

Chemical Analysis Report

NE-DIST-2019-10-24-01

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

Event Description: **LSJR North Boat**
Request ID: **RQ-2019-10-21-17**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 20-NOV-2019 13:21

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Ribault River at US-1

Collection Date/Time: 10/23/2019 10:05

Field ID: 20030133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131183	EPA 8321B	2,4-D	0.017		ug/L	P373086	
		Acesulfame K**	0.11	I	ug/L	P373164	
		AMPA**	0.35	I	ug/L	P373164	
		Sucralose**	0.22		ug/L	P373164	
		Acetaminophen**	0.0080	U	ug/L	P373086	
		Acetamiprid**	0.0020	U	ug/L	P373086	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	0.10	U	ug/L	P373164	
		Glyphosate**	0.81		ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373086	
		Bentazon	0.0013	I	ug/L	P373086	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373086	
		Carbamazepine**	8.0E-04	U	ug/L	P373086	
		Clothianidin**	0.0020	U	ug/L	P373086	
		Dinotefuran**	0.0020	U	ug/L	P373086	
		Diuron	0.018		ug/L	P373086	
		Fenuron	0.016	I	ug/L	P373086	
		Fluridone**	0.013		ug/L	P373086	
		Imazapyr**	1.3		ug/L	P373086	
		Hydrocodone**	0.0020	U	ug/L	P373086	
		Ibuprofen**	0.020	U	ug/L	P373086	
		Imidacloprid	0.0076	I	ug/L	P373086	MS
		Linuron	0.0040	U	ug/L	P373086	
		Mandestrobin**	0.0020	UJ	ug/L	P373086	
		MCPP	0.0020	U	ug/L	P373086	
		Naproxen**	0.0080	U	ug/L	P373086	
		Primidone**	0.0040	U	ug/L	P373086	
		Pyraclostrobin**	0.0020	U	ug/L	P373086	
		Thiamethoxam**	0.0020	U	ug/L	P373086	
		Tolfenpyrad**	0.0020	U	ug/L	P373086	
		Triclopyr**	0.0040	U	ug/L	P373086	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Ribault R Moncrief Rd BR

Collection Date/Time: 10/23/2019 10:25

Field ID: 20030129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131158	EPA 180.1 Rev. 2.0	Turbidity	8.2		NTU	P373097	
	EPA 300.0	Bromide	1.1		mg Br/L	P373776	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P373310	
	SM 2540 D-97	TSS	9	I	mg/L	P373222	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P373313	
2131159	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P373456	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P373355	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P373198	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P373253	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P373404	
2131160	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.090		mg P/L	P373091	
2131182	EPA 8321B	2,4-D	0.015		ug/L	P373086	
		Acesulfame K**	1.0	U	ug/L	P373165	
		AMPA**	0.13	I	ug/L	P373164	
		Sucralose**	0.010	U	ug/L	P373164	
		Acetaminophen**	0.0082	I	ug/L	P373086	
		Acetamiprid**	0.0020	U	ug/L	P373086	
		Endothall**	2.5	U	ug/L	P373165	
		Glufosinate**	0.10	U	ug/L	P373164	
		Glyphosate**	0.75		ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373086	
		Bentazon	0.0018	I	ug/L	P373086	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373086	
		Carbamazepine**	8.0E-04	U	ug/L	P373086	
		Clothianidin**	0.0020	U	ug/L	P373086	
		Dinotefuran**	0.0020	U	ug/L	P373086	
		Diuron	0.013		ug/L	P373086	
		Fenuron	0.016	U	ug/L	P373086	
		Fluridone**	0.013		ug/L	P373086	
		Imazapyr**	0.54		ug/L	P373086	
		Hydrocodone**	0.0020	U	ug/L	P373086	
		Ibuprofen**	0.020	U	ug/L	P373086	
		Imidacloprid	0.0070	I	ug/L	P373086	MS
		Linuron	0.0040	U	ug/L	P373086	
		Mandestrobin**	0.0020	UJ	ug/L	P373086	
		MCP	0.0020	U	ug/L	P373086	
		Naproxen**	0.0080	U	ug/L	P373086	
		Primidone**	0.0040	U	ug/L	P373086	
		Pyraclostrobin**	0.0020	U	ug/L	P373086	
		Thiamethoxam**	0.0020	U	ug/L	P373086	
		Tolfenpyrad**	0.0020	U	ug/L	P373086	
		Triclopyr**	0.0040	U	ug/L	P373086	

Field ID: 20030129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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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.
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Moncrief Creek Near Mouth

