

Chemical Analysis Report

NE-DIST-2020-06-03-03

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

Event Description: **Callahan 2020**
Request ID: **RQ-2020-04-06-56**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 23-JUN-2020 13:14

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Unnamed Branch above Alligator Cr

Collection Date/Time: 06/02/2020 10:00

Field ID: G4NE0288

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2174602	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P382772	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P383381	
		Sulfate	17		mg SO4/L	P383385	
	SM 2120 B-2011	Color (true)	260		PCU	P382778	
	SM 2320 B-2011	Total Alkalinity	31		mg CaCO3/L	P383005	
	SM 2540 C-2011	TDS	137		mg/L	P383026	
	SM 2540 D-2011	TSS	2	I	mg/L	P383039	
	SM 4500 F-C-2011	Fluoride	0.085	I	mg F/L	P382910	
2174603	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P382876	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P383259	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P382847	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P382936	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P382838	
2174604	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.16		mg P/L	P382776	
2174612	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P382814	
		2,4-D	0.0020	I	ug/L	P382851	
		AMPA**	0.19	I	ug/L	P382814	
		Sucralose**	2.4		ug/L	P382814	
		Acetaminophen**	0.0080	U	ug/L	P382851	
		Endothall**	0.25	U	ug/L	P382814	
		Acetamiprid**	0.0020	U	ug/L	P382851	
		Glufosinate**	0.10	U	ug/L	P382814	
		Glyphosate**	0.95	J	ug/L	P382814	MS
		Afidopyropen**	0.0020	U	ug/L	P382851	
		Bentazon	0.025		ug/L	P382851	
		Benzovindiflupyr**	0.0020	U	ug/L	P382851	
		Carbamazepine**	8.0E-04	U	ug/L	P382851	
		Clothianidin**	0.0031	I	ug/L	P382851	MS
		Dinotefuran**	0.0023	I	ug/L	P382851	
		Diuron	0.0020	U	ug/L	P382851	
		Fenuron	0.016	U	ug/L	P382851	
		Fluridone**	0.064		ug/L	P382851	
		Imazapyr**	0.041		ug/L	P382851	MS
		Hydrocodone**	0.0020	U	ug/L	P382851	
		Ibuprofen**	0.020	U	ug/L	P382851	
		Imidacloprid	0.039		ug/L	P382851	MS
		Linuron	0.0040	U	ug/L	P382851	
		Mandestrobin**	0.0020	U	ug/L	P382851	
		MCP	0.024		ug/L	P382851	
		Naproxen**	0.0080	U	ug/L	P382851	
		Primidone**	0.0040	U	ug/L	P382851	
		Pyraclostrobin**	0.0020	U	ug/L	P382851	
		Thiamethoxam**	0.0020	U	ug/L	P382851	

Field ID: G4NE0288

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2174612	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P382851	
		Triclopyr**	0.0040	U	ug/L	P382851	
2174613	EPA 200.7 Rev. 4.4	Barium	25.6		ug/L	P382927	
		Calcium	17.2		mg/L	P382927	
		Iron	820		ug/L	P382927	
		Magnesium	5.06		mg/L	P382927	
		Potassium	3.0		mg/L	P382927	
		Sodium	11.3		mg/L	P382927	
		Zinc	5.0	U	ug/L	P382927	
	EPA 200.8 Rev. 5.4	Aluminum	233		ug/L	P382927	
		Antimony	0.066	I	ug/L	P382927	
		Arsenic	0.59		ug/L	P382927	
		Boron**	32.1		ug/L	P382927	
		Cadmium	0.020	U	ug/L	P382927	
		Chromium	0.45	I	ug/L	P382927	
		Copper	1.06		ug/L	P382927	
		Lead	0.40	I	ug/L	P382927	
		Nickel	0.65	I	ug/L	P382927	
		Selenium	0.20	U	ug/L	P382927	
		Silver	0.010	U	ug/L	P382927	
		Thallium	0.10	U	ug/L	P382927	
	SM 2340B	Hardness	63.8		mg/L	P382927	

