

Chemical Analysis Report

SO-DIST-2021-01-20-02

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

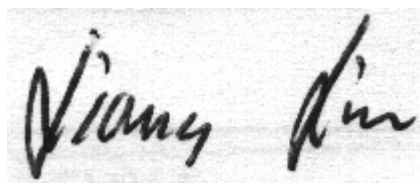
Event Description: **2021 SMP: DeSoto Cricks**
Request ID: **RQ-2021-01-18-32**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Chris Hormuth

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: Liang Lin, Environmental Administrator

Date Certified: 09-FEB-2021 16:35

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: Myrtle Slough@ Pine Island St

Collection Date/Time: 01/19/2021 10:00

Field ID: G3SD0095

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220234	EPA 8321B	2,4-D	0.0020	U	ug/L	P392677	
		Acesulfame K**	0.10	U	ug/L	P392663	
		AMPA**	0.10	U	ug/L	P392663	
		Sucralose**	0.014	I	ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Glufosinate**	0.10	U	ug/L	P392663	
		Glyphosate**	0.10	U	ug/L	P392663	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	8.0E-04	U	ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	8.0E-04	U	ug/L	P392677	
		Imazapyr**	0.0040	U	ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0020	U	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Hawthorne Creek @ Reynolds St

Collection Date/Time: 01/19/2021 11:30

Field ID: G3SD0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220227	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P392687	
	EPA 300.0 Rev. 2.1	Chloride	180		mg Cl/L	P392789	
		Sulfate	120		mg SO4/L	P392790	
		Color (true)	46		PCU	P392634	
	SM 2320 B-2011	Total Alkalinity	137		mg CaCO3/L	P392852	
	SM 2540 C-2011	TDS	660		mg/L	P393017	
	SM 2540 D-2011	TSS	2	U	mg/L	P392977	
	SM 4500 F-C-2011	Fluoride	0.41		mg F/L	P392857	
2220228	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P393205	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P393057	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.51		mg N/L	P392813	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P392786	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P392755	
2220229	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P392635	
2220235	EPA 200.7 Rev. 4.4	Barium	39.6		ug/L	P392709	
		Calcium	109		mg/L	P392709	
		Iron	160		ug/L	P392709	
		Magnesium	26.2		mg/L	P392709	
		Manganese	17.1		ug/L	P392709	
		Potassium	7.5		mg/L	P392709	
		Sodium	79.5		mg/L	P392709	
	EPA 200.8 Rev. 5.4	Zinc	6.6	I	ug/L	P392709	
		Aluminum	19	I	ug/L	P392709	
		Antimony	0.61		ug/L	P392709	
		Arsenic	1.11		ug/L	P392709	
		Boron**	56.0		ug/L	P392709	
		Cadmium	0.046	I	ug/L	P392709	
		Chromium	0.45	I	ug/L	P392709	
		Copper	1.17		ug/L	P392709	
		Lead	0.20	U	ug/L	P392709	
		Nickel	1.7	I	ug/L	P392709	
		Selenium	0.20	U	ug/L	P392709	
		Silver	0.010	U	ug/L	P392709	
		Thallium	0.10	U	ug/L	P392709	
		Hardness	380		mg/L	P392709	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392687

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392709

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: P392709

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: P392789

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392790

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393205

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: P393057

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392813

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P392786

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392635

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

Reference Method: EPA 8321B
Batch ID: P392663

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: P392677

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: P392677

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: P392634

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P392852

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

Reference Method: SM 2540 C-2011
Batch ID: P393017

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P392977

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P392857

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P392755

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: P392709

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.2		P	85 - 115
Calcium	106		P	85 - 115
Iron	108		P	85 - 115
Magnesium	107		P	85 - 115
Manganese	99.4		P	85 - 115
Potassium	98.1		P	85 - 115
Sodium	104		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392709

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.4		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	101		P	85 - 115
Boron	92.7		P	85 - 115
Cadmium	96.7		P	85 - 115
Chromium	106		P	85 - 115
Copper	98.9		P	85 - 115
Lead	103		P	85 - 115
Nickel	99.7		P	85 - 115
Selenium	98.6		P	85 - 115
Silver	109		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392789