Collection Date/Time: 10/23/2019 11:10

Field ID: 20030115

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131155	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P373097	
	EPA 300.0	Bromide	8.2		mg Br/L	P373776	
	SM 2320 B-97	Total Alkalinity	96		mg CaCO3/L	P373310	
	SM 2540 D-97	TSS	23		mg/L	P373222	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P373313	
2131156	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P373457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P373353	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.086		mg N/L	P373325	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P373348	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P373404	
2131157	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.086		mg P/L	P373090	
2131181	EPA 8321B	2,4-D	0.019		ug/L	P373086	
		Acesulfame K**	0.10	U	ug/L	P373164	
		AMPA**	0.10	UJ	ug/L	P373164	SUR
		Sucralose**	0.010	UJ	ug/L	P373164	SUR
		Acetaminophen**	0.0080	U	ug/L	P373086	
		Acetamiprid**	0.0020	U	ug/L	P373086	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	0.10	UJ	ug/L	P373164	SUR
		Glyphosate**	0.10	UJ	ug/L	P373164	SUR
		Afidopyropen**	0.0020	UJ	ug/L	P373086	
		Bentazon	0.0054		ug/L	P373086	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373086	
		Carbamazepine**	0.0013	I	ug/L	P373086	
		Clothianidin**	0.0020	U	ug/L	P373086	
		Dinotefuran**	0.0020	U	ug/L	P373086	
		Diuron	0.024		ug/L	P373086	
		Fenuron	0.016	U	ug/L	P373086	
		Fluridone**	0.0058		ug/L	P373086	
		Imazapyr**	0.074		ug/L	P373086	
		Hydrocodone**	0.0020	U	ug/L	P373086	
		Ibuprofen**	0.020	U	ug/L	P373086	
		Imidacloprid	0.0095		ug/L	P373086	MS
		Linuron	0.0040	U	ug/L	P373086	
		Mandestrobin**	0.0020	UJ	ug/L	P373086	
		MCP	0.0020	U	ug/L	P373086	
		Naproxen**	0.0080	U	ug/L	P373086	
		Primidone**	0.0040	U	ug/L	P373086	
		Pyraclostrobin**	0.0020	U	ug/L	P373086	
		Thiamethoxam**	0.0020	U	ug/L	P373086	
		Tolfenpyrad**	0.0020	U	ug/L	P373086	
		Triclopyr**	0.0040	U	ug/L	P373086	
2131186	EPA 200.7 Rev. 4.4	Iron	640		ug/L	P373085	

Field ID: 20030115

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131186	EPA 200.7 Rev. 4.4	Manganese	21.0		ug/L	P373085	
		Zinc	5.9	I	ug/L	P373085	
	EPA 200.8 Rev. 5.4	Aluminum	569		ug/L	P373085	
		Antimony	0.15	I	ug/L	P373085	
		Arsenic	1.91		ug/L	P373085	
		Cadmium	0.020	U	ug/L	P373085	
		Chromium	1.4	I	ug/L	P373085	
		Copper	2.30		ug/L	P373085	
		Lead	1.79		ug/L	P373085	
		Nickel	0.67	I	ug/L	P373085	
		Selenium	0.20	U	ug/L	P373085	
		Silver	0.010	U	ug/L	P373085	
		Thallium	0.10	U	ug/L	P373085	

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.

EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Trout R @ I-95 Burt Maxwell Dock

Collection Date/Time: 10/23/2019 11:30

Field ID: 20030121

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131161	EPA 180.1 Rev. 2.0	Turbidity	6.5		NTU	P373097	
	EPA 300.0	Bromide	10		mg Br/L	P373776	
	SM 2320 B-97	Total Alkalinity	89		mg CaCO3/L	P373310	
	SM 2540 D-97	TSS	7	I	mg/L	P373222	
	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P373313	
2131162	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P373457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P373353	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.075		mg N/L	P373325	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P373348	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P373404	
2131163	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.072		mg P/L	P373090	
2131187	EPA 200.7 Rev. 4.4	Iron	270	I	ug/L	P373414	
		Manganese	13		ug/L	P373414	
		Zinc	15	U	ug/L	P373414	
	EPA 200.8 Rev. 5.4	Aluminum	280		ug/L	P373414	
		Antimony	0.20	U	ug/L	P373414	
		Arsenic	2.09		ug/L	P373414	
		Cadmium	0.080	U	ug/L	P373414	
		Chromium	1.6	U	ug/L	P373414	
		Copper	1.6	U	ug/L	P373414	
		Lead	0.80	U	ug/L	P373414	
		Nickel	2.0	U	ug/L	P373414	
		Selenium	0.80	U	ug/L	P373414	
		Silver	0.040	U	ug/L	P373414	
		Thallium	1.1	I	ug/L	P373414	

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: Moncrief CR Lem Turner Rd BR/Norwood Ave Collection Date/Time: 10/23/2019 12:05

Field ID: 20030114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131164	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P373097	
	EPA 300.0	Bromide	1.5		mg Br/L	P373776	
	SM 2320 B-97	Total Alkalinity	129		mg CaCO3/L	P373310	
	SM 2540 D-97	TSS	7	I	mg/L	P373222	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P373313	
2131165	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P373456	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P373355	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P373198	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P373254	
	SM 5310 B-00	Organic Carbon	7.6		mg C/L	P373404	
2131166	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P373091	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373097

