

Chemical Analysis Report

TLH-ROC-2021-06-01-01

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

Event Description: **Run 10**
Request ID: **RQ-2021-05-31-18**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 25-JUN-2021 17:19



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.

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

Sample Location: Big Branch @ Rd5

Collection Date/Time: 06/01/2021 10:30

Field ID: G2TLHR0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251236	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P399116	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P399639	
		Sulfate	0.25	I	mg SO4/L	P399618	
	SM 2120 B-2011	Color (true)	64		PCU	P399113	
	SM 2320 B-2011	Total Alkalinity	4.9		mg CaCO3/L	P399336	
	SM 2540 C-2011	TDS	29		mg/L	P399523	
	SM 2540 D-2011	TSS	4	I	mg/L	P399314	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P400024	
2251237	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P399373	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P399150	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P399216	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P399486	
	SM 5310 B-2011	Organic Carbon	4.4		mg C/L	P399729	
2251238	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P399119	
2251243	EPA 8321B	2,4-D	0.0020	U	ug/L	P399076	
		Acesulfame K	0.10	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399076	
		AMPA	0.10	U	ug/L	P399017	
		Sucralose	0.010	U	ug/L	P399017	MS
		Acetaminophen	0.0080	U	ug/L	P399076	
		Acetamiprid	0.0020	U	ug/L	P399076	
		Endothall	0.25	U	ug/L	P399017	
		Glufosinate	0.10	U	ug/L	P399017	
		Glyphosate	0.10	U	ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399076	
		Bentazon	8.0E-04	U	ug/L	P399076	
		Benzovindiflupyr	0.0020	U	ug/L	P399076	
		Carbamazepine	8.0E-04	U	ug/L	P399076	
		Clothianidin	0.0020	U	ug/L	P399076	
		Dinotefuran	0.0020	U	ug/L	P399076	
		Diuron	0.0020	U	ug/L	P399076	
		Fenuron	0.016	U	ug/L	P399076	
		Fluridone	8.0E-04	U	ug/L	P399076	
		Imazapyr	0.056		ug/L	P399076	
		Hydrocodone	0.0020	U	ug/L	P399076	
		Ibuprofen	0.020	U	ug/L	P399076	
		Imidacloprid	0.0020	U	ug/L	P399076	
		Linuron	0.0040	U	ug/L	P399076	
		Mandestrobin	0.0020	U	ug/L	P399076	
		MCP	0.0020	U	ug/L	P399076	
		Naproxen	0.0080	U	ug/L	P399076	
		Primidone	0.0040	U	ug/L	P399076	
		Pyraclostrobin	0.0020	U	ug/L	P399076	

Field ID: G2TLHR0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251243	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P399076	
		Tolfenpyrad	0.0020	U	ug/L	P399076	
		Triclopyr	0.0040	U	ug/L	P399076	
2251245	EPA 200.7 Rev. 4.4	Barium	9.6		ug/L	P399302	
		Calcium	2.34		mg/L	P399302	
		Iron	650		ug/L	P399302	
		Magnesium	0.41		mg/L	P399302	
		Manganese	6.8		ug/L	P399302	
		Potassium	0.30	U	mg/L	P399302	
		Sodium	2.3		mg/L	P399302	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P399302	
		Aluminum	203		ug/L	P399302	
		Antimony	0.050	U	ug/L	P399302	
		Arsenic	0.12	I	ug/L	P399302	
		Beryllium	0.020	I	ug/L	P399302	
		Boron**	7.2	I	ug/L	P399302	
		Cadmium	0.020	U	ug/L	P399302	
		Chromium	0.40	U	ug/L	P399302	
		Copper	0.40	U	ug/L	P399302	
		Lead	0.46		ug/L	P399302	
		Nickel	0.50	U	ug/L	P399302	
		Selenium	0.20	U	ug/L	P399302	
		Silver	0.010	U	ug/L	P399302	
		Thallium	0.10	U	ug/L	P399302	
	SM 2340B	Hardness	7.6		mg/L	P399302	

