

Chemical Analysis Report

WQAP-2021-11-22-01

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

Event Description: **Lake Jackson**
Request ID: **RQ-2021-09-13-04**
Customer: **WQAP**
Project ID: **LK-JACKSON**

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Date Certified: 15-DEC-2021 15:29



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: Apalachicola River @ Bristol Landing

Collection Date/Time: 11/22/2021 10:25

Field ID: G2TLHR0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290916	EPA 180.1 Rev. 2.0	Turbidity	5.0	A	NTU	P406720	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P407154	
		Sulfate	6.2		mg SO4/L	P407157	
	SM 2120 B-2011	Color (true)	16		PCU	P406716	
	SM 2320 B-2011	Total Alkalinity	44		mg CaCO3/L	P406784	
	SM 2540 C-2011	TDS	75		mg/L	P407014	
	SM 2540 D-2011	TSS	5	I	mg/L	P407051	
	SM 4500 F-C-2011	Fluoride	0.067	I	mg F/L	P406787	
2290917	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P407084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P407144	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.71		mg N/L	P406741	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P406641	
	SM 5310 B-2011	Organic Carbon	3.3		mg C/L	P406794	
2290918	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P406711	
2290921	EPA 8321B	2,4-D	0.013		ug/L	P406695	
		Acesulfame K	0.10	U	ug/L	P406666	
		2,4,5-T	0.0040	U	ug/L	P406695	
		AMPA	0.12	I	ug/L	P406666	
		Acetaminophen	0.0080	U	ug/L	P406695	
		Acetamiprid	0.0020	U	ug/L	P406695	
		Endothall	0.25	U	ug/L	P406666	
		Glufosinate	0.10	U	ug/L	P406666	
		Glyphosate	0.10	U	ug/L	P406666	
		Afidopyropen	0.0020	UJ	ug/L	P406695	LCS
		Bentazon	0.0018	I	ug/L	P406695	
		Sucralose	0.95		ug/L	P406666	
		Benzovindiflupyr	0.0020	U	ug/L	P406695	
		Carbamazepine	0.0016	I	ug/L	P406695	
		Clothianidin	0.0020	U	ug/L	P406695	
		Dinotefuran	0.0026	I	ug/L	P406695	
		Diuron	0.0039	I	ug/L	P406695	
		Fenuron	0.018	I	ug/L	P406695	
		Fluridone	8.0E-04	U	ug/L	P406695	
		Imazapyr	0.072		ug/L	P406695	
		Hydrocodone	0.0020	U	ug/L	P406695	
		Ibuprofen	0.020	U	ug/L	P406695	
		Imidacloprid	0.0030	I	ug/L	P406695	MS
		Linuron	0.0040	U	ug/L	P406695	
		Mandestrobin	0.0020	U	ug/L	P406695	
		MCP	0.0040	U	ug/L	P406695	
		Naproxen	0.0080	U	ug/L	P406695	
		Primidone	0.0040	U	ug/L	P406695	
		Pyraclostrobin	0.0020	U	ug/L	P406695	

Field ID: G2TLHR0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290921	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P406695	MS
		Tolfenpyrad	0.0020	U	ug/L	P406695	
		Triclopyr	0.0040	U	ug/L	P406695	
2290922	EPA 200.7 Rev. 4.4	Barium	21.0		ug/L	P406808	
		Calcium	15.8		mg/L	P406808	
		Iron	520		ug/L	P406808	
		Magnesium	1.91		mg/L	P406808	
		Manganese	94.4		ug/L	P406808	
		Potassium	1.8		mg/L	P406808	
		Sodium	6.0		mg/L	P406808	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P406808	
		Aluminum	184		ug/L	P406808	
		Antimony	0.085	I	ug/L	P406808	
		Arsenic	0.40		ug/L	P406808	
		Beryllium	0.026	I	ug/L	P406808	
		Boron**	18.2		ug/L	P406808	
		Cadmium	0.020	U	ug/L	P406808	
		Chromium	0.51	I	ug/L	P406808	
		Copper	0.72	I	ug/L	P406808	
		Lead	0.26	I	ug/L	P406808	
		Nickel	0.50	U	ug/L	P406808	
		Selenium	0.20	U	ug/L	P406808	
		Silver	0.010	U	ug/L	P406808	
		Thallium	0.10	U	ug/L	P406808	
	SM 2340B	Hardness	47.2		mg/L	P406808	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P406720

