

Chemical Analysis Report

SO-DIST-2020-06-10-01

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

Event Description: **2020 Continuous Monitoring**

Request ID: **RQ-2020-06-01-20**

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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Certified by: Liang Lin, Environmental Administrator

Date Certified: 26-JUN-2020 10:38

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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: LittleAlligator@Midway

Collection Date/Time: 06/09/2020 09:15

Field ID: G3SD0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2175516	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P383044	
	EPA 300.0 Rev. 2.1	Bromide	29		mg Br/L	P383319	
	SM 2320 B-2011	Total Alkalinity	108		mg CaCO3/L	P383114	
	SM 2540 D-2011	TSS	4	I	mg/L	P383451	
	SM 4500 F-C-2011	Fluoride	0.68		mg F/L	P383306	
2175517	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P383175	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P383264	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P383253	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P383227	
	SM 5310 B-2011	Organic Carbon	9.2		mg C/L	P383119	
2175518	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.22		mg P/L	P383052	
2175533	EPA 200.7 Rev. 4.4	Iron	260	I	ug/L	P383105	
		Manganese	15		ug/L	P383105	
		Zinc	15	U	ug/L	P383105	
	EPA 200.8 Rev. 5.4	Aluminum	31	I	ug/L	P383105	
		Antimony	0.31	I	ug/L	P383105	
		Arsenic	3.44		ug/L	P383105	
		Cadmium	0.080	U	ug/L	P383105	
		Chromium	1.6	U	ug/L	P383105	
		Copper	1.6	U	ug/L	P383105	
		Lead	0.80	U	ug/L	P383105	
		Nickel	2.0	U	ug/L	P383105	
		Selenium	0.80	U	ug/L	P383105	
		Silver	0.040	U	ug/L	P383105	
		Thallium	1.0	U	ug/L	P383105	
	SM 2340B	Hardness	2.74E+03		mg/L	P383105	

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: Apollo Waterway @ Bend

Collection Date/Time: 06/09/2020 10:25

Field ID: G3SD0069

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2175519	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P383044	
	EPA 300.0 Rev. 2.1	Bromide	7.3		mg Br/L	P383319	
	SM 2320 B-2011	Total Alkalinity	75		mg CaCO3/L	P383113	
	SM 2540 D-2011	TSS	3	I	mg/L	P383449	
	SM 4500 F-C-2011	Fluoride	0.38		mg F/L	P383116	
2175520	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P383175	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P383264	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.029		mg N/L	P383253	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P383227	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P383118	
2175521	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P383052	

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: RockCreek@EisenhowerDr

Collection Date/Time: 06/09/2020 11:00

Field ID: G3SD0070

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2175522	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P383044	
	EPA 300.0 Rev. 2.1	Bromide	5.1		mg Br/L	P383319	
	SM 2320 B-2011	Total Alkalinity	72		mg CaCO3/L	P383114	
	SM 2540 D-2011	TSS	3	IA	mg/L	P383450	
	SM 4500 F-C-2011	Fluoride	0.32		mg F/L	P383251	
2175523	EPA 350.1 Rev. 2.0	Ammonia-N	0.055		mg N/L	P383175	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P383264	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P383253	
	EPA 365.1 Rev. 2.0	Total-P	0.23		mg P/L	P383227	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P383118	
2175524	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P383052	
2175532	EPA 8321B	Acesulfame K**	1.0	U	ug/L	P383003	
		2,4-D	0.026		ug/L	P383083	
		AMPA**	0.10	U	ug/L	P383003	
		Sucralose**	0.24		ug/L	P383003	
		Acetaminophen**	0.0080	U	ug/L	P383083	
		Endothall**	2.5	U	ug/L	P383003	
		Acetamiprid**	0.0020	U	ug/L	P383083	
		Glufosinate**	0.10	U	ug/L	P383003	
		Glyphosate**	0.55		ug/L	P383003	
		Afidopyropen**	0.0020	U	ug/L	P383083	
		Bentazon	0.0078		ug/L	P383083	
		Benzovindiflupyr**	0.0020	U	ug/L	P383083	
		Carbamazepine**	8.0E-04	U	ug/L	P383083	
		Clothianidin**	0.014		ug/L	P383083	
		Dinotefuran**	0.024		ug/L	P383083	
		Diuron	0.012		ug/L	P383083	
		Fenuron	0.016	U	ug/L	P383083	
		Fluridone**	0.099		ug/L	P383083	
		Imazapyr**	0.19		ug/L	P383083	
		Hydrocodone**	0.0020	U	ug/L	P383083	
		Ibuprofen**	0.020	U	ug/L	P383083	
		Imidacloprid	0.028		ug/L	P383083	
		Linuron	0.0040	U	ug/L	P383083	
		Mandestrobin**	0.0020	U	ug/L	P383083	
		MCP	0.0020	U	ug/L	P383083	
		Naproxen**	0.0080	U	ug/L	P383083	
		Primidone**	0.0040	U	ug/L	P383083	
		Pyraclostrobin**	0.0020	U	ug/L	P383083	
		Thiamethoxam**	0.0048	I	ug/L	P383083	
		Tolfenpyrad**	0.0020	U	ug/L	P383083	
		Triclopyr**	0.0040	U	ug/L	P383083	
2175535	EPA 200.7 Rev. 4.4	Iron	300		ug/L	P383105	

