

Chemical Analysis Report

WAS-SECT-2019-06-05-01

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

Event Description: **NWQI - Alligator Creek**

Request ID: **RQ-2019-06-03-27**

Customer: **WAS-SECT**

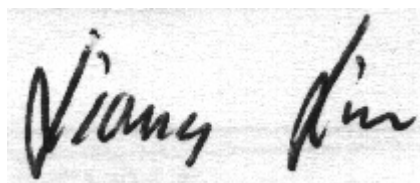
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 03-JUL-2019 10:49

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Alligator Creek Upstream of SR 273

Collection Date/Time: 06/05/2019 10:45

Field ID: G3WA0005_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091915	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P365138	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P365524	
		Sulfate	0.21	I	mg SO4/L	P365526	
	SM 2120 B	Color (true)	77		PCU	P365149	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P365561	
	SM 2540 C-97	TDS	40		mg/L	P365636	
	SM 2540 D-97	TSS	5	I	mg/L	P365859	
	SM 4500 F-C-97	Fluoride	0.052	I	mg F/L	P365567	
2091916	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P365574	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P365497	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P365379	
	EPA 365.1 Rev. 2.0	Total-P	0.074		mg P/L	P365681	
	SM 5310 B-00	Organic Carbon	8.8		mg C/L	P365429	
2091917	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P365152	
2091935	EPA 8321B	2,4-D	0.0038	I	ug/L	P364985	
		Acesulfame K**	0.10	U	ug/L	P365160	
		AMPA**	0.10	U	ug/L	P365160	
		Sucralose**	0.071		ug/L	P365160	
		Acetaminophen**	0.0080	U	ug/L	P364985	
		Endothall**	0.25	U	ug/L	P365160	
		Glufosinate**	0.10	U	ug/L	P365160	
		Bentazon	8.0E-04	U	ug/L	P364985	
		Glyphosate**	0.10	U	ug/L	P365160	
		Carbamazepine**	8.0E-04	U	ug/L	P364985	
		Diuron	0.0020	U	ug/L	P364985	
		Fenuron	0.016	U	ug/L	P364985	
		Fluridone**	8.0E-04	U	ug/L	P364985	
		Imazapyr**	0.0082	I	ug/L	P364985	
		Hydrocodone**	0.0020	U	ug/L	P364985	
		Ibuprofen**	0.020	U	ug/L	P364985	
		Imidacloprid	0.021		ug/L	P364985	
		Linuron	0.0040	U	ug/L	P364985	
		MCP	0.0020	U	ug/L	P364985	
		Naproxen**	0.0080	U	ug/L	P364985	
		Primidone**	0.0040	U	ug/L	P364985	
		Pyraclostrobin**	0.0020	U	ug/L	P364985	
		Triclopyr**	0.0040	U	ug/L	P364985	
2091938	EPA 200.7 Rev. 4.4	Barium	15.8		ug/L	P365364	
		Calcium	6.98		mg/L	P365364	
		Iron	1.87E+03		ug/L	P365364	
		Magnesium	1.97		mg/L	P365364	
		Potassium	1.7		mg/L	P365364	
		Sodium	2.1		mg/L	P365364	

Field ID: G3WA0005_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091938	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P365364	
	EPA 200.8 Rev. 5.4	Aluminum	249		ug/L	P366385	
		Antimony	0.050	I	ug/L	P365364	
		Arsenic	1.10		ug/L	P365364	
		Boron**	11.6		ug/L	P365364	
		Cadmium	0.020	U	ug/L	P365364	
		Chromium	0.40	U	ug/L	P365364	
		Copper	0.40	U	ug/L	P365364	
		Lead	0.55		ug/L	P365364	
		Nickel	0.50	U	ug/L	P365364	
		Selenium	0.20	U	ug/L	P365364	
		Silver	0.010	U	ug/L	P365364	
		Thallium	0.10	U	ug/L	P365364	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 353.2 Rev. 2.0: The result was confirmed on 06/10/2019.

EPA 200.7 Rev. 4.4: The iron and zinc results were confirmed in the undigested sample on 06/14/2019.

Sample Location: FIELD BLANK

Collection Date/Time: 06/05/2019 11:08

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091918	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P365139	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P365524	
		Sulfate	0.20	U	mg SO4/L	P365526	
	SM 2120 B	Color (true)	2.5	U	PCU	P365149	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P365561	
	SM 2540 C-97	TDS	15	U	mg/L	P365633	
	SM 2540 D-97	TSS	2	U	mg/L	P365826	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P365567	
2091919	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P365574	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P365497	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P365379	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P365425	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P365429	
2091920	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P365154	
2091936	EPA 8321B	2,4-D	0.0020	U	ug/L	P364985	
		Acesulfame K**	0.10	U	ug/L	P365160	
		AMPA**	0.10	U	ug/L	P365160	
		Sucralose**	0.010	U	ug/L	P365160	
		Acetaminophen**	0.0080	U	ug/L	P364985	
		Endothall**	0.25	U	ug/L	P365160	
		Glufosinate**	0.10	U	ug/L	P365160	
		Bentazon	8.0E-04	U	ug/L	P364985	
		Glyphosate**	0.10	U	ug/L	P365160	
		Carbamazepine**	8.0E-04	U	ug/L	P364985	
		Diuron	0.0020	U	ug/L	P364985	
		Fenuron	0.016	U	ug/L	P364985	
		Fluridone**	8.0E-04	U	ug/L	P364985	
		Imazapyr**	0.0040	U	ug/L	P364985	
		Hydrocodone**	0.0020	U	ug/L	P364985	
		Ibuprofen**	0.020	U	ug/L	P364985	
		Imidacloprid	0.0020	U	ug/L	P364985	
		Linuron	0.0040	U	ug/L	P364985	
		MCP	0.0020	U	ug/L	P364985	
		Naproxen**	0.0080	U	ug/L	P364985	
		Primidone**	0.0040	U	ug/L	P364985	
		Pyraclostrobin**	0.0020	U	ug/L	P364985	
		Triclopyr**	0.0040	U	ug/L	P364985	
2091939	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P365364	
		Calcium	0.075	U	mg/L	P365364	
		Iron	30	U	ug/L	P365364	
		Magnesium	0.040	U	mg/L	P365364	
		Potassium	0.30	U	mg/L	P365364	
		Sodium	0.50	U	mg/L	P365364	