Ref. Method and Comment:

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Cushing Cr @ Stratton Rd

Collection Date/Time: 06/02/2020 11:35

Field ID: NE400002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2174605	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P382772	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P383381	
		Sulfate	12		mg SO4/L	P383385	
	SM 2120 B-2011	Color (true)	340		PCU	P382778	
	SM 2320 B-2011	Total Alkalinity	40		mg CaCO3/L	P383005	
	SM 2540 C-2011	TDS	143		mg/L	P383026	
	SM 2540 D-2011	TSS	2	U	mg/L	P383039	
	SM 4500 F-C-2011	Fluoride	0.10		mg F/L	P382910	
2174606	EPA 350.1 Rev. 2.0	Ammonia-N	0.094		mg N/L	P382876	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P383259	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.063		mg N/L	P382847	
	EPA 365.1 Rev. 2.0	Total-P	0.093		mg P/L	P382936	
	SM 5310 B-2011	Organic Carbon	30		mg C/L	P382838	
2174607	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061		mg P/L	P382776	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P382772

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P382927

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P382927

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383381

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383385

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382876

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383259

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382847

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382936

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P382776

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

Reference Method: EPA 8321B
Batch ID: P382814

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: P382851

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P382851

Component	Result	Code	Units
Mandestrobin	0.0020	U	ug/L
MCP	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: SM 2120 B-2011
Batch ID: P382778

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P383005

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

Reference Method: SM 2540 C-2011
Batch ID: P383026

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P383039

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P382910

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P382838

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: P382927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	95.2		P	85 - 115
Calcium	102		P	85 - 115
Iron	101		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	95.9		P	85 - 115
Sodium	99.5		P	85 - 115
Zinc	96.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P382927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	100		P	85 - 115
Boron	104		P	85 - 115
Cadmium	106		P	85 - 115
Chromium	109		P	85 - 115
Copper	102		P	85 - 115
Lead	100		P	85 - 115
Nickel	100		P	85 - 115
Selenium	96.4		P	85 - 115
Silver	105		P	85 - 115
Thallium	95.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383381

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383385

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382876

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383259

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382847

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382936

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: P382776

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	94.6		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P382814

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	68.8		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	139		P	40 - 150
Glufosinate	94.3		P	40 - 150
Glyphosate	93.4		P	40 - 140
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P382851

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	139		P	30 - 160
Acetaminophen	80.4		P	30 - 160
Acetamiprid	78.0		P	30 - 160
Afidopyropen	70.2		P	30 - 160
Bentazon	47.5		P	30 - 160
Benzovindiflupyr	56.5		P	30 - 160
Carbamazepine	61.6		P	30 - 160
Clothianidin	85.3		P	30 - 160
Dinotefuran	89.2		P	30 - 160
Diuron	52.9		P	30 - 160
Fenuron	89.2		P	30 - 160
Fluridone	84.2		P	30 - 160
Hydrocodone	72.8		P	30 - 160
Ibuprofen	81.5		P	30 - 160
Imazapyr	53.4		P	30 - 160
Imidacloprid	100		P	30 - 160
Linuron	52.2		P	30 - 160
Mandestrobin	74.6		P	30 - 160
MCPP	122		P	30 - 160
Naproxen	68.4		P	30 - 160
Primidone	82.9		P	30 - 160
Pyraclostrobin	65.4		P	30 - 160
Thiamethoxam	78.2		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P382851

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	45.7		P	30 - 160
Triclopyr	92.5		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P382778

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.7		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P383005