Field ID: G3SD0070

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2175535	EPA 200.7 Rev. 4.4	Manganese	25.9		ug/L	P383105	
		Zinc	5.0	U	ug/L	P383105	
	EPA 200.8 Rev. 5.4	Aluminum	93		ug/L	P383105	
		Antimony	0.20	U	ug/L	P383105	
		Arsenic	2.31		ug/L	P383105	
		Cadmium	0.080	U	ug/L	P383105	
		Chromium	1.6	U	ug/L	P383105	
		Copper	1.6	U	ug/L	P383105	
		Lead	0.80	U	ug/L	P383105	
		Nickel	2.0	U	ug/L	P383105	
		Selenium	0.80	U	ug/L	P383105	
		Silver	0.040	U	ug/L	P383105	
		Thallium	1.0	U	ug/L	P383105	
	SM 2340B	Hardness	699		mg/L	P383105	

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: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for bentazon and imazapyr 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: P383044

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383105

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383105

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383319

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P383175

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383264

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383253

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: P383227

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383052

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

Reference Method: EPA 8321B
Batch ID: P383003

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: P383083

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P383113

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

Reference Method: SM 2320 B-2011
Batch ID: P383114

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

Reference Method: SM 2540 D-2011
Batch ID: P383449

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P383450

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P383451

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P383116

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P383251

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P383306

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P383118

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P383119

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115
Manganese	100		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	108		P	85 - 115
Arsenic	110		P	85 - 115
Cadmium	109		P	85 - 115
Chromium	108		P	85 - 115
Copper	107		P	85 - 115
Lead	107		P	85 - 115
Nickel	107		P	85 - 115
Selenium	105		P	85 - 115
Silver	112		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383319

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P383175

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383264

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: P383253

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383227

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	95.6		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P383003

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	70.4		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	140		P	40 - 150
Glufosinate	96.3		P	40 - 150
Glyphosate	94.5		P	40 - 140
Sucralose	102		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P383083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	112		P	30 - 160
Acetaminophen	78.2		P	30 - 160
Acetamiprid	82.0		P	30 - 160
Afidopyropen	65.8		P	30 - 160
Bentazon	37.1		P	30 - 160
Benzovindiflupyr	53.6		P	30 - 160
Carbamazepine	54.6		P	30 - 160
Clothianidin	72.3		P	30 - 160
Dinotefuran	66.6		P	30 - 160
Diuron	41.7		P	30 - 160
Fenuron	95.9		P	30 - 160
Fluridone	82.2		P	30 - 160
Hydrocodone	69.6		P	30 - 160
Ibuprofen	61.7		P	30 - 160
Imazapyr	72.6		P	30 - 160
Imidacloprid	92.0		P	30 - 160
Linuron	43.7		P	30 - 160
Mandestrobin	64.3		P	30 - 160
MCPP	124		P	30 - 160
Naproxen	72.6		P	30 - 160
Primidone	78.0		P	30 - 160
Pyraclostrobin	59.2		P	30 - 160
Thiamethoxam	67.5		P	30 - 160
Tolfenpyrad	43.2		P	30 - 160
Triclopyr	108		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P383113