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: P399116

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399302

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: P399302

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: P399618

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399639

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399373

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: P399150

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399216

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399486

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399119

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

Reference Method: EPA 8321B
Batch ID: P399017

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: P399076

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: P399076

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P399113

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P399336

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

Reference Method: SM 2540 C-2011
Batch ID: P399523

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P399314

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P400024

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P399729

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: P399302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.0		P	85 - 115
Calcium	108		P	85 - 115
Iron	106		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	99.7		P	85 - 115
Potassium	101		P	85 - 115
Sodium	104		P	85 - 115
Zinc	93.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P399302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.4		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	92.4		P	85 - 115
Boron	107		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	99.7		P	85 - 115
Copper	100		P	85 - 115
Lead	110		P	85 - 115
Nickel	99.6		P	85 - 115
Selenium	103		P	85 - 115
Silver	101		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P399618

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P399639

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P399373

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P399150

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P399216

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: P399486

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: P399119

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

Reference Method: EPA 8321B

Batch ID: P399017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.1		P	40 - 150
AMPA	89.9		P	40 - 150
Endothall	88.2		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	104		P	40 - 150
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P399076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.1		P	40 - 150
2,4,5-T	103		P	40 - 150
Acetaminophen	62.1		P	30 - 150
Acetamiprid	88.6		P	40 - 150
Afidopyropen	80.4		P	40 - 150
Bentazon	110		P	30 - 150
Benzovindiflupyr	96.8		P	40 - 150
Carbamazepine	91.1		P	40 - 150
Clothianidin	76.1		P	40 - 150
Dinotefuran	71.4		P	40 - 150
Diuron	88.2		P	40 - 150
Fenuron	103		P	40 - 150
Fluridone	89.3		P	40 - 150
Hydrocodone	78.7		P	40 - 150
Ibuprofen	82.6		P	40 - 150
Imazapyr	97.3		P	40 - 150
Imidacloprid	78.0		P	40 - 150
Linuron	81.4		P	40 - 150
Mandestrobin	99.1		P	40 - 150
MCPP	105		P	40 - 150
Naproxen	84.6		P	40 - 150
Primidone	95.2		P	40 - 150
Pyraclostrobin	90.2		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P399076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	82.0		P	40 - 150
Tolfenpyrad	57.3		P	30 - 150
Triclopyr	96.0		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P399113

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.0		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P399336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.3		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P400024

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P399729

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P399302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251062	Barium	99.4		P	80 - 120
2251062	Calcium	105		P	80 - 120
2251062	Iron	106		P	80 - 120
2251062	Magnesium	102		P	80 - 120
2251062	Manganese	101		P	80 - 120
2251062	Potassium	98.3		P	80 - 120
2251062	Sodium	103		P	80 - 120
2251062	Zinc	98.0		P	80 - 120
2251291	Barium	102	100	P/P	80 - 120
2251291	Calcium	113	108	P/P	80 - 120
2251291	Iron	110	107	P/P	80 - 120
2251291	Magnesium	109	106	P/P	80 - 120
2251291	Manganese	103	101	P/P	80 - 120
2251291	Potassium	105	102	P/P	80 - 120
2251291	Sodium	110	106	P/P	80 - 120
2251291	Zinc	99.0	97.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P399302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251062	Aluminum	98.1		P	80 - 120
2251062	Antimony	104		P	80 - 120
2251062	Arsenic	103		P	80 - 120
2251062	Beryllium	95.5		P	80 - 120
2251062	Boron	101		P	80 - 120
2251062	Cadmium	104		P	80 - 120
2251062	Chromium	101		P	80 - 120
2251062	Copper	102		P	80 - 120
2251062	Lead	111		P	80 - 120
2251062	Nickel	101		P	80 - 120
2251062	Selenium	103		P	80 - 120
2251062	Silver	101		P	80 - 120
2251062	Thallium	107		P	80 - 120
2251291	Aluminum	93.7	96.8	P/P	80 - 120
2251291	Antimony	99.7	101	P/P	80 - 120
2251291	Arsenic	99.5	102	P/P	80 - 120
2251291	Beryllium	89.3	94.0	P/P	80 - 120
2251291	Boron	97.3	98.0	P/P	80 - 120
2251291	Cadmium	102	103	P/P	80 - 120
2251291	Chromium	97.6	98.5	P/P	80 - 120
2251291	Copper	98.9	99.5	P/P	80 - 120
2251291	Lead	108	110	P/P	80 - 120
2251291	Nickel	97.3	97.7	P/P	80 - 120
2251291	Selenium	98.2	99.4	P/P	80 - 120
2251291	Silver	103	102	P/P	80 - 120
2251291	Thallium	102	104	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P399618