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392790

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393057

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.1		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P392813

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P392786

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P392635

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

Reference Method: EPA 8321B

Batch ID: P392663

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.1		P	40 - 150
AMPA	102		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	133		P	40 - 140
Sucralose	131		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P392677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	128		P	30 - 160
Acetaminophen	85.3		P	30 - 160
Acetamiprid	101		P	30 - 160
Afidopyropen	85.4		P	30 - 160
Bentazon	91.3		P	30 - 160
Benzovindiflupyr	80.9		P	30 - 160
Carbamazepine	84.3		P	30 - 160
Clothianidin	83.3		P	30 - 160
Dinotefuran	91.9		P	30 - 160
Diuron	71.1		P	30 - 160
Fenuron	104		P	30 - 160
Fluridone	80.5		P	30 - 160
Hydrocodone	105		P	30 - 160
Ibuprofen	85.2		P	30 - 160
Imazapyr	92.5		P	30 - 160
Imidacloprid	107		P	30 - 160
Linuron	71.3		P	30 - 160
Mandestrobin	96.6		P	30 - 160
MCPP	105		P	30 - 160
Naproxen	61.3		P	30 - 160
Primidone	87.2		P	30 - 160
Pyraclostrobin	78.0		P	30 - 160
Thiamethoxam	93.5		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P392677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	51.1		P	30 - 160
Triclopyr	91.7		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P392634

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

Reference Method: SM 2320 B-2011
Batch ID: P392852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.3		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P392857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.3		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P392755

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P392709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220092	Barium	101		P	80 - 120
2220092	Calcium	109		P	80 - 120
2220092	Iron	110		P	80 - 120
2220092	Magnesium	109		P	80 - 120
2220092	Manganese	101		P	80 - 120
2220092	Potassium	104		P	80 - 120
2220092	Sodium	105		P	80 - 120
2220092	Zinc	104		P	80 - 120
2220307	Barium	104	102	P/P	80 - 120
2220307	Calcium	111	110	P/P	80 - 120
2220307	Iron	113	114	P/P	80 - 120
2220307	Magnesium	111	112	P/P	80 - 120
2220307	Manganese	105	102	P/P	80 - 120
2220307	Potassium	105	102	P/P	80 - 120
2220307	Sodium	106	102	P/P	80 - 120
2220307	Zinc	106	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P392709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220092	Aluminum	95.1		P	80 - 120
2220092	Antimony	100		P	80 - 120
2220092	Arsenic	96.5		P	80 - 120
2220092	Boron	98.2		P	80 - 120
2220092	Cadmium	93.8		P	80 - 120
2220092	Chromium	102		P	80 - 120
2220092	Copper	94.8		P	80 - 120
2220092	Lead	101		P	80 - 120
2220092	Nickel	94.0		P	80 - 120
2220092	Selenium	92.0		P	80 - 120
2220092	Silver	106		P	80 - 120
2220092	Thallium	102		P	80 - 120
2220307	Aluminum	93.8	96.0	P/P	80 - 120
2220307	Antimony	102	103	P/P	80 - 120
2220307	Arsenic	96.9	98.2	P/P	80 - 120
2220307	Boron	97.0	98.3	P/P	80 - 120
2220307	Cadmium	95.2	96.8	P/P	80 - 120
2220307	Chromium	106	108	P/P	80 - 120
2220307	Copper	95.5	96.9	P/P	80 - 120
2220307	Lead	102	103	P/P	80 - 120
2220307	Nickel	97.9	98.9	P/P	80 - 120
2220307	Selenium	92.8	94.9	P/P	80 - 120
2220307	Silver	109	108	P/P	80 - 120
2220307	Thallium	99.8	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220281	Chloride	102		P	90 - 110
2220423	Chloride	102		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220281	Sulfate	103		P	90 - 110
2220423	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219920	Ammonia-N	99.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220178	Kjeldahl Nitrogen	94.1	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220107	NO2NO3-N	97.2	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P392786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220161	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220163	O-Phosphate-P	99.5	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P392663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219980	Acesulfame K	81.7	84.4	P/P	40 - 150
2219980	AMPA	116	107	P/P	40 - 150
2219980	Endothall	101	103	P/P	40 - 150
2219980	Glufosinate	91.6	104	P/P	40 - 150
2219980	Glyphosate	119	135	P/P	40 - 140
2219980	Sucralose	128	134	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P392677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220213	2,4-D	102	95.7	P/P	30 - 160
2220213	Acetaminophen	91.4	88.0	P/P	30 - 160
2220213	Acetamiprid	86.5	83.6	P/P	30 - 160
2220213	Afidopyropen	90.2	82.0	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P392677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220213	Benzovindiflupyr	85.8	76.2	P/P	30 - 160
2220213	Carbamazepine	67.7	64.1	P/P	30 - 160
2220213	Clothianidin	77.2	87.2	P/P	30 - 160
2220213	Dinotefuran	102	101	P/P	30 - 160
2220213	Diuron	49.9	50.4	P/P	30 - 160
2220213	Fenuron	65.6	67.4	P/P	30 - 160
2220213	Hydrocodone	93.2	93.1	P/P	30 - 160
2220213	Ibuprofen	64.0	78.2	P/P	30 - 160
2220213	Imidacloprid	130	124	P/P	30 - 160
2220213	Linuron	65.6	59.5	P/P	30 - 160
2220213	Mandestrobin	88.8	82.4	P/P	30 - 160
2220213	MCPP	101	89.8	P/P	30 - 160
2220213	Naproxen	67.9	76.4	P/P	30 - 160
2220213	Primidone	76.9	78.4	P/P	30 - 160
2220213	Pyraclostrobin	83.5	78.3	P/P	30 - 160
2220213	Thiamethoxam	101	106	P/P	30 - 160
2220213	Tolfenpyrad	55.7	50.9	P/P	30 - 160
2220213	Triclopyr	106	89.8	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P392857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220159	Fluoride	95.8	95.8	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P392755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220106	Organic Carbon	98.9	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P392687