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P383114

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P383116

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P383251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P383306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.7		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P383118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	105		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P383119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	107		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175535	Iron	105	106	P/P	70 - 130
2175535	Manganese	99.1	102	P/P	70 - 130
2175535	Zinc	105	107	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175535	Aluminum	114	115	P/P	70 - 130
2175535	Antimony	113	113	P/P	70 - 130
2175535	Arsenic	123	123	P/P	70 - 130
2175535	Cadmium	107	107	P/P	70 - 130
2175535	Chromium	111	110	P/P	70 - 130
2175535	Copper	109	109	P/P	70 - 130
2175535	Lead	110	110	P/P	70 - 130
2175535	Nickel	109	110	P/P	70 - 130
2175535	Selenium	115	116	P/P	70 - 130
2175535	Silver	105	106	P/P	70 - 130
2175535	Thallium	118	113	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175177	Bromide	96.5	93.4	P/P	90 - 110
2176090	Bromide	91.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P383175

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175517	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383264

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2176207	Kjeldahl Nitrogen	99.6	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383253

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2176208	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175452	Total-P	97.8	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P383052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175521	O-Phosphate-P	92.1	93.6	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P383003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175191	Acesulfame K	49.0	55.2	P/P	40 - 150
2175191	AMPA	89.4	93.5	P/P	40 - 150
2175191	Endothall	133	138	P/P	40 - 150
2175191	Glufosinate	89.3	94.0	P/P	40 - 150
2175191	Glyphosate	87.0	79.7	P/P	40 - 140
2175191	Sucralose	87.9	93.2	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P383083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175814	2,4-D	110	115	P/P	30 - 160
2175814	Acetaminophen	79.4	77.6	P/P	30 - 160
2175814	Acetamiprid	59.2	65.6	P/P	30 - 160
2175814	Afidopyropen	65.5	68.2	P/P	30 - 160
2175814	Benzovindiflupyr	54.3	57.6	P/P	30 - 160
2175814	Carbamazepine	42.3	42.1	P/P	30 - 160
2175814	Clothianidin	53.1	54.9	P/P	30 - 160
2175814	Dinotefuran	62.3	60.4	P/P	30 - 160
2175814	Diuron	33.9	33.8	P/P	30 - 160
2175814	Fenuron	61.5	62.3	P/P	30 - 160
2175814	Fluridone	81.0	80.2	P/P	30 - 160
2175814	Hydrocodone	53.7	53.8	P/P	30 - 160
2175814	Ibuprofen	49.5	52.9	P/P	30 - 160
2175814	Imidacloprid	99.9	106	P/P	30 - 160
2175814	Linuron	40.1	41.2	P/P	30 - 160
2175814	Mandestrobin	61.7	61.4	P/P	30 - 160
2175814	MCP	124	127	P/P	30 - 160
2175814	Naproxen	56.3	61.2	P/P	30 - 160
2175814	Primidone	53.3	51.5	P/P	30 - 160
2175814	Pyraclostrobin	63.4	64.8	P/P	30 - 160
2175814	Thiamethoxam	58.4	56.7	P/P	30 - 160
2175814	Tolfenpyrad	52.4	51.1	P/P	30 - 160
2175814	Triclopyr	101	130	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
 Batch ID: P383116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175565	Fluoride	102	99.8	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
 Batch ID: P383251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2176090	Fluoride	98.4	95.2	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P383306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175450	Fluoride	96.9	99.5	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P383118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175555	Organic Carbon	103	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P383119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175517	Organic Carbon	106	105	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P383044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175510	Turbidity	3.57	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175535	Iron	0.934	Spike	P	0 - 20