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

Reference Method: SM 4500 F-C-2011
Batch ID: P382910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P382838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P382927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174678	Barium	95.0	95.2	P/P	80 - 120
2174678	Calcium	102		P	80 - 120
2174678	Iron	104	106	P/P	80 - 120
2174678	Magnesium	101		P	80 - 120
2174678	Potassium	96.8		P	80 - 120
2174678	Sodium	98.6		P	80 - 120
2174678	Zinc	99.7	100	P/P	80 - 120
2174928	Barium	94.4		P	80 - 120
2174928	Calcium	103		P	80 - 120
2174928	Iron	100		P	80 - 120
2174928	Magnesium	103		P	80 - 120
2174928	Potassium	88.2		P	80 - 120
2174928	Sodium	99.7		P	80 - 120
2174928	Zinc	99.7		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P382927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174678	Aluminum	100	99.5	P/P	80 - 120
2174678	Antimony	110	107	P/P	80 - 120
2174678	Arsenic	99.4	98.1	P/P	80 - 120
2174678	Boron	101	103	P/P	80 - 120
2174678	Cadmium	105	103	P/P	80 - 120
2174678	Chromium	107	107	P/P	80 - 120
2174678	Copper	102	102	P/P	80 - 120
2174678	Lead	106	104	P/P	80 - 120
2174678	Nickel	101	101	P/P	80 - 120
2174678	Selenium	103	103	P/P	80 - 120
2174678	Silver	99.7	99.2	P/P	80 - 120
2174678	Thallium	105	106	P/P	80 - 120
2174928	Aluminum	101		P	80 - 120
2174928	Antimony	108		P	80 - 120
2174928	Arsenic	100		P	80 - 120
2174928	Boron	105		P	80 - 120
2174928	Cadmium	106		P	80 - 120
2174928	Chromium	107		P	80 - 120
2174928	Copper	101		P	80 - 120
2174928	Lead	106		P	80 - 120
2174928	Nickel	102		P	80 - 120
2174928	Selenium	100		P	80 - 120
2174928	Silver	101		P	80 - 120
2174928	Thallium	110		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175993	Chloride	107		P	90 - 110
2176239	Chloride	100		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175993	Sulfate	105		P	90 - 110
2176239	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174589	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174589	Kjeldahl Nitrogen	85.5	95.4	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174629	NO2NO3-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382936

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174603	Total-P	96.6	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P382776

