

Chemical Analysis Report

WAS-SECT-2019-10-09-01

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

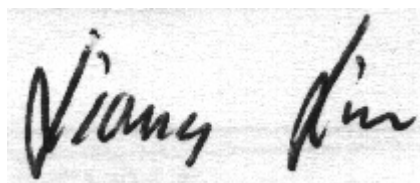
Event Description: **Little River, Lake McBride**
Request ID: **RQ-2019-10-07-27**
Customer: **WAS-SECT**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 06-NOV-2019 14:44

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: McBride Mid

Collection Date/Time: 10/09/2019 10:16

Field ID: G1WA0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126585	EPA 180.1 Rev. 2.0	Turbidity	3.9	A	NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	8.6		mg Cl/L	P372759	
		Sulfate	0.20	U	mg SO4/L	P372763	
		Color (true)	7.8		PCU	P372308	
	SM 2120 B	Total Alkalinity	5.9		mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	26		mg/L	P372817	
	SM 2540 D-97	TSS	4	I	mg/L	P372826	
	SM 4500 F-C-97	Fluoride	0.038	I	mg F/L	P372642	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P372560	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P372339	
2126591	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P372437	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P372388	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P372520	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P372259	
	dissolved						
2126620	EPA 8321B	2,4-D	0.47		ug/L	P372151	
		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.094		ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyrophen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	8.0E-04	U	ug/L	P372151	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P372151	
		Carbamazepine**	8.0E-04	U	ug/L	P372151	
		Clothianidin**	0.0020	U	ug/L	P372151	
		Dinotefuran**	0.0020	U	ug/L	P372151	
		Diuron	0.0020	U	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	8.0E-04	U	ug/L	P372151	
		Imazapyr**	0.0092	I	ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.0020	U	ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0020	U	ug/L	P372151	MS

Field ID: G1WA0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126620	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126627	EPA 200.7 Rev. 4.4	Barium	10.2		ug/L	P372399	
		Calcium	1.70		mg/L	P372399	
		Iron	140		ug/L	P372399	
		Magnesium	1.04		mg/L	P372399	
		Potassium	0.92	I	mg/L	P372399	
		Sodium	5.1		mg/L	P372399	
		Zinc	5.0	U	ug/L	P372399	
	EPA 200.8 Rev. 5.4	Aluminum	8.6	I	ug/L	P372399	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.50		ug/L	P372399	
		Boron**	16.1		ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.40	U	ug/L	P372399	
		Copper	0.52	I	ug/L	P372399	
		Lead	0.20	U	ug/L	P372399	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: McBride South

Collection Date/Time: 10/09/2019 09:56

Field ID: G1WA0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126586	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	8.5		mg Cl/L	P372759	
		Sulfate	0.20	U	mg SO4/L	P372763	
		Color (true)	7.9		PCU	P372308	
	SM 2120 B	Total Alkalinity	5.9		mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	24	I	mg/L	P372817	
	SM 2540 D-97	TSS	4	I	mg/L	P372826	
	SM 4500 F-C-97	Fluoride	0.038	I	mg F/L	P372642	
2126592	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P372560	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P372339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P372437	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P372388	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P372520	
2126598	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P372259	
2126621	EPA 8321B	2,4-D	0.57		ug/L	P372151	
		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.16		ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyropen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	8.0E-04	U	ug/L	P372151	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P372151	
		Carbamazepine**	8.0E-04	U	ug/L	P372151	
		Clothianidin**	0.0020	U	ug/L	P372151	
		Dinotefuran**	0.0020	U	ug/L	P372151	
		Diuron	0.0020	U	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	8.0E-04	U	ug/L	P372151	
		Imazapyr**	0.0061	I	ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.0020	U	ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCPP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0020	U	ug/L	P372151	MS

Field ID: G1WA0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126621	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126628	EPA 200.7 Rev. 4.4	Barium	10.3		ug/L	P372399	
		Calcium	1.64		mg/L	P372399	
		Iron	210		ug/L	P372399	
		Magnesium	1.01		mg/L	P372399	
		Potassium	0.90	I	mg/L	P372399	
		Sodium	5.0		mg/L	P372399	
		Zinc	5.0	U	ug/L	P372399	
	EPA 200.8 Rev. 5.4	Aluminum	14	I	ug/L	P372399	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.62		ug/L	P372399	
		Boron**	16.4		ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.40	U	ug/L	P372399	
		Copper	0.51	I	ug/L	P372399	
		Lead	0.20	U	ug/L	P372399	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: McBride West

Collection Date/Time: 10/09/2019 10:41

Field ID: G1WA0089

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126587	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	8.6		mg Cl/L	P372759	
		Sulfate	0.20	U	mg SO4/L	P372763	
		Color (true)	9.8		PCU	P372308	
	SM 2120 B	Total Alkalinity	6.2		mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	25		mg/L	P372817	
	SM 2540 D-97	TSS	3	I	mg/L	P372826	
	SM 4500 F-C-97	Fluoride	0.038	I	mg F/L	P372642	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P372560	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P372339	
2126593	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P372437	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P372388	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P372571	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P372259	
	EPA 8321B	2,4-D	0.30		ug/L	P372151	
2126622		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.11		ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyropen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	8.0E-04	U	ug/L	P372151	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P372151	
		Carbamazepine**	8.0E-04	U	ug/L	P372151	
		Clothianidin**	0.0020	U	ug/L	P372151	
		Dinotefuran**	0.0020	U	ug/L	P372151	
		Diuron	0.0020	U	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	8.0E-04	U	ug/L	P372151	
		Imazapyr**	0.0072	I	ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.0020	U	ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0020	U	ug/L	P372151	MS

Field ID: G1WA0089

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126622	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126629	EPA 200.7 Rev. 4.4	Barium	9.6		ug/L	P372399	
		Calcium	1.69		mg/L	P372399	
		Iron	190		ug/L	P372399	
		Magnesium	1.01		mg/L	P372399	
		Potassium	0.94	I	mg/L	P372399	
		Sodium	5.0		mg/L	P372399	
		Zinc	5.0	U	ug/L	P372399	
	EPA 200.8 Rev. 5.4	Aluminum	11	I	ug/L	P372399	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.61		ug/L	P372399	
		Boron**	15.3		ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.40	U	ug/L	P372399	
		Copper	0.40	U	ug/L	P372399	
		Lead	0.20	U	ug/L	P372399	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Little River 100 meters upstream of SR 12