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373085

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373414

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373085

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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: P373414

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0
Batch ID: P373776

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373456

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373457

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373353

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373355

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373198

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373325

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373253

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373254

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
Batch ID: P373348

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373090

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373091

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

Reference Method: EPA 8321B
Batch ID: P373086

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: P373164

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P373164

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P373165

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Endothall	0.25	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P373310

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

Reference Method: SM 2540 D-97
Batch ID: P373222

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P373313

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P373404

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: P373085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	103		P	85 - 115
Manganese	97.6		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	102		P	85 - 115
Manganese	102		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	100		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	95.6		P	80 - 120
Copper	99.6		P	85 - 115
Lead	102		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	97.5		P	85 - 115
Silver	104		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	101		P	85 - 115
Cadmium	97.0		P	85 - 115
Chromium	97.3		P	85 - 115
Copper	100		P	85 - 115
Lead	98.4		P	85 - 115
Nickel	102		P	85 - 115
Selenium	97.5		P	85 - 115
Silver	102		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P373776

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373456

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373457

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373353

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373355

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373198

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373325

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: P373253

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373254

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373348

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373090

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373091

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P373086

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	140		P	40 - 160
Acetaminophen	83.5		P	30 - 160
Acetamiprid	97.2		P	40 - 160
Afidopyropen	87.8		P	40 - 160
Bentazon	82.4		P	30 - 160
Benzovindiflupyr	89.4		P	40 - 160
Carbamazepine	99.5		P	40 - 160
Clothianidin	88.7		P	40 - 160
Dinotefuran	92.6		P	40 - 160
Diuron	91.0		P	40 - 160
Fenuron	98.4		P	40 - 160
Fluridone	89.1		P	40 - 160
Hydrocodone	91.0		P	40 - 160
Ibuprofen	94.1		P	30 - 160
Imazapyr	101		P	40 - 160
Imidacloprid	92.4		P	40 - 160
Linuron	78.0		P	40 - 160
Mandestrobin	94.1		P	40 - 160
MCPP	118		P	40 - 160
Naproxen	86.6		P	40 - 160
Primidone	77.0		P	40 - 160
Pyraclostrobin	82.8		P	30 - 160
Thiamethoxam	103		P	40 - 160
Tolfenpyrad	50.7		P	40 - 160
Triclopyr	117		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P373164

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	116		P	40 - 150
AMPA	141		P	40 - 150
Endothall	89.2		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	119		P	40 - 140
Sucralose	117		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P373165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	125		P	40 - 150
Endothall	94.7		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P373310

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

Reference Method: SM 4500 F-C-97
Batch ID: P373313

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

Reference Method: SM 5310 B-00
Batch ID: P373404

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: P373085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131041	Iron	102	103	P/P	80 - 120
2131041	Manganese	95.5	97.5	P/P	80 - 120
2131041	Zinc	98.7	100	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131737	Iron	96.0	96.4	P/P	80 - 120
2131737	Manganese	97.7	96.5	P/P	80 - 120
2131737	Zinc	105	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131041	Aluminum	100	99.6	P/P	80 - 120
2131041	Antimony	103	100	P/P	80 - 120
2131041	Arsenic	100	98.7	P/P	80 - 120
2131041	Cadmium	99.2	96.4	P/P	80 - 120
2131041	Chromium	96.4	96.7	P/P	80 - 120
2131041	Copper	97.1	95.9	P/P	80 - 120
2131041	Lead	103	100	P/P	80 - 120
2131041	Nickel	99.6	97.2	P/P	80 - 120
2131041	Selenium	93.6	92.4	P/P	80 - 120
2131041	Silver	105	104	P/P	80 - 120
2131041	Thallium	105	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131737	Aluminum	114	116	P/P	70 - 130
2131737	Antimony	108	109	P/P	70 - 130
2131737	Arsenic	120	120	P/P	70 - 130
2131737	Cadmium	104	103	P/P	70 - 130
2131737	Chromium	92.4	92.4	P/P	70 - 130
2131737	Copper	109	110	P/P	70 - 130
2131737	Lead	110	112	P/P	70 - 130
2131737	Nickel	111	111	P/P	70 - 130
2131737	Selenium	111	109	P/P	70 - 130
2131737	Silver	102	104	P/P	70 - 130
2131737	Thallium	101	103	P/P	70 - 130

Reference Method: EPA 300.0
Batch ID: P373776

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131222	Bromide	97.8	98.1	P/P	90 - 110
2132117	Bromide	98.2		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131469	Ammonia-N	99.7	99.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131665	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373353

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131592	Kjeldahl Nitrogen	96.7	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373355

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131165	Kjeldahl Nitrogen	94.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373198

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131056	NO2NO3-N	98.6	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131132	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373253

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131081	Total-P	101	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373254