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220076	Turbidity	0.258	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P392709

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220307	Barium	2.07	Spike	P	0 - 20
2220307	Calcium	0.647	Spike	P	0 - 20
2220307	Iron	0.954	Spike	P	0 - 20
2220307	Magnesium	0.962	Spike	P	0 - 20
2220307	Manganese	2.15	Spike	P	0 - 20
2220307	Potassium	2.76	Spike	P	0 - 20
2220307	Sodium	2.69	Spike	P	0 - 20
2220307	Zinc	1.66	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P392709

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220307	Aluminum	2.27	Spike	P	0 - 20
2220307	Antimony	1.45	Spike	P	0 - 20
2220307	Arsenic	1.39	Spike	P	0 - 20
2220307	Boron	1.25	Spike	P	0 - 20
2220307	Cadmium	1.73	Spike	P	0 - 20
2220307	Chromium	1.98	Spike	P	0 - 20
2220307	Copper	1.46	Spike	P	0 - 20
2220307	Lead	1.43	Spike	P	0 - 20
2220307	Nickel	1.07	Spike	P	0 - 20
2220307	Selenium	2.27	Spike	P	0 - 20
2220307	Silver	0.393	Spike	P	0 - 20
2220307	Thallium	2.09	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392789

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220423	Chloride	0.819	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392790