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174591	O-Phosphate-P	90.8	92.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P382814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174612	Acesulfame K	51.4	43.7	P/P	40 - 150
2174612	AMPA	87.9	84.2	P/P	40 - 150
2174612	Endothall	138	138	P/P	40 - 150
2174612	Glufosinate	86.8	85.6	P/P	40 - 150
2174612	Glyphosate	163	157	F/F	40 - 140
2174612	Sucralose	103	108	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P382851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174477	2,4-D	78.4	77.2	P/P	30 - 160
2174477	Acetaminophen	146	140	P/P	30 - 160
2174477	Acetamiprid	59.7	61.2	P/P	30 - 160
2174477	Afidopyropen	48.9	51.6	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P382851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174477	Bentazon	30.5	33.2	P/P	30 - 160
2174477	Benzovindiflupyr	56.5	51.6	P/P	30 - 160
2174477	Carbamazepine	74.8	69.1	P/P	30 - 160
2174477	Clothianidin	177	151	F/P	30 - 160
2174477	Dinotefuran	118	117	P/P	30 - 160
2174477	Diuron	52.3	50.5	P/P	30 - 160
2174477	Fenuron	60.8	59.2	P/P	30 - 160
2174477	Fluridone	87.3	82.8	P/P	30 - 160
2174477	Hydrocodone	80.8	78.8	P/P	30 - 160
2174477	Ibuprofen	64.9	59.6	P/P	30 - 160
2174477	Imazapyr	24.1	31.5	F/P	30 - 160
2174477	Imidacloprid	313	272	F/F	30 - 160
2174477	Linuron	56.9	52.7	P/P	30 - 160
2174477	Mandestrobin	69.4	69.8	P/P	30 - 160
2174477	MCP	57.1	73.5	P/P	30 - 160
2174477	Naproxen	70.4	66.6	P/P	30 - 160
2174477	Primidone	111	100	P/P	30 - 160
2174477	Pyraclostrobin	62.9	59.6	P/P	30 - 160
2174477	Thiamethoxam	131	126	P/P	30 - 160
2174477	Tolfenpyrad	42.5	41.9	P/P	30 - 160
2174477	Triclopyr	59.8	61.4	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P382910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174661	Fluoride	97.0	97.7	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P382838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174578	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P382772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174577	Turbidity	2.71	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P382927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174678	Barium	0.186	Spike	P	0 - 20
2174678	Calcium	2.69	Spike	P	0 - 20
2174678	Iron	2.24	Spike	P	0 - 20
2174678	Magnesium	2.45	Spike	P	0 - 20
2174678	Potassium	1.26	Spike	P	0 - 20
2174678	Sodium	3.54	Spike	P	0 - 20
2174678	Zinc	0.692	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P382927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174678	Aluminum	0.459	Spike	P	0 - 20
2174678	Antimony	2.64	Spike	P	0 - 20
2174678	Arsenic	1.21	Spike	P	0 - 20
2174678	Boron	1.27	Spike	P	0 - 20
2174678	Cadmium	1.37	Spike	P	0 - 20
2174678	Chromium	0.634	Spike	P	0 - 20
2174678	Copper	0.363	Spike	P	0 - 20
2174678	Lead	1.49	Spike	P	0 - 20
2174678	Nickel	0.337	Spike	P	0 - 20
2174678	Selenium	0.0585	Spike	P	0 - 20
2174678	Silver	0.588	Spike	P	0 - 20
2174678	Thallium	0.911	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175993	Chloride	1.08	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175993	Sulfate	1.21	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174589	Ammonia-N	1.07	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174589	Kjeldahl Nitrogen	5.60	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174629	NO2NO3-N	0.506	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174603	Total-P	6.99	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P382776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174591	O-Phosphate-P	1.31	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P382814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174612	Acesulfame K	16.3	Spike	P	0 - 30
2174612	AMPA	3.50	Spike	P	0 - 30
2174612	Endothall	0.340	Spike	P	0 - 30
2174612	Glufosinate	1.44	Spike	P	0 - 30
2174612	Glyphosate	2.21	Spike	P	0 - 30
2174612	Sucralose	2.44	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P382851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174477	2,4-D	1.44	Spike	P	0 - 30
2174477	Acetaminophen	4.01	Spike	P	0 - 30
2174477	Acetamiprid	2.55	Spike	P	0 - 30
2174477	Afidopyropen	5.38	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P382851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174477	Bentazon	3.06	Spike	P	0 - 30
2174477	Benzovindiflupyr	9.02	Spike	P	0 - 30
2174477	Carbamazepine	4.91	Spike	P	0 - 30
2174477	Clothianidin	16.2	Spike	P	0 - 30
2174477	Dinotefuran	0.176	Spike	P	0 - 30
2174477	Diuron	3.12	Spike	P	0 - 30
2174477	Fenuron	1.31	Spike	P	0 - 30
2174477	Fluridone	4.96	Spike	P	0 - 30
2174477	Hydrocodone	2.43	Spike	P	0 - 30
2174477	Ibuprofen	8.52	Spike	P	0 - 30
2174477	Imazapyr	16.9	Spike	P	0 - 30
2174477	Imidacloprid	13.6	Spike	P	0 - 30
2174477	Linuron	7.73	Spike	P	0 - 30
2174477	Mandestrobin	0.607	Spike	P	0 - 30
2174477	MCP	25.1	Spike	P	0 - 30
2174477	Naproxen	5.53	Spike	P	0 - 30
2174477	Primidone	9.80	Spike	P	0 - 30
2174477	Pyraclostrobin	5.44	Spike	P	0 - 30
2174477	Thiamethoxam	4.09	Spike	P	0 - 30
2174477	Tolfenpyrad	1.40	Spike	P	0 - 30
2174477	Triclopyr	2.74	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P382778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174587	Color (true)	2.28	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P383005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174661	Total Alkalinity	0.986	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P383026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2173989	TDS	3.90	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P383039

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174580	TSS	8.45	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P382910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174661	Fluoride	0.476	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P382838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174578	Organic Carbon	0.998	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2174612
Field Sample ID: G4NE0288