2175535	Manganese	2.57	Spike	P	0 - 20
2175535	Zinc	2.26	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175535	Aluminum	1.45	Spike	P	0 - 20
2175535	Antimony	0.139	Spike	P	0 - 20
2175535	Arsenic	0.0790	Spike	P	0 - 20
2175535	Cadmium	0.0851	Spike	P	0 - 20
2175535	Chromium	0.248	Spike	P	0 - 20
2175535	Copper	0.602	Spike	P	0 - 20
2175535	Lead	0.806	Spike	P	0 - 20
2175535	Nickel	1.56	Spike	P	0 - 20
2175535	Selenium	1.39	Spike	P	0 - 20
2175535	Silver	0.942	Spike	P	0 - 20
2175535	Thallium	4.57	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175177	Bromide	3.11	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P383175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175517	Ammonia-N	0.233	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2176207	Kjeldahl Nitrogen	0.996	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2176208	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175452	Total-P	4.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175521	O-Phosphate-P	0.575	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P383003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175191	Acesulfame K	12.0	Spike	P	0 - 30
2175191	AMPA	2.85	Spike	P	0 - 30
2175191	Endothall	3.33	Spike	P	0 - 30
2175191	Glufosinate	5.23	Spike	P	0 - 30
2175191	Glyphosate	5.25	Spike	P	0 - 30
2175191	Sucralose	5.54	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P383083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175814	2,4-D	4.98	Spike	P	0 - 30
2175814	Acetaminophen	2.30	Spike	P	0 - 30
2175814	Acetamiprid	10.3	Spike	P	0 - 30
2175814	Afidopyropen	4.11	Spike	P	0 - 30
2175814	Bentazon	2.92	Spike	P	0 - 30
2175814	Benzovindiflupyr	5.94	Spike	P	0 - 30
2175814	Carbamazepine	0.371	Spike	P	0 - 30
2175814	Clothianidin	3.40	Spike	P	0 - 30
2175814	Dinotefuran	3.23	Spike	P	0 - 30
2175814	Diuron	0.238	Spike	P	0 - 30
2175814	Fenuron	1.17	Spike	P	0 - 30
2175814	Fluridone	0.881	Spike	P	0 - 30
2175814	Hydrocodone	0.333	Spike	P	0 - 30
2175814	Ibuprofen	5.07	Spike	P	0 - 30
2175814	Imazapyr	5.14	Spike	P	0 - 30
2175814	Imidacloprid	5.98	Spike	P	0 - 30
2175814	Linuron	2.80	Spike	P	0 - 30
2175814	Mandestrobin	0.625	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P383083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175814	MCP	2.34	Spike	P	0 - 30
2175814	Naproxen	8.32	Spike	P	0 - 30
2175814	Primidone	3.45	Spike	P	0 - 30
2175814	Pyraclostrobin	2.22	Spike	P	0 - 30
2175814	Thiamethoxam	2.97	Spike	P	0 - 30
2175814	Tolfenpyrad	2.53	Spike	P	0 - 30
2175814	Triclopyr	24.9	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P383113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175565	Total Alkalinity	0.256	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P383114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175448	Total Alkalinity	0.973	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P383116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175565	Fluoride	1.38	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P383251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2176090	Fluoride	2.37	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P383306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175450	Fluoride	1.50	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P383118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175555	Organic Carbon	0.203	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P383119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175517	Organic Carbon	1.25	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2175532

Field Sample ID: G3SD0070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.3	P	30 - 160
EPA 8321B	Diuron-d6	48.6	P	30 - 160
EPA 8321B	Endothall-d6	95.5	P	30 - 160
EPA 8321B	Endothall-d6	95.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.5	P	30 - 160
EPA 8321B	Primidone-d5	91.3	P	30 - 160
EPA 8321B	Sucralose-d6	84.7	P	30 - 160
EPA 8321B	Sucralose-d6	84.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99250

Included Lab Sample IDs: 2175516, 2175519, 2175522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99252