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P406808

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
Manganese	1.0	U	ug/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: P406808

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	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: P407154

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407157

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P407084

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: P407144

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406741

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406641

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406711

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

Reference Method: EPA 8321B
Batch ID: P406666

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: P406695

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P406695

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	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: P406716

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P406784

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

Reference Method: SM 2540 C-2011
Batch ID: P407014

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P407051

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P406787

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P406794

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: P406808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	97.0		P	85 - 115
Calcium	102		P	85 - 115
Iron	102		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	99.0		P	85 - 115
Potassium	95.9		P	85 - 115
Sodium	97.9		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P406808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	101		P	85 - 115
Boron	97.8		P	85 - 115
Cadmium	99.5		P	85 - 115
Chromium	102		P	85 - 115
Copper	102		P	85 - 115
Lead	99.0		P	85 - 115
Nickel	102		P	85 - 115
Selenium	102		P	85 - 115
Silver	102		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407154

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407157

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P407084

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407144

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P406741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P406641

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P406711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.8		P	90 - 110

Reference Method: EPA 8321B

Batch ID: P406666

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	93.4		P	40 - 160
Endothall	87.0		P	40 - 150
Glufosinate	95.7		P	40 - 160
Glyphosate	97.4		P	40 - 160
Sucralose	98.4		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P406695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	69.8		P	40 - 150
2,4,5-T	99.0		P	40 - 150
Acetaminophen	79.4		P	30 - 150
Acetamiprid	74.7		P	40 - 150
Afidopyropen	27.7		F	40 - 150
Bentazon	107		P	30 - 150
Benzovindiflupyr	86.0		P	40 - 150
Carbamazepine	74.1		P	40 - 150
Clothianidin	92.1		P	40 - 150
Dinotefuran	80.1		P	40 - 150
Diuron	70.7		P	40 - 150
Fenuron	97.3		P	40 - 150
Fluridone	92.4		P	40 - 150
Hydrocodone	74.2		P	40 - 150
Ibuprofen	55.2		P	40 - 150
Imazapyr	70.3		P	40 - 150
Imidacloprid	76.8		P	40 - 150
Linuron	86.2		P	40 - 150
Mandestrobin	76.9		P	40 - 150
MCPP	74.9		P	40 - 150
Naproxen	62.9		P	40 - 150
Primidone	60.1		P	40 - 150
Pyraclostrobin	85.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P406695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	86.4		P	40 - 150
Tolfenpyrad	70.4		P	30 - 150
Triclopyr	82.9		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P406716

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

Reference Method: SM 2320 B-2011
Batch ID: P406784

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P406787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P406794