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131165	Total-P	99.4	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131133	Total-P	92.2	92.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P373090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131136	O-Phosphate-P	97.8	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P373091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131160	O-Phosphate-P	98.2	97.7	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P373086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130634	2,4-D	125	118	P/P	40 - 160
2130634	Acetaminophen	74.1	74.6	P/P	30 - 160
2130634	Acetamiprid	114	112	P/P	40 - 160
2130634	Afidopyropen	94.7	88.1	P/P	40 - 160
2130634	Bentazon	51.8	50.6	P/P	30 - 160
2130634	Benzovindiflupyr	88.1	84.6	P/P	40 - 160
2130634	Carbamazepine	91.1	92.1	P/P	40 - 160
2130634	Clothianidin	93.4	91.1	P/P	40 - 160
2130634	Dinotefuran	112	107	P/P	40 - 160
2130634	Diuron	78.5	80.7	P/P	40 - 160
2130634	Fenuron	94.3	89.3	P/P	40 - 160
2130634	Fluridone	84.2	84.0	P/P	40 - 160
2130634	Hydrocodone	113	111	P/P	40 - 160
2130634	Ibuprofen	81.8	77.0	P/P	30 - 160
2130634	Imazapyr	91.5	86.9	P/P	40 - 160
2130634	Imidacloprid	173	161	F/F	40 - 160
2130634	Linuron	65.8	63.8	P/P	40 - 160
2130634	Mandestrobin	98.9	97.2	P/P	40 - 160
2130634	MCPP	106	111	P/P	40 - 160
2130634	Naproxen	89.1	92.1	P/P	40 - 160
2130634	Primidone	109	105	P/P	40 - 160
2130634	Pyraclostrobin	82.7	80.7	P/P	30 - 160
2130634	Thiamethoxam	157	151	P/P	40 - 160
2130634	Tolfenpyrad	61.2	60.2	P/P	40 - 160
2130634	Triclopyr	121	99.0	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P373164

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131107	Acesulfame K	81.0	80.1	P/P	40 - 150
2131107	AMPA	85.3	84.8	P/P	40 - 150
2131107	Endothall	84.3	87.1	P/P	40 - 150
2131107	Glufosinate	85.5	87.8	P/P	40 - 150
2131107	Glyphosate	77.6	79.4	P/P	40 - 140
2131107	Sucralose	97.8	81.9	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P373165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131872	Acesulfame K	67.8	67.8	P/P	40 - 150
2131872	Endothall	103	105	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P373313

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131051	Fluoride	96.5	96.5	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P373404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131156	Organic Carbon	103	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373097

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131128	Turbidity	2.53	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131041	Iron	0.737	Spike	P	0 - 20
2131041	Manganese	1.98	Spike	P	0 - 20
2131041	Zinc	1.35	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P373414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131737	Iron	0.462	Spike	P	0 - 20
2131737	Manganese	1.07	Spike	P	0 - 20
2131737	Zinc	2.01	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131041	Aluminum	0.546	Spike	P	0 - 20
2131041	Antimony	2.38	Spike	P	0 - 20
2131041	Arsenic	1.72	Spike	P	0 - 20
2131041	Cadmium	2.78	Spike	P	0 - 20
2131041	Chromium	0.286	Spike	P	0 - 20
2131041	Copper	1.07	Spike	P	0 - 20
2131041	Lead	2.18	Spike	P	0 - 20
2131041	Nickel	2.45	Spike	P	0 - 20
2131041	Selenium	1.34	Spike	P	0 - 20
2131041	Silver	0.846	Spike	P	0 - 20
2131041	Thallium	0.463	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131737	Aluminum	1.57	Spike	P	0 - 20
2131737	Antimony	0.764	Spike	P	0 - 20
2131737	Arsenic	0.271	Spike	P	0 - 20
2131737	Cadmium	0.704	Spike	P	0 - 20
2131737	Chromium	0.00242	Spike	P	0 - 20
2131737	Copper	1.01	Spike	P	0 - 20
2131737	Lead	1.43	Spike	P	0 - 20
2131737	Nickel	0.505	Spike	P	0 - 20
2131737	Selenium	1.38	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P373414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131737	Silver	1.41	Spike	P	0 - 20
2131737	Thallium	2.18	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P373776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131222	Bromide	0.247	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131469	Ammonia-N	0.0208	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131665	Ammonia-N	0.0589	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373353