Included Lab Sample IDs: 2175518, 2175521, 2175524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	98.0	P/P	90 - 110
O-Phosphate-P	98.8	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99270

Included Lab Sample IDs: 2175532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	92.6	91.0	P/P	30 - 200
Glufosinate	91.6	95.1	P/P	30 - 200
Glyphosate	94.4	88.0	P/P	30 - 200

Reference Method: EPA 8321B

Run ID: A99272

Included Lab Sample IDs: 2175532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	71.4	69.9	P/P	30 - 200
Endothall	133	135	P/P	30 - 200

Reference Method: SM 2320 B-2011

Run ID: A99280

Included Lab Sample IDs: 2175516, 2175519, 2175522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.6	97.0	P/P	90 - 110
Total Alkalinity	98.3	95.6	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99280

Included Lab Sample IDs: 2175519

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

Reference Method: SM 5310 B-2011

Run ID: A99281

Included Lab Sample IDs: 2175517, 2175520, 2175523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	104	P/P	90 - 110
Organic Carbon	104	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A99294
Included Lab Sample IDs: 2175532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	83.9	90.1	P/P	30 - 200

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A99309
Included Lab Sample IDs: 2175517, 2175520, 2175523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A99313
Included Lab Sample IDs: 2175533, 2175535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	105	106	P/P	90 - 110
Manganese	102	100	P/P	90 - 110
Zinc	102	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A99334
Included Lab Sample IDs: 2175522

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A99337
Included Lab Sample IDs: 2175517, 2175520, 2175523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A99357
Included Lab Sample IDs: 2175516

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A99359
Included Lab Sample IDs: 2175517, 2175520, 2175523

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

Reference Method: EPA 8321B
Run ID: A99367
Included Lab Sample IDs: 2175532

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

Reference Method: EPA 8321B

Run ID: A99367

Included Lab Sample IDs: 2175532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	112	118	P/P	50 - 150
Acetaminophen	120	123	P/P	60 - 160
Acetamiprid	121	118	P/P	50 - 150
Afidopyropen	89.8	108	P/P	50 - 150
Bentazon	87.7	86.0	P/P	50 - 160
Benzovindiflupyr	97.1	97.6	P/P	50 - 150
Carbamazepine	98.1	98.9	P/P	60 - 150
Clothianidin	110	107	P/P	60 - 150
Dinotefuran	112	109	P/P	50 - 150
Diuron	100	98.7	P/P	60 - 160
Fenuron	118	117	P/P	60 - 150
Fluridone	136	135	P/P	60 - 160
Hydrocodone	115	117	P/P	60 - 150
Ibuprofen	108	113	P/P	50 - 160
Imazapyr	115	118	P/P	50 - 150
Imidacloprid	124	116	P/P	60 - 150
Linuron	86.1	89.6	P/P	60 - 150
Mandestrobin	92.8	96.5	P/P	50 - 150
MCPP	136	131	P/P	50 - 150
Naproxen	69.9	73.2	P/P	50 - 160
Primidone	118	117	P/P	60 - 150
Pyraclostrobin	109	112	P/P	60 - 150
Thiamethoxam	112	114	P/P	50 - 150
Tolfenpyrad	112	116	P/P	60 - 150
Triclopyr	134	129	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99373

Included Lab Sample IDs: 2175516, 2175519, 2175522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	99.7	97.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99378

Included Lab Sample IDs: 2175533, 2175535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	100	101	P/P	90 - 110
Arsenic	105	106	P/P	90 - 110
Cadmium	98.2	98.5	P/P	90 - 110
Chromium	102	99.1	P/P	90 - 110
Copper	103	102	P/P	90 - 110
Lead	99.2	99.2	P/P	90 - 110
Nickel	104	103	P/P	90 - 110
Selenium	102	103	P/P	90 - 110
Silver	108	108	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99379

Included Lab Sample IDs: 2175517, 2175520, 2175523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99443