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399618

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251099	Sulfate	93.6		P	90 - 110
2251452	Sulfate	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399639

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251099	Chloride	92.4		P	90 - 110
2251452	Chloride	95.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251234	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251234	Kjeldahl Nitrogen	97.9	97.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251286	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251104	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251235	O-Phosphate-P	99.1	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P399017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250902	Acesulfame K	84.9	81.4	P/P	40 - 150
2250902	AMPA	72.3	70.9	P/P	40 - 150
2250902	Endothall	93.1	103	P/P	40 - 150
2250902	Glufosinate	105	95.8	P/P	40 - 150
2250902	Glyphosate	99.6	90.0	P/P	40 - 150
2250902	Sucralose	38.7	52.0	F/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P399076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251243	2,4-D	122	128	P/P	40 - 150
2251243	2,4,5-T	107	105	P/P	40 - 150
2251243	Acetaminophen	89.9	81.9	P/P	30 - 150
2251243	Acetamiprid	103	94.5	P/P	40 - 150
2251243	Afidopyropen	92.5	79.5	P/P	40 - 150
2251243	Bentazon	102	94.0	P/P	30 - 150
2251243	Benzovindiflupyr	98.2	97.1	P/P	40 - 150
2251243	Carbamazepine	103	102	P/P	40 - 150
2251243	Clothianidin	97.1	90.4	P/P	40 - 150
2251243	Dinotefuran	92.2	85.7	P/P	40 - 150
2251243	Diuron	79.8	75.4	P/P	40 - 150
2251243	Fenuron	102	104	P/P	40 - 150
2251243	Fluridone	85.2	80.8	P/P	40 - 150
2251243	Hydrocodone	88.8	94.3	P/P	40 - 150
2251243	Ibuprofen	80.6	79.1	P/P	40 - 150
2251243	Imazapyr	117	103	P/P	40 - 150
2251243	Imidacloprid	130	116	P/P	40 - 150
2251243	Linuron	74.9	79.9	P/P	40 - 150
2251243	Mandestrobin	98.8	95.5	P/P	40 - 150
2251243	MCCP	121	119	P/P	40 - 150
2251243	Naproxen	106	78.9	P/P	40 - 150
2251243	Primidone	124	99.4	P/P	40 - 150
2251243	Pyraclostrobin	98.9	96.1	P/P	40 - 150
2251243	Thiamethoxam	122	108	P/P	40 - 150
2251243	Tolfenpyrad	56.5	59.9	P/P	30 - 150
2251243	Triclopyr	119	113	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P400024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252023	Fluoride	101	101	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P399729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250478	Organic Carbon	94.6	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P399116

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251524	Turbidity	5.79	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P399302

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251291	Barium	1.50	Spike	P	0 - 20
2251291	Calcium	2.81	Spike	P	0 - 20
2251291	Iron	2.15	Spike	P	0 - 20
2251291	Magnesium	2.21	Spike	P	0 - 20
2251291	Manganese	1.68	Spike	P	0 - 20
2251291	Potassium	2.85	Spike	P	0 - 20
2251291	Sodium	2.89	Spike	P	0 - 20
2251291	Zinc	1.32	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P399302