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091939	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P365364	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P365364	
		Antimony	0.050	U	ug/L	P365364	
		Arsenic	0.050	U	ug/L	P365364	
		Boron**	2.0	U	ug/L	P365364	
		Cadmium	0.020	U	ug/L	P365364	
		Chromium	0.40	U	ug/L	P365364	
		Copper	0.40	U	ug/L	P365364	
		Lead	0.20	U	ug/L	P365364	
		Nickel	0.50	U	ug/L	P365364	
		Selenium	0.20	U	ug/L	P365364	
		Silver	0.010	U	ug/L	P365364	
		Thallium	0.10	U	ug/L	P365364	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Alligator Creek Upstream of Bentley Rd

Collection Date/Time: 06/05/2019 12:02

Field ID: G3WA0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091912	EPA 180.1 Rev. 2.0	Turbidity	50		NTU	P365139	
	EPA 300.0 Rev. 2.1	Chloride	9.3		mg Cl/L	P365524	
		Sulfate	0.26	I	mg SO4/L	P365526	
	SM 2120 B	Color (true)	19	A	PCU	P365151	
	SM 2320 B-97	Total Alkalinity	54		mg CaCO3/L	P365561	
	SM 2540 C-97	TDS	81		mg/L	P365636	
	SM 2540 D-97	TSS	37		mg/L	P365859	
	SM 4500 F-C-97	Fluoride	0.094	I	mg F/L	P365567	
2091913	EPA 350.1 Rev. 2.0	Ammonia-N	1.6		mg N/L	P365574	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.4		mg N/L	P365496	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P365379	
	EPA 365.1 Rev. 2.0	Total-P	0.46		mg P/L	P365935	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P365429	
2091914	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P365154	
2091934	EPA 8321B	2,4-D	0.0020	U	ug/L	P364985	
		Acesulfame K**	0.10	U	ug/L	P365160	
		AMPA**	0.10	U	ug/L	P365160	
		Sucralose**	0.062		ug/L	P365160	
		Acetaminophen**	0.0080	U	ug/L	P364985	
		Endothall**	0.25	U	ug/L	P365160	
		Glufosinate**	0.10	U	ug/L	P365160	
		Bentazon	8.0E-04	U	ug/L	P364985	
		Glyphosate**	0.10	U	ug/L	P365160	
		Carbamazepine**	8.0E-04	U	ug/L	P364985	
		Diuron	0.0020	U	ug/L	P364985	
		Fenuron	0.016	U	ug/L	P364985	
		Fluridone**	8.0E-04	U	ug/L	P364985	
		Imazapyr**	0.0040	U	ug/L	P364985	
		Hydrocodone**	0.0020	U	ug/L	P364985	
		Ibuprofen**	0.020	U	ug/L	P364985	
		Imidacloprid	0.0035	I	ug/L	P364985	
		Linuron	0.0040	U	ug/L	P364985	
		MCPP	0.0020	U	ug/L	P364985	
		Naproxen**	0.0080	U	ug/L	P364985	
		Primidone**	0.0040	U	ug/L	P364985	
		Pyraclostrobin**	0.0020	U	ug/L	P364985	
		Triclopyr**	0.0040	U	ug/L	P364985	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Alligator Creek Upstream of SR 273