Included Lab Sample IDs: 2175533, 2175535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	94.3	108	P/P	90 - 110
Thallium	92.4	98.8	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		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					3.57	
EPA 200.7 Rev. 4.4	Iron	105	105	106			0.934
	Manganese	100	99.1	102			2.57
	Zinc	102	105	107			2.26
EPA 200.8 Rev. 5.4	Aluminum	104	114	115			1.45
	Antimony	108	113	113			0.139
	Arsenic	110	123	123			0.0790
	Cadmium	109	107	107			0.0851
	Chromium	108	111	110			0.248
	Copper	107	109	109			0.602
	Lead	107	110	110			0.806
	Nickel	107	109	110			1.56
	Selenium	105	115	116			1.39
	Silver	112	105	106			0.942
	Thallium	101	118	113			4.57
EPA 300.0 Rev. 2.1	Bromide	100	96.5	93.4	91.1		3.11
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	102	101			0.233
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	99.6	101			0.996
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	103	103			0.0
EPA 365.1 Rev. 2.0	Total-P	106	97.8	105			4.13
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	95.6	92.1	93.6			0.575
EPA 8321B	2,4-D	112	110	115			4.98
	Acesulfame K	70.4	49.0	55.2			12.0
	Acetaminophen	78.2	79.4	77.6			2.30
	Acetamiprid	82.0	59.2	65.6			10.3
	Afidopyropen	65.8	65.5	68.2			4.11
	AMPA	96.4	89.4	93.5			2.85
	Bentazon	37.1					2.92
	Benzovindiflupyr	53.6	54.3	57.6			5.94
	Carbamazepine	54.6	42.3	42.1			0.371
	Clothianidin	72.3	53.1	54.9			3.40
	Dinotefuran	66.6	62.3	60.4			3.23
	Diuron	41.7	33.9	33.8			0.238
	Endothall	140	133	138			3.33
	Fenuron	95.9	61.5	62.3			1.17
	Fluridone	82.2	81.0	80.2			0.881
	Glufosinate	96.3	89.3	94.0			5.23
	Glyphosate	94.5	87.0	79.7			5.25
	Hydrocodone	69.6	53.7	53.8			0.333
	Ibuprofen	61.7	49.5	52.9			5.07
	Imazapyr	72.6					5.14
	Imidacloprid	92.0	99.9	106			5.98
	Linuron	43.7	40.1	41.2			2.80
	Mandestrobin	64.3	61.7	61.4			0.625
	MCPP	124	124	127			2.34
	Naproxen	72.6	56.3	61.2			8.32
	Primidone	78.0	53.3	51.5			3.45
	Pyraclostrobin	59.2	63.4	64.8			2.22
	Sucralose	102	87.9	93.2			5.54
	Thiamethoxam	67.5	58.4	56.7			2.97
	Tolfenpyrad	43.2	52.4	51.1			2.53
	Triclopyr	108	101	130			24.9
SM 2320 B-2011	Total Alkalinity	99.5				0.256	
	Total Alkalinity	98.5				0.973	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
SM 4500 F-C-2011	Fluoride	101	102	99.8			1.38
	Fluoride	99.5	98.4	95.2			2.37
	Fluoride	94.7	96.9	99.5			1.50
SM 5310 B-2011	Organic Carbon	105	103	102			0.203
	Organic Carbon	107	106	105			1.25

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2175516, 2175519, 2175522
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2175533, 2175535
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2175533, 2175535
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2175516, 2175519, 2175522
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2175517, 2175520, 2175523
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2175517, 2175520, 2175523
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2175517, 2175520, 2175523
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2175517, 2175520, 2175523
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2175518, 2175521, 2175524
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2175532
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2175532
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2175516, 2175519, 2175522
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2175533, 2175535
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2175516, 2175519, 2175522
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2175516, 2175519, 2175522
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2175517, 2175520, 2175523