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220423	Sulfate	1.08	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219920	Ammonia-N	1.72	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220178	Kjeldahl Nitrogen	6.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220107	NO2NO3-N	0.685	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P392786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220161	Total-P	1.50	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220163	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P392663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219980	Acesulfame K	3.29	Spike	P	0 - 30
2219980	AMPA	8.42	Spike	P	0 - 30
2219980	Endothall	1.87	Spike	P	0 - 30
2219980	Glufosinate	13.0	Spike	P	0 - 30
2219980	Glyphosate	12.5	Spike	P	0 - 30
2219980	Sucralose	4.53	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220213	2,4-D	5.80	Spike	P	0 - 30
2220213	Acetaminophen	3.82	Spike	P	0 - 30
2220213	Acetamiprid	3.46	Spike	P	0 - 30
2220213	Afidopyropen	9.49	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P392677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220213	Bentazon	3.35	Spike	P	0 - 30
2220213	Benzovindiflupyr	11.8	Spike	P	0 - 30
2220213	Carbamazepine	5.35	Spike	P	0 - 30
2220213	Clothianidin	12.2	Spike	P	0 - 30
2220213	Dinotefuran	0.802	Spike	P	0 - 30
2220213	Diuron	0.932	Spike	P	0 - 30
2220213	Fenuron	2.71	Spike	P	0 - 30
2220213	Fluridone	16.3	Spike	P	0 - 30
2220213	Hydrocodone	0.132	Spike	P	0 - 30
2220213	Ibuprofen	20.0	Spike	P	0 - 30
2220213	Imazapyr	7.82	Spike	P	0 - 30
2220213	Imidacloprid	4.43	Spike	P	0 - 30
2220213	Linuron	9.66	Spike	P	0 - 30
2220213	Mandestrobin	7.47	Spike	P	0 - 30
2220213	MCPP	11.5	Spike	P	0 - 30
2220213	Naproxen	11.7	Spike	P	0 - 30
2220213	Primidone	1.79	Spike	P	0 - 30
2220213	Pyraclostrobin	6.47	Spike	P	0 - 30
2220213	Thiamethoxam	5.33	Spike	P	0 - 30
2220213	Tolfenpyrad	9.08	Spike	P	0 - 30
2220213	Triclopyr	16.1	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P392634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220159	Color (true)	1.64	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P392852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220159	Total Alkalinity	1.59	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220105	TDS	6.32	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P392857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220159	Fluoride	0.0	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P392755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220106	Organic Carbon	1.50	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2220234

Field Sample ID: G3SD0095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	59.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.4	P	30 - 160
EPA 8321B	Diuron-d6	32.3	P	30 - 160
EPA 8321B	Endothall-d6	118	P	40 - 160
EPA 8321B	Endothall-d6	118	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	69.1	P	30 - 160
EPA 8321B	Primidone-d5	43.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A103140

Included Lab Sample IDs: 2220227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103142

Included Lab Sample IDs: 2220229

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	99.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103154

Included Lab Sample IDs: 2220227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	103	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103158

Included Lab Sample IDs: 2220227

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

Reference Method: SM 5310 B-2011

Run ID: A103188

Included Lab Sample IDs: 2220228

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

Reference Method: EPA 8321B

Run ID: A103192

Included Lab Sample IDs: 2220234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	116	118	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103210

Included Lab Sample IDs: 2220228

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

Reference Method: EPA 8321B

Run ID: A103215

Included Lab Sample IDs: 2220234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.1	99.4	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A103215
Included Lab Sample IDs: 2220234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	103	P/P	60 - 160
Endothall	96.0	91.7	P/P	60 - 160
Glufosinate	84.3	99.7	P/P	60 - 160
Glyphosate	117	112	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A103220
Included Lab Sample IDs: 2220227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	91.9	94.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A103220
Included Lab Sample IDs: 2220227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A103221
Included Lab Sample IDs: 2220235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.5	101	P/P	90 - 110
Calcium	103	99.5	P/P	90 - 110
Iron	104	102	P/P	90 - 110
Magnesium	102	99.4	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Potassium	98.1	94.7	P/P	90 - 110
Sodium	103	100	P/P	90 - 110
Zinc	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A103224
Included Lab Sample IDs: 2220228