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131592	Kjeldahl Nitrogen	0.933	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131165	Kjeldahl Nitrogen	4.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131056	NO2NO3-N	0.468	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131132	NO2NO3-N	1.20	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131081	Total-P	1.77	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131165	Total-P	2.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131133	Total-P	0.667	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131136	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131160	O-Phosphate-P	0.266	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P373086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130634	2,4-D	5.38	Spike	P	0 - 30
2130634	Acetaminophen	0.457	Spike	P	0 - 30
2130634	Acetamiprid	1.39	Spike	P	0 - 30
2130634	Afidopyropen	7.19	Spike	P	0 - 30
2130634	Bentazon	1.64	Spike	P	0 - 30
2130634	Benzovindiflupyr	4.05	Spike	P	0 - 30
2130634	Carbamazepine	0.956	Spike	P	0 - 30
2130634	Clothianidin	2.49	Spike	P	0 - 30
2130634	Dinotefuran	4.38	Spike	P	0 - 30
2130634	Diuron	2.43	Spike	P	0 - 30
2130634	Fenuron	5.44	Spike	P	0 - 30
2130634	Fluridone	0.190	Spike	P	0 - 30
2130634	Hydrocodone	2.36	Spike	P	0 - 30
2130634	Ibuprofen	6.09	Spike	P	0 - 30
2130634	Imazapyr	4.54	Spike	P	0 - 30
2130634	Imidacloprid	5.63	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P373086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130634	Linuron	3.04	Spike	P	0 - 30
2130634	Mandestrobin	1.76	Spike	P	0 - 30
2130634	MCP	4.34	Spike	P	0 - 30
2130634	Naproxen	3.36	Spike	P	0 - 30
2130634	Primidone	4.00	Spike	P	0 - 30
2130634	Pyraclostrobin	2.50	Spike	P	0 - 30
2130634	Thiamethoxam	3.93	Spike	P	0 - 30
2130634	Tolfenpyrad	1.68	Spike	P	0 - 30
2130634	Triclopyr	20.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P373164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131107	Acesulfame K	1.11	Spike	P	0 - 30
2131107	AMPA	0.606	Spike	P	0 - 30
2131107	Endothall	3.27	Spike	P	0 - 30
2131107	Glufosinate	2.71	Spike	P	0 - 30
2131107	Glyphosate	2.27	Spike	P	0 - 30
2131107	Sucralose	17.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P373165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131872	Acesulfame K	0.00826	Spike	P	0 - 30
2131872	Endothall	1.61	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P373310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131051	Total Alkalinity	0.347	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P373313

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131051	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P373404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131156	Organic Carbon	0.153	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2131181
Field Sample ID: 20030115

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.8	P	30 - 160
EPA 8321B	Bentazon-d7	46.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.5	P	30 - 160
EPA 8321B	Diuron-d6	80.5	P	30 - 160
EPA 8321B	Endothall-d6	74.3	P	30 - 160
EPA 8321B	Endothall-d6	74.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	14.5	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	14.5	F	30 - 160
EPA 8321B	Ibuprofen-d3	73.1	P	30 - 160
EPA 8321B	Primidone-d5	90.2	P	30 - 160
EPA 8321B	Sucralose-d6	2.73	F	30 - 160
EPA 8321B	Sucralose-d6	2.73	F	30 - 160

Lab Sample ID: 2131182
Field Sample ID: 20030129

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.2	P	30 - 160
EPA 8321B	Bentazon-d7	46.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.0	P	30 - 160
EPA 8321B	Diuron-d6	69.9	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	116	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.0	P	30 - 160
EPA 8321B	Primidone-d5	87.4	P	30 - 160
EPA 8321B	Sucralose-d6	41.5	P	30 - 160
EPA 8321B	Sucralose-d6	41.5	P	30 - 160

Lab Sample ID: 2131183
Field Sample ID: 20030133

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.5	P	30 - 160
EPA 8321B	Bentazon-d7	44.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.6	P	30 - 160
EPA 8321B	Diuron-d6	67.6	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	63.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	63.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.2	P	30 - 160
EPA 8321B	Primidone-d5	87.9	P	30 - 160
EPA 8321B	Sucralose-d6	80.1	P	30 - 160
EPA 8321B	Sucralose-d6	80.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95219

Included Lab Sample IDs: 2131157, 2131160, 2131163, 2131166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.2	P/P	90 - 110
O-Phosphate-P	99.2	99.8	P/P	90 - 110
O-Phosphate-P	99.8	99.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95225

Included Lab Sample IDs: 2131155, 2131158, 2131161, 2131164

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95253

Included Lab Sample IDs: 2131186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	99.8	101	P/P	90 - 110
Manganese	100	100	P/P	90 - 110
Zinc	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95272

Included Lab Sample IDs: 2131159, 2131165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95283

Included Lab Sample IDs: 2131181, 2131182, 2131183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	100	P/P	50 - 150
Acetaminophen	99.0	98.6	P/P	60 - 160
Acetamiprid	105	104	P/P	50 - 150
Afidopyropen	99.3	99.1	P/P	50 - 150
Bentazon	98.8	100	P/P	50 - 160
Benzovindiflupyr	100	105	P/P	50 - 150
Carbamazepine	104	105	P/P	60 - 150
Clothianidin	97.6	85.4	P/P	60 - 150
Dinotefuran	98.6	98.1	P/P	50 - 150
Diuron	105	106	P/P	60 - 150
Fenuron	105	107	P/P	60 - 150
Fluridone	109	106	P/P	60 - 160
Hydrocodone	92.6	104	P/P	60 - 150
Ibuprofen	88.2	94.9	P/P	50 - 160
Imazapyr	88.1	91.4	P/P	50 - 150
Imazapyr	95.7	89.8	P/P	50 - 150
Imidacloprid	101	93.8	P/P	60 - 150
Linuron	98.1	97.6	P/P	60 - 150
Mandestrobin	114	121	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95283

