	Benjamin T. Nordmann	2148548
	01/10/2020	01/16/2020 15:07	Yen Ta	01/21/2020 15:22	Benjamin T. Nordmann	2148552
EPA 365.1 Rev. 2.0 dissolved	01/10/2020	01/16/2020 15:07	Yen Ta	01/21/2020 15:25	Benjamin T. Nordmann	2148555
	01/10/2020			01/10/2020 15:10	Carlos Miranda	2148544
	01/10/2020			01/10/2020 15:11	Carlos Miranda	2148549
	01/10/2020			01/10/2020 15:12	Carlos Miranda	2148550, 2148553
EPA 8321B	01/10/2020			01/10/2020 15:13	Carlos Miranda	2148556
	01/10/2020	01/15/2020 10:00	Hoor Shaik	01/16/2020 00:05	Juyoung Kim	2148567
	01/10/2020	01/15/2020 10:00	Hoor Shaik	01/16/2020 00:39	Juyoung Kim	2148568
	01/10/2020	01/15/2020 14:30	Rebecca Ware	01/15/2020 18:26	Rebecca Ware	2148567
	01/10/2020	01/15/2020 14:30	Rebecca Ware	01/16/2020 11:42	Rebecca Ware	2148567
	01/10/2020	01/15/2020 14:30	Rebecca Ware	01/23/2020 13:14	Rebecca Ware	2148567
	01/10/2020	01/15/2020 16:00	Rebecca Ware	01/15/2020 18:39	Rebecca Ware	2148568
	01/10/2020	01/15/2020 16:00	Rebecca Ware	01/16/2020 11:52	Rebecca Ware	2148568
	01/10/2020	01/15/2020 16:00	Rebecca Ware	01/23/2020 13:25	Rebecca Ware	2148568
SM 2120 B-2011	01/10/2020			01/10/2020 16:51	Madeline Funaro	2148554

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B-2011	01/10/2020			01/10/2020 17:19	Madeline Funaro	2148542, 2148545
	01/10/2020			01/10/2020 17:20	Madeline Funaro	2148546
	01/10/2020			01/10/2020 17:21	Madeline Funaro	2148551
SM 2320 B-2011	01/10/2020			01/16/2020 00:01	Dale L. Simmons	2148542
	01/10/2020			01/16/2020 00:13	Dale L. Simmons	2148545
	01/10/2020			01/16/2020 00:26	Dale L. Simmons	2148546
	01/10/2020			01/16/2020 00:38	Dale L. Simmons	2148551
	01/10/2020			01/16/2020 00:51	Dale L. Simmons	2148554
SM 2340B	01/10/2020			01/15/2020 17:16	Betina Topolski	2148569
	01/10/2020			01/15/2020 17:24	Betina Topolski	2148570
	01/10/2020			01/15/2020 17:32	Betina Topolski	2148571
SM 2540 C-2011	01/10/2020			01/14/2020 17:25	Yijie Li	2148542, 2148545, 2148546, 2148551, 2148554
SM 2540 D-2011	01/10/2020			01/14/2020 17:25	Yijie Li	2148542, 2148545, 2148546, 2148551, 2148554
SM 4500 F-C-2011	01/10/2020			01/16/2020 00:01	Dale L. Simmons	2148542
	01/10/2020			01/16/2020 00:13	Dale L. Simmons	2148545
	01/10/2020			01/16/2020 00:26	Dale L. Simmons	2148546
	01/10/2020			01/16/2020 00:38	Dale L. Simmons	2148551
	01/10/2020			01/16/2020 00:51	Dale L. Simmons	2148554
SM 5310 B-2011	01/10/2020			01/15/2020 20:19	Madeline Funaro	2148543
	01/10/2020			01/15/2020 20:32	Madeline Funaro	2148547
	01/10/2020			01/15/2020 20:45	Madeline Funaro	2148548
	01/10/2020			01/15/2020 20:59	Madeline Funaro	2148552
	01/10/2020			01/15/2020 21:12	Madeline Funaro	2148555