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.1	P	30 - 160
EPA 8321B	Diuron-d6	45.7	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	152	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	152	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.2	P	30 - 160
EPA 8321B	Primidone-d5	75.7	P	30 - 160
EPA 8321B	Sucralose-d6	97.3	P	30 - 160
EPA 8321B	Sucralose-d6	97.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99148

Included Lab Sample IDs: 2174602, 2174605

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: A99149

Included Lab Sample IDs: 2174604, 2174607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.4	97.0	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A99150

Included Lab Sample IDs: 2174602, 2174605

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

Reference Method: SM 5310 B-2011

Run ID: A99176

Included Lab Sample IDs: 2174603, 2174606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	100	P/P	90 - 110
Organic Carbon	100	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99180

Included Lab Sample IDs: 2174603, 2174606

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

Reference Method: EPA 8321B

Run ID: A99184

Included Lab Sample IDs: 2174612

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	66.4	76.2	P/P	30 - 200
Endothall	158	154	P/P	30 - 200

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99191

Included Lab Sample IDs: 2174603, 2174606

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A99205

Included Lab Sample IDs: 2174602, 2174605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99206

Included Lab Sample IDs: 2174612

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	91.3	89.0	P/P	30 - 200
Glufosinate	88.6	93.2	P/P	30 - 200
Glyphosate	97.9	96.4	P/P	30 - 200

Reference Method: EPA 8321B

Run ID: A99216

Included Lab Sample IDs: 2174612

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	62.3	91.8	P/P	50 - 150
Acetaminophen	135	113	P/P	60 - 160
Acetamiprid	109	112	P/P	50 - 150
Afidopyropen	85.1	94.5	P/P	50 - 150
Bentazon	90.9	97.1	P/P	50 - 160
Benzovindiflupyr	102	96.1	P/P	50 - 150
Carbamazepine	107	106	P/P	60 - 150
Clothianidin	138	122	P/P	60 - 150
Dinotefuran	110	101	P/P	50 - 150
Diuron	100	97.3	P/P	60 - 160
Fenuron	107	113	P/P	60 - 150
Fluridone	119	115	P/P	60 - 160
Hydrocodone	117	113	P/P	60 - 150
Ibuprofen	65.5	97.2	P/P	50 - 160
Imazapyr	62.6	62.6	P/P	50 - 150
Imidacloprid	144	119	P/P	60 - 150
Linuron	112	106	P/P	60 - 150
Mandestrobin	111	109	P/P	50 - 150
MCPP	70.1	99.8	P/P	50 - 150
Naproxen	80.8	112	P/P	50 - 160
Primidone	109	101	P/P	60 - 150
Pyraclostrobin	93.7	94.3	P/P	60 - 150
Thiamethoxam	145	121	P/P	50 - 150
Tolfenpyrad	110	102	P/P	60 - 150
Triclopyr	61.7	93.3	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A99222

Included Lab Sample IDs: 2174612

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	115	P/P	30 - 200

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A99231

Included Lab Sample IDs: 2174613

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.9	98.9	P/P	90 - 110
Calcium	104	99.7	P/P	90 - 110
Iron	104	99.2	P/P	90 - 110
Magnesium	103	99.4	P/P	90 - 110
Potassium	100	96.1	P/P	90 - 110
Sodium	101	97.7	P/P	90 - 110
Zinc	100	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99234

Included Lab Sample IDs: 2174613

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.8	99.3	P/P	90 - 110
Antimony	106	103	P/P	90 - 110
Boron	101	102	P/P	90 - 110
Chromium	108	104	P/P	90 - 110
Copper	101	100	P/P	90 - 110
Lead	99.4	99.1	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	106	102	P/P	90 - 110
Thallium	97.2	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99236

Included Lab Sample IDs: 2174603, 2174606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.3	96.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A99239

Included Lab Sample IDs: 2174602, 2174605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.0	98.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99247