Collection Date/Time: 10/09/2019 13:37

Field ID: G1WA0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126588	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	8.6		mg Cl/L	P372759	
		Sulfate	1.1		mg SO4/L	P372763	
	SM 2120 B	Color (true)	75	A	PCU	P372308	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	92		mg/L	P372817	
	SM 2540 D-97	TSS	5	I	mg/L	P372826	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P372642	
2126594	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P372561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P372339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	4.9		mg N/L	P372438	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P372388	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P372571	
2126600	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P372259	
2126623	EPA 8321B	2,4-D	0.0020	U	ug/L	P372151	
		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.014	I	ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyropen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	0.0081		ug/L	P372151	
		Benzovindiflupyr**	0.0040	IJ	ug/L	P372151	
		Carbamazepine**	9.3E-04	I	ug/L	P372151	
		Clothianidin**	0.0038	I	ug/L	P372151	
		Dinotefuran**	0.088		ug/L	P372151	
		Diuron	0.0055	I	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	8.0E-04	U	ug/L	P372151	
		Imazapyr**	0.016		ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.012		ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0021	I	ug/L	P372151	MS

Field ID: G1WA0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126623	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126630	EPA 200.7 Rev. 4.4	Barium	21.0		ug/L	P372399	
		Calcium	5.62		mg/L	P372399	
		Iron	1.31E+03		ug/L	P372399	
		Magnesium	3.27		mg/L	P372399	
		Potassium	0.93	I	mg/L	P372399	
		Sodium	13.4		mg/L	P372399	
		Zinc	5.0	U	ug/L	P372399	
	EPA 200.8 Rev. 5.4	Aluminum	357		ug/L	P372399	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.97		ug/L	P372399	
		Boron**	12.8		ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.53	I	ug/L	P372399	
		Copper	0.58	I	ug/L	P372399	
		Lead	0.40		ug/L	P372399	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Willacoochee Creek at 161

Collection Date/Time: 10/09/2019 12:44

Field ID: G1WA0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126589	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P372759	
		Sulfate	0.25	I	mg SO4/L	P372763	
	SM 2120 B	Color (true)	59		PCU	P372308	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	59		mg/L	P372817	
	SM 2540 D-97	TSS	7	I	mg/L	P372826	
	SM 4500 F-C-97	Fluoride	0.060	I	mg F/L	P372642	
2126595	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P372561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P372339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.2		mg N/L	P372437	
	EPA 365.1 Rev. 2.0	Total-P	0.060		mg P/L	P372388	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P372571	
2126601	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P372259	
2126624	EPA 8321B	2,4-D	0.0020	U	ug/L	P372151	
		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.015	I	ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyropen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	0.013		ug/L	P372151	
		Benzovindiflupyr**	0.0051	IJ	ug/L	P372151	
		Carbamazepine**	0.0018	I	ug/L	P372151	
		Clothianidin**	0.0044	I	ug/L	P372151	
		Dinotefuran**	0.12		ug/L	P372151	
		Diuron	0.0077	I	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	0.0012	I	ug/L	P372151	
		Imazapyr**	0.016	I	ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.013		ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCPP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0024	I	ug/L	P372151	MS

Field ID: G1WA0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126624	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126631	EPA 200.7 Rev. 4.4	Barium	25.5		ug/L	P372399	
		Calcium	4.71		mg/L	P372399	
		Iron	1.06E+03		ug/L	P372925	
		Magnesium	3.27		mg/L	P372399	
		Potassium	0.81	I	mg/L	P372399	
		Sodium	3.6		mg/L	P372399	
		Zinc	5.0	U	ug/L	P372399	
	EPA 200.8 Rev. 5.4	Aluminum	792		ug/L	P373645	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.68		ug/L	P372399	
		Boron**	9.8		ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.54	I	ug/L	P372399	
		Copper	0.82		ug/L	P373645	
		Lead	0.59		ug/L	P373645	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Willacoochee Creek at 161

Collection Date/Time: 10/09/2019 12:59

Field ID: G1WA0087_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126590	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P372759	
		Sulfate	0.26	I	mg SO4/L	P372763	
	SM 2120 B	Color (true)	56		PCU	P372308	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	59		mg/L	P372817	
	SM 2540 D-97	TSS	6	I	mg/L	P372826	
	SM 4500 F-C-97	Fluoride	0.059	I	mg F/L	P372642	
2126596	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P372561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32		mg N/L	P372339	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.2		mg N/L	P372437	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P372388	
	SM 5310 B-00	Organic Carbon	3.1		mg C/L	P372571	
2126602	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P372259	
2126625	EPA 8321B	2,4-D	0.0020	U	ug/L	P372151	
		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.017	I	ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyropen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	0.013		ug/L	P372151	
		Benzovindiflupyr**	0.0052	IJ	ug/L	P372151	
		Carbamazepine**	0.0016	I	ug/L	P372151	
		Clothianidin**	0.0035	I	ug/L	P372151	
		Dinotefuran**	0.12		ug/L	P372151	
		Diuron	0.0077	I	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	0.0011	I	ug/L	P372151	
		Imazapyr**	0.016	I	ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.012		ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0022	I	ug/L	P372151	MS

Field ID: G1WA0087_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126625	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126632	EPA 200.7 Rev. 4.4	Barium	22.2		ug/L	P372399	
		Calcium	4.66		mg/L	P372399	
		Iron	1.10E+03		ug/L	P372925	
		Magnesium	3.21		mg/L	P372399	
		Potassium	0.81	I	mg/L	P372399	
		Sodium	3.6		mg/L	P372399	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P372399	
		Aluminum	906		ug/L	P373645	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.59		ug/L	P372399	
		Boron**	10.0		ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.40	U	ug/L	P372399	
		Copper	0.85		ug/L	P373645	
		Lead	0.60		ug/L	P373645	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Willacoochee Creek at 161