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251291	Aluminum	3.19	Spike	P	0 - 20
2251291	Antimony	0.851	Spike	P	0 - 20
2251291	Arsenic	2.07	Spike	P	0 - 20
2251291	Beryllium	5.13	Spike	P	0 - 20
2251291	Boron	0.664	Spike	P	0 - 20
2251291	Cadmium	0.698	Spike	P	0 - 20
2251291	Chromium	0.968	Spike	P	0 - 20
2251291	Copper	0.543	Spike	P	0 - 20
2251291	Lead	2.05	Spike	P	0 - 20
2251291	Nickel	0.352	Spike	P	0 - 20
2251291	Selenium	1.20	Spike	P	0 - 20
2251291	Silver	1.13	Spike	P	0 - 20
2251291	Thallium	2.85	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P399618

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251099	Sulfate	1.08	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P399639

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251099	Chloride	0.714	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P399373

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251234	Ammonia-N	0.877	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P399150

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251234	Kjeldahl Nitrogen	0.0579	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P399216

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251286	NO2NO3-N	1.97	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P399486

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251104	Total-P	0.184	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P399119

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251235	O-Phosphate-P	0.403	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P399017

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250902	Acesulfame K	3.94	Spike	P	0 - 30
2250902	AMPA	1.92	Spike	P	0 - 30
2250902	Endothall	10.5	Spike	P	0 - 30
2250902	Glufosinate	8.87	Spike	P	0 - 30
2250902	Glyphosate	8.49	Spike	P	0 - 30
2250902	Sucralose	27.3	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P399076

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251243	2,4-D	4.60	Spike	P	0 - 30
2251243	2,4,5-T	1.50	Spike	P	0 - 30
2251243	Acetaminophen	9.36	Spike	P	0 - 30
2251243	Acetamidrid	8.91	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P399076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251243	Afidopyropen	15.1	Spike	P	0 - 30
2251243	Bentazon	8.47	Spike	P	0 - 30
2251243	Benzovindiflupyr	1.20	Spike	P	0 - 30
2251243	Carbamazepine	0.696	Spike	P	0 - 30
2251243	Clothianidin	7.13	Spike	P	0 - 30
2251243	Dinotefuran	7.30	Spike	P	0 - 30
2251243	Diuron	5.56	Spike	P	0 - 30
2251243	Fenuron	2.56	Spike	P	0 - 30
2251243	Fluridone	5.29	Spike	P	0 - 30
2251243	Hydrocodone	5.95	Spike	P	0 - 30
2251243	Ibuprofen	1.86	Spike	P	0 - 30
2251243	Imazapyr	7.71	Spike	P	0 - 30
2251243	Imidacloprid	12.1	Spike	P	0 - 30
2251243	Linuron	6.44	Spike	P	0 - 30
2251243	Mandestrobin	3.39	Spike	P	0 - 30
2251243	MCPP	1.91	Spike	P	0 - 30
2251243	Naproxen	29.7	Spike	P	0 - 30
2251243	Primidone	21.9	Spike	P	0 - 30
2251243	Pyraclostrobin	2.81	Spike	P	0 - 30
2251243	Thiamethoxam	12.3	Spike	P	0 - 30
2251243	Tolfenpyrad	5.84	Spike	P	0 - 30
2251243	Triclopyr	5.64	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P399113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251233	Color (true)	7.68	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P399336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251762	Total Alkalinity	0.352	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P399523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251294	TDS	2.80	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P400024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252023	Fluoride	0.0	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P399729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250478	Organic Carbon	0.812	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2251243

Field Sample ID: G2TLHR0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	133	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.4	P	30 - 160
EPA 8321B	Diuron-d6	75.2	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.8	P	30 - 160
EPA 8321B	Primidone-d5	94.9	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A105824

Included Lab Sample IDs: 2251233, 2251236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.7	99.9	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A105825

Included Lab Sample IDs: 2251233, 2251236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A105826