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2291009	Barium	96.1	96.6	P/P	80 - 120
2291009	Calcium	99.0		P	80 - 120
2291009	Iron	106	106	P/P	80 - 120
2291009	Magnesium	101		P	80 - 120
2291009	Manganese	101	102	P/P	80 - 120
2291009	Potassium	102	102	P/P	80 - 120
2291009	Sodium	102	100	P/P	80 - 120
2291009	Zinc	105	108	P/P	80 - 120
2291225	Barium	95.9		P	80 - 120
2291225	Iron	105		P	80 - 120
2291225	Magnesium	106		P	80 - 120
2291225	Manganese	100		P	80 - 120
2291225	Potassium	108		P	80 - 120
2291225	Sodium	105		P	80 - 120
2291225	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P406808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2291009	Aluminum	102	102	P/P	80 - 120
2291009	Antimony	104	104	P/P	80 - 120
2291009	Arsenic	101	102	P/P	80 - 120
2291009	Beryllium	97.7	100	P/P	80 - 120
2291009	Boron	98.1	102	P/P	80 - 120
2291009	Cadmium	103	103	P/P	80 - 120
2291009	Chromium	103	104	P/P	80 - 120
2291009	Copper	100	101	P/P	80 - 120
2291009	Lead	100	101	P/P	80 - 120
2291009	Nickel	101	102	P/P	80 - 120
2291009	Selenium	101	102	P/P	80 - 120
2291009	Silver	103	105	P/P	80 - 120
2291009	Thallium	104	105	P/P	80 - 120
2291225	Aluminum	96.6		P	80 - 120
2291225	Antimony	104		P	80 - 120
2291225	Arsenic	99.0		P	80 - 120
2291225	Beryllium	99.5		P	80 - 120
2291225	Boron	98.2		P	80 - 120
2291225	Cadmium	102		P	80 - 120
2291225	Chromium	105		P	80 - 120
2291225	Copper	95.2		P	80 - 120
2291225	Lead	101		P	80 - 120
2291225	Nickel	101		P	80 - 120
2291225	Selenium	101		P	80 - 120
2291225	Silver	103		P	80 - 120
2291225	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P407154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290802	Chloride	99.5		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2291021	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290802	Sulfate	95.8		P	90 - 110
2291021	Sulfate	94.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P407084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290917	Ammonia-N	97.2	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290821	Kjeldahl Nitrogen	91.4	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290967	NO2NO3-N	100	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290781	Total-P	104	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290968	O-Phosphate-P	101	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P406666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290921	Acesulfame K	123	119	P/P	40 - 150
2290921	AMPA	100	104	P/P	40 - 160
2290921	Endothall	88.2	89.2	P/P	40 - 150
2290921	Glufosinate	101	102	P/P	40 - 160
2290921	Glyphosate	90.8	94.6	P/P	40 - 160
2290921	Sucralose	92.6	100	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P406695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290415	2,4-D	115	88.7	P/P	40 - 150
2290415	2,4,5-T	104	109	P/P	40 - 150
2290415	Acetaminophen	116	100	P/P	30 - 150
2290415	Acetamiprid	95.6	84.9	P/P	40 - 150
2290415	Afidopyropen	56.2	50.2	P/P	40 - 150
2290415	Benzovindiflupyr	94.6	80.2	P/P	40 - 150
2290415	Carbamazepine	110	91.5	P/P	40 - 150
2290415	Clothianidin	125	96.5	P/P	40 - 150
2290415	Dinotefuran	127	124	P/P	40 - 150
2290415	Diuron	84.6	89.2	P/P	40 - 150
2290415	Fenuron	86.1	72.3	P/P	40 - 150
2290415	Fluridone	120	89.7	P/P	40 - 150
2290415	Hydrocodone	110	95.9	P/P	40 - 150
2290415	Ibuprofen	53.3	70.1	P/P	40 - 150
2290415	Imidacloprid	204	155	F/F	40 - 150
2290415	Linuron	74.9	80.8	P/P	40 - 150
2290415	Mandestrobin	92.8	86.1	P/P	40 - 150
2290415	MCPP	87.2	82.4	P/P	40 - 150
2290415	Naproxen	115	101	P/P	40 - 150
2290415	Primidone	117	105	P/P	40 - 150
2290415	Pyraclostrobin	98.7	85.9	P/P	40 - 150
2290415	Thiamethoxam	184	165	F/F	40 - 150
2290415	Tolfenpyrad	89.2	78.9	P/P	30 - 150
2290415	Triclopyr	103	93.5	P/P	40 - 150

Reference Method: SM 5310 B-2011
Batch ID: P406794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290925	Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P406720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290916	Turbidity	5.05	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P406808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2291009	Barium	0.479	Spike	P	0 - 20
2291009	Calcium	0.262	Spike	P	0 - 20
2291009	Iron	0.706	Spike	P	0 - 20
2291009	Magnesium	0.874	Spike	P	0 - 20
2291009	Manganese	0.921	Spike	P	0 - 20
2291009	Potassium	0.0124	Spike	P	0 - 20
2291009	Sodium	0.832	Spike	P	0 - 20
2291009	Zinc	3.37	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P406808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2291009	Aluminum	0.000411	Spike	P	0 - 20
2291009	Antimony	0.0428	Spike	P	0 - 20
2291009	Arsenic	0.777	Spike	P	0 - 20
2291009	Beryllium	2.82	Spike	P	0 - 20
2291009	Boron	3.17	Spike	P	0 - 20
2291009	Cadmium	0.697	Spike	P	0 - 20
2291009	Chromium	0.261	Spike	P	0 - 20
2291009	Copper	0.232	Spike	P	0 - 20
2291009	Lead	1.03	Spike	P	0 - 20
2291009	Nickel	1.19	Spike	P	0 - 20
2291009	Selenium	0.789	Spike	P	0 - 20
2291009	Silver	1.31	Spike	P	0 - 20
2291009	Thallium	1.40	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290802	Chloride	0.273	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290802	Sulfate	0.173	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P407084