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	06/10/2020			06/10/2020 15:06	Yen Ta	2175516, 2175519, 2175522
EPA 200.7 Rev. 4.4	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/12/2020 15:45	Betina Topolski	2175533
	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/12/2020 16:01	Betina Topolski	2175535
EPA 200.8 Rev. 5.4	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/17/2020 01:05	Justin Cutchin	2175533
	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/17/2020 01:12	Justin Cutchin	2175535
	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/22/2020 10:53	Justin Cutchin	2175533
	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/22/2020 10:57	Justin Cutchin	2175535
	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/22/2020 11:57	Justin Cutchin	2175533
	06/10/2020	06/11/2020 16:55	Elliott D. Healy	06/22/2020 12:01	Justin Cutchin	2175535
EPA 300.0 Rev. 2.1	06/10/2020			06/16/2020 22:53	Elliott Rodriguez	2175516
	06/10/2020			06/16/2020 23:10	Elliott Rodriguez	2175519
	06/10/2020			06/16/2020 23:27	Elliott Rodriguez	2175522
EPA 350.1 Rev. 2.0	06/10/2020			06/13/2020 16:28	Ping Hua	2175517
	06/10/2020			06/13/2020 16:37	Ping Hua	2175520
	06/10/2020			06/13/2020 16:38	Ping Hua	2175523
EPA 351.2 Rev. 2.0	06/10/2020	06/16/2020 11:50	Sima Feizi	06/17/2020 11:04	Jhamieka S. Greenwood	2175517
	06/10/2020	06/16/2020 11:50	Sima Feizi	06/17/2020 11:06	Jhamieka S. Greenwood	2175520
	06/10/2020	06/16/2020 11:50	Sima Feizi	06/17/2020 11:08	Jhamieka S. Greenwood	2175523
EPA 353.2 Rev. 2.0	06/10/2020			06/16/2020 08:37	Beverly Y. Sanders	2175517
	06/10/2020			06/16/2020 08:38	Beverly Y. Sanders	2175520
	06/10/2020			06/16/2020 08:40	Beverly Y. Sanders	2175523
EPA 365.1 Rev. 2.0	06/10/2020	06/15/2020 15:28	Yen Ta	06/16/2020 10:11	Lipi Saha	2175517
	06/10/2020	06/15/2020 15:28	Yen Ta	06/16/2020 10:12	Lipi Saha	2175520
	06/10/2020	06/15/2020 15:28	Yen Ta	06/16/2020 10:13	Lipi Saha	2175523
EPA 365.1 Rev. 2.0 dissolved	06/10/2020			06/10/2020 15:44	Carlos Miranda	2175521
	06/10/2020			06/10/2020 15:49	Carlos Miranda	2175518
	06/10/2020			06/10/2020 15:54	Carlos Miranda	2175524
EPA 8321B	06/10/2020	06/10/2020 12:00	Rebecca Ware	06/10/2020 16:39	Rebecca Ware	2175532
	06/10/2020	06/10/2020 12:00	Rebecca Ware	06/11/2020 14:02	Rebecca Ware	2175532
	06/10/2020	06/10/2020 12:00	Rebecca Ware	06/12/2020 11:40	Rebecca Ware	2175532
	06/10/2020	06/15/2020 10:10	Hoor Shaik	06/15/2020 22:50	Juyoung Kim	2175532
SM 2320 B-2011	06/10/2020			06/11/2020 22:22	Dale L. Simmons	2175519
	06/10/2020			06/12/2020 01:06	Dale L. Simmons	2175522
	06/10/2020			06/12/2020 01:44	Dale L. Simmons	2175516
SM 2340B	06/10/2020			06/12/2020 15:53	Betina Topolski	2175533
	06/10/2020			06/12/2020 16:57	Betina Topolski	2175535
SM 2540 D-2011	06/10/2020			06/12/2020 15:15	Yijie Li	2175516, 2175519, 2175522
SM 4500 F-C-2011	06/10/2020			06/11/2020 22:22	Dale L. Simmons	2175519
	06/10/2020			06/16/2020 03:05	Dale L. Simmons	2175522
	06/10/2020			06/16/2020 13:20	Dale L. Simmons	2175516

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	06/10/2020			06/11/2020 17:53	David Boose	2175520
	06/10/2020			06/11/2020 18:05	David Boose	2175523
	06/10/2020			06/11/2020 20:30	David Boose	2175517