

Chemical Analysis Report

NE-DIST-2020-09-04-01

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

Event Description: **LSJR West**
Request ID: **RQ-2020-08-31-36**
Customer: **NE-DIST**
Project ID: **SMP**

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

Date Certified: 28-SEP-2020 10:22

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Trout River at Garden St

Collection Date/Time: 09/03/2020 09:15

Field ID: 20030751

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194475	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P386999	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P387331	
		Sulfate	7.9		mg SO4/L	P387334	
	SM 2120 B-2011	Color (true)	300		PCU	P387009	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P387126	
	SM 2540 C-2011	TDS	129		mg/L	P387384	
	SM 2540 D-2011	TSS	3	I	mg/L	P387377	
	SM 4500 F-C-2011	Fluoride	0.036	I	mg F/L	P387130	
2194476	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P387045	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P387210	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.078		mg N/L	P387136	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P387730	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P387239	
2194477	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P387011	
2194516	EPA 8321B	2,4-D	0.095		ug/L	P387048	
		Acesulfame K**	0.10	U	ug/L	P386984	MS
		AMPA**	0.10	U	ug/L	P386984	
		Sucralose**	0.099		ug/L	P386984	
		Acetaminophen**	0.0080	U	ug/L	P387048	
		Endothall**	0.25	U	ug/L	P386984	
		Acetamiprid**	0.0020	U	ug/L	P387048	
		Glufosinate**	0.10	U	ug/L	P386984	
		Glyphosate**	0.10	U	ug/L	P386984	
		Afidopyropen**	0.0020	U	ug/L	P387048	
		Bentazon	0.0024	I	ug/L	P387048	
		Benzovindiflupyr**	0.0020	U	ug/L	P387048	
		Carbamazepine**	8.0E-04	U	ug/L	P387048	
		Clothianidin**	0.0020	U	ug/L	P387048	
		Dinotefuran**	0.0020	U	ug/L	P387048	
		Diuron	0.017		ug/L	P387048	
		Fenuron	0.016	U	ug/L	P387048	
		Fluridone**	0.0015	I	ug/L	P387048	
		Imazapyr**	0.0070	I	ug/L	P387048	
		Hydrocodone**	0.0020	U	ug/L	P387048	
		Ibuprofen**	0.020	U	ug/L	P387048	
		Imidacloprid	0.0020	U	ug/L	P387048	
		Linuron	0.0040	U	ug/L	P387048	
		Mandestrobin**	0.0020	U	ug/L	P387048	
		MCP	0.0020	U	ug/L	P387048	
		Naproxen**	0.0080	U	ug/L	P387048	
		Primidone**	0.0040	U	ug/L	P387048	
		Pyraclostrobin**	0.0020	U	ug/L	P387048	
		Thiamethoxam**	0.0020	U	ug/L	P387048	

Field ID: 20030751

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194516	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P387048	
		Triclopyr**	0.0040	U	ug/L	P387048	
2194527	EPA 200.7 Rev. 4.4	Barium	31.3		ug/L	P387083	
		Calcium	12.1		mg/L	P387083	
		Iron	960		ug/L	P387083	
		Magnesium	2.13		mg/L	P387083	
		Potassium	2.0		mg/L	P387083	
		Sodium	12.0		mg/L	P387083	
		Zinc	7.3	I	ug/L	P387083	
	EPA 200.8 Rev. 5.4	Aluminum	471		ug/L	P387083	
		Antimony	0.062	I	ug/L	P387083	
		Arsenic	0.73		ug/L	P387083	
		Boron**	29.8		ug/L	P387083	
		Cadmium	0.020	U	ug/L	P387083	
		Chromium	0.62	I	ug/L	P387083	
		Copper	0.80		ug/L	P387083	
		Lead	0.74		ug/L	P387083	
		Nickel	0.62	I	ug/L	P387083	
		Selenium	0.20	U	ug/L	P387083	
		Silver	0.010	U	ug/L	P387083	
		Thallium	0.10	U	ug/L	P387083	
	SM 2340B	Hardness	39.1		mg/L	P387083	

Ref. Method and Comment:

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

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

EPA 8321B: MS accuracy for endothall could not be assessed due to a high concentration in the spiked sample.

Sample Location: FB09032020

Collection Date/Time: 09/03/2020 09:25

Field ID: FB09032020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194484	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P386999	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P387331	
		Sulfate	0.20	U	mg SO4/L	P387334	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P387009	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P387126	
	SM 2540 C-2011	TDS	15	U	mg/L	P387383	
	SM 2540 D-2011	TSS	2	U	mg/L	P387376	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P387130	
2194485	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P387292	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P387210	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P387137	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P387730	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P387314	
2194486	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P387011	
2194518	EPA 8321B	2,4-D	0.0020	U	ug/L	P387048	
		Acesulfame K**	0.10	U	ug/L	P386984	MS
		AMPA**	0.10	U	ug/L	P386984	
		Sucralose**	0.010	U	ug/L	P386984	
		Acetaminophen**	0.0080	U	ug/L	P387048	
		Endothall**	0.25	U	ug/L	P386984	
		Acetamiprid**	0.0020	U	ug/L	P387048	
		Glufosinate**	0.10	U	ug/L	P386984	
		Glyphosate**	0.10	U	ug/L	P386984	
		Afidopyropen**	0.0020	U	ug/L	P387048	
		Bentazon	8.0E-04	U	ug/L	P387048	
		Benzovindiflupyr**	0.0020	U	ug/L	P387048	
		Carbamazepine**	8.0E-04	U	ug/L	P387048	
		Clothianidin**	0.0020	U	ug/L	P387048	
		Dinotefuran**	0.0020	U	ug/L	P387048	
		Diuron	0.0020	U	ug/L	P387048	
		Fenuron	0.016	U	ug/L	P387048	
		Fluridone**	8.0E-04	U	ug/L	P387048	
		Imazapyr**	0.0040	U	ug/L	P387048	
		Hydrocodone**	0.0020	U	ug/L	P387048	
		Ibuprofen**	0.020	U	ug/L	P387048	
		Imidacloprid	0.0020	U	ug/L	P387048	
		Linuron	0.0040	U	ug/L	P387048	
		Mandestrobin**	0.0020	U	ug/L	P387048	
		MCPD	0.0020	U	ug/L	P387048	
		Naproxen**	0.0080	U	ug/L	P387048	
		Primidone**	0.0040	U	ug/L	P387048	
		Pyraclostrobin**	0.0020	U	ug/L	P387048	
		Thiamethoxam**	0.0020	U	ug/L	P387048	