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290917	Ammonia-N	0.547	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P407144

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290821	Kjeldahl Nitrogen	2.96	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P406741

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290967	NO2NO3-N	2.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P406641

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290781	Total-P	2.89	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P406711

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290968	O-Phosphate-P	1.10	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P406666

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290921	Acesulfame K	3.07	Spike	P	0 - 30
2290921	AMPA	4.01	Spike	P	0 - 30
2290921	Endothall	1.17	Spike	P	0 - 30
2290921	Glufosinate	1.65	Spike	P	0 - 30
2290921	Glyphosate	4.10	Spike	P	0 - 30
2290921	Sucralose	5.70	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P406695

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290415	2,4-D	22.7	Spike	P	0 - 30
2290415	2,4,5-T	4.99	Spike	P	0 - 30
2290415	Acetaminophen	14.4	Spike	P	0 - 30
2290415	Acetamidrid	11.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P406695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290415	Afidopyropen	11.3	Spike	P	0 - 30
2290415	Bentazon	9.55	Spike	P	0 - 30
2290415	Benzovindiflupyr	16.5	Spike	P	0 - 30
2290415	Carbamazepine	14.2	Spike	P	0 - 30
2290415	Clothianidin	26.0	Spike	P	0 - 30
2290415	Dinotefuran	2.04	Spike	P	0 - 30
2290415	Diuron	5.28	Spike	P	0 - 30
2290415	Fenuron	13.2	Spike	P	0 - 30
2290415	Fluridone	13.4	Spike	P	0 - 30
2290415	Hydrocodone	13.6	Spike	P	0 - 30
2290415	Ibuprofen	27.3	Spike	P	0 - 30
2290415	Imazapyr	4.76	Spike	P	0 - 30
2290415	Imidacloprid	24.5	Spike	P	0 - 30
2290415	Linuron	7.59	Spike	P	0 - 30
2290415	Mandestrobin	7.59	Spike	P	0 - 30
2290415	MCPP	5.67	Spike	P	0 - 30
2290415	Naproxen	13.1	Spike	P	0 - 30
2290415	Primidone	11.3	Spike	P	0 - 30
2290415	Pyraclostrobin	13.9	Spike	P	0 - 30
2290415	Thiamethoxam	10.4	Spike	P	0 - 30
2290415	Tolfenpyrad	12.4	Spike	P	0 - 30
2290415	Triclopyr	9.44	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P406716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290924	Color (true)	1.96	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P406784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290766	Total Alkalinity	0.818	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P407014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2291024	TDS	4.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P406787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290766	Fluoride	0.0	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P406794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290925	Organic Carbon	5.03	Sample	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2290921

Field Sample ID: G2TLHR0043

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	86.1	P	30 - 160
EPA 8321B	Endothall-d6	94.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.4	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	98.4	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109057

Included Lab Sample IDs: 2290918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	99.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A109061

Included Lab Sample IDs: 2290916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109065

Included Lab Sample IDs: 2290916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109078

Included Lab Sample IDs: 2290917

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

Reference Method: EPA 8321B

Run ID: A109092

Included Lab Sample IDs: 2290921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	97.6	P/P	60 - 160
Endothall	90.5	88.3	P/P	60 - 160
Sucralose	102	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109101

Included Lab Sample IDs: 2290921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	106	P/P	60 - 160
Glufosinate	88.8	97.3	P/P	60 - 160
Glyphosate	91.2	98.7	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A109109

Included Lab Sample IDs: 2290916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.0	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A109109

Included Lab Sample IDs: 2290916

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

Reference Method: SM 5310 B-2011

Run ID: A109117

Included Lab Sample IDs: 2290917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.1	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109136

Included Lab Sample IDs: 2290917

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A109157

Included Lab Sample IDs: 2290922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	94.5	P/P	90 - 110
Calcium	102	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Manganese	101	99.4	P/P	90 - 110
Potassium	97.8	96.6	P/P	90 - 110
Sodium	100	98.8	P/P	90 - 110
Zinc	99.7	105	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109202

Included Lab Sample IDs: 2290922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	92.4	96.5	P/P	90 - 110
Arsenic	95.7	95.1	P/P	90 - 110
Beryllium	94.5	94.4	P/P	90 - 110
Boron	98.0	97.3	P/P	90 - 110
Cadmium	95.1	99.0	P/P	90 - 110
Chromium	95.2	96.0	P/P	90 - 110
Copper	94.5	93.1	P/P	90 - 110
Lead	93.4	94.6	P/P	90 - 110
Nickel	95.2	94.4	P/P	90 - 110
Selenium	97.2	99.4	P/P	90 - 110
Silver	97.3	98.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109225