Collection Date/Time: 06/05/2019 10:24

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091909	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P365138	
	EPA 300.0 Rev. 2.1	Chloride	5.3		mg Cl/L	P365524	
		Sulfate	0.25	I	mg SO4/L	P365526	
	SM 2120 B	Color (true)	73		PCU	P365149	
	SM 2320 B-97	Total Alkalinity	23		mg CaCO3/L	P365560	
	SM 2540 C-97	TDS	45		mg/L	P365636	
	SM 2540 D-97	TSS	4	I	mg/L	P365859	
	SM 4500 F-C-97	Fluoride	0.053	I	mg F/L	P365566	
2091910	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P365574	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P365496	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P365379	
	EPA 365.1 Rev. 2.0	Total-P	0.070		mg P/L	P365641	
	SM 5310 B-00	Organic Carbon	9.2		mg C/L	P365429	
2091911	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P365152	
2091933	EPA 8321B	2,4-D	0.0032	I	ug/L	P364985	
		Acesulfame K**	0.10	U	ug/L	P365160	
		AMPA**	0.10	U	ug/L	P365160	
		Sucralose**	0.084		ug/L	P365160	
		Acetaminophen**	0.0080	U	ug/L	P364985	
		Endothall**	0.25	U	ug/L	P365160	
		Glufosinate**	0.10	U	ug/L	P365160	
		Bentazon	8.0E-04	U	ug/L	P364985	
		Glyphosate**	0.10	U	ug/L	P365160	
		Carbamazepine**	8.0E-04	U	ug/L	P364985	
		Diuron	0.0020	U	ug/L	P364985	
		Fenuron	0.016	U	ug/L	P364985	
		Fluridone**	8.0E-04	U	ug/L	P364985	
		Imazapyr**	0.0079	I	ug/L	P364985	
		Hydrocodone**	0.0020	U	ug/L	P364985	
		Ibuprofen**	0.020	U	ug/L	P364985	
		Imidacloprid	0.024		ug/L	P364985	
		Linuron	0.0040	U	ug/L	P364985	
		MCPP	0.0020	U	ug/L	P364985	
		Naproxen**	0.0080	U	ug/L	P364985	
		Primidone**	0.0040	U	ug/L	P364985	
		Pyraclostrobin**	0.0020	U	ug/L	P364985	
		Triclopyr**	0.0040	U	ug/L	P364985	
2091937	EPA 200.7 Rev. 4.4	Barium	16.4		ug/L	P365364	
		Calcium	7.10		mg/L	P365364	
		Iron	1.49E+03		ug/L	P365364	
		Magnesium	1.97		mg/L	P365364	
		Potassium	1.7		mg/L	P365364	
		Sodium	2.1		mg/L	P365364	

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2091937	EPA 200.7 Rev. 4.4	Zinc	39		ug/L	P365364	
	EPA 200.8 Rev. 5.4	Aluminum	239		ug/L	P366385	
		Antimony	0.055	I	ug/L	P365364	
		Arsenic	1.04		ug/L	P365364	
		Boron**	12.0		ug/L	P365364	
		Cadmium	0.020	U	ug/L	P365364	
		Chromium	0.40	U	ug/L	P365364	
		Copper	0.63	I	ug/L	P365364	
		Lead	0.49		ug/L	P365364	
		Nickel	0.50	U	ug/L	P365364	
		Selenium	0.20	U	ug/L	P365364	
		Silver	0.010	U	ug/L	P365364	
		Thallium	0.10	U	ug/L	P365364	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 353.2 Rev. 2.0: The result was confirmed on 06/10/2019.

EPA 200.7 Rev. 4.4: The iron and zinc results were confirmed in the undigested sample on 06/14/2019.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P365138

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P365139

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P365364

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: P365364

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 200.8 Rev. 5.4

Batch ID: P366385

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P365524

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365526

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365574

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365496

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365497

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365379

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365425

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365641

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365681

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365935

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365152

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365154

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

Reference Method: EPA 8321B
Batch ID: P364985

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P365160

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: SM 2120 B
Batch ID: P365149

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P365151

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P365560

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

Reference Method: SM 2320 B-97
Batch ID: P365561

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

Reference Method: SM 2540 C-97
Batch ID: P365633

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P365636

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P365826

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P365859

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P365566

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P365567

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P365429

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: P365364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.7		P	85 - 115
Calcium	101		P	85 - 115
Iron	104		P	85 - 115
Magnesium	101		P	85 - 115
Potassium	101		P	85 - 115
Sodium	98.9		P	85 - 115
Zinc	96.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P365364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.0		P	85 - 115
Antimony	93.7		P	85 - 115
Arsenic	98.2		P	85 - 115
Boron	97.5		P	85 - 115
Cadmium	96.4		P	85 - 115
Chromium	103		P	85 - 115
Copper	102		P	85 - 115
Lead	90.3		P	85 - 115
Nickel	95.5		P	85 - 115
Selenium	101		P	85 - 115
Silver	92.8		P	85 - 115
Thallium	94.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P366385

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P365524

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P365526

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P365574

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365496

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365497

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365379

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365425

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365641

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365681

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365935

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365154

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P364985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	114		P	40 - 150
Acetaminophen	90.4		P	30 - 150
Bentazon	112		P	30 - 150
Carbamazepine	105		P	40 - 150
Diuron	90.6		P	40 - 150
Fenuron	109		P	40 - 150
Fluridone	95.1		P	40 - 150
Hydrocodone	104		P	40 - 150
Ibuprofen	73.3		P	40 - 150
Imazapyr	93.1		P	40 - 150
Imidacloprid	95.8		P	40 - 150
Linuron	71.0		P	40 - 150
MCPP	115		P	40 - 150
Naproxen	87.2		P	40 - 150
Primidone	92.8		P	40 - 150
Pyraclostrobin	85.5		P	40 - 150
Triclopyr	81.3		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P365160

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	106		P	40 - 150
Endothall	92.4		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	106		P	40 - 140
Sucralose	101		P	40 - 150