Included Lab Sample IDs: 2251235, 2251238

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

Reference Method: EPA 8321B

Run ID: A105827

Included Lab Sample IDs: 2251243

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	139	P/P	60 - 160
Endothall	125	126	P/P	60 - 160
Sucralose	116	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A105838

Included Lab Sample IDs: 2251243

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.1	94.3	P/P	60 - 160
Glufosinate	97.4	99.9	P/P	60 - 160
Glyphosate	107	112	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A105874

Included Lab Sample IDs: 2251234, 2251237

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A105875

Included Lab Sample IDs: 2251234, 2251237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.6	95.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A105930

Included Lab Sample IDs: 2251233, 2251236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.5	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A105942

Included Lab Sample IDs: 2251234, 2251237

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A105953

Included Lab Sample IDs: 2251244, 2251245

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	104	101	P/P	90 - 110
Calcium	105	100	P/P	90 - 110
Iron	104	98.7	P/P	90 - 110
Magnesium	102	97.4	P/P	90 - 110
Manganese	104	101	P/P	90 - 110
Potassium	102	97.1	P/P	90 - 110
Sodium	103	97.9	P/P	90 - 110
Zinc	101	99.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A105956

Included Lab Sample IDs: 2251233, 2251236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.2	98.9	P/P	90 - 110
Sulfate	98.5	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106021

Included Lab Sample IDs: 2251234, 2251237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	98.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106028

Included Lab Sample IDs: 2251244, 2251245

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.2	96.4	P/P	90 - 110
Aluminum	98.7	97.2	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Antimony	101	99.9	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Beryllium	96.2	95.6	P/P	90 - 110
Beryllium	96.6	96.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106028

Included Lab Sample IDs: 2251244, 2251245

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	97.6	97.4	P/P	90 - 110
Boron	99.8	97.6	P/P	90 - 110
Cadmium	100	99.3	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Chromium	96.6	97.3	P/P	90 - 110
Chromium	97.3	96.0	P/P	90 - 110
Copper	97.6	96.4	P/P	90 - 110
Copper	97.6	97.6	P/P	90 - 110
Lead	109	110	P/P	90 - 110
Lead	109	109	P/P	90 - 110
Nickel	97.7	96.4	P/P	90 - 110
Nickel	97.9	97.7	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Selenium	102	101	P/P	90 - 110
Silver	98.1	98.9	P/P	90 - 110
Silver	98.9	98.1	P/P	90 - 110
Thallium	94.9	95.1	P/P	90 - 110
Thallium	95.0	94.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106040

Included Lab Sample IDs: 2251243

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.8	82.9	P/P	50 - 150
2,4,5-T	110	119	P/P	50 - 150
Acetaminophen	93.0	91.7	P/P	60 - 160
Acetamiprid	105	105	P/P	50 - 150
Afidopyropen	117	122	P/P	50 - 150
Bentazon	134	139	P/P	50 - 160
Benzovindiflupyr	98.9	109	P/P	50 - 150
Carbamazepine	104	108	P/P	60 - 150
Clothianidin	103	99.7	P/P	60 - 150
Dinotefuran	101	97.6	P/P	50 - 150
Diuron	111	101	P/P	60 - 160
Fenuron	93.4	91.3	P/P	60 - 150
Fluridone	109	106	P/P	60 - 160
Hydrocodone	97.8	94.2	P/P	60 - 150
Ibuprofen	109	95.4	P/P	50 - 160
Imazapyr	113	123	P/P	50 - 150
Imidacloprid	93.2	91.3	P/P	60 - 150
Linuron	104	95.6	P/P	60 - 150
Mandestrobin	106	96.7	P/P	50 - 150
MCPP	109	121	P/P	50 - 150
Naproxen	85.2	102	P/P	50 - 160
Primidone	108	113	P/P	60 - 150
Pyraclostrobin	108	107	P/P	60 - 150
Thiamethoxam	99.3	99.3	P/P	50 - 150
Tolfenpyrad	99.6	97.9	P/P	60 - 150
Triclopyr	104	103	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A106083