Field ID: FB09032020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194518	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P387048	
		Triclopyr**	0.0040	U	ug/L	P387048	
2194529	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P387083	
		Calcium	0.075	U	mg/L	P387083	
		Iron	30	U	ug/L	P387083	
		Magnesium	0.040	U	mg/L	P387083	
		Potassium	0.30	U	mg/L	P387083	
		Sodium	0.50	U	mg/L	P387083	
		Zinc	5.0	U	ug/L	P387083	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P387083	
		Antimony	0.050	U	ug/L	P387083	
		Arsenic	0.050	U	ug/L	P387083	
		Boron**	2.0	U	ug/L	P387083	
		Cadmium	0.020	U	ug/L	P387083	
		Chromium	0.40	U	ug/L	P387083	
		Copper	0.40	U	ug/L	P387083	
		Lead	0.20	U	ug/L	P387083	
		Nickel	0.50	U	ug/L	P387083	
		Selenium	0.20	U	ug/L	P387083	
		Silver	0.010	U	ug/L	P387083	
		Thallium	0.10	U	ug/L	P387083	
	SM 2340B	Hardness	0.35	U	mg/L	P387083	

Ref. Method and Comment:

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

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

EPA 8321B: MS accuracy for endothall could not be assessed due to a high concentration in the spiked sample.

Sample Location: Mcgirts Creek at Old Plank Road

Collection Date/Time: 09/03/2020 09:55

Field ID: 20030346

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194472	EPA 180.1 Rev. 2.0	Turbidity	7.4		NTU	P386998	
	EPA 300.0 Rev. 2.1	Chloride	14	A	mg Cl/L	P387331	
		Sulfate	17	A	mg SO4/L	P387334	
	SM 2120 B-2011	Color (true)	210		PCU	P387009	
	SM 2320 B-2011	Total Alkalinity	8.2		mg CaCO3/L	P387126	
	SM 2540 C-2011	TDS	107		mg/L	P387384	
	SM 2540 D-2011	TSS	3	I	mg/L	P387377	
	SM 4500 F-C-2011	Fluoride	0.044	I	mg F/L	P387130	
2194473	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P387045	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P387210	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P387136	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P387730	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P387239	
2194474	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P387011	
2194515	EPA 8321B	2,4-D	0.0020	U	ug/L	P387048	
		Acesulfame K**	0.10	U	ug/L	P386984	MS
		AMPA**	1.0	U	ug/L	P386984	
		Sucralose**	0.016	I	ug/L	P386984	
		Acetaminophen**	0.0080	U	ug/L	P387048	
		Endothall**	0.25	U	ug/L	P386984	
		Acetamiprid**	0.0020	U	ug/L	P387048	
		Glufosinate**	1.0	U	ug/L	P386984	
		Glyphosate**	1.1	I	ug/L	P386984	
		Afidopyropen**	0.0020	U	ug/L	P387048	
		Bentazon	0.0012	I	ug/L	P387048	
		Benzovindiflupyr**	0.0020	U	ug/L	P387048	
		Carbamazepine**	8.0E-04	U	ug/L	P387048	
		Clothianidin**	0.0020	U	ug/L	P387048	
		Dinotefuran**	0.0020	U	ug/L	P387048	
		Diuron	0.0020	U	ug/L	P387048	
		Fenuron	0.016	U	ug/L	P387048	
		Fluridone**	8.0E-04	U	ug/L	P387048	
		Imazapyr**	0.065		ug/L	P387048	
		Hydrocodone**	0.0020	U	ug/L	P387048	
		Ibuprofen**	0.020	U	ug/L	P387048	
		Imidacloprid	0.0020	U	ug/L	P387048	
		Linuron	0.0040	U	ug/L	P387048	
		Mandestrobin**	0.0020	U	ug/L	P387048	
		MCP	0.0020	U	ug/L	P387048	
		Naproxen**	0.0080	U	ug/L	P387048	
		Primidone**	0.0040	U	ug/L	P387048	
		Pyraclostrobin**	0.0020	U	ug/L	P387048	
		Thiamethoxam**	0.0020	U	ug/L	P387048	

Field ID: 20030346

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194515	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P387048	
		Triclopyr**	0.0040	U	ug/L	P387048	

Ref. Method and Comment:

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

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

EPA 8321B: MS accuracy for endothall could not be assessed due to a high concentration in the spiked sample. MDL for some parameters elevated due to matrix interference.

Sample Location: Wills Br at Watergate Rd.