Collection Date/Time: 10/09/2019 12:23

Field ID: FB_10092019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126603	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P372278	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P372759	
		Sulfate	0.20	U	mg SO4/L	P372763	
	SM 2120 B	Color (true)	2.5	U	PCU	P372308	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P372639	
	SM 2540 C-97	TDS	15	U	mg/L	P372815	
	SM 2540 D-97	TSS	2	U	mg/L	P372824	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P372642	
2126604	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P372561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P372306	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P372438	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P372401	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P372571	
2126605	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P372259	
2126626	EPA 8321B	2,4-D	0.0020	U	ug/L	P372151	
		Acesulfame K**	0.10	U	ug/L	P372253	
		AMPA**	0.10	U	ug/L	P372253	
		Sucralose**	0.010	U	ug/L	P372253	
		Acetaminophen**	0.0080	U	ug/L	P372151	
		Acetamiprid**	0.0020	U	ug/L	P372151	
		Endothall**	0.25	U	ug/L	P372253	
		Glufosinate**	0.10	U	ug/L	P372253	
		Glyphosate**	0.10	U	ug/L	P372253	
		Afidopyropen**	0.0020	UJ	ug/L	P372151	RPD
		Bentazon	8.0E-04	U	ug/L	P372151	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P372151	
		Carbamazepine**	8.0E-04	U	ug/L	P372151	
		Clothianidin**	0.0020	U	ug/L	P372151	
		Dinotefuran**	0.0020	U	ug/L	P372151	
		Diuron	0.0020	U	ug/L	P372151	
		Fenuron	0.016	U	ug/L	P372151	
		Fluridone**	8.0E-04	U	ug/L	P372151	
		Imazapyr**	0.0040	U	ug/L	P372151	
		Hydrocodone**	0.0020	U	ug/L	P372151	
		Ibuprofen**	0.020	U	ug/L	P372151	
		Imidacloprid	0.0020	U	ug/L	P372151	MS
		Linuron	0.0040	U	ug/L	P372151	
		Mandestrobin**	0.0020	UJ	ug/L	P372151	
		MCP	0.0020	U	ug/L	P372151	
		Naproxen**	0.0080	U	ug/L	P372151	
		Primidone**	0.0040	U	ug/L	P372151	
		Pyraclostrobin**	0.0020	U	ug/L	P372151	
		Thiamethoxam**	0.0020	U	ug/L	P372151	MS

Field ID: FB_10092019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2126626	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P372151	
		Triclopyr**	0.0040	U	ug/L	P372151	
2126633	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P372399	
		Calcium	0.075	U	mg/L	P372399	
		Iron	30	U	ug/L	P372399	
		Magnesium	0.040	U	mg/L	P372399	
		Potassium	0.30	U	mg/L	P372399	
		Sodium	0.50	U	mg/L	P372399	
		Zinc	5.0	U	ug/L	P372399	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P372399	
		Antimony	0.050	U	ug/L	P372399	
		Arsenic	0.050	U	ug/L	P372399	
		Boron**	2.0	U	ug/L	P372399	
		Cadmium	0.020	U	ug/L	P372399	
		Chromium	0.40	U	ug/L	P372399	
		Copper	0.40	U	ug/L	P372399	
		Lead	0.20	U	ug/L	P372399	
		Nickel	0.50	U	ug/L	P372399	
		Selenium	0.20	U	ug/L	P372399	
		Silver	0.010	U	ug/L	P372399	
		Thallium	0.10	U	ug/L	P372399	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P372278

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P372399

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 200.7 Rev. 4.4

Batch ID: P372925

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P372399

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	2.8		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: P373645

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P372759

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: P372763

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372560

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372561

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372306

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372339

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372437

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372438

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P372388

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P372401

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: P372259

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

Reference Method: EPA 8321B
Batch ID: P372151

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: EPA 8321B
Batch ID: P372253

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: P372308

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P372639

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

Reference Method: SM 2540 C-97
Batch ID: P372815

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P372817

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P372824

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P372826

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P372642

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P372520

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

Reference Method: SM 5310 B-00
Batch ID: P372571

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: P372399

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.8		P	85 - 115
Calcium	103		P	85 - 115
Iron	99.4		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	98.7		P	85 - 115
Sodium	95.5		P	85 - 115
Zinc	98.2		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P372925

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

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P372399

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	107		P	85 - 115
Arsenic	108		P	85 - 115
Boron	99.8		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	99.1		P	85 - 115
Copper	106		P	85 - 115
Lead	102		P	85 - 115
Nickel	97.5		P	85 - 115
Selenium	96.6		P	85 - 115
Silver	108		P	85 - 115
Thallium	109		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P373645

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.1		P	85 - 115
Copper	94.7		P	85 - 115
Lead	98.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P372759

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P372763

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372560

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372561

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372339

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: P372437

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372438

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P372388

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P372401

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P372259

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P372151

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	118		P	40 - 160
Acetaminophen	82.7		P	30 - 160
Acetamiprid	100		P	40 - 160
Afidopyropen	68.3		P	40 - 160
Bentazon	109		P	30 - 160
Benzovindiflupyr	81.6		P	40 - 160
Carbamazepine	101		P	40 - 160
Clothianidin	96.4		P	40 - 160
Dinotefuran	91.3		P	40 - 160
Diuron	83.0		P	40 - 160
Fenuron	107		P	40 - 160
Fluridone	90.4		P	40 - 160
Hydrocodone	93.6		P	40 - 160
Ibuprofen	84.0		P	30 - 160
Imazapyr	130		P	40 - 160
Imidacloprid	103		P	40 - 160
Linuron	79.3		P	40 - 160
Mandestrobin	77.6		P	40 - 160
MCPP	122		P	40 - 160
Naproxen	82.8		P	40 - 160
Primidone	87.9		P	40 - 160
Pyraclostrobin	76.4		P	30 - 160
Thiamethoxam	105		P	40 - 160
Tolfenpyrad	54.5		P	40 - 160
Triclopyr	98.8		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P372253

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	80.2		P	40 - 150
AMPA	144		P	40 - 150
Endothall	84.9		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	99.4		P	40 - 140
Sucralose	105		P	40 - 150

Reference Method: SM 2120 B

Batch ID: P372308

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

Reference Method: SM 2320 B-97

Batch ID: P372639

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	98 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P372642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P372520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P372571

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P372399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126629	Barium	99.8	98.9	P/P	80 - 120
2126629	Calcium	100	102	P/P	80 - 120
2126629	Iron	98.9	98.8	P/P	80 - 120
2126629	Magnesium	104	105	P/P	80 - 120
2126629	Potassium	94.8	99.9	P/P	80 - 120
2126629	Sodium	98.2		P	80 - 120
2126629	Zinc	99.6	98.3	P/P	80 - 120
2127179	Barium	95.8		P	80 - 120
2127179	Calcium	97.6		P	80 - 120
2127179	Iron	98.8		P	80 - 120
2127179	Magnesium	99.2		P	80 - 120
2127179	Potassium	93.4		P	80 - 120
2127179	Sodium	96.0		P	80 - 120
2127179	Zinc	94.7		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P372925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2129326	Iron	103	102	P/P	80 - 120
2129987	Iron	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P372399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126629	Aluminum	104	102	P/P	80 - 120
2126629	Antimony	108	107	P/P	80 - 120
2126629	Arsenic	109	109	P/P	80 - 120
2126629	Boron	102	99.0	P/P	80 - 120
2126629	Cadmium	104	104	P/P	80 - 120
2126629	Chromium	102	101	P/P	80 - 120
2126629	Copper	107	107	P/P	80 - 120
2126629	Lead	105	103	P/P	80 - 120
2126629	Nickel	98.1	100	P/P	80 - 120
2126629	Selenium	98.2	97.1	P/P	80 - 120
2126629	Silver	108	106	P/P	80 - 120
2126629	Thallium	113	112	P/P	80 - 120
2127179	Aluminum	103		P	80 - 120
2127179	Antimony	112		P	80 - 120
2127179	Arsenic	110		P	80 - 120
2127179	Boron	101		P	80 - 120
2127179	Cadmium	106		P	80 - 120
2127179	Chromium	100		P	80 - 120
2127179	Copper	102		P	80 - 120
2127179	Lead	103		P	80 - 120
2127179	Nickel	94.7		P	80 - 120
2127179	Selenium	97.3		P	80 - 120
2127179	Silver	108		P	80 - 120
2127179	Thallium	113		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373645