Reference Method: SM 2120 B

Batch ID: P365149

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2120 B

Batch ID: P365151

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	85 - 115

Reference Method: SM 2320 B-97

Batch ID: P365560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 2320 B-97

Batch ID: P365561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97

Batch ID: P365566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	92 - 103

Reference Method: SM 4500 F-C-97

Batch ID: P365567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 5310 B-00

Batch ID: P365429

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P365364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092808	Barium	99.0	102	P/P	80 - 120
2092808	Calcium	107		P	80 - 120
2092808	Iron	105	107	P/P	80 - 120
2092808	Magnesium	103		P	80 - 120
2092808	Potassium	103	105	P/P	80 - 120
2092808	Sodium	104		P	80 - 120
2092808	Zinc	96.7	99.3	P/P	80 - 120
2092809	Barium	99.8		P	80 - 120
2092809	Calcium	101		P	80 - 120
2092809	Iron	105		P	80 - 120
2092809	Magnesium	101		P	80 - 120
2092809	Potassium	101		P	80 - 120
2092809	Sodium	101		P	80 - 120
2092809	Zinc	97.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P365364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092808	Aluminum	91.5	92.5	P/P	80 - 120
2092808	Antimony	95.9	96.4	P/P	80 - 120
2092808	Arsenic	94.9	95.5	P/P	80 - 120
2092808	Boron	96.1	96.6	P/P	80 - 120
2092808	Cadmium	97.9	97.5	P/P	80 - 120
2092808	Chromium	103	103	P/P	80 - 120
2092808	Copper	100	99.5	P/P	80 - 120
2092808	Lead	90.0	92.3	P/P	80 - 120
2092808	Nickel	90.9	91.2	P/P	80 - 120
2092808	Selenium	104	104	P/P	80 - 120
2092808	Silver	92.6	93.3	P/P	80 - 120
2092808	Thallium	95.7	99.5	P/P	80 - 120
2092809	Aluminum	90.8		P	80 - 120
2092809	Antimony	94.7		P	80 - 120
2092809	Arsenic	94.9		P	80 - 120
2092809	Boron	96.8		P	80 - 120
2092809	Cadmium	95.8		P	80 - 120
2092809	Chromium	103		P	80 - 120
2092809	Copper	102		P	80 - 120
2092809	Lead	92.9		P	80 - 120
2092809	Nickel	90.3		P	80 - 120
2092809	Selenium	104		P	80 - 120
2092809	Silver	92.1		P	80 - 120
2092809	Thallium	98.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P366385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091937	Aluminum	99.7	98.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091832	Chloride	98.6		P	90 - 110
2092046	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091832	Sulfate	97.6		P	90 - 110
2092046	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091834	Ammonia-N	98.1	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365496

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091812	Kjeldahl Nitrogen	114	112	F/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092030	Kjeldahl Nitrogen	103	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365379

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091846	NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091834	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094226	Total-P	97.2	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094227	Total-P	103	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P365935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095567	Total-P	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P365152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091389	O-Phosphate-P	98.9	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P365154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091914	O-Phosphate-P	99.6	101	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P364985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091078	2,4-D	126	104	P/P	40 - 150
2091078	Acetaminophen	102	96.4	P/P	30 - 150
2091078	Bentazon	122	115	P/P	30 - 150
2091078	Carbamazepine	94.9	97.4	P/P	40 - 150
2091078	Diuron	88.8	89.7	P/P	40 - 150
2091078	Fenuron	102	107	P/P	40 - 150
2091078	Fluridone	98.1	91.5	P/P	40 - 150
2091078	Hydrocodone	108	113	P/P	40 - 150
2091078	Ibuprofen	78.9	60.1	P/P	40 - 150
2091078	Imazapyr	102	109	P/P	40 - 150
2091078	Imidacloprid	128	122	P/P	40 - 150
2091078	Linuron	72.0	69.6	P/P	40 - 150
2091078	MCPP	133	118	P/P	40 - 150
2091078	Naproxen	85.2	78.4	P/P	40 - 150
2091078	Primidone	105	104	P/P	40 - 150
2091078	Pyraclostrobin	87.1	82.3	P/P	40 - 150
2091078	Triclopyr	88.1	76.9	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P365160

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091078	Acesulfame K	110	106	P/P	40 - 150
2091078	AMPA	94.1	96.4	P/P	40 - 150
2091078	Endothall	96.5	96.5	P/P	40 - 150
2091078	Glufosinate	96.9	97.7	P/P	40 - 150
2091078	Glyphosate	95.3	97.2	P/P	40 - 140
2091078	Sucralose	102	98.5	P/P	40 - 150

Reference Method: SM 4500 F-C-97

Batch ID: P365566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092079	Fluoride	98.0	97.3	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P365567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092187	Fluoride	97.2	96.7	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P365429