Collection Date/Time: 09/03/2020 11:55

Field ID: G2NE1183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194481	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P386999	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P387331	
		Sulfate	16		mg SO4/L	P387334	
	SM 2120 B-2011	Color (true)	100		PCU	P387009	
	SM 2320 B-2011	Total Alkalinity	72		mg CaCO3/L	P387126	
	SM 2540 C-2011	TDS	160	A	mg/L	P387385	
	SM 2540 D-2011	TSS	3	IA	mg/L	P387378	
	SM 4500 F-C-2011	Fluoride	0.081	I	mg F/L	P387130	
2194482	EPA 350.1 Rev. 2.0	Ammonia-N	0.094		mg N/L	P387292	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P387210	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.30		mg N/L	P387136	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P387730	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P387314	
2194483	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.046		mg P/L	P387011	
2194517	EPA 8321B	2,4-D	0.68		ug/L	P387048	
		Acesulfame K**	0.10	U	ug/L	P386984	MS
		AMPA**	0.33	I	ug/L	P386984	
		Sucralose**	0.41		ug/L	P386984	
		Acetaminophen**	0.0087	I	ug/L	P387048	
		Endothall**	0.25	U	ug/L	P386984	
		Acetamiprid**	0.0020	U	ug/L	P387048	
		Glufosinate**	0.10	U	ug/L	P386984	
		Glyphosate**	2.2		ug/L	P386984	
		Afidopyropen**	0.0020	U	ug/L	P387048	
		Bentazon	0.014		ug/L	P387048	
		Benzovindiflupyr**	0.0020	U	ug/L	P387048	
		Carbamazepine**	0.0014	I	ug/L	P387048	
		Clothianidin**	0.0025	I	ug/L	P387048	
		Dinotefuran**	0.0040	I	ug/L	P387048	
		Diuron	0.045		ug/L	P387048	
		Fenuron	0.016	U	ug/L	P387048	
		Fluridone**	0.063		ug/L	P387048	
		Imazapyr**	0.52		ug/L	P387048	
		Hydrocodone**	0.0020	U	ug/L	P387048	
		Ibuprofen**	0.020	U	ug/L	P387048	
		Imidacloprid	0.017		ug/L	P387048	
		Linuron	0.0040	U	ug/L	P387048	
		Mandestrobin**	0.0020	U	ug/L	P387048	
		MCP	0.0026	I	ug/L	P387048	
		Naproxen**	0.0094	I	ug/L	P387048	
		Primidone**	0.0061	I	ug/L	P387048	
		Pyraclostrobin**	0.0020	U	ug/L	P387048	
		Thiamethoxam**	0.0020	U	ug/L	P387048	

Field ID: G2NE1183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194517	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P387048	
		Triclopyr**	0.0040	U	ug/L	P387048	

Ref. Method and Comment:

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

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

EPA 8321B: MS accuracy for endothall could not be assessed due to a high concentration in the spiked sample.

Sample Location: Yellow Water Cr at Sr 228

Collection Date/Time: 09/03/2020 11:15

Field ID: 20030549

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2194478	EPA 180.1 Rev. 2.0	Turbidity	6.8	A	NTU	P386999	
	EPA 300.0 Rev. 2.1	Chloride	7.9		mg Cl/L	P387331	
		Sulfate	0.78		mg SO4/L	P387334	
	SM 2120 B-2011	Color (true)	420		PCU	P387009	
	SM 2320 B-2011	Total Alkalinity	6.7		mg CaCO3/L	P387126	
	SM 2540 C-2011	TDS	99		mg/L	P387384	
	SM 2540 D-2011	TSS	5	I	mg/L	P387377	
	SM 4500 F-C-2011	Fluoride	0.044	I	mg F/L	P387130	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P387045	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P387210	
2194479	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P387136	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P387730	
	SM 5310 B-2011	Organic Carbon	33		mg C/L	P387314	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P387011	
	EPA 200.7 Rev. 4.4	Barium	15.6		ug/L	P387083	
2194528		Calcium	6.60		mg/L	P387083	
		Iron	2.26E+03		ug/L	P387083	
		Magnesium	1.15		mg/L	P387083	
		Potassium	0.34	I	mg/L	P387083	
		Sodium	4.7		mg/L	P387083	
		Zinc	12	I	ug/L	P387083	
	EPA 200.8 Rev. 5.4	Aluminum	545		ug/L	P387083	
		Antimony	0.075	I	ug/L	P387083	
		Arsenic	0.63		ug/L	P387083	
		Boron**	16.5		ug/L	P387083	
		Cadmium	0.020	U	ug/L	P387083	
		Chromium	1.2	I	ug/L	P387083	
		Copper	3.46		ug/L	P387083	
		Lead	2.25		ug/L	P387083	
		Nickel	1.3	I	ug/L	P387083	
		Selenium	0.20	U	ug/L	P387083	
		Silver	0.010	U	ug/L	P387083	
		Thallium	0.10	U	ug/L	P387083	
	SM 2340B	Hardness	21.2		mg/L	P387083	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The copper and lead results were confirmed in the undigested sample on 09/15/2020.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386998

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386999

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387083

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

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: P387331

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387334

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387292

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387210

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387136

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387137

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387730

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387011

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

Reference Method: EPA 8321B
Batch ID: P386984

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P387048

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P387009

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P387126

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

Reference Method: SM 2540 C-2011
Batch ID: P387383

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P387384

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P387385

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387376

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387377

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387378

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387239

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

Reference Method: SM 5310 B-2011
Batch ID: P387314

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: P387083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	104		P	85 - 115
Iron	102		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	99.4		P	85 - 115
Sodium	104		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.5		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	94.7		P	85 - 115
Boron	98.9		P	85 - 115
Cadmium	99.0		P	85 - 115
Chromium	105		P	85 - 115
Copper	93.5		P	85 - 115
Lead	100		P	85 - 115
Nickel	93.1		P	85 - 115
Selenium	92.5		P	85 - 115
Silver	101		P	85 - 115
Thallium	99.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387331

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387334

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387292

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387210

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387136

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387137

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: P387730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387011

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P386984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	50.5		P	40 - 150
AMPA	41.0		P	40 - 150
Endothall	114		P	40 - 150
Glufosinate	89.8		P	40 - 150
Glyphosate	112		P	40 - 140
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P387048