Included Lab Sample IDs: 2131181, 2131182, 2131183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCP	92.5	89.4	P/P	50 - 150
Naproxen	102	111	P/P	50 - 160
Primidone	94.1	94.8	P/P	60 - 150
Pyraclostrobin	106	101	P/P	60 - 150
Thiamethoxam	101	102	P/P	50 - 150
Tolfenpyrad	94.2	104	P/P	60 - 150
Triclopyr	94.9	75.0	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95299

Included Lab Sample IDs: 2131159, 2131165

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

Reference Method: SM 2320 B-97

Run ID: A95300

Included Lab Sample IDs: 2131155, 2131158, 2131161, 2131164

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

Reference Method: SM 4500 F-C-97

Run ID: A95300

Included Lab Sample IDs: 2131155, 2131158, 2131161, 2131164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	99.0	P/P	90 - 110
Fluoride	99.0	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95303

Included Lab Sample IDs: 2131156, 2131162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	100	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95323

Included Lab Sample IDs: 2131181, 2131182, 2131183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	103	109	P/P	60 - 160
Acesulfame K	106	102	P/P	60 - 160
Acesulfame K	111	106	P/P	60 - 160
Endothall	100	89.8	P/P	60 - 160
Endothall	86.0	87.9	P/P	60 - 160
Endothall	87.9	94.6	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95334

Included Lab Sample IDs: 2131181, 2131182, 2131183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	115	85.9	P/P	60 - 160
AMPA	140	115	P/P	60 - 160
Glufosinate	114	96.8	P/P	60 - 160
Glufosinate	96.8	82.2	P/P	60 - 160
Glyphosate	115	86.1	P/P	60 - 160
Glyphosate	125	115	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95336

Included Lab Sample IDs: 2131156, 2131162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	104	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A95339

Included Lab Sample IDs: 2131156, 2131159, 2131162, 2131165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95359

Included Lab Sample IDs: 2131156, 2131159, 2131162, 2131165

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95361

Included Lab Sample IDs: 2131186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	107	P/P	90 - 110
Antimony	99.3	99.8	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	101	99.8	P/P	90 - 110
Selenium	99.5	99.0	P/P	90 - 110
Silver	104	105	P/P	90 - 110
Thallium	96.6	94.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95380

Included Lab Sample IDs: 2131181, 2131182

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	116	114	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95393

Included Lab Sample IDs: 2131186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	100	95.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95433

Included Lab Sample IDs: 2131187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	99.8	99.4	P/P	95 - 105
Manganese	103	103	P/P	95 - 105
Zinc	101	101	P/P	95 - 105

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95437

Included Lab Sample IDs: 2131156, 2131159, 2131162, 2131165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	96.9	P/P	90 - 110
Kjeldahl Nitrogen	95.0	92.9	P/P	90 - 110
Kjeldahl Nitrogen	97.6	95.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95462

Included Lab Sample IDs: 2131183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.8	87.9	P/P	60 - 160

Reference Method: EPA 300.0

Run ID: A95513

Included Lab Sample IDs: 2131155, 2131158, 2131161, 2131164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	100	100	P/P	90 - 110
Bromide	99.2	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95730

Included Lab Sample IDs: 2131187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	104	P/P	90 - 110
Antimony	98.1	99.0	P/P	90 - 110
Arsenic	102	105	P/P	90 - 110
Cadmium	99.6	99.7	P/P	90 - 110
Chromium	96.7	97.8	P/P	90 - 110
Copper	104	106	P/P	90 - 110
Lead	97.9	99.8	P/P	90 - 110
Nickel	104	107	P/P	90 - 110
Selenium	98.9	102	P/P	90 - 110
Silver	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95802