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2091548	Organic Carbon	93.1	91.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091855	Turbidity	6.24	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092044	Turbidity	3.24	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092808	Barium	3.02	Spike	P	0 - 20
2092808	Calcium	2.14	Spike	P	0 - 20
2092808	Iron	1.64	Spike	P	0 - 20
2092808	Magnesium	0.424	Spike	P	0 - 20
2092808	Potassium	1.49	Spike	P	0 - 20
2092808	Sodium	1.90	Spike	P	0 - 20
2092808	Zinc	2.71	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092808	Aluminum	1.10	Spike	P	0 - 20
2092808	Antimony	0.487	Spike	P	0 - 20
2092808	Arsenic	0.607	Spike	P	0 - 20
2092808	Boron	0.433	Spike	P	0 - 20
2092808	Cadmium	0.424	Spike	P	0 - 20
2092808	Chromium	0.318	Spike	P	0 - 20
2092808	Copper	0.428	Spike	P	0 - 20
2092808	Lead	2.53	Spike	P	0 - 20
2092808	Nickel	0.297	Spike	P	0 - 20
2092808	Selenium	0.587	Spike	P	0 - 20
2092808	Silver	0.798	Spike	P	0 - 20
2092808	Thallium	3.92	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091937	Aluminum	0.861	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091832	Chloride	0.519	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091832	Sulfate	0.208	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091834	Ammonia-N	0.109	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091812	Kjeldahl Nitrogen	0.714	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092030	Kjeldahl Nitrogen	4.18	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091846	NO2NO3-N	0.512	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091834	Total-P	1.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094226	Total-P	1.92	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P365681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094227	Total-P	2.25	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P365935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095567	Total-P	1.62	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P365152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091389	O-Phosphate-P	0.605	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P365154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091914	O-Phosphate-P	0.998	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P364985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091078	2,4-D	18.8	Spike	P	0 - 30
2091078	Acetaminophen	5.53	Spike	P	0 - 30
2091078	Bentazon	6.17	Spike	P	0 - 30
2091078	Carbamazepine	2.61	Spike	P	0 - 30
2091078	Diuron	1.02	Spike	P	0 - 30
2091078	Fenuron	4.81	Spike	P	0 - 30
2091078	Fluridone	6.97	Spike	P	0 - 30
2091078	Hydrocodone	4.22	Spike	P	0 - 30
2091078	Ibuprofen	27.1	Spike	P	0 - 30
2091078	Imazapyr	7.14	Spike	P	0 - 30
2091078	Imidacloprid	5.05	Spike	P	0 - 30
2091078	Linuron	3.46	Spike	P	0 - 30
2091078	MCP	12.1	Spike	P	0 - 30
2091078	Naproxen	8.31	Spike	P	0 - 30
2091078	Primidone	0.662	Spike	P	0 - 30
2091078	Pyraclostrobin	5.68	Spike	P	0 - 30
2091078	Triclopyr	13.6	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P365160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P365160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091078	Acesulfame K	3.31	Spike	P	0 - 30
2091078	AMPA	2.44	Spike	P	0 - 30
2091078	Endothall	0.0369	Spike	P	0 - 30
2091078	Glufosinate	0.847	Spike	P	0 - 30
2091078	Glyphosate	2.00	Spike	P	0 - 30
2091078	Sucralose	3.96	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P365149

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091811	Color (true)	2.24	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P365151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091912	Color (true)	0.549	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P365560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092079	Total Alkalinity	0.664	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P365561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092187	Total Alkalinity	0.616	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P365633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091382	TDS	1.50	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P365636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091741	TDS	6.75	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P365566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092079	Fluoride	0.476	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P365567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092187	Fluoride	0.482	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P365429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2091548	Organic Carbon	1.03	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2091933

Field Sample ID: G3WA0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.0	P	30 - 160
EPA 8321B	Diuron-d6	63.2	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.2	P	30 - 160
EPA 8321B	Primidone-d5	94.3	P	30 - 160
EPA 8321B	Sucralose-d6	152	P	30 - 160
EPA 8321B	Sucralose-d6	152	P	30 - 160

Lab Sample ID: 2091934

Field Sample ID: G3WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.7	P	30 - 160
EPA 8321B	Diuron-d6	57.3	P	30 - 160
EPA 8321B	Endothall-d6	88.3	P	30 - 160
EPA 8321B	Endothall-d6	88.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.1	P	30 - 160
EPA 8321B	Primidone-d5	76.5	P	30 - 160
EPA 8321B	Sucralose-d6	147	P	30 - 160
EPA 8321B	Sucralose-d6	147	P	30 - 160

Lab Sample ID: 2091935

Field Sample ID: G3WA0005_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.9	P	30 - 160
EPA 8321B	Diuron-d6	65.9	P	30 - 160
EPA 8321B	Endothall-d6	86.3	P	30 - 160
EPA 8321B	Endothall-d6	86.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.4	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	30 - 160

Lab Sample ID: 2091936

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2091936

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	91.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.1	P	30 - 160
EPA 8321B	Diuron-d6	64.4	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.9	P	30 - 160
EPA 8321B	Primidone-d5	87.0	P	30 - 160
EPA 8321B	Sucralose-d6	93.8	P	30 - 160
EPA 8321B	Sucralose-d6	93.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A91888

Included Lab Sample IDs: 2091909, 2091912, 2091915, 2091918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A91889

Included Lab Sample IDs: 2091909, 2091912, 2091915, 2091918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	102	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A91890

Included Lab Sample IDs: 2091911, 2091914, 2091917, 2091920

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	98.3	P/P	90 - 110
O-Phosphate-P	99.3	99.4	P/P	90 - 110
O-Phosphate-P	99.4	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A91966

Included Lab Sample IDs: 2091933, 2091934, 2091935, 2091936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	80.1	82.8	P/P	60 - 160
Acesulfame K	82.8	83.2	P/P	60 - 160
Endothall	88.0	88.2	P/P	60 - 160
Endothall	88.2	90.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A91971

Included Lab Sample IDs: 2091933, 2091934, 2091935, 2091936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	85.9	83.0	P/P	60 - 160
Glufosinate	90.0	86.7	P/P	60 - 160
Glyphosate	86.6	78.5	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91977

Included Lab Sample IDs: 2091910, 2091913, 2091916, 2091919

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A92015

Included Lab Sample IDs: 2091910, 2091913, 2091916, 2091919

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

Reference Method: SM 5310 B-00

Run ID: A92015

Included Lab Sample IDs: 2091910, 2091913, 2091916, 2091919

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	95.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A92026

Included Lab Sample IDs: 2091909, 2091912, 2091915, 2091918

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92057

Included Lab Sample IDs: 2091919

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

Reference Method: EPA 8321B

Run ID: A92066

Included Lab Sample IDs: 2091933, 2091934, 2091935, 2091936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	97.7	100	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A92072