Included Lab Sample IDs: 2251234, 2251237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	100	P/P	90 - 110
Organic Carbon	97.4	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A106203

Included Lab Sample IDs: 2251233, 2251236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	103	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						5.79	
EPA 200.7 Rev. 4.4	Barium	98.0	99.4	102	100			1.50
	Calcium	108	105	113	108			2.81
	Iron	106	106	110	107			2.15
	Magnesium	105	102	109	106			2.21
	Manganese	99.7	101	103	101			1.68
	Potassium	101	98.3	105	102			2.85
	Sodium	104	103	110	106			2.89
	Zinc	93.4	98.0	99.0	97.7			1.32
EPA 200.8 Rev. 5.4	Aluminum	99.4	98.1	93.7	96.8			3.19
	Antimony	102	104	99.7	101			0.851
	Arsenic	102	103	99.5	102			2.07
	Beryllium	92.4	95.5	89.3	94.0			5.13
	Boron	107	101	97.3	98.0			0.664
	Cadmium	103	104	102	103			0.698
	Chromium	99.7	101	97.6	98.5			0.968
	Copper	100	102	98.9	99.5			0.543
	Lead	110	111	108	110			2.05
	Nickel	99.6	101	97.3	97.7			0.352
	Selenium	103	103	98.2	99.4			1.20
	Silver	101	101	103	102			1.13
	Thallium	104	107	102	104			2.85
EPA 300.0 Rev. 2.1	Chloride	97.6	92.4	95.1			0.714	
	Sulfate	98.6	93.6	96.3			1.08	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	102	103				0.877
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	97.9	97.9				0.0579
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	100	102				1.97
EPA 365.1 Rev. 2.0	Total-P	100	102	102				0.184
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	99.1	99.5				0.403
EPA 8321B	2,4-D	97.1	128	122				4.60
	2,4,5-T	103	107	105				1.50
	Acesulfame K	94.1	84.9	81.4				3.94
	Acetaminophen	62.1	81.9	89.9				9.36
	Acetamiprid	88.6	94.5	103				8.91
	Afidopyropen	80.4	79.5	92.5				15.1
	AMPA	89.9	72.3	70.9				1.92
	Bentazon	110	102	94.0				8.47
	Benzovindiflupyr	96.8	97.1	98.2				1.20
	Carbamazepine	91.1	102	103				0.696
	Clothianidin	76.1	90.4	97.1				7.13
	Dinotefuran	71.4	85.7	92.2				7.30
	Diuron	88.2	75.4	79.8				5.56
	Endothall	88.2	93.1	103				10.5
	Fenuron	103	104	102				2.56
	Fluridone	89.3	80.8	85.2				5.29
	Glufosinate	104	105	95.8				8.87
	Glyphosate	104	99.6	90.0				8.49
	Hydrocodone	78.7	94.3	88.8				5.95
	Ibuprofen	82.6	80.6	79.1				1.86
	Imazapyr	97.3	103	117				7.71
	Imidacloprid	78.0	116	130				12.1
	Linuron	81.4	79.9	74.9				6.44
	Mandestrobin	99.1	95.5	98.8				3.39
	MCPP	105	119	121				1.91

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Naproxen	84.6	78.9	106		29.7
	Primidone	95.2	99.4	124		21.9
	Pyraclostrobin	90.2	96.1	98.9		2.81
	Sucralose	113	38.7	52.0		27.3
	Thiamethoxam	82.0	108	122		12.3
	Tolfenpyrad	57.3	59.9	56.5		5.84
	Triclopyr	96.0	113	119		5.64
SM 2120 B-2011	Color (true)	99.0			7.68	
SM 2320 B-2011	Total Alkalinity	98.3			0.352	
SM 2540 C-2011	TDS				2.80	
SM 4500 F-C-2011	Fluoride	98.8	101	101		0.0
SM 5310 B-2011	Organic Carbon	94.8	94.6	95.5		0.812