Included Lab Sample IDs: 2131187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	93.9	92.1	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					2.53	
EPA 200.7 Rev. 4.4	Iron	103	102	103			0.737
	Iron	102	96.0	96.4			0.462
	Manganese	97.6	95.5	97.5			1.98
	Manganese	102	97.7	96.5			1.07
	Zinc	102	98.7	100			1.35
	Zinc	103	105	103			2.01
EPA 200.8 Rev. 5.4	Aluminum	101	100	99.6			0.546
	Aluminum	103	114	116			1.57
	Antimony	101	103	100			2.38
	Antimony	100	108	109			0.764
	Arsenic	100	100	98.7			1.72
	Arsenic	101	120	120			0.271
	Cadmium	98.6	99.2	96.4			2.78
	Cadmium	97.0	104	103			0.704
	Chromium	95.6	96.4	96.7			0.286
	Chromium	97.3	92.4	92.4			0.0024
	Copper	99.6	97.1	95.9			1.07
	Copper	100	109	110			1.01
	Lead	102	103	100			2.18
	Lead	98.4	110	112			1.43
	Nickel	99.9	99.6	97.2			2.45
	Nickel	102	111	111			0.505
	Selenium	97.5	93.6	92.4			1.34
	Selenium	97.5	111	109			1.38
	Silver	104	105	104			0.846
	Silver	102	102	104			1.41
	Thallium	102	105	105			0.463
	Thallium	100	101	103			2.18
EPA 300.0	Bromide	98.5	97.8	98.1	98.2		0.247
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	99.7	99.7			0.0208
	Ammonia-N	100	103	103			0.0589
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	96.7	97.7			0.933
	Kjeldahl Nitrogen	98.9	94.0	101			4.44
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	98.6	98.2			0.468
	NO2NO3-N	101	102	100			1.20
EPA 365.1 Rev. 2.0	Total-P	99.7	101	99.6			1.77
	Total-P	98.5	99.4	95.8			2.44
	Total-P	102	92.2	92.9			0.667
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	97.8	97.8			0.0
	O-Phosphate-P	99.7	98.2	97.7			0.266
EPA 8321B	2,4-D	140	125	118			5.38
	Acesulfame K	116	81.0	80.1			1.11
	Acesulfame K	125	67.8	67.8			0.0082
	Acetaminophen	83.5	74.1	74.6			0.457
	Acetamiprid	97.2	114	112			1.39
	Afidopyropen	87.8	94.7	88.1			7.19
	AMPA	141	85.3	84.8			0.606
	Bentazon	82.4	51.8	50.6			1.64
	Benzovindiflupyr	89.4	88.1	84.6			4.05
	Carbamazepine	99.5	91.1	92.1			0.956
	Clothianidin	88.7	93.4	91.1			2.49
	Dinotefuran	92.6	112	107			4.38
	Diuron	91.0	78.5	80.7			2.43

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Endothall	89.2	84.3	87.1		3.27
	Endothall	94.7	103	105		1.61
	Fenuron	98.4	94.3	89.3		5.44
	Fluridone	89.1	84.2	84.0		0.190
	Glufosinate	104	85.5	87.8		2.71
	Glyphosate	119	77.6	79.4		2.27
	Hydrocodone	91.0	113	111		2.36
	Ibuprofen	94.1	81.8	77.0		6.09
	Imazapyr	101	91.5	86.9		4.54
	Imidacloprid	92.4	173	161		5.63
	Linuron	78.0	65.8	63.8		3.04
	Mandestrobin	94.1	98.9	97.2		1.76
	MCPP	118	106	111		4.34
	Naproxen	86.6	89.1	92.1		3.36
	Primidone	77.0	109	105		4.00
	Pyraclostrobin	82.8	82.7	80.7		2.50
	Sucralose	117	97.8	81.9		17.8
	Thiamethoxam	103	157	151		3.93
	Tolfenpyrad	50.7	61.2	60.2		1.68
	Triclopyr	117	121	99.0		20.1
SM 2320 B-97	Total Alkalinity	104				0.347
SM 4500 F-C-97	Fluoride	96.1	96.5	96.5		0.0
SM 5310 B-00	Organic Carbon	102	103	103		0.153

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2131155, 2131158, 2131161, 2131164
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2131186, 2131187
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2131186, 2131187
EPA 300.0 / E31780	Bromide in aqueous matrices	2131155, 2131158, 2131161, 2131164
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2131156, 2131159, 2131162, 2131165
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2131156, 2131159, 2131162, 2131165
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2131156, 2131159, 2131162, 2131165
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2131156, 2131159, 2131162, 2131165
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2131157, 2131160, 2131163, 2131166
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2131181, 2131182, 2131183
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2131181, 2131182, 2131183
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2131155, 2131158, 2131161, 2131164
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2131155, 2131158, 2131161, 2131164
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2131155, 2131158, 2131161, 2131164
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2131156, 2131159, 2131162, 2131165