Included Lab Sample IDs: 2174613

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	94.5	91.4	P/P	90 - 110
Cadmium	100	99.0	P/P	90 - 110
Silver	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99379

Included Lab Sample IDs: 2174603, 2174606

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99379

Included Lab Sample IDs: 2174603, 2174606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99401

Included Lab Sample IDs: 2174602, 2174605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	99.7	P/P	90 - 110
Sulfate	100	101	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						2.71	
EPA 200.7 Rev. 4.4	Barium	95.2	95.0	95.2	94.4			0.186
	Calcium	102	102	103				2.69
	Iron	101	104	106	100			2.24
	Magnesium	100	101	103				2.45
	Potassium	95.9	96.8	88.2				1.26
	Sodium	99.5	98.6	99.7				3.54
	Zinc	96.7	99.7	100	99.7			0.692
EPA 200.8 Rev. 5.4	Aluminum	100	100	99.5	101			0.459
	Antimony	105	110	107	108			2.64
	Arsenic	100	99.4	98.1	100			1.21
	Boron	104	101	103	105			1.27
	Cadmium	106	105	103	106			1.37
	Chromium	109	107	107	107			0.634
	Copper	102	102	102	101			0.363
	Lead	100	106	104	106			1.49
	Nickel	100	101	101	102			0.337
	Selenium	96.4	103	103	100			0.0585
	Silver	105	99.7	99.2	101			0.588
	Thallium	95.7	105	106	110			0.911
EPA 300.0 Rev. 2.1	Chloride	101	107	100			1.08	
	Sulfate	102	105	101			1.21	
EPA 350.1 Rev. 2.0	Ammonia-N	102	102	103				1.07
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	85.5	95.4				5.60
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	103	99.0	98.5				0.506
EPA 365.1 Rev. 2.0	Total-P	103	96.6	107				6.99
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	94.6	90.8	92.0				1.31
EPA 8321B	2,4-D	139	78.4	77.2				1.44
	Acesulfame K	68.8	51.4	43.7				16.3
	Acetaminophen	80.4	146	140				4.01
	Acetamiprid	78.0	59.7	61.2				2.55
	Afidopyropen	70.2	48.9	51.6				5.38
	AMPA	96.4	87.9	84.2				3.50
	Bentazon	47.5	30.5	33.2				3.06
	Benzovindiflupyr	56.5	56.5	51.6				9.02
	Carbamazepine	61.6	74.8	69.1				4.91
	Clothianidin	85.3	177	151				16.2
	Dinotefuran	89.2	118	117				0.176
	Diuron	52.9	52.3	50.5				3.12
	Endothall	139	138	138				0.340
	Fenuron	89.2	60.8	59.2				1.31
	Fluridone	84.2	87.3	82.8				4.96
	Glufosinate	94.3	86.8	85.6				1.44
	Glyphosate	93.4	163	157				2.21
	Hydrocodone	72.8	80.8	78.8				2.43
	Ibuprofen	81.5	64.9	59.6				8.52
	Imazapyr	53.4	24.1	31.5				16.9
	Imidacloprid	100	313	272				13.6
	Linuron	52.2	56.9	52.7				7.73
	Mandestrobin	74.6	69.4	69.8				0.607
	MCP	122	57.1	73.5				25.1
	Naproxen	68.4	70.4	66.6				5.53
	Primidone	82.9	111	100				9.80
	Pyraclostrobin	65.4	62.9	59.6				5.44

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Sucralose	106	103	108		
	Thiamethoxam	78.2	131	126		
	Tolfenpyrad	45.7	42.5	41.9		
	Triclopyr	92.5	59.8	61.4		
SM 2120 B-2011	Color (true)	99.7				2.28
SM 2320 B-2011	Total Alkalinity	98.4				0.986
SM 2540 C-2011	TDS					3.90
SM 2540 D-2011	TSS					8.45
SM 4500 F-C-2011	Fluoride	97.7	97.0	97.7		
SM 5310 B-2011	Organic Carbon	99.4	103			
						0.476
						0.998