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2132639	Aluminum	99.0	97.7	P/P	80 - 120
2132639	Copper	94.3	91.9	P/P	80 - 120
2132639	Lead	102	102	P/P	80 - 120
2132829	Aluminum	96.9		P	80 - 120
2132829	Copper	99.7		P	80 - 120
2132829	Lead	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P372759

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126536	Chloride	97.2	98.0	P/P	90 - 110
2126644	Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P372763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126536	Sulfate	98.3	100	P/P	90 - 110
2126644	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126593	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126645	Ammonia-N	96.1	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126422	Kjeldahl Nitrogen	106	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126591	Kjeldahl Nitrogen	93.9	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126551	NO2NO3-N	102	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126398	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P372388

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126557	Total-P	94.4	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P372401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126645	Total-P	97.8	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P372259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126597	O-Phosphate-P	97.9	99.9	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P372151

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2125877	2,4-D	133	131	P/P	40 - 160
2125877	Acetaminophen	71.9	75.6	P/P	30 - 160
2125877	Acetamiprid	117	89.6	P/P	40 - 160
2125877	Afidopyropen	76.7	56.3	P/P	40 - 160
2125877	Bentazon	100	97.6	P/P	30 - 160
2125877	Benzovindiflupyr	89.0	91.1	P/P	40 - 160
2125877	Carbamazepine	98.8	90.6	P/P	40 - 160
2125877	Clothianidin	106	104	P/P	40 - 160
2125877	Dinotefuran	109	115	P/P	40 - 160
2125877	Diuron	83.1	80.8	P/P	40 - 160
2125877	Fenuron	87.3	91.4	P/P	40 - 160
2125877	Fluridone	87.4	86.0	P/P	40 - 160
2125877	Hydrocodone	103	111	P/P	40 - 160
2125877	Ibuprofen	82.7	78.8	P/P	30 - 160
2125877	Imazapyr	76.4	101	P/P	40 - 160
2125877	Imidacloprid	164	184	F/F	40 - 160
2125877	Linuron	79.3	77.1	P/P	40 - 160
2125877	Mandestrobin	76.8	84.6	P/P	40 - 160
2125877	MCP	144	142	P/P	40 - 160
2125877	Naproxen	93.0	76.9	P/P	40 - 160
2125877	Primidone	102	101	P/P	40 - 160
2125877	Pyraclostrobin	85.8	90.1	P/P	30 - 160
2125877	Thiamethoxam	156	165	P/F	40 - 160
2125877	Tolfenpyrad	58.6	61.8	P/P	40 - 160
2125877	Triclopyr	111	121	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P372253

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126620	Acesulfame K	97.4	94.7	P/P	40 - 150
2126620	AMPA	123	116	P/P	40 - 150
2126620	Endothall	92.4	89.8	P/P	40 - 150
2126620	Glufosinate	97.2	88.0	P/P	40 - 150
2126620	Glyphosate	107	98.7	P/P	40 - 140
2126620	Sucralose	83.5	71.2	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P372642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126771	Fluoride	94.5	93.4	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P372520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126066	Organic Carbon	96.0	95.2	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P372571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126674	Organic Carbon	102	104	P/P	85 - 115

Quality Assurance Report

Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P372278

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126585	Turbidity	2.58	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P372399

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126629	Barium	0.880	Spike	P	0 - 20
2126629	Calcium	1.39	Spike	P	0 - 20
2126629	Iron	0.0686	Spike	P	0 - 20
2126629	Magnesium	0.151	Spike	P	0 - 20
2126629	Potassium	4.20	Spike	P	0 - 20
2126629	Sodium	0.605	Spike	P	0 - 20
2126629	Zinc	1.35	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P372925

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2129326	Iron	0.706	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P372399

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126629	Aluminum	1.53	Spike	P	0 - 20
2126629	Antimony	0.611	Spike	P	0 - 20
2126629	Arsenic	0.0246	Spike	P	0 - 20
2126629	Boron	2.38	Spike	P	0 - 20
2126629	Cadmium	0.202	Spike	P	0 - 20
2126629	Chromium	1.31	Spike	P	0 - 20
2126629	Copper	0.356	Spike	P	0 - 20
2126629	Lead	1.50	Spike	P	0 - 20
2126629	Nickel	2.06	Spike	P	0 - 20
2126629	Selenium	1.04	Spike	P	0 - 20
2126629	Silver	2.04	Spike	P	0 - 20
2126629	Thallium	0.550	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P373645