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2251233, 2251236
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2251244, 2251245
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2251244, 2251245
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2251233, 2251236
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2251233, 2251236
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2251234, 2251237
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2251234, 2251237
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2251234, 2251237
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2251234, 2251237
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2251235, 2251238
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2251243
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2251243
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2251233, 2251236
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2251233, 2251236
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2251244, 2251245
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2251233, 2251236
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2251233, 2251236
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2251233, 2251236
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2251234, 2251237

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	06/01/2021			06/02/2021 15:46	Sarah A Nixon	2251233, 2251236
EPA 200.7 Rev. 4.4	06/01/2021	06/07/2021 14:20	Elliott D. Healy	06/08/2021 16:24	Betina Topolski	2251244
	06/01/2021	06/07/2021 14:20	Elliott D. Healy	06/08/2021 16:31	Betina Topolski	2251245
EPA 200.8 Rev. 5.4	06/01/2021	06/07/2021 14:20	Elliott D. Healy	06/11/2021 18:02	Alexander Thompson	2251244
	06/01/2021	06/07/2021 14:20	Elliott D. Healy	06/11/2021 19:09	Alexander Thompson	2251245
EPA 300.0 Rev. 2.1	06/01/2021			06/11/2021 15:42	Lipi Saha	2251233
	06/01/2021			06/11/2021 15:54	Lipi Saha	2251236
EPA 350.1 Rev. 2.0	06/01/2021			06/08/2021 14:20	Roberta Tatti	2251234
	06/01/2021			06/08/2021 14:24	Roberta Tatti	2251237
EPA 351.2 Rev. 2.0	06/01/2021	06/03/2021 13:01	Benjamin T. Nordmann	06/04/2021 11:29	Virginia P. Brown	2251234
	06/01/2021	06/03/2021 13:01	Benjamin T. Nordmann	06/04/2021 11:34	Virginia P. Brown	2251237
EPA 353.2 Rev. 2.0	06/01/2021			06/04/2021 10:02	Beverly Y. Sanders	2251234
	06/01/2021			06/04/2021 10:03	Beverly Y. Sanders	2251237
EPA 365.1 Rev. 2.0	06/01/2021	06/10/2021 12:25	Yen Ta	06/11/2021 12:17	Shengyu Ding	2251234
	06/01/2021	06/10/2021 12:25	Yen Ta	06/11/2021 12:18	Shengyu Ding	2251237
EPA 365.1 Rev. 2.0 dissolved	06/01/2021			06/02/2021 16:41	Ping Hua	2251235
	06/01/2021			06/02/2021 16:44	Ping Hua	2251238
EPA 8321B	06/01/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 12:18	Juyoung Kim	2251243
	06/01/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 16:35	Pramila Ghimire	2251243
	06/01/2021	06/07/2021 09:00	Hoor Shaik	06/12/2021 00:39	Juyoung Kim	2251243
SM 2120 B-2011	06/01/2021			06/02/2021 16:37	Sarah A Nixon	2251233, 2251236
SM 2320 B-2011	06/01/2021			06/07/2021 18:01	Dale L. Simmons	2251233
	06/01/2021			06/07/2021 18:10	Dale L. Simmons	2251236
SM 2340B	06/01/2021			06/08/2021 16:24	Betina Topolski	2251244
	06/01/2021			06/08/2021 16:31	Betina Topolski	2251245
SM 2540 C-2011	06/01/2021			06/04/2021 14:29	Yijie Li	2251233, 2251236
SM 2540 D-2011	06/01/2021			06/04/2021 14:29	Yijie Li	2251233, 2251236
SM 4500 F-C-2011	06/01/2021			06/21/2021 23:45	Patrick M. Roche	2251233
	06/01/2021			06/21/2021 23:50	Patrick M. Roche	2251236
SM 5310 B-2011	06/01/2021			06/14/2021 20:33	Madeline Gruver	2251237
	06/01/2021			06/14/2021 22:27	Madeline Gruver	2251234