

Chemical Analysis Report

NE-DIST-2020-03-06-01

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

Event Description: **Pellicer Creek and Tribs**
Request ID: **RQ-2020-03-02-27**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 27-MAR-2020 11:30

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

NON-CONFORMANCE REPORT INCLUDED

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: Stevens Branch S of Pellicer Cemetery off CR 204 **Collection Date/Time: 03/05/2020 09:45**

Field ID: 27010070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162902	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P380219	
	EPA 300.0 Rev. 2.1	Chloride	27	A	mg Cl/L	P380495	
		Sulfate	25	A	mg SO4/L	P380497	
	SM 2120 B-2011	Color (true)	170		PCU	P380215	
	SM 2320 B-2011	Total Alkalinity	144		mg CaCO3/L	P380749	
	SM 2540 C-2011	TDS	293		mg/L	P380816	
	SM 2540 D-2011	TSS	2	I	mg/L	P380805	
	SM 4500 F-C-2011	Fluoride	0.25		mg F/L	P380714	
2162905	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P380611	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P380382	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P380600	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P380492	
	SM 5310 B-2011	Organic Carbon	25		mg C/L	P380350	
2162908	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.095		mg P/L	P380221	

Ref. Method and Comment:

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

Sample Location: Pringle BR Unnamed Dirt Rd. 0.5mi S Dave BR Collection Date/Time: 03/05/2020 10:10

Field ID: 27010203

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162903	EPA 180.1 Rev. 2.0	Turbidity	5.2	A	NTU	P380219	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P380495	
		Sulfate	1.3		mg SO4/L	P380497	
	SM 2120 B-2011	Color (true)	85		PCU	P380215	
	SM 2320 B-2011	Total Alkalinity	140		mg CaCO3/L	P380749	
	SM 2540 C-2011	TDS	222		mg/L	P380816	
	SM 2540 D-2011	TSS	2	U	mg/L	P380805	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P380714	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P380638	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P380382	
2162906	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P380600	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P380492	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P380561	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.098		mg P/L	P380221	
	dissolved						

Ref. Method and Comment:

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

Sample Location: Pellicer Creek downstream of RR tracks

Collection Date/Time: 03/05/2020 10:45

Field ID: G5NE0590

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162904	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P380219	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P380495	
		Sulfate	13		mg SO4/L	P380497	
		Color (true)	110		PCU	P380215	
	SM 2320 B-2011	Total Alkalinity	126		mg CaCO3/L	P380749	
	SM 2540 C-2011	TDS	222		mg/L	P380816	
	SM 2540 D-2011	TSS	2	U	mg/L	P380805	
	SM 4500 F-C-2011	Fluoride	0.17		mg F/L	P380714	
2162907	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P380638	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P380382	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P380600	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P380492	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P380561	
2162910	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.099		mg P/L	P380221	

Ref. Method and Comment:

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

Sample Location: Pellicer Creek at Styles Creek

Collection Date/Time: 03/05/2020 11:20

Field ID: G5NE0592

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162911	EPA 180.1 Rev. 2.0	Turbidity	8.7	A	NTU	P380218	
	EPA 300.0 Rev. 2.1	Bromide	47		mg Br/L	P380448	
		Sulfate	1.9E+03		mg SO4/L	P380497	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P380861	
	SM 2540 D-2011	TSS	16		mg/L	P380808	
	SM 4500 F-C-2011	Fluoride	0.91		mg F/L	P380870	
2162912	EPA 350.1 Rev. 2.0	Ammonia-N	0.020	Y	mg N/L	P380612	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44	Y	mg N/L	P380383	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	UY	mg N/L	P380901	
	EPA 365.1 Rev. 2.0	Total-P	0.063	Y	mg P/L	P380656	
	SM 5310 B-2011	Organic Carbon	6.7	Y	mg C/L	P380563	
2162913	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P380223	
2162937	EPA 8321B	2,4-D	0.0024	I	ug/L	P380348	
		Acesulfame K**	0.10	UJ	ug/L	P380245	MS, SUR
		AMPA**	1.0	U	ug/L	P380245	
		Sucralose**	0.035	I	ug/L	P380245	
		Acetaminophen**	0.0080	U	ug/L	P380348	
		Acetamiprid**	0.0020	U	ug/L	P380348	
		Endothall**	0.25	UJ	ug/L	P380245	SUR
		Glufosinate**	1.0	U	ug/L	P380245	
		Glyphosate**	1.0	U	ug/L	P380245	
		Afidopyropen**	0.0020	UJ	ug/L	P380348	
		Bentazon	0.0049		ug/L	P380348	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380348	
		Carbamazepine**	8.0E-04	U	ug/L	P380348	
		Clothianidin**	0.0020	U	ug/L	P380348	
		Dinotefuran**	0.0020	U	ug/L	P380348	
		Diuron	0.0020	U	ug/L	P380348	
		Fenuron	0.016	U	ug/L	P380348	
		Fluridone**	8.0E-04	U	ug/L	P380348	
		Imazapyr**	0.26		ug/L	P380348	
		Hydrocodone**	0.0020	U	ug/L	P380348	
		Ibuprofen**	0.020	U	ug/L	P380348	
		Imidacloprid	0.0020	U	ug/L	P380348	MS
		Linuron	0.0040	U	ug/L	P380348	
		Mandestrobin**	0.0020	UJ	ug/L	P380348	
		MCPP	0.0020	U	ug/L	P380348	
		Naproxen**	0.0080	U	ug/L	P380348	
		Primidone**	0.0040	U	ug/L	P380348	
		Pyraclostrobin**	0.0020	U	ug/L	P380348	
		Thiamethoxam**	0.0020	U	ug/L	P380348	MS
		Tolfenpyrad**	0.0020	U	ug/L	P380348	
		Triclopyr**	0.0040	U	ug/L	P380348	

Field ID: G5NE0592

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162938	EPA 200.7 Rev. 4.4	Iron	770		ug/L	P380460	
		Manganese	33		ug/L	P380460	
		Zinc	20	U	ug/L	P380460	
	EPA 200.8 Rev. 5.4	Aluminum	806		ug/L	P380460	
		Antimony	0.20	U	ug/L	P380460	
		Arsenic	2.27		ug/L	P380460	
		Cadmium	0.080	U	ug/L	P380460	
		Chromium	1.6	U	ug/L	P380460	
		Copper	1.6	U	ug/L	P380460	
		Lead	0.80	U	ug/L	P380460	
		Nickel	2.0	U	ug/L	P380460	
		Selenium	0.80	U	ug/L	P380460	
		Silver	0.040	U	ug/L	P380460	
		Thallium	0.40	U	ug/L	P380460	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was not preserved with sulfuric acid within 15 minutes of collection.

EPA 351.2 Rev. 2.0: Sample was not preserved with sulfuric acid within 15 minutes of collection.

EPA 353.2 Rev. 2.0: Sample was not preserved with sulfuric acid within 15 minutes of collection.

EPA 365.1 Rev. 2.0: Total-P: Sample was not preserved with sulfuric acid within 15 minutes of collection.

SM 5310 B-2011: Sample was not preserved with sulfuric acid within 15 minutes of collection.

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

Sample Location: Pellicer Creek 1.3 miles South of I-95

Collection Date/Time: 03/05/2020 10:25

Field ID: G5NE0593

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162914	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P380218	
	EPA 300.0 Rev. 2.1	Bromide	15		mg Br