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2132639	Aluminum	1.01	Spike	P	0 - 20
2132639	Copper	2.47	Spike	P	0 - 20
2132639	Lead	0.534	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P372759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126536	Chloride	0.597	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P372763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126536	Sulfate	1.74	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126593	Ammonia-N	1.36	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126645	Ammonia-N	2.61	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126422	Kjeldahl Nitrogen	4.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P372339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126591	Kjeldahl Nitrogen	10.2	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126551	NO2NO3-N	1.47	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126398	NO2NO3-N	0.830	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P372388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126557	Total-P	2.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P372401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126645	Total-P	0.192	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P372259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126597	O-Phosphate-P	2.02	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P372151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2125877	2,4-D	1.68	Spike	P	0 - 30
2125877	Acetaminophen	4.36	Spike	P	0 - 30
2125877	Acetamiprid	26.3	Spike	P	0 - 30
2125877	Afidopyropen	30.7	Spike	F	0 - 30
2125877	Bentazon	1.59	Spike	P	0 - 30
2125877	Benzovindiflupyr	2.26	Spike	P	0 - 30
2125877	Carbamazepine	6.86	Spike	P	0 - 30
2125877	Clothianidin	1.88	Spike	P	0 - 30
2125877	Dinotefuran	5.19	Spike	P	0 - 30
2125877	Diuron	2.38	Spike	P	0 - 30
2125877	Fenuron	4.56	Spike	P	0 - 30
2125877	Fluridone	1.28	Spike	P	0 - 30
2125877	Hydrocodone	7.25	Spike	P	0 - 30
2125877	Ibuprofen	4.79	Spike	P	0 - 30
2125877	Imazapyr	17.2	Spike	P	0 - 30
2125877	Imidacloprid	10.8	Spike	P	0 - 30
2125877	Linuron	2.78	Spike	P	0 - 30
2125877	Mandestrobin	9.74	Spike	P	0 - 30
2125877	MCPP	1.17	Spike	P	0 - 30
2125877	Naproxen	19.0	Spike	P	0 - 30
2125877	Primidone	1.42	Spike	P	0 - 30
2125877	Pyraclostrobin	4.85	Spike	P	0 - 30
2125877	Thiamethoxam	5.47	Spike	P	0 - 30
2125877	Tolfenpyrad	5.31	Spike	P	0 - 30
2125877	Triclopyr	9.35	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P372253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126620	Acesulfame K	2.81	Spike	P	0 - 30
2126620	AMPA	5.92	Spike	P	0 - 30
2126620	Endothall	2.85	Spike	P	0 - 30
2126620	Glufosinate	9.96	Spike	P	0 - 30
2126620	Glyphosate	8.22	Spike	P	0 - 30
2126620	Sucralose	15.2	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P372308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126588	Color (true)	2.45	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P372639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126771	Total Alkalinity	0.605	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P372815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126280	TDS	1.03	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P372817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126673	TDS	2.06	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P372642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126771	Fluoride	0.958	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P372520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126066	Organic Carbon	0.619	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P372571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126674	Organic Carbon	1.23	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2126620

Field Sample ID: G1WA0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	67.0	P	30 - 160
EPA 8321B	Bentazon-d7	83.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.5	P	30 - 160
EPA 8321B	Diuron-d6	79.2	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.7	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160

Lab Sample ID: 2126621

Field Sample ID: G1WA0088

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	70.8	P	30 - 160
EPA 8321B	Bentazon-d7	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.0	P	30 - 160
EPA 8321B	Diuron-d6	86.1	P	30 - 160
EPA 8321B	Endothall-d6	134	P	30 - 160
EPA 8321B	Endothall-d6	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.5	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	75.0	P	30 - 160
EPA 8321B	Sucralose-d6	75.0	P	30 - 160

Lab Sample ID: 2126622

Field Sample ID: G1WA0089

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	130	P	30 - 160
EPA 8321B	Acetaminophen-d4	65.8	P	30 - 160
EPA 8321B	Bentazon-d7	80.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.1	P	30 - 160
EPA 8321B	Diuron-d6	77.6	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.7	P	30 - 160
EPA 8321B	Primidone-d5	91.4	P	30 - 160
EPA 8321B	Sucralose-d6	69.4	P	30 - 160
EPA 8321B	Sucralose-d6	69.4	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2126623

Field Sample ID: G1WA0020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	133	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.5	P	30 - 160
EPA 8321B	Bentazon-d7	83.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.9	P	30 - 160
EPA 8321B	Diuron-d6	81.5	P	30 - 160
EPA 8321B	Endothall-d6	96.8	P	30 - 160
EPA 8321B	Endothall-d6	96.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.2	P	30 - 160
EPA 8321B	Primidone-d5	93.4	P	30 - 160
EPA 8321B	Sucralose-d6	69.2	P	30 - 160
EPA 8321B	Sucralose-d6	69.2	P	30 - 160

Lab Sample ID: 2126624

Field Sample ID: G1WA0087

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	142	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.1	P	30 - 160
EPA 8321B	Bentazon-d7	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	103	P	30 - 160
EPA 8321B	Diuron-d6	99.2	P	30 - 160
EPA 8321B	Endothall-d6	96.6	P	30 - 160
EPA 8321B	Endothall-d6	96.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.1	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Sucralose-d6	68.7	P	30 - 160
EPA 8321B	Sucralose-d6	68.7	P	30 - 160

Lab Sample ID: 2126625

Field Sample ID: G1WA0087_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.9	P	30 - 160
EPA 8321B	Bentazon-d7	92.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.4	P	30 - 160
EPA 8321B	Diuron-d6	90.3	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.7	P	30 - 160
EPA 8321B	Primidone-d5	99.2	P	30 - 160
EPA 8321B	Sucralose-d6	70.4	P	30 - 160
EPA 8321B	Sucralose-d6	70.4	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2126626

Field Sample ID: FB_10092019

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.2	P	30 - 160
EPA 8321B	Bentazon-d7	90.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.1	P	30 - 160
EPA 8321B	Diuron-d6	80.4	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.7	P	30 - 160
EPA 8321B	Primidone-d5	84.2	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A94852

Included Lab Sample IDs: 2126597, 2126598, 2126599, 2126600, 2126601, 2126602, 2126605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	97.6	P/P	90 - 110
O-Phosphate-P	98.2	97.2	P/P	90 - 110
O-Phosphate-P	98.3	97.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94862

Included Lab Sample IDs: 2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	98.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A94874

Included Lab Sample IDs: 2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.6	99.3	P/P	90 - 115

Reference Method: EPA 8321B

Run ID: A94876

Included Lab Sample IDs: 2126620, 2126621, 2126622, 2126623, 2126624, 2126625, 2126626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.7	93.5	P/P	50 - 150
Acetaminophen	85.5	93.3	P/P	60 - 160
Acetamiprid	108	107	P/P	50 - 150
Afidopyropen	80.7	80.2	P/P	50 - 150
Bentazon	105	103	P/P	50 - 160
Benzovindiflupyr	94.6	97.2	P/P	50 - 150
Carbamazepine	103	106	P/P	60 - 150
Clothianidin	95.6	103	P/P	60 - 150
Dinotefuran	101	103	P/P	50 - 150
Diuron	106	102	P/P	60 - 150
Fenuron	107	106	P/P	60 - 150
Fluridone	101	103	P/P	60 - 160
Hydrocodone	100	100	P/P	60 - 150
Ibuprofen	87.4	89.4	P/P	50 - 160
Imazapyr	118	115	P/P	50 - 150
Imidacloprid	94.8	100	P/P	60 - 150
Linuron	106	104	P/P	60 - 150
Mandestrobin	83.9	84.6	P/P	50 - 150
MCPP	85.4	82.9	P/P	50 - 150
Naproxen	83.0	64.0	P/P	50 - 160
Primidone	107	100	P/P	60 - 150
Pyraclostrobin	86.8	98.4	P/P	60 - 150
Thiamethoxam	99.6	102	P/P	50 - 150
Tolfenpyrad	102	105	P/P	60 - 150
Triclopyr	82.0	88.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94889

Included Lab Sample IDs: 2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604