Included Lab Sample IDs: 2290922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	93.6	94.9	P/P	90 - 110
Thallium	92.9	91.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A109230

Included Lab Sample IDs: 2290917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.7	95.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A109256

Included Lab Sample IDs: 2290916

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109297

Included Lab Sample IDs: 2290917

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

Reference Method: EPA 8321B

Run ID: A109350

Included Lab Sample IDs: 2290921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	73.4	72.4	P/P	50 - 150
2,4,5-T	82.6	94.6	P/P	50 - 150
Acetaminophen	102	95.0	P/P	60 - 160
Acetamiprid	112	101	P/P	50 - 150
Afidopyropen	94.7	96.7	P/P	50 - 150
Bentazon	122	101	P/P	50 - 160
Benzovindiflupyr	120	104	P/P	50 - 150
Carbamazepine	101	96.0	P/P	60 - 150
Clothianidin	132	121	P/P	60 - 150
Dinotefuran	106	96.9	P/P	50 - 150
Diuron	79.3	107	P/P	60 - 160
Fenuron	98.5	97.4	P/P	60 - 150
Fluridone	111	83.9	P/P	60 - 160
Hydrocodone	106	96.9	P/P	60 - 150
Ibuprofen	101	76.6	P/P	50 - 160
Imazapyr	97.2	81.8	P/P	50 - 150
Imidacloprid	99.9	101	P/P	60 - 150
Linuron	76.2	126	P/P	60 - 150
Mandestrobin	101	116	P/P	50 - 150
MCPP	105	88.6	P/P	50 - 150
Naproxen	120	89.1	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A109350
Included Lab Sample IDs: 2290921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	100	70.6	P/P	60 - 150
Pyraclostrobin	109	106	P/P	60 - 150
Thiamethoxam	101	101	P/P	50 - 150
Tolfenpyrad	106	77.2	P/P	60 - 150
Triclopyr	87.8	83.8	P/P	50 - 150

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						5.05	
EPA 200.7 Rev. 4.4	Barium	97.0	96.1	96.6	95.9			0.479
	Calcium	102	99.0					0.262
	Iron	102	106	106	105			0.706
	Magnesium	101	101	106				0.874
	Manganese	99.0	101	102	100			0.921
	Potassium	95.9	102	102	108			0.0124
	Sodium	97.9	102	100	105			0.832
	Zinc	101	105	108	104			3.37
EPA 200.8 Rev. 5.4	Aluminum	102	102	102	96.6			0.0004
	Antimony	101	104	104	104			0.0428
	Arsenic	101	101	102	99.0			0.777
	Beryllium	101	97.7	100	99.5			2.82
	Boron	97.8	98.1	102	98.2			3.17
	Cadmium	99.5	103	103	102			0.697
	Chromium	102	105	103	104			0.261
	Copper	102	100	101	95.2			0.232
	Lead	99.0	100	101	101			1.03
	Nickel	102	101	102	101			1.19
	Selenium	102	101	102	101			0.789
	Silver	102	103	105	103			1.31
	Thallium	101	105	104	105			1.40
EPA 300.0 Rev. 2.1	Chloride	99.8	99.5	97.9			0.273	
	Sulfate	98.4	95.8	94.2			0.173	
EPA 350.1 Rev. 2.0	Ammonia-N	95.0	97.2	96.4				0.547
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	94.5	91.4				2.96
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101	100	98.0				2.52
EPA 365.1 Rev. 2.0	Total-P	100	104	108				2.89
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8	101	99.5				1.10
EPA 8321B	2,4-D	69.8	115	88.7				22.7
	2,4,5-T	99.0	104	109				4.99
	Acesulfame K	107	123	119				3.07
	Acetaminophen	79.4	116	100				14.4
	Acetamiprid	74.7	95.6	84.9				11.9
	Afidopyropen	27.7	56.2	50.2				11.3
	AMPA	93.4	100	104				4.01
	Bentazon	107						9.55
	Benzovindiflupyr	86.0	94.6	80.2				16.5
	Carbamazepine	74.1	110	91.5				14.2
	Clothianidin	92.1	125	96.5				26.0
	Dinotefuran	80.1	127	124				2.04
	Diuron	70.7	84.6	89.2				5.28
	Endothall	87.0	88.2	89.2				1.17
	Fenuron	97.3	86.1	72.3				13.2
	Fluridone	92.4	120	89.7				13.4
	Glufosinate	95.7	101	102				1.65
	Glyphosate	97.4	90.8	94.6				4.10
	Hydrocodone	74.2	110	95.9				13.6
	Ibuprofen	55.2	53.3	70.1				27.3
	Imazapyr	70.3						4.76
	Imidacloprid	76.8	204	155				24.5
	Linuron	86.2	74.9	80.8				7.59
	Mandestrobin	76.9	92.8	86.1				7.59
	MCPD	74.9	87.2	82.4				5.67