Included Lab Sample IDs: 2091909, 2091912, 2091915, 2091918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110
Total Alkalinity	109	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A92072

Included Lab Sample IDs: 2091909, 2091912, 2091915, 2091918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.5	P/P	90 - 110
Fluoride	99.0	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92075

Included Lab Sample IDs: 2091910, 2091913, 2091916, 2091919

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.7	P/P	90 - 110
Ammonia-N	99.7	99.6	P/P	90 - 110
Ammonia-N	99.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92095

Included Lab Sample IDs: 2091937, 2091938, 2091939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	103	P/P	90 - 110
Barium	102	101	P/P	95 - 105
Calcium	102	104	P/P	90 - 110
Calcium	103	102	P/P	95 - 105
Iron	103	102	P/P	95 - 105
Magnesium	101	104	P/P	90 - 110
Magnesium	102	101	P/P	95 - 105
Potassium	101	102	P/P	95 - 105
Potassium	102	103	P/P	90 - 110
Sodium	100	103	P/P	90 - 110
Sodium	99.2	100	P/P	95 - 105
Zinc	103	102	P/P	95 - 105

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92108

Included Lab Sample IDs: 2091916, 2091919

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92126

Included Lab Sample IDs: 2091937, 2091938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	104	101	P/P	90 - 110
Zinc	101	95.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92133

Included Lab Sample IDs: 2091910, 2091913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92151

Included Lab Sample IDs: 2091910, 2091916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A92168

Included Lab Sample IDs: 2091933, 2091934, 2091935, 2091936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	101	88.3	P/P	50 - 150
2,4-D	88.3	91.7	P/P	50 - 150
Acetaminophen	127	91.7	P/P	60 - 160
Acetaminophen	79.7	127	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A92168

Included Lab Sample IDs: 2091933, 2091934, 2091935, 2091936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	109	115	P/P	50 - 160
Bentazon	115	91.3	P/P	50 - 160
Carbamazepine	106	92.5	P/P	60 - 150
Carbamazepine	92.5	96.8	P/P	60 - 150
Diuron	102	105	P/P	60 - 150
Diuron	105	103	P/P	60 - 150
Fenuron	92.8	102	P/P	60 - 150
Fenuron	99.9	92.8	P/P	60 - 150
Fluridone	104	101	P/P	60 - 160
Fluridone	106	104	P/P	60 - 160
Hydrocodone	105	115	P/P	60 - 150
Hydrocodone	100	105	P/P	60 - 150
Ibuprofen	77.1	80.6	P/P	50 - 160
Ibuprofen	86.8	77.1	P/P	50 - 160
Imazapyr	83.1	94.7	P/P	50 - 150
Imazapyr	99.2	83.1	P/P	50 - 150
Imidacloprid	89.1	94.0	P/P	60 - 150
Imidacloprid	94.0	98.6	P/P	60 - 150
Linuron	97.3	98.1	P/P	60 - 150
Linuron	98.1	89.7	P/P	60 - 150
MCPP	91.9	93.6	P/P	50 - 150
MCPP	93.6	104	P/P	50 - 150
Naproxen	118	90.8	P/P	50 - 160
Naproxen	90.8	83.0	P/P	50 - 160
Primidone	102	91.4	P/P	60 - 150
Primidone	106	102	P/P	60 - 150
Pyraclostrobin	78.0	74.8	P/P	60 - 150
Pyraclostrobin	94.5	78.0	P/P	60 - 150
Triclopyr	102	108	P/P	50 - 150
Triclopyr	108	115	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92190

Included Lab Sample IDs: 2091937, 2091938, 2091939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.2	97.3	P/P	90 - 110
Antimony	95.1	94.5	P/P	90 - 110
Antimony	95.5	95.1	P/P	90 - 110
Arsenic	101	98.1	P/P	90 - 110
Arsenic	98.1	96.3	P/P	90 - 110
Boron	96.9	98.7	P/P	90 - 110
Boron	98.7	102	P/P	90 - 110
Cadmium	97.7	97.9	P/P	90 - 110
Cadmium	97.9	97.7	P/P	90 - 110
Lead	91.6	93.4	P/P	90 - 110
Lead	92.5	91.6	P/P	90 - 110
Nickel	98.6	96.4	P/P	90 - 110
Nickel	98.7	98.6	P/P	90 - 110
Silver	94.0	94.0	P/P	90 - 110
Silver	94.0	94.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92190

Included Lab Sample IDs: 2091937, 2091938, 2091939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	90.6	93.2	P/P	90 - 110
Thallium	91.9	90.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92255

Included Lab Sample IDs: 2091913

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92282

Included Lab Sample IDs: 2091937, 2091938, 2091939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	99.6	99.1	P/P	90 - 110
Chromium	99.8	99.6	P/P	90 - 110
Copper	101	98.4	P/P	90 - 110
Copper	98.4	99.4	P/P	90 - 110
Selenium	100	97.1	P/P	90 - 110
Selenium	97.1	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92485