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

Reference Method: EPA 8321B

Run ID: A94912

Included Lab Sample IDs: 2126620, 2126621, 2126622, 2126623, 2126624, 2126625, 2126626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	67.0	P/P	60 - 160
Acesulfame K	60.3	71.1	P/P	60 - 160
Acesulfame K	79.1	60.3	P/P	60 - 160
Endothall	75.4	82.0	P/P	60 - 160
Endothall	93.5	98.6	P/P	60 - 160
Endothall	98.6	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94917

Included Lab Sample IDs: 2126620, 2126621, 2126622, 2126623, 2126624, 2126625, 2126626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	108	137	P/P	60 - 160
AMPA	125	108	P/P	60 - 160
AMPA	137	76.5	P/P	60 - 160
Glufosinate	104	64.1	P/P	60 - 160
Glufosinate	82.7	104	P/P	60 - 160
Glufosinate	87.0	82.7	P/P	60 - 160
Glyphosate	104	84.7	P/P	60 - 160
Glyphosate	84.7	97.8	P/P	60 - 160
Glyphosate	97.8	65.8	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94931

Included Lab Sample IDs: 2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	100	P/P	90 - 110
Kjeldahl Nitrogen	97.9	99.7	P/P	90 - 110
Kjeldahl Nitrogen	99.7	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94940

Included Lab Sample IDs: 2126620, 2126621, 2126622, 2126623, 2126624, 2126625, 2126626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	96.3	P/P	60 - 160
Sucralose	106	102	P/P	60 - 160
Sucralose	96.3	111	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94968

Included Lab Sample IDs: 2126627, 2126628, 2126629, 2126630, 2126631, 2126632, 2126633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	101	P/P	90 - 110
Barium	102	101	P/P	95 - 105
Calcium	100	101	P/P	90 - 110
Calcium	101	100	P/P	95 - 105
Iron	101	99.8	P/P	90 - 110
Iron	102	101	P/P	95 - 105
Magnesium	103	103	P/P	95 - 105
Magnesium	103	101	P/P	90 - 110
Potassium	100	98.9	P/P	95 - 105
Potassium	98.9	99.0	P/P	90 - 110
Sodium	98.7	99.2	P/P	90 - 110
Sodium	99.8	98.7	P/P	95 - 105
Zinc	102	101	P/P	90 - 110
Zinc	102	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94969

Included Lab Sample IDs: 2126594, 2126595, 2126596

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

Reference Method: SM 5310 B-00

Run ID: A94976

Included Lab Sample IDs: 2126591, 2126592

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	95.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94989

Included Lab Sample IDs: 2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604

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

Reference Method: SM 5310 B-00

Run ID: A94999

Included Lab Sample IDs: 2126593, 2126594, 2126595, 2126596, 2126604

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	97.6	P/P	90 - 110
Organic Carbon	97.6	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95002

Included Lab Sample IDs: 2126591, 2126592, 2126593, 2126604

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	100	P/P	90 - 110
Total-P	99.5	99.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95003

Included Lab Sample IDs: 2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	100	P/P	90 - 110
Sulfate	99.0	101	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A95021

Included Lab Sample IDs: 2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603

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

Reference Method: SM 4500 F-C-97

Run ID: A95021

Included Lab Sample IDs: 2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95119

Included Lab Sample IDs: 2126628, 2126629, 2126630, 2126631, 2126632, 2126633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	99.9	P/P	90 - 110
Aluminum	99.9	101	P/P	90 - 110
Antimony	102	102	P/P	90 - 110
Antimony	102	104	P/P	90 - 110
Arsenic	107	108	P/P	90 - 110
Arsenic	107	107	P/P	90 - 110
Boron	97.4	97.5	P/P	90 - 110
Boron	98.4	97.4	P/P	90 - 110
Cadmium	103	104	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	98.7	99.8	P/P	90 - 110
Chromium	99.8	99.7	P/P	90 - 110
Copper	105	105	P/P	90 - 110
Copper	105	105	P/P	90 - 110
Lead	98.8	99.4	P/P	90 - 110
Lead	99.4	99.5	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Thallium	96.4	97.5	P/P	90 - 110
Thallium	97.5	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95161

Included Lab Sample IDs: 2126628, 2126629, 2126630, 2126631, 2126632, 2126633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	97.1	97.6	P/P	90 - 110
Nickel	97.6	95.2	P/P	90 - 110
Selenium	94.3	98.9	P/P	90 - 110
Selenium	98.9	95.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95223

Included Lab Sample IDs: 2126631, 2126632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	100	101	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95248

Included Lab Sample IDs: 2126627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.5	100	P/P	90 - 110
Arsenic	98.1	97.4	P/P	90 - 110
Boron	101	101	P/P	90 - 110
Cadmium	96.4	95.9	P/P	90 - 110
Chromium	92.8	93.5	P/P	90 - 110
Copper	98.3	97.0	P/P	90 - 110
Lead	98.1	97.0	P/P	90 - 110
Nickel	98.4	97.4	P/P	90 - 110
Selenium	94.9	95.8	P/P	90 - 110
Silver	96.8	96.0	P/P	90 - 110
Thallium	95.2	93.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95327

Included Lab Sample IDs: 2126627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	90.1	92.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95493