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2174602, 2174605
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2174613
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2174613
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2174602, 2174605
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2174602, 2174605
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2174603, 2174606
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2174603, 2174606
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2174603, 2174606
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2174603, 2174606
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2174604, 2174607
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2174612
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2174612
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2174602, 2174605
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2174602, 2174605
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2174613
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2174602, 2174605
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2174602, 2174605
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2174602, 2174605
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2174603, 2174606

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	06/03/2020			06/03/2020 15:57	Yen Ta	2174602, 2174605
EPA 200.7 Rev. 4.4	06/03/2020	06/08/2020 14:40	Elliott D. Healy	06/09/2020 14:00	Betina Topolski	2174613
EPA 200.8 Rev. 5.4	06/03/2020	06/08/2020 14:40	Elliott D. Healy	06/09/2020 22:20	Justin Cutchin	2174613
	06/03/2020	06/08/2020 14:40	Elliott D. Healy	06/10/2020 14:27	Justin Cutchin	2174613
EPA 300.0 Rev. 2.1	06/03/2020			06/17/2020 10:07	Elliott Rodriguez	2174602
	06/03/2020			06/17/2020 10:20	Elliott Rodriguez	2174605
EPA 350.1 Rev. 2.0	06/03/2020			06/06/2020 13:58	Ping Hua	2174603
	06/03/2020			06/06/2020 14:07	Ping Hua	2174606
EPA 351.2 Rev. 2.0	06/03/2020	06/16/2020 10:50	Sima Feizi	06/17/2020 09:46	Jhamieka S. Greenwood	2174603
	06/03/2020	06/16/2020 10:50	Sima Feizi	06/17/2020 09:48	Jhamieka S. Greenwood	2174606
EPA 353.2 Rev. 2.0	06/03/2020			06/05/2020 09:48	Beverly Y. Sanders	2174603
	06/03/2020			06/05/2020 09:49	Beverly Y. Sanders	2174606
EPA 365.1 Rev. 2.0	06/03/2020	06/08/2020 17:04	Yen Ta	06/10/2020 08:55	Lipi Saha	2174603
	06/03/2020	06/08/2020 17:04	Yen Ta	06/10/2020 08:58	Lipi Saha	2174606
EPA 365.1 Rev. 2.0 dissolved	06/03/2020			06/03/2020 16:28	Jhamieka S. Greenwood	2174604
	06/03/2020			06/03/2020 16:29	Jhamieka S. Greenwood	2174607
EPA 8321B	06/03/2020	06/04/2020 15:15	Rebecca Ware	06/04/2020 18:36	Rebecca Ware	2174612
	06/03/2020	06/04/2020 15:15	Rebecca Ware	06/05/2020 18:43	Rebecca Ware	2174612
	06/03/2020	06/04/2020 15:15	Rebecca Ware	06/08/2020 17:40	Rebecca Ware	2174612
	06/03/2020	06/08/2020 10:00	Hoor Shaik	06/09/2020 00:11	Juyoung Kim	2174612
SM 2120 B-2011	06/03/2020			06/03/2020 16:29	Blanca Fach	2174602
	06/03/2020			06/03/2020 16:30	Blanca Fach	2174605
SM 2320 B-2011	06/03/2020			06/09/2020 14:24	Dale L. Simmons	2174602
	06/03/2020			06/09/2020 14:34	Dale L. Simmons	2174605
SM 2340B	06/03/2020			06/09/2020 14:00	Betina Topolski	2174613
SM 2540 C-2011	06/03/2020			06/05/2020 16:02	Yijie Li	2174602, 2174605
SM 2540 D-2011	06/03/2020			06/05/2020 16:02	Yijie Li	2174602, 2174605
SM 4500 F-C-2011	06/03/2020			06/05/2020 19:20	Dale L. Simmons	2174602
	06/03/2020			06/05/2020 19:32	Dale L. Simmons	2174605
SM 5310 B-2011	06/03/2020			06/04/2020 23:56	David Boose	2174603
	06/03/2020			06/05/2020 00:32	David Boose	2174606