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

Reference Method: EPA 8321B
Run ID: A103235
Included Lab Sample IDs: 2220234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.1	95.4	P/P	50 - 150
Acetaminophen	99.8	103	P/P	60 - 160
Acetamiprid	105	109	P/P	50 - 150
Afidopyropen	111	120	P/P	50 - 150
Bentazon	124	121	P/P	50 - 160
Benzovindiflupyr	120	122	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A103235
Included Lab Sample IDs: 2220234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	105	103	P/P	60 - 150
Clothianidin	85.6	92.2	P/P	60 - 150
Dinotefuran	105	101	P/P	50 - 150
Diuron	117	113	P/P	60 - 160
Fenuron	111	106	P/P	60 - 150
Fluridone	123	122	P/P	60 - 160
Hydrocodone	117	119	P/P	60 - 150
Ibuprofen	109	75.7	P/P	50 - 160
Imazapyr	100	97.3	P/P	50 - 160
Imidacloprid	98.1	103	P/P	60 - 150
Linuron	108	104	P/P	60 - 150
Mandestrobin	109	107	P/P	50 - 150
MCPP	100	98.3	P/P	50 - 150
Naproxen	76.4	74.8	P/P	50 - 160
Primidone	93.8	87.2	P/P	60 - 150
Pyraclostrobin	102	111	P/P	60 - 150
Thiamethoxam	110	105	P/P	50 - 150
Tolfenpyrad	111	107	P/P	60 - 150
Triclopyr	107	90.2	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A103276
Included Lab Sample IDs: 2220235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.0	97.0	P/P	90 - 110
Antimony	99.3	99.4	P/P	90 - 110
Arsenic	97.7	97.7	P/P	90 - 110
Boron	101	102	P/P	90 - 110
Chromium	104	105	P/P	90 - 110
Copper	94.2	94.9	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	95.5	96.6	P/P	90 - 110
Selenium	96.4	96.1	P/P	90 - 110
Silver	104	106	P/P	90 - 110
Thallium	103	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A103299
Included Lab Sample IDs: 2220235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	98.7	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A103322
Included Lab Sample IDs: 2220228

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.4	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103348

Included Lab Sample IDs: 2220228

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	93.0	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						0.258	
EPA 200.7 Rev. 4.4	Barium	98.2	101	104	102			2.07
	Calcium	106	109	111	110			0.647
	Iron	108	110	113	114			0.954
	Magnesium	107	109	111	112			0.962
	Manganese	99.4	101	105	102			2.15
	Potassium	98.1	104	105	102			2.76
	Sodium	104	105	106	102			2.69
	Zinc	101	104	106	104			1.66
EPA 200.8 Rev. 5.4	Aluminum	97.4	93.8	96.0	95.1			2.27
	Antimony	104	102	103	100			1.45
	Arsenic	101	96.9	98.2	96.5			1.39
	Boron	92.7	97.0	98.3	98.2			1.25
	Cadmium	96.7	95.2	96.8	93.8			1.73
	Chromium	106	106	108	102			1.98
	Copper	98.9	95.5	96.9	94.8			1.46
	Lead	103	102	103	101			1.43
	Nickel	99.7	97.9	98.9	94.0			1.07
	Selenium	98.6	92.8	94.9	92.0			2.27
	Silver	109	109	108	106			0.393
	Thallium	101	99.8	102	102			2.09
EPA 300.0 Rev. 2.1	Chloride	101	102	102			0.819	
	Sulfate	103	102	103			1.08	
EPA 350.1 Rev. 2.0	Ammonia-N	98.3	99.2	101				1.72
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.1	94.1	106				6.44
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	97.2	98.2				0.685
EPA 365.1 Rev. 2.0	Total-P	104	102	103				1.50
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4	99.5	99.5				0.0
EPA 8321B	2,4-D	128	102	95.7				5.80
	Acesulfame K	97.1	81.7	84.4				3.29
	Acetaminophen	85.3	91.4	88.0				3.82
	Acetamiprid	101	86.5	83.6				3.46
	Afidopyropen	85.4	90.2	82.0				9.49
	AMPA	102	116	107				8.42
	Bentazon	91.3						3.35
	Benzovindiflupyr	80.9	85.8	76.2				11.8
	Carbamazepine	84.3	67.7	64.1				5.35
	Clothianidin	83.3	77.2	87.2				12.2
	Dinotefuran	91.9	102	101				0.802
	Diuron	71.1	49.9	50.4				0.932
	Endothall	102	101	103				1.87
	Fenuron	104	65.6	67.4				2.71
	Fluridone	80.5						16.3
	Glufosinate	100	91.6	104				13.0
	Glyphosate	133	119	135				12.5
	Hydrocodone	105	93.2	93.1				0.132
	Ibuprofen	85.2	64.0	78.2				20.0
	Imazapyr	92.5						7.82
	Imidacloprid	107	130	124				4.43
	Linuron	71.3	65.6	59.5				9.66
	Mandestrobin	96.6	88.8	82.4				7.47
	MCP	105	101	89.8				11.5
	Naproxen	61.3	67.9	76.4				11.7
	Primidone	87.2	76.9	78.4				1.79