Included Lab Sample IDs: 2126631, 2126632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	100	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Lead	99.8	101	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.58	
EPA 200.7 Rev. 4.4	Barium	99.8	99.8	98.9	95.8			0.880
	Calcium	103	100	102	97.6			1.39
	Iron	99.4	98.9	98.8	98.8			0.0686
	Iron	102	103	102	102			0.706
	Magnesium	108	104	105	99.2			0.151
	Potassium	98.7	94.8	99.9	93.4			4.20
	Sodium	95.5	98.2	96.0				0.605
	Zinc	98.2	99.6	98.3	94.7			1.35
EPA 200.8 Rev. 5.4	Aluminum	103	104	102	103			1.53
	Aluminum	98.1	99.0	97.7	96.9			1.01
	Antimony	107	108	107	112			0.611
	Arsenic	108	109	109	110			0.0246
	Boron	99.8	102	99.0	101			2.38
	Cadmium	102	104	104	106			0.202
	Chromium	99.1	102	101	100			1.31
	Copper	106	107	107	102			0.356
	Copper	94.7	94.3	91.9	99.7			2.47
	Lead	102	105	103	103			1.50
	Lead	98.5	102	102	102			0.534
	Nickel	97.5	98.1	100	94.7			2.06
	Selenium	96.6	98.2	97.1	97.3			1.04
	Silver	108	108	106	108			2.04
	Thallium	109	113	112	113			0.550
EPA 300.0 Rev. 2.1	Chloride	100	97.2	98.0	98.4			0.597
	Sulfate	101	98.3	100	98.4			1.74
EPA 350.1 Rev. 2.0	Ammonia-N	98.1	100	101				1.36
	Ammonia-N	98.0	96.1	98.8				2.61
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.3	106	99.6				4.94
	Kjeldahl Nitrogen	102	93.9	108				10.2
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	101				1.47
	NO2NO3-N	101	100	102				0.830
EPA 365.1 Rev. 2.0	Total-P	97.7	94.4	96.4				2.02
	Total-P	96.1	97.8	97.6				0.192
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	97.9	99.9				2.02
EPA 8321B	2,4-D	118	131	133				1.68
	Acesulfame K	80.2	97.4	94.7				2.81
	Acetaminophen	82.7	71.9	75.6				4.36
	Acetamiprid	100	117	89.6				26.3
	Afidopyropen	68.3	76.7	56.3				30.7
	AMPA	144	123	116				5.92
	Bentazon	109	97.6	100				1.59
	Benzovindiflupyr	81.6	91.1	89.0				2.26
	Carbamazepine	101	98.8	90.6				6.86
	Clothianidin	96.4	106	104				1.88
	Dinotefuran	91.3	109	115				5.19
	Diuron	83.0	83.1	80.8				2.38
	Endothall	84.9	92.4	89.8				2.85
	Fenuron	107	87.3	91.4				4.56
	Fluridone	90.4	87.4	86.0				1.28
	Glufosinate	105	97.2	88.0				9.96
	Glyphosate	99.4	107	98.7				8.22
	Hydrocodone	93.6	103	111				7.25
	Ibuprofen	84.0	78.8	82.7				4.79

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imazapyr	130	101	76.4		17.2
	Imidacloprid	103	164	184		10.8
	Linuron	79.3	79.3	77.1		2.78
	Mandestrobin	77.6	84.6	76.8		9.74
	MCCP	122	142	144		1.17
	Naproxen	82.8	76.9	93.0		19.0
	Primidone	87.9	102	101		1.42
	Pyraclostrobin	76.4	90.1	85.8		4.85
	Sucralose	105	83.5	71.2		15.2
	Thiamethoxam	105	156	165		5.47
	Tolfenpyrad	54.5	61.8	58.6		5.31
	Triclopyr	98.8	121	111		9.35
SM 2120 B	Color (true)	99.0			2.45	
SM 2320 B-97	Total Alkalinity	105			0.605	
SM 2540 C-97	TDS				1.03	
	TDS				2.06	
SM 4500 F-C-97	Fluoride	96.1	94.5	93.4		0.958
SM 5310 B-00	Organic Carbon	95.2	96.0	95.2		0.619
	Organic Carbon	102	102	104		1.23

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2126627, 2126628, 2126629, 2126630, 2126631, 2126632, 2126633
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2126627, 2126628, 2126629, 2126630, 2126631, 2126632, 2126633
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2126597, 2126598, 2126599, 2126600, 2126601, 2126602, 2126605
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2126620, 2126621, 2126622, 2126623, 2126624, 2126625, 2126626
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2126620, 2126621, 2126622, 2126623, 2126624, 2126625, 2126626
SM 2120 B / E31780	True Color measured at 450 nm	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2126591, 2126592, 2126593, 2126594, 2126595, 2126596, 2126604

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	10/09/2019			10/10/2019 14:53	Rosalyn Ballman	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
EPA 200.7 Rev. 4.4	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 12:53	Betina Topolski	2126633
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 13:12	Betina Topolski	2126627
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 13:18	Betina Topolski	2126628
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 13:40	Betina Topolski	2126629
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 13:59	Betina Topolski	2126630
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 14:04	Betina Topolski	2126631
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/15/2019 14:09	Betina Topolski	2126632
	10/09/2019	10/22/2019 17:20	Elliott D. Healy	10/24/2019 11:54	Alexander Thompson	2126631
	10/09/2019	10/22/2019 17:20	Elliott D. Healy	10/24/2019 11:59	Alexander Thompson	2126632
EPA 200.8 Rev. 5.4	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/21/2019 23:58	Justin Cutchin	2126633
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 00:17	Justin Cutchin	2126628
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 00:27	Justin Cutchin	2126629
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 01:25	Justin Cutchin	2126630
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 01:34	Justin Cutchin	2126631
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 01:44	Justin Cutchin	2126632
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 21:56	Justin Cutchin	2126633
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 22:13	Justin Cutchin	2126628
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 22:21	Justin Cutchin	2126629
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 23:11	Justin Cutchin	2126630
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 23:19	Justin Cutchin	2126631
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/22/2019 23:28	Justin Cutchin	2126632
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/23/2019 15:33	Robert K Palmer	2126627
	10/09/2019	10/14/2019 15:00	Elliott D. Healy	10/28/2019 22:00	Robert K Palmer	2126627
	10/09/2019	10/22/2019 17:20	Elliott D. Healy	11/05/2019 17:27	Robert K Palmer	2126631
	10/09/2019	11/04/2019 12:55	Elliott D. Healy	11/05/2019 17:27	Robert K Palmer	2126631
	10/09/2019	11/04/2019 12:55	Elliott D. Healy	11/05/2019 17:37	Robert K Palmer	2126632
EPA 300.0 Rev. 2.1	10/09/2019			10/16/2019 22:14	Jhamieka S. Greenwood	2126585
	10/09/2019			10/16/2019 22:26	Jhamieka S. Greenwood	2126586
	10/09/2019			10/16/2019 22:38	Jhamieka S. Greenwood	2126587
	10/09/2019			10/16/2019 22:50	Jhamieka S. Greenwood	2126588
	10/09/2019			10/16/2019 23:02	Jhamieka S. Greenwood	2126589
	10/09/2019			10/16/2019 23:14	Jhamieka S. Greenwood	2126590
	10/09/2019			10/16/2019 23:27	Jhamieka S. Greenwood	2126603
EPA 350.1 Rev. 2.0	10/09/2019			10/15/2019 13:27	Ping Hua	2126593
	10/09/2019			10/15/2019 13:48	Ping Hua	2126591
	10/09/2019			10/15/2019 13:50	Ping Hua	2126592
	10/09/2019			10/15/2019 14:05	Ping Hua	2126594
	10/09/2019			10/15/2019 14:06	Ping Hua	2126595