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	124		P	30 - 160
Acetaminophen	85.5		P	30 - 160
Acetamiprid	73.5		P	30 - 160
Afidopyropen	61.3		P	30 - 160
Bentazon	61.5		P	30 - 160
Benzovindiflupyr	68.8		P	30 - 160
Carbamazepine	62.1		P	30 - 160
Clothianidin	75.4		P	30 - 160
Dinotefuran	86.6		P	30 - 160
Diuron	53.7		P	30 - 160
Fenuron	85.5		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P387048

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluridone	72.4		P	30 - 160
Hydrocodone	81.4		P	30 - 160
Ibuprofen	70.2		P	30 - 160
Imazapyr	71.6		P	30 - 160
Imidacloprid	106		P	30 - 160
Linuron	75.2		P	30 - 160
Mandestrobin	69.4		P	30 - 160
MCPP	115		P	30 - 160
Naproxen	93.5		P	30 - 160
Primidone	75.8		P	30 - 160
Pyraclostrobin	60.2		P	30 - 160
Thiamethoxam	80.2		P	30 - 160
Tolfenpyrad	43.0		P	30 - 160
Triclopyr	104		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P387009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P387126

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P387239

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.6		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194273	Barium	104	103	P/P	80 - 120
2194273	Calcium	104		P	80 - 120
2194273	Iron	105	104	P/P	80 - 120
2194273	Magnesium	105	104	P/P	80 - 120
2194273	Potassium	99.3	99.9	P/P	80 - 120
2194273	Sodium	102		P	80 - 120
2194273	Zinc	109	106	P/P	80 - 120
2194439	Barium	103		P	80 - 120
2194439	Calcium	99.2		P	80 - 120
2194439	Iron	101		P	80 - 120
2194439	Magnesium	102		P	80 - 120
2194439	Potassium	97.0		P	80 - 120
2194439	Sodium	99.5		P	80 - 120
2194439	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194273	Aluminum	92.9	92.9	P/P	80 - 120
2194273	Antimony	105	105	P/P	80 - 120
2194273	Arsenic	97.3	97.4	P/P	80 - 120
2194273	Boron	96.0	95.8	P/P	80 - 120
2194273	Cadmium	101	102	P/P	80 - 120
2194273	Chromium	107	107	P/P	80 - 120
2194273	Copper	95.7	95.4	P/P	80 - 120
2194273	Lead	102	102	P/P	80 - 120
2194273	Nickel	94.4	94.2	P/P	80 - 120
2194273	Selenium	94.1	94.5	P/P	80 - 120
2194273	Silver	100	100	P/P	80 - 120
2194273	Thallium	104	105	P/P	80 - 120
2194439	Aluminum	94.7		P	80 - 120
2194439	Antimony	104		P	80 - 120
2194439	Arsenic	95.2		P	80 - 120
2194439	Boron	98.5		P	80 - 120
2194439	Cadmium	101		P	80 - 120
2194439	Chromium	105		P	80 - 120
2194439	Copper	96.5		P	80 - 120
2194439	Lead	103		P	80 - 120
2194439	Nickel	97.7		P	80 - 120
2194439	Selenium	90.4		P	80 - 120
2194439	Silver	100		P	80 - 120
2194439	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194472	Chloride	99.1		P	90 - 110
2194716	Chloride	98.5		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194472	Sulfate	93.8		P	90 - 110
2194716	Sulfate	95.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194479	Ammonia-N	95.1	93.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194619	Ammonia-N	95.3	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194490	Kjeldahl Nitrogen	105	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194411	NO2NO3-N	99.2	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194490	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194382	Total-P	108	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194434	O-Phosphate-P	98.5	99.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P386984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194415	Acesulfame K	30.4	33.8	F/F	40 - 150
2194415	AMPA	72.1	72.4	P/P	40 - 150
2194415	Glufosinate	71.6	82.0	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P386984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194415	Glyphosate	64.5	94.7	P/P	40 - 140
2194415	Sucralose	51.5	58.2	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P387048

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194517	Acetaminophen	104	94.5	P/P	30 - 160
2194517	Acetamiprid	70.4	68.3	P/P	30 - 160
2194517	Afidopyropen	45.8	46.5	P/P	30 - 160
2194517	Benzovindiflupyr	61.3	61.1	P/P	30 - 160
2194517	Carbamazepine	56.8	51.3	P/P	30 - 160
2194517	Clothianidin	80.8	72.2	P/P	30 - 160
2194517	Dinotefuran	106	97.7	P/P	30 - 160
2194517	Diuron	44.6	38.1	P/P	30 - 160
2194517	Fenuron	81.4	78.9	P/P	30 - 160
2194517	Hydrocodone	80.6	78.5	P/P	30 - 160
2194517	Ibuprofen	66.2	62.5	P/P	30 - 160
2194517	Imidacloprid	152	135	P/P	30 - 160
2194517	Linuron	61.7	51.2	P/P	30 - 160
2194517	Mandestrobin	73.0	67.9	P/P	30 - 160
2194517	MCCP	110	110	P/P	30 - 160
2194517	Naproxen	83.1	70.4	P/P	30 - 160
2194517	Primidone	92.9	87.2	P/P	30 - 160
2194517	Pyraclostrobin	62.8	60.5	P/P	30 - 160
2194517	Thiamethoxam	98.1	88.8	P/P	30 - 160
2194517	Tolfenpyrad	43.5	43.9	P/P	30 - 160
2194517	Triclopyr	114	109	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194618	Fluoride	98.5	99.6	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194433	Organic Carbon	99.4	101	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2194492	Organic Carbon	96.6	98.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194432	Turbidity	1.35	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194478	Turbidity	4.72	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194273	Barium	1.54	Spike	P	0 - 20
2194273	Calcium	0.997	Spike	P	0 - 20
2194273	Iron	0.697	Spike	P	0 - 20
2194273	Magnesium	0.477	Spike	P	0 - 20
2194273	Potassium	0.511	Spike	P	0 - 20
2194273	Sodium	0.415	Spike	P	0 - 20
2194273	Zinc	2.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194273	Aluminum	0.0430	Spike	P	0 - 20
2194273	Antimony	0.0302	Spike	P	0 - 20
2194273	Arsenic	0.0480	Spike	P	0 - 20
2194273	Boron	0.226	Spike	P	0 - 20
2194273	Cadmium	0.827	Spike	P	0 - 20
2194273	Chromium	0.159	Spike	P	0 - 20
2194273	Copper	0.374	Spike	P	0 - 20
2194273	Lead	0.0788	Spike	P	0 - 20
2194273	Nickel	0.197	Spike	P	0 - 20
2194273	Selenium	0.510	Spike	P	0 - 20
2194273	Silver	0.114	Spike	P	0 - 20
2194273	Thallium	0.536	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194472	Chloride	0.0776	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194472	Sulfate	0.218	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194479	Ammonia-N	1.41	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194619	Ammonia-N	3.78	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194490	Kjeldahl Nitrogen	2.74	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194411	NO2NO3-N	0.797	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194490	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194382	Total-P	0.684	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194434	O-Phosphate-P	0.607	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P386984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194415	Acesulfame K	10.6	Spike	P	0 - 30
2194415	AMPA	0.198	Spike	P	0 - 30
2194415	Endothall	2.72	Spike	P	0 - 30
2194415	Glufosinate	13.6	Spike	P	0 - 30
2194415	Glyphosate	6.72	Spike	P	0 - 30
2194415	Sucralose	11.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194517	2,4-D	9.43	Spike	P	0 - 30
2194517	Acetaminophen	8.80	Spike	P	0 - 30
2194517	Acetamiprid	2.98	Spike	P	0 - 30
2194517	Afidopyropen	1.59	Spike	P	0 - 30
2194517	Bentazon	1.06	Spike	P	0 - 30
2194517	Benzovindiflupyr	0.351	Spike	P	0 - 30
2194517	Carbamazepine	9.02	Spike	P	0 - 30
2194517	Clothianidin	10.8	Spike	P	0 - 30
2194517	Dinotefuran	7.64	Spike	P	0 - 30
2194517	Diuron	6.69	Spike	P	0 - 30
2194517	Fenuron	3.16	Spike	P	0 - 30
2194517	Fluridone	6.35	Spike	P	0 - 30
2194517	Hydrocodone	2.62	Spike	P	0 - 30
2194517	Ibuprofen	5.70	Spike	P	0 - 30
2194517	Imazapyr	5.88	Spike	P	0 - 30
2194517	Imidacloprid	10.7	Spike	P	0 - 30
2194517	Linuron	18.5	Spike	P	0 - 30
2194517	Mandestrobin	7.25	Spike	P	0 - 30
2194517	MCP	0.0766	Spike	P	0 - 30
2194517	Naproxen	14.3	Spike	P	0 - 30
2194517	Primidone	5.81	Spike	P	0 - 30
2194517	Pyraclostrobin	3.66	Spike	P	0 - 30
2194517	Thiamethoxam	10.0	Spike	P	0 - 30
2194517	Tolfenpyrad	0.883	Spike	P	0 - 30
2194517	Triclopyr	4.67	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P387009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194410	Color (true)	7.21	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P387126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194618	Total Alkalinity	3.90	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P387383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194066	TDS	8.52	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P387384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194410	TDS	2.51	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P387385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194481	TDS	5.61	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P387130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194618	Fluoride	0.921	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P387239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194433	Organic Carbon	1.17	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P387314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2194492	Organic Carbon	1.41	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2194515
Field Sample ID: 20030346

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	84.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	76.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.1	P	30 - 160
EPA 8321B	Diuron-d6	50.0	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.6	P	30 - 160
EPA 8321B	Primidone-d5	66.5	P	30 - 160
EPA 8321B	Sucralose-d6	70.6	P	30 - 160
EPA 8321B	Sucralose-d6	70.6	P	30 - 160

Lab Sample ID: 2194516
Field Sample ID: 20030751

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.9	P	30 - 160
EPA 8321B	Diuron-d6	55.7	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.8	P	30 - 160
EPA 8321B	Primidone-d5	74.4	P	30 - 160
EPA 8321B	Sucralose-d6	64.6	P	30 - 160
EPA 8321B	Sucralose-d6	64.6	P	30 - 160

Lab Sample ID: 2194517
Field Sample ID: G2NE1183

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.6	P	30 - 160
EPA 8321B	Diuron-d6	59.2	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.0	P	30 - 160
EPA 8321B	Primidone-d5	89.5	P	30 - 160
EPA 8321B	Sucralose-d6	57.1	P	30 - 160
EPA 8321B	Sucralose-d6	57.1	P	30 - 160

Lab Sample ID: 2194518
Field Sample ID: FB09032020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	101	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2194518

Field Sample ID: FB09032020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	69.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.9	P	30 - 160
EPA 8321B	Diuron-d6	72.1	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	122	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.5	P	30 - 160
EPA 8321B	Primidone-d5	79.9	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: EPA 180.1 Rev. 2.0

Run ID: A100828

Included Lab Sample IDs: 2194472, 2194475, 2194478, 2194481, 2194484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	99.0	100	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A100830

Included Lab Sample IDs: 2194472, 2194475, 2194478, 2194481, 2194484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.5	97.7	P/P	90 - 115
Color (true)	99.5	99.7	P/P	90 - 115
Color (true)	99.7	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100831

Included Lab Sample IDs: 2194474, 2194477, 2194480, 2194483, 2194486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.6	97.4	P/P	90 - 110
O-Phosphate-P	99.2	96.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100836

Included Lab Sample IDs: 2194473, 2194476, 2194479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	94.8	96.6	P/P	90 - 110
Ammonia-N	96.6	94.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100873

Included Lab Sample IDs: 2194472, 2194475, 2194478, 2194481, 2194484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.2	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100873

Included Lab Sample IDs: 2194472, 2194475, 2194478, 2194481, 2194484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	96.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100874

Included Lab Sample IDs: 2194473, 2194476, 2194479, 2194482, 2194485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110
NO2NO3-N	99.5	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100889

Included Lab Sample IDs: 2194527, 2194528, 2194529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	98.8	P/P	95 - 105
Barium	98.5	99.5	P/P	90 - 110
Calcium	98.9	100	P/P	95 - 105
Calcium	99.0	100	P/P	90 - 110
Iron	98.4	99.3	P/P	90 - 110
Iron	98.8	99.8	P/P	95 - 105
Magnesium	97.6	99.0	P/P	95 - 105
Magnesium	97.8	98.5	P/P	90 - 110
Potassium	95.8	96.2	P/P	90 - 110
Potassium	96.5	97.4	P/P	95 - 105
Sodium	97.9	97.7	P/P	90 - 110
Sodium	98.3	100	P/P	95 - 105
Zinc	100	99.8	P/P	95 - 105
Zinc	99.9	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100901

Included Lab Sample IDs: 2194515, 2194516, 2194517, 2194518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	60.6	65.4	P/P	60 - 160
Endothall	114	100	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100905

Included Lab Sample IDs: 2194515, 2194516, 2194517, 2194518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	76.2	80.0	P/P	60 - 160
AMPA	79.9	75.1	P/P	60 - 160
Glufosinate	79.8	89.6	P/P	60 - 160
Glufosinate	99.7	91.1	P/P	60 - 160
Glyphosate	132	136	P/P	60 - 160
Glyphosate	148	133	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A100921

Included Lab Sample IDs: 2194473, 2194476

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100938

Included Lab Sample IDs: 2194473, 2194476, 2194479, 2194482, 2194485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100944

Included Lab Sample IDs: 2194482, 2194485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100952

Included Lab Sample IDs: 2194479, 2194482, 2194485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	97.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100956

Included Lab Sample IDs: 2194515, 2194516, 2194517, 2194518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	106	101	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100958

Included Lab Sample IDs: 2194472, 2194475, 2194478, 2194481, 2194484

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100965

Included Lab Sample IDs: 2194527, 2194528, 2194529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	94.7	95.2	P/P	90 - 110
Aluminum	97.3	97.4	P/P	90 - 110
Antimony	106	105	P/P	90 - 110
Antimony	107	107	P/P	90 - 110
Arsenic	94.6	93.3	P/P	90 - 110
Arsenic	95.9	94.3	P/P	90 - 110
Boron	96.9	98.1	P/P	90 - 110
Boron	99.0	98.6	P/P	90 - 110
Cadmium	97.7	98.5	P/P	90 - 110
Cadmium	98.3	96.9	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Chromium	103	103	P/P	90 - 110
Copper	94.1	94.1	P/P	90 - 110
Copper	94.1	92.9	P/P	90 - 110
Lead	98.3	99.4	P/P	90 - 110
Lead	98.6	97.6	P/P	90 - 110
Nickel	94.1	95.6	P/P	90 - 110
Nickel	95.7	94.6	P/P	90 - 110
Selenium	95.2	93.9	P/P	90 - 110
Selenium	96.9	96.1	P/P	90 - 110
Silver	102	100	P/P	90 - 110
Silver	102	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100965

Included Lab Sample IDs: 2194527, 2194528, 2194529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	95.3	97.3	P/P	90 - 110
Thallium	96.7	94.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101044

Included Lab Sample IDs: 2194515, 2194516, 2194517, 2194518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	121	128	P/P	50 - 150
Acetaminophen	108	106	P/P	60 - 160
Acetamiprid	119	121	P/P	50 - 150
Afidopyropen	86.7	96.4	P/P	50 - 150
Bentazon	103	111	P/P	50 - 160
Benzovindiflupyr	101	104	P/P	50 - 150
Carbamazepine	108	105	P/P	60 - 150
Clothianidin	99.1	93.6	P/P	60 - 150
Dinotefuran	100	99.1	P/P	50 - 150
Diuron	99.8	98.5	P/P	60 - 160
Fenuron	119	114	P/P	60 - 150
Fluridone	110	113	P/P	60 - 160
Hydrocodone	110	109	P/P	60 - 150
Ibuprofen	85.8	91.8	P/P	50 - 160
Imazapyr	129	132	P/P	50 - 160
Imidacloprid	103	103	P/P	60 - 150
Linuron	91.9	101	P/P	60 - 150
Mandestrobin	101	108	P/P	50 - 150
MCPP	110	111	P/P	50 - 150
Naproxen	99.2	90.3	P/P	50 - 160
Primidone	101	99.9	P/P	60 - 150
Pyraclostrobin	108	102	P/P	60 - 150
Thiamethoxam	119	105	P/P	50 - 150
Tolfenpyrad	104	108	P/P	60 - 150
Triclopyr	99.7	119	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101179

Included Lab Sample IDs: 2194476, 2194479, 2194482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	103	P/P	85 - 115
Total-P	103	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101180

Included Lab Sample IDs: 2194473, 2194485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.2	93.8	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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						1.35	
	Turbidity						4.72	
EPA 200.7 Rev. 4.4	Barium	101	104	103	103			1.54
	Calcium	104	104	99.2				0.997
	Iron	102	105	104	101			0.697
	Magnesium	102	105	104	102			0.477
	Potassium	99.4	99.3	99.9	97.0			0.511
	Sodium	104	102	99.5				0.415
	Zinc	103	109	106	104			2.47
EPA 200.8 Rev. 5.4	Aluminum	93.5	92.9	92.9	94.7			0.0430
	Antimony	103	105	105	104			0.0302
	Arsenic	94.7	97.3	97.4	95.2			0.0480
	Boron	98.9	96.0	95.8	98.5			0.226
	Cadmium	99.0	101	102	101			0.827
	Chromium	105	107	107	105			0.159
	Copper	93.5	95.7	95.4	96.5			0.374
	Lead	100	102	102	103			0.0788
	Nickel	93.1	94.4	94.2	97.7			0.197
	Selenium	92.5	94.1	94.5	90.4			0.510
	Silver	101	100	100	100			0.114
	Thallium	99.3	104	105	104			0.536
EPA 300.0 Rev. 2.1	Chloride	100	99.1	98.5			0.0776	
	Sulfate	98.8	93.8	95.1			0.218	
EPA 350.1 Rev. 2.0	Ammonia-N	94.0	95.1	93.4				1.41
	Ammonia-N	99.8	95.3	99.3				3.78
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	105	110				2.74
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	99.2	98.2				0.797
	NO2NO3-N	100	100	100				0.0
EPA 365.1 Rev. 2.0	Total-P	109	108	109				0.684
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	98.5	99.1				0.607
EPA 8321B	2,4-D	124						9.43
	Acesulfame K	50.5	30.4	33.8				10.6
	Acetaminophen	85.5	104	94.5				8.80
	Acetamiprid	73.5	70.4	68.3				2.98
	Afidopyropen	61.3	45.8	46.5				1.59
	AMPA	41.0	72.1	72.4				0.198
	Bentazon	61.5						1.06
	Benzovindiflupyr	68.8	61.3	61.1				0.351
	Carbamazepine	62.1	56.8	51.3				9.02
	Clothianidin	75.4	80.8	72.2				10.8
	Dinotefuran	86.6	106	97.7				7.64
	Diuron	53.7	44.6	38.1				6.69
	Endothall	114						2.72
	Fenuron	85.5	81.4	78.9				3.16
	Fluridone	72.4						6.35
	Glufosinate	89.8	71.6	82.0				13.6
	Glyphosate	112	64.5	94.7				6.72
	Hydrocodone	81.4	80.6	78.5				2.62
	Ibuprofen	70.2	66.2	62.5				5.70
	Imazapyr	71.6						5.88
	Imidacloprid	106	152	135				10.7
	Linuron	75.2	61.7	51.2				18.5
	Mandestrobin	69.4	73.0	67.9				7.25
	MCP	115	110	110				0.0766

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Naproxen	93.5	83.1	70.4			14.3
	Primidone	75.8	92.9	87.2			5.81
	Pyraclostrobin	60.2	62.8	60.5			3.66
	Sucralose	106	51.5	58.2			11.6
	Thiamethoxam	80.2	98.1	88.8			10.0
	Tolfenpyrad	43.0	43.5	43.9			0.883
	Triclopyr	104	114	109			4.67
SM 2120 B-2011	Color (true)	98.2				7.21	
SM 2320 B-2011	Total Alkalinity	99.4				3.90	
SM 2540 C-2011	TDS					8.52	
	TDS					2.51	
	TDS					5.61	
SM 4500 F-C-2011	Fluoride	98.8	98.5	99.6			0.921
SM 5310 B-2011	Organic Carbon	99.6	99.4	101			1.17
	Organic Carbon	98.1	96.6	98.4			1.41

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2194472, 2194475, 2194478, 2194481, 2194484
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2194527, 2194528, 2194529
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2194527, 2194528, 2194529
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2194472, 2194475, 2194478, 2194481, 2194484
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2194472, 2194475, 2194478, 2194481, 2194484
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2194473, 2194476, 2194479, 2194482, 2194485
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2194473, 2194476, 2194479, 2194482, 2194485
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2194473, 2194476, 2194479, 2194482, 2194485
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2194473, 2194476, 2194479, 2194482, 2194485
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2194474, 2194477, 2194480, 2194483, 2194486
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2194515, 2194516, 2194517, 2194518
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2194515, 2194516, 2194517, 2194518
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2194472, 2194475, 2194478, 2194481, 2194484
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2194472, 2194475, 2194478, 2194481, 2194484
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2194527, 2194528, 2194529
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2194472, 2194475, 2194478, 2194481, 2194484
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2194472, 2194475, 2194478, 2194481, 2194484
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2194472, 2194475, 2194478, 2194481, 2194484
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2194473, 2194476, 2194479, 2194482, 2194485

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	09/04/2020			09/04/2020 15:07	Yen Ta	2194472, 2194475, 2194478, 2194481, 2194484
EPA 200.7 Rev. 4.4	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/09/2020 14:20	Betina Topolski	2194529
	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/09/2020 17:20	Betina Topolski	2194527
	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/09/2020 17:28	Betina Topolski	2194528
EPA 200.8 Rev. 5.4	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/14/2020 19:15	Alexander Thompson	2194529
	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/14/2020 22:25	Alexander Thompson	2194527
	09/04/2020	09/08/2020 14:40	Elliott D. Healy	09/14/2020 22:33	Alexander Thompson	2194528
EPA 300.0 Rev. 2.1	09/04/2020			09/11/2020 09:24	Elliott Rodriguez	2194472
	09/04/2020			09/11/2020 10:17	Elliott Rodriguez	2194475
	09/04/2020			09/11/2020 10:30	Elliott Rodriguez	2194478
	09/04/2020			09/11/2020 10:43	Elliott Rodriguez	2194481
	09/04/2020			09/11/2020 10:56	Elliott Rodriguez	2194484
EPA 350.1 Rev. 2.0	09/04/2020			09/07/2020 18:55	Ping Hua	2194479
	09/04/2020			09/07/2020 19:16	Ping Hua	2194473
	09/04/2020			09/07/2020 19:17	Ping Hua	2194476
	09/04/2020			09/12/2020 13:24	Ping Hua	2194482
	09/04/2020			09/12/2020 13:25	Ping Hua	2194485
EPA 351.2 Rev. 2.0	09/04/2020	09/10/2020 11:36	Sima Feizi	09/11/2020 11:32	Elliott Rodriguez	2194473
	09/04/2020	09/10/2020 11:36	Sima Feizi	09/11/2020 11:34	Elliott Rodriguez	2194476
	09/04/2020	09/10/2020 11:36	Sima Feizi	09/11/2020 11:35	Elliott Rodriguez	2194479
	09/04/2020	09/10/2020 11:36	Sima Feizi	09/11/2020 11:37	Elliott Rodriguez	2194482
	09/04/2020	09/10/2020 11:36	Sima Feizi	09/11/2020 11:39	Elliott Rodriguez	2194485
EPA 353.2 Rev. 2.0	09/04/2020			09/09/2020 10:42	Beverly Y. Sanders	2194473
	09/04/2020			09/09/2020 10:43	Beverly Y. Sanders	2194476
	09/04/2020			09/09/2020 10:44	Beverly Y. Sanders	2194479
	09/04/2020			09/09/2020 10:45	Beverly Y. Sanders	2194482
	09/04/2020			09/09/2020 11:00	Beverly Y. Sanders	2194485
EPA 365.1 Rev. 2.0	09/04/2020	09/23/2020 12:23	Yen Ta	09/24/2020 12:35	Lipi Saha	2194476
	09/04/2020	09/23/2020 12:23	Yen Ta	09/24/2020 12:36	Lipi Saha	2194479
	09/04/2020	09/23/2020 12:23	Yen Ta	09/24/2020 12:39	Lipi Saha	2194482
	09/04/2020	09/23/2020 12:23	Yen Ta	09/24/2020 12:51	Lipi Saha	2194473
	09/04/2020	09/23/2020 12:23	Yen Ta	09/24/2020 12:52	Lipi Saha	2194485
EPA 365.1 Rev. 2.0 dissolved	09/04/2020			09/04/2020 14:54	Samantha Davila	2194474
	09/04/2020			09/04/2020 14:59	Samantha Davila	2194477
	09/04/2020			09/04/2020 15:00	Samantha Davila	2194480
	09/04/2020			09/04/2020 15:01	Samantha Davila	2194483
	09/04/2020			09/04/2020 15:02	Samantha Davila	2194486
EPA 8321B	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/05/2020 03:01	Rebecca Ware	2194515
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/05/2020 03:14	Rebecca Ware	2194516

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/05/2020 03:28	Rebecca Ware	2194517
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/05/2020 03:42	Rebecca Ware	2194518
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/09/2020 11:31	Rebecca Ware	2194516
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/09/2020 11:42	Rebecca Ware	2194517
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/09/2020 11:53	Rebecca Ware	2194518
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 09:13	Rebecca Ware	2194515
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 22:05	Rebecca Ware	2194515
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 22:16	Rebecca Ware	2194516
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 22:28	Rebecca Ware	2194517
	09/04/2020	09/04/2020 14:30	Rebecca Ware	09/10/2020 22:40	Rebecca Ware	2194518
	09/04/2020	09/09/2020 09:00	Hoor Shaik	09/17/2020 10:17	Juyoung Kim	2194517
	09/04/2020	09/09/2020 09:00	Hoor Shaik	09/17/2020 10:51	Juyoung Kim	2194515
	09/04/2020	09/09/2020 09:00	Hoor Shaik	09/17/2020 11:26	Juyoung Kim	2194516
	09/04/2020	09/09/2020 09:00	Hoor Shaik	09/17/2020 12:01	Juyoung Kim	2194518
SM 2120 B-2011	09/04/2020			09/04/2020 15:53	Samantha Davila	2194481
	09/04/2020			09/04/2020 15:54	Samantha Davila	2194484
	09/04/2020			09/04/2020 16:21	Samantha Davila	2194472
	09/04/2020			09/04/2020 16:22	Samantha Davila	2194478
	09/04/2020			09/04/2020 16:33	Samantha Davila	2194475
SM 2320 B-2011	09/04/2020			09/08/2020 18:30	Dale L. Simmons	2194472
	09/04/2020			09/08/2020 18:43	Dale L. Simmons	2194475
	09/04/2020			09/08/2020 18:55	Dale L. Simmons	2194478
	09/04/2020			09/08/2020 19:08	Dale L. Simmons	2194481
	09/04/2020			09/08/2020 19:17	Dale L. Simmons	2194484
SM 2340B	09/04/2020			09/09/2020 14:20	Betina Topolski	2194529
	09/04/2020			09/09/2020 17:20	Betina Topolski	2194527
	09/04/2020			09/09/2020 17:28	Betina Topolski	2194528
SM 2540 C-2011	09/04/2020			09/08/2020 15:01	Yijie Li	2194472, 2194475, 2194478, 2194481, 2194484
SM 2540 D-2011	09/04/2020			09/08/2020 15:26	Yijie Li	2194472, 2194475, 2194478, 2194481, 2194484
SM 4500 F-C-2011	09/04/2020			09/08/2020 18:30	Dale L. Simmons	2194472
	09/04/2020			09/08/2020 18:43	Dale L. Simmons	2194475
	09/04/2020			09/08/2020 18:55	Dale L. Simmons	2194478
	09/04/2020			09/08/2020 19:08	Dale L. Simmons	2194481
	09/04/2020			09/08/2020 19:17	Dale L. Simmons	2194484
SM 5310 B-2011	09/04/2020			09/11/2020 01:24	David Boose	2194473
	09/04/2020			09/11/2020 01:39	David Boose	2194476
	09/04/2020			09/12/2020 01:41	David Boose	2194479
	09/04/2020			09/12/2020 01:54	David Boose	2194482

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	09/04/2020			09/12/2020 02:06	David Boose	2194485