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Pyraclostrobin	78.0	83.5	78.3			6.47
	Sucralose	131	134	128			4.53
	Thiamethoxam	93.5	101	106			5.33
	Tolfenpyrad	51.1	55.7	50.9			9.08
	Triclopyr	91.7	106	89.8			16.1
SM 2120 B-2011	Color (true)	101				1.64	
SM 2320 B-2011	Total Alkalinity	95.3				1.59	
SM 2540 C-2011	TDS					6.32	
SM 4500 F-C-2011	Fluoride	95.3	95.8	95.8			0.0
SM 5310 B-2011	Organic Carbon	101	98.9	102			1.50

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2220227
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2220235
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2220235
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2220227
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2220227
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2220228
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2220228
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2220228
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2220228
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2220229
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2220234
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2220234
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2220227
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2220227
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2220235
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2220227
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2220227
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2220227
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2220228

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	01/20/2021			01/20/2021 16:14	Yen Ta	2220227
EPA 200.7 Rev. 4.4	01/20/2021	01/21/2021 16:35	Elliott D. Healy	01/25/2021 14:07	Betina Topolski	2220235
EPA 200.8 Rev. 5.4	01/20/2021	01/21/2021 16:35	Elliott D. Healy	01/27/2021 20:38	Alexander Thompson	2220235
	01/20/2021	01/21/2021 16:35	Elliott D. Healy	01/28/2021 12:53	Alexander Thompson	2220235
EPA 300.0 Rev. 2.1	01/20/2021			01/22/2021 20:35	Lipi Saha	2220227
EPA 350.1 Rev. 2.0	01/20/2021			02/01/2021 19:00	Ping Hua	2220228
EPA 351.2 Rev. 2.0	01/20/2021	01/28/2021 13:00	Yen Ta	01/29/2021 13:29	Julia Storbeck	2220228
EPA 353.2 Rev. 2.0	01/20/2021			01/25/2021 09:43	Beverly Y. Sanders	2220228
EPA 365.1 Rev. 2.0	01/20/2021	01/22/2021 17:15	Shengyu Wang	01/25/2021 16:30	Lipi Saha	2220228
EPA 365.1 Rev. 2.0 dissolved	01/20/2021			01/20/2021 15:16	Blanca Fach	2220229
EPA 8321B	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 03:09	Rebecca Ware	2220234
	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 19:23	Rebecca Ware	2220234
	01/20/2021	01/22/2021 09:00	Hoor Shaik	01/23/2021 19:49	Juyoung Kim	2220234
SM 2120 B-2011	01/20/2021			01/20/2021 15:51	Benjamin T. Nordmann	2220227
SM 2320 B-2011	01/20/2021			01/22/2021 01:23	Dale L. Simmons	2220227
SM 2340B	01/20/2021			01/25/2021 14:07	Betina Topolski	2220235
SM 2540 C-2011	01/20/2021			01/22/2021 15:16	Yijie Li	2220227
SM 2540 D-2011	01/20/2021			01/22/2021 15:16	Yijie Li	2220227
SM 4500 F-C-2011	01/20/2021			01/22/2021 01:23	Dale L. Simmons	2220227
SM 5310 B-2011	01/20/2021			01/22/2021 06:56	Touraj Touran	2220228