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	10/24/2019			10/24/2019 15:01	Rosalyn Ballman	2131155, 2131158, 2131161, 2131164
EPA 200.7 Rev. 4.4	10/24/2019	10/24/2019 15:30	Elliott D. Healy	10/25/2019 17:47	Alexander Thompson	2131186
	10/24/2019	10/30/2019 14:43	Elliott D. Healy	11/01/2019 09:37	Alexander Thompson	2131187
EPA 200.8 Rev. 5.4	10/24/2019	10/24/2019 15:30	Elliott D. Healy	10/30/2019 22:11	Robert K Palmer	2131186
	10/24/2019	10/24/2019 15:30	Elliott D. Healy	10/31/2019 18:11	Justin Cutchin	2131186
	10/24/2019	10/30/2019 14:43	Elliott D. Healy	11/14/2019 01:40	Justin Cutchin	2131187
	10/24/2019	10/30/2019 14:43	Elliott D. Healy	11/14/2019 04:15	Justin Cutchin	2131187
	10/24/2019	10/30/2019 14:43	Elliott D. Healy	11/18/2019 18:07	Robert K Palmer	2131187
EPA 300.0	10/24/2019			11/05/2019 02:43	Jhamieka S. Greenwood	2131155
	10/24/2019			11/05/2019 03:00	Jhamieka S. Greenwood	2131158
	10/24/2019			11/05/2019 03:18	Jhamieka S. Greenwood	2131161
	10/24/2019			11/05/2019 04:09	Jhamieka S. Greenwood	2131164
EPA 350.1 Rev. 2.0	10/24/2019			10/29/2019 12:43	Ping Hua	2131159
	10/24/2019			10/29/2019 12:44	Ping Hua	2131165
	10/24/2019			10/29/2019 13:22	Ping Hua	2131156
	10/24/2019			10/29/2019 13:23	Ping Hua	2131162
EPA 351.2 Rev. 2.0	10/24/2019	10/29/2019 12:47	Sima Feizi	11/01/2019 18:04	Jhamieka S. Greenwood	2131156
	10/24/2019	10/29/2019 12:47	Sima Feizi	11/01/2019 18:06	Jhamieka S. Greenwood	2131162
	10/24/2019	10/29/2019 13:05	Sima Feizi	11/01/2019 18:45	Jhamieka S. Greenwood	2131165
	10/24/2019	10/29/2019 13:05	Sima Feizi	11/01/2019 19:02	Jhamieka S. Greenwood	2131159
EPA 353.2 Rev. 2.0	10/24/2019			10/28/2019 10:03	Beverly Y. Sanders	2131159
	10/24/2019			10/28/2019 10:05	Beverly Y. Sanders	2131165
	10/24/2019			10/29/2019 10:34	Beverly Y. Sanders	2131156
	10/24/2019			10/29/2019 10:35	Beverly Y. Sanders	2131162
EPA 365.1 Rev. 2.0	10/24/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 11:38	Lipi Saha	2131159
	10/24/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 11:41	Lipi Saha	2131165
	10/24/2019	10/29/2019 13:09	Vijayalakshmi Reddy	10/30/2019 10:55	Lipi Saha	2131156
	10/24/2019	10/29/2019 13:09	Vijayalakshmi Reddy	10/30/2019 10:56	Lipi Saha	2131162
EPA 365.1 Rev. 2.0 dissolved	10/24/2019			10/24/2019 15:29	Julia Storbeck	2131160
	10/24/2019			10/24/2019 15:47	Julia Storbeck	2131166
	10/24/2019			10/24/2019 15:56	Julia Storbeck	2131157
	10/24/2019			10/24/2019 15:57	Julia Storbeck	2131163
EPA 8321B	10/24/2019	10/25/2019 14:00	Hoor Shaik	10/26/2019 08:36	Juyoung Kim	2131181
	10/24/2019	10/25/2019 14:00	Hoor Shaik	10/26/2019 09:10	Juyoung Kim	2131182
	10/24/2019	10/25/2019 14:00	Hoor Shaik	10/26/2019 09:45	Juyoung Kim	2131183
	10/24/2019	10/25/2019 14:00	Hoor Shaik	10/28/2019 11:09	Juyoung Kim	2131183
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 11:42	Rebecca Ware	2131181
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 11:52	Rebecca Ware	2131182
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 12:23	Rebecca Ware	2131183
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 10:47	Rebecca Ware	2131181

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 11:31	Rebecca Ware	2131183
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 17:20	Rebecca Ware	2131182
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 14:48	Rebecca Ware	2131181
	10/24/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 14:59	Rebecca Ware	2131182
	10/24/2019	10/28/2019 11:00	Rebecca Ware	11/01/2019 17:59	Rebecca Ware	2131183
SM 2320 B-97	10/24/2019			10/29/2019 01:53	Dale L. Simmons	2131161
	10/24/2019			10/29/2019 02:06	Dale L. Simmons	2131158
	10/24/2019			10/29/2019 03:02	Dale L. Simmons	2131164
	10/24/2019			10/29/2019 03:15	Dale L. Simmons	2131155
SM 2540 D-97	10/24/2019			10/25/2019 18:02	Rosalyn Ballman	2131155, 2131158, 2131161, 2131164
SM 4500 F-C-97	10/24/2019			10/29/2019 01:53	Dale L. Simmons	2131161
	10/24/2019			10/29/2019 02:06	Dale L. Simmons	2131158
	10/24/2019			10/29/2019 03:02	Dale L. Simmons	2131164
	10/24/2019			10/29/2019 03:15	Dale L. Simmons	2131155
SM 5310 B-00	10/24/2019			10/29/2019 23:03	Madeline Funaro	2131156
	10/24/2019			10/30/2019 00:06	Madeline Funaro	2131159
	10/24/2019			10/30/2019 00:20	Madeline Funaro	2131162
	10/24/2019			10/30/2019 00:34	Madeline Funaro	2131165