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Naproxen	62.9	115	101		13.1
	Primidone	60.1	117	105		11.3
	Pyraclostrobin	85.8	98.7	85.9		13.9
	Sucralose	98.4	92.6	100		5.70
	Thiamethoxam	86.4	184	165		10.4
	Tolfenpyrad	70.4	89.2	78.9		12.4
	Triclopyr	82.9	103	93.5		9.44
SM 2120 B-2011	Color (true)	100			1.96	
SM 2320 B-2011	Total Alkalinity	102			0.818	
SM 2540 C-2011	TDS				4.88	
SM 4500 F-C-2011	Fluoride	99.0				0.0
SM 5310 B-2011	Organic Carbon	105	99.4		5.03	

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2290916
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2290922
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2290922
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2290916
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2290916
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2290917
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2290917
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2290917
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2290917
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2290918
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2290921
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2290916
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2290916
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2290922
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2290916
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2290916
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2290916
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2290917

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	11/22/2021			11/23/2021 16:13	Khloe J Berg	2290916
EPA 200.7 Rev. 4.4	11/22/2021	11/30/2021 10:30	Vijayalakshmi Reddy	12/01/2021 15:48	Josef B Mick	2290922
EPA 200.8 Rev. 5.4	11/22/2021	11/30/2021 10:30	Vijayalakshmi Reddy	12/03/2021 16:35	Emily M Philpot	2290922
	11/22/2021	11/30/2021 10:30	Vijayalakshmi Reddy	12/06/2021 13:58	Alexander Thompson	2290922
EPA 300.0 Rev. 2.1	11/22/2021			12/07/2021 01:08	James L Waggeberby	2290916
EPA 350.1 Rev. 2.0	11/22/2021			12/06/2021 14:59	Ping Hua	2290917
EPA 351.2 Rev. 2.0	11/22/2021	12/08/2021 16:51	Alexandra J Mattheus	12/09/2021 12:38	Alexandra J Mattheus	2290917
EPA 353.2 Rev. 2.0	11/22/2021			11/24/2021 09:30	Beverly Y. Sanders	2290917
EPA 365.1 Rev. 2.0	11/22/2021	11/23/2021 12:38	Simonne.V. Calhoun	11/29/2021 20:20	Sarah A Nixon	2290917
EPA 365.1 Rev. 2.0 dissolved	11/22/2021			11/23/2021 14:31	James L Waggeberby	2290918
EPA 8321B	11/22/2021	11/24/2021 09:00	Juyoung Kim	11/24/2021 10:15	Juyoung Kim	2290921
	11/22/2021	11/24/2021 09:00	Juyoung Kim	11/24/2021 12:20	Manjita Shrestha	2290921
	11/22/2021	11/24/2021 09:00	Manjita Shrestha	12/10/2021 03:35	Juyoung Kim	2290921
SM 2120 B-2011	11/22/2021			11/23/2021 15:30	Blanca Fach	2290916
SM 2320 B-2011	11/22/2021			11/24/2021 22:18	Dale L. Simmons	2290916
SM 2340B	11/22/2021			12/01/2021 15:48	Josef B Mick	2290922
SM 2540 C-2011	11/22/2021			11/24/2021 14:26	Yijie Li	2290916
SM 2540 D-2011	11/22/2021			11/24/2021 14:26	Yijie Li	2290916
SM 4500 F-C-2011	11/22/2021			11/24/2021 22:18	Dale L. Simmons	2290916
SM 5310 B-2011	11/22/2021			11/27/2021 06:35	Touraj Touran	2290917