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	10/09/2019			10/15/2019 14:08	Ping Hua	2126596
	10/09/2019			10/15/2019 15:08	Ping Hua	2126604
EPA 351.2 Rev. 2.0	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 15:20	Jhamieka S. Greenwood	2126604
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 15:55	Jhamieka S. Greenwood	2126591
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 16:06	Jhamieka S. Greenwood	2126592
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 16:11	Jhamieka S. Greenwood	2126593
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 16:12	Jhamieka S. Greenwood	2126594
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 16:14	Jhamieka S. Greenwood	2126595
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 16:16	Jhamieka S. Greenwood	2126596
	10/09/2019	10/11/2019 10:11	Sima Feizi	10/14/2019 16:16	Jhamieka S. Greenwood	2126596
EPA 353.2 Rev. 2.0	10/09/2019			10/11/2019 10:49	Beverly Y. Sanders	2126591
	10/09/2019			10/11/2019 10:50	Beverly Y. Sanders	2126592
	10/09/2019			10/11/2019 10:51	Beverly Y. Sanders	2126593
	10/09/2019			10/11/2019 11:06	Beverly Y. Sanders	2126604
	10/09/2019			10/11/2019 11:23	Beverly Y. Sanders	2126595
	10/09/2019			10/11/2019 11:24	Beverly Y. Sanders	2126596
	10/09/2019			10/11/2019 11:28	Beverly Y. Sanders	2126594
	10/09/2019			10/11/2019 11:28	Beverly Y. Sanders	2126594
EPA 365.1 Rev. 2.0	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 11:57	Rosalyn Ballman	2126594
	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 11:58	Rosalyn Ballman	2126595
	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 11:59	Rosalyn Ballman	2126596
	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 15:47	Rosalyn Ballman	2126591, 2126592
	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 15:48	Rosalyn Ballman	2126593
	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 16:15	Rosalyn Ballman	2126604
	10/09/2019	10/14/2019 14:50	Lipi Saha	10/15/2019 16:15	Rosalyn Ballman	2126604
EPA 365.1 Rev. 2.0 dissolved	10/09/2019			10/09/2019 16:56	Julia Storbeck	2126597
	10/09/2019			10/09/2019 17:05	Julia Storbeck	2126605
	10/09/2019			10/09/2019 17:06	Julia Storbeck	2126601
	10/09/2019			10/09/2019 17:07	Julia Storbeck	2126602
	10/09/2019			10/09/2019 17:33	Julia Storbeck	2126598
	10/09/2019			10/09/2019 17:34	Julia Storbeck	2126599
	10/09/2019			10/09/2019 17:35	Julia Storbeck	2126600
	10/09/2019			10/09/2019 17:35	Julia Storbeck	2126600
EPA 8321B	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 03:25	Juyoung Kim	2126620
	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 04:00	Juyoung Kim	2126621
	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 04:34	Juyoung Kim	2126622
	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 05:09	Juyoung Kim	2126623
	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 05:43	Juyoung Kim	2126624
	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 06:18	Juyoung Kim	2126625
	10/09/2019	10/10/2019 09:00	Hoor Shaik	10/11/2019 06:53	Juyoung Kim	2126626
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 21:35	Mohammad Ghaffari	2126620
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 23:01	Mohammad Ghaffari	2126621
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 23:11	Mohammad Ghaffari	2126622
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 23:22	Mohammad Ghaffari	2126623
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 23:22	Mohammad Ghaffari	2126623

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 23:33	Mohammad Ghaffari	2126624
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/10/2019 23:44	Mohammad Ghaffari	2126625
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 00:05	Mohammad Ghaffari	2126626
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 12:32	Mohammad Ghaffari	2126620
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 14:23	Mohammad Ghaffari	2126621
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 14:36	Mohammad Ghaffari	2126622
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 14:50	Mohammad Ghaffari	2126623
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 15:04	Mohammad Ghaffari	2126624
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 15:18	Mohammad Ghaffari	2126625
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/11/2019 20:34	Mohammad Ghaffari	2126626
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 13:30	Mohammad Ghaffari	2126620
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 15:21	Mohammad Ghaffari	2126621
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 15:35	Mohammad Ghaffari	2126622
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 15:49	Mohammad Ghaffari	2126623
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 16:03	Mohammad Ghaffari	2126624
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 16:17	Mohammad Ghaffari	2126625
	10/09/2019	10/10/2019 15:15	Mohammad Ghaffari	10/14/2019 16:45	Mohammad Ghaffari	2126626
SM 2120 B	10/09/2019			10/10/2019 16:31	Madeline Funaro	2126585, 2126586
	10/09/2019			10/10/2019 16:32	Madeline Funaro	2126587
	10/09/2019			10/10/2019 16:34	Madeline Funaro	2126588
	10/09/2019			10/10/2019 16:35	Madeline Funaro	2126589, 2126590
	10/09/2019			10/10/2019 16:36	Madeline Funaro	2126603
SM 2320 B-97	10/09/2019			10/15/2019 07:47	Dale L. Simmons	2126585
	10/09/2019			10/15/2019 07:59	Dale L. Simmons	2126586
	10/09/2019			10/15/2019 08:11	Dale L. Simmons	2126587
	10/09/2019			10/15/2019 08:23	Dale L. Simmons	2126588
	10/09/2019			10/15/2019 08:34	Dale L. Simmons	2126589
	10/09/2019			10/15/2019 08:45	Dale L. Simmons	2126590
SM 2540 C-97	10/09/2019			10/15/2019 08:59	Dale L. Simmons	2126603
	10/09/2019			10/11/2019 12:48	Yijie Li	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
SM 2540 D-97	10/09/2019			10/11/2019 12:48	Yijie Li	2126585, 2126586, 2126587, 2126588, 2126589, 2126590, 2126603
SM 4500 F-C-97	10/09/2019			10/15/2019 07:47	Dale L. Simmons	2126585
	10/09/2019			10/15/2019 07:59	Dale L. Simmons	2126586
	10/09/2019			10/15/2019 08:11	Dale L. Simmons	2126587
	10/09/2019			10/15/2019 08:23	Dale L. Simmons	2126588
	10/09/2019			10/15/2019 08:34	Dale L. Simmons	2126589
	10/09/2019			10/15/2019 08:45	Dale L. Simmons	2126590
	10/09/2019			10/15/2019 08:59	Dale L. Simmons	2126603

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	10/09/2019			10/12/2019 03:25	Madeline Funaro	2126591
	10/09/2019			10/12/2019 03:42	Madeline Funaro	2126592
	10/09/2019			10/15/2019 18:08	Madeline Funaro	2126593
	10/09/2019			10/15/2019 18:23	Madeline Funaro	2126594
	10/09/2019			10/15/2019 19:03	Madeline Funaro	2126595
	10/09/2019			10/15/2019 19:16	Madeline Funaro	2126596
	10/09/2019			10/15/2019 19:30	Madeline Funaro	2126604