Included Lab Sample IDs: 2091937, 2091938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.4	99.5	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			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					6.24	
	Turbidity					3.24	
EPA 200.7 Rev. 4.4	Barium	98.7	99.0	102	99.8		3.02
	Calcium	101	107	101			2.14
	Iron	104	105	107	105		1.64
	Magnesium	101	103	101			0.424
	Potassium	101	103	105	101		1.49
	Sodium	98.9	104	101			1.90
	Zinc	96.7	96.7	99.3	97.6		2.71
EPA 200.8 Rev. 5.4	Aluminum	96.0	91.5	92.5	90.8		1.10
	Aluminum	99.6	99.7	98.6			0.861
	Antimony	93.7	95.9	96.4	94.7		0.487
	Arsenic	98.2	94.9	95.5	94.9		0.607
	Boron	97.5	96.1	96.6	96.8		0.433
	Cadmium	96.4	97.9	97.5	95.8		0.424
	Chromium	103	103	103	103		0.318
	Copper	102	102	100	99.5		0.428
	Lead	90.3	90.0	92.3	92.9		2.53
	Nickel	95.5	90.9	91.2	90.3		0.297
	Selenium	101	104	104	104		0.587
	Silver	92.8	92.6	93.3	92.1		0.798
	Thallium	94.4	95.7	99.5	98.0		3.92
EPA 300.0 Rev. 2.1	Chloride	101	98.6	102		0.519	
	Sulfate	101	97.6	103		0.208	
EPA 350.1 Rev. 2.0	Ammonia-N	96.5	98.1	98.0			0.109
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	114	112			0.714
	Kjeldahl Nitrogen	102	103	109			4.18
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.0	98.0	97.5			0.512
EPA 365.1 Rev. 2.0	Total-P	102	104	102			1.40
	Total-P	98.4	97.2	99.1			1.92
	Total-P	103	103	101			2.25
	Total-P	103	102	100			1.62
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9	98.9	99.5			0.605
	O-Phosphate-P	99.6	99.6	101			0.998
EPA 8321B	2,4-D	114	126	104			18.8
	Acesulfame K	112	110	106			3.31
	Acetaminophen	90.4	102	96.4			5.53
	AMPA	106	94.1	96.4			2.44
	Bentazon	112	122	115			6.17
	Carbamazepine	105	94.9	97.4			2.61
	Diuron	90.6	88.8	89.7			1.02
	Endothall	92.4	96.5	96.5			0.0369
	Fenuron	109	102	107			4.81
	Fluridone	95.1	98.1	91.5			6.97
	Glufosinate	100	96.9	97.7			0.847
	Glyphosate	106	95.3	97.2			2.00
	Hydrocodone	104	108	113			4.22
	Ibuprofen	73.3	78.9	60.1			27.1
	Imazapyr	93.1	102	109			7.14
	Imidacloprid	95.8	128	122			5.05
	Linuron	71.0	72.0	69.6			3.46
	MCP	115	133	118			12.1
	Naproxen	87.2	85.2	78.4			8.31
	Primidone	92.8	105	104			0.662

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Pyraclostrobin	85.5	87.1	82.3		5.68
	Sucralose	101	102	98.5		3.96
	Triclopyr	81.3	88.1	76.9		13.6
SM 2120 B	Color (true)	102			2.24	
	Color (true)	99.8			0.549	
SM 2320 B-97	Total Alkalinity	104			0.664	
	Total Alkalinity	104			0.616	
SM 2540 C-97	TDS				1.50	
	TDS				6.75	
SM 4500 F-C-97	Fluoride	97.4	98.0	97.3		0.476
	Fluoride	96.9	97.2	96.7		0.482
SM 5310 B-00	Organic Carbon	95.8	93.1	91.6		1.03

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2091909, 2091912, 2091915, 2091918
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2091937, 2091938, 2091939
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2091937, 2091938, 2091939
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2091909, 2091912, 2091915, 2091918
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2091909, 2091912, 2091915, 2091918
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2091910, 2091913, 2091916, 2091919
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2091910, 2091913, 2091916, 2091919
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2091910, 2091913, 2091916, 2091919
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2091910, 2091913, 2091916, 2091919
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2091911, 2091914, 2091917, 2091920
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2091933, 2091934, 2091935, 2091936
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2091933, 2091934, 2091935, 2091936
SM 2120 B / E31780	True Color measured at 450 nm	2091909, 2091912, 2091915, 2091918
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2091909, 2091912, 2091915, 2091918
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2091909, 2091912, 2091915, 2091918
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2091909, 2091912, 2091915, 2091918
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2091909, 2091912, 2091915, 2091918
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2091910, 2091913, 2091916, 2091919

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	06/05/2019			06/05/2019 16:52	Julia Storbeck	2091909, 2091912, 2091915, 2091918
EPA 200.7 Rev. 4.4	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/12/2019 15:30	Betina Topolski	2091939
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/12/2019 17:16	Betina Topolski	2091937
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/12/2019 17:23	Betina Topolski	2091938
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/14/2019 15:47	Betina Topolski	2091937
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/14/2019 15:55	Betina Topolski	2091938
EPA 200.8 Rev. 5.4	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/18/2019 16:26	Robert K Palmer	2091939
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/18/2019 18:24	Robert K Palmer	2091937
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/18/2019 18:34	Robert K Palmer	2091938
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/21/2019 13:46	Robert K Palmer	2091939
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/21/2019 14:38	Robert K Palmer	2091937
	06/05/2019	06/11/2019 11:00	Alexander Thompson	06/21/2019 14:58	Robert K Palmer	2091938
	06/05/2019	06/27/2019 14:30	Alexander Thompson	06/28/2019 20:17	Martin Acosta	2091937
	06/05/2019	06/27/2019 14:30	Alexander Thompson	06/28/2019 20:46	Martin Acosta	2091938
EPA 300.0 Rev. 2.1	06/05/2019			06/12/2019 17:16	Lipi Saha	2091909
	06/05/2019			06/12/2019 17:52	Lipi Saha	2091912
	06/05/2019			06/12/2019 18:04	Lipi Saha	2091915
	06/05/2019			06/12/2019 18:16	Lipi Saha	2091918
EPA 350.1 Rev. 2.0	06/05/2019			06/12/2019 16:57	Ping Hua	2091910
	06/05/2019			06/12/2019 16:59	Ping Hua	2091916
	06/05/2019			06/12/2019 17:09	Ping Hua	2091919
	06/05/2019			06/12/2019 18:14	Ping Hua	2091913
EPA 351.2 Rev. 2.0	06/05/2019	06/12/2019 15:25	Adrian Shelby	06/14/2019 11:22	Joseph Suarez	2091916
	06/05/2019	06/12/2019 15:25	Adrian Shelby	06/14/2019 11:23	Joseph Suarez	2091919
	06/05/2019	06/12/2019 15:25	Adrian Shelby	06/17/2019 09:46	Joseph Suarez	2091910
	06/05/2019	06/12/2019 15:25	Adrian Shelby	06/17/2019 09:47	Joseph Suarez	2091913
EPA 353.2 Rev. 2.0	06/05/2019			06/10/2019 12:14	Beverly Y. Sanders	2091910
	06/05/2019			06/10/2019 12:15	Beverly Y. Sanders	2091916
	06/05/2019			06/10/2019 12:16	Beverly Y. Sanders	2091913
	06/05/2019			06/10/2019 12:18	Beverly Y. Sanders	2091919
EPA 365.1 Rev. 2.0	06/05/2019	06/11/2019 13:00	Adrian Shelby	06/12/2019 17:30	Rosalyn Ballman	2091919
	06/05/2019	06/14/2019 12:55	Sima Feizi	06/17/2019 17:26	Julia Storbeck	2091910
	06/05/2019	06/14/2019 12:55	Sima Feizi	06/17/2019 17:31	Julia Storbeck	2091916
	06/05/2019	06/19/2019 12:35	Sima Feizi	06/21/2019 08:50	Lipi Saha	2091913
EPA 365.1 Rev. 2.0 dissolved	06/05/2019			06/05/2019 16:55	Jhamieka S. Greenwood	2091914
	06/05/2019			06/05/2019 17:12	Jhamieka S. Greenwood	2091911
	06/05/2019			06/05/2019 17:13	Jhamieka S. Greenwood	2091917
	06/05/2019			06/05/2019 17:32	Jhamieka S. Greenwood	2091920
EPA 8321B	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 13:40	Rebecca Ware	2091933
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 13:51	Rebecca Ware	2091934

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 14:02	Rebecca Ware	2091935
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 14:13	Rebecca Ware	2091936
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 22:02	Rebecca Ware	2091933
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 22:16	Rebecca Ware	2091934
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 22:44	Rebecca Ware	2091935
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/06/2019 22:58	Rebecca Ware	2091936
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/12/2019 00:56	Rebecca Ware	2091933
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/12/2019 01:08	Rebecca Ware	2091934
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/12/2019 01:20	Rebecca Ware	2091935
	06/05/2019	06/06/2019 09:45	Rebecca Ware	06/12/2019 01:32	Rebecca Ware	2091936
	06/05/2019	06/07/2019 09:00	Hoor Shaik	06/08/2019 05:48	Juyoung Kim	2091933
	06/05/2019	06/07/2019 09:00	Hoor Shaik	06/08/2019 06:57	Juyoung Kim	2091934
	06/05/2019	06/07/2019 09:00	Hoor Shaik	06/08/2019 07:32	Juyoung Kim	2091935
	06/05/2019	06/07/2019 09:00	Hoor Shaik	06/08/2019 08:06	Juyoung Kim	2091936
SM 2120 B	06/05/2019			06/05/2019 17:11	Madeline Funaro	2091909
	06/05/2019			06/05/2019 17:12	Madeline Funaro	2091915
	06/05/2019			06/05/2019 17:13	Madeline Funaro	2091918
	06/05/2019			06/05/2019 17:27	Madeline Funaro	2091912
SM 2320 B-97	06/05/2019			06/12/2019 23:51	Dale L. Simmons	2091909
	06/05/2019			06/13/2019 02:06	Dale L. Simmons	2091912
	06/05/2019			06/13/2019 02:17	Dale L. Simmons	2091915
	06/05/2019			06/13/2019 02:32	Dale L. Simmons	2091918
SM 2540 C-97	06/05/2019			06/10/2019 15:55	Yijie Li	2091909, 2091912, 2091915, 2091918
SM 2540 D-97	06/05/2019			06/10/2019 15:55	Yijie Li	2091909, 2091912, 2091915, 2091918
SM 4500 F-C-97	06/05/2019			06/12/2019 23:51	Dale L. Simmons	2091909
	06/05/2019			06/13/2019 02:06	Dale L. Simmons	2091912
	06/05/2019			06/13/2019 02:17	Dale L. Simmons	2091915
	06/05/2019			06/13/2019 02:32	Dale L. Simmons	2091918
SM 5310 B-00	06/05/2019			06/10/2019 10:03	Madeline Funaro	2091910
	06/05/2019			06/10/2019 10:19	Madeline Funaro	2091913
	06/05/2019			06/10/2019 10:36	Madeline Funaro	2091916
	06/05/2019			06/10/2019 10:52	Madeline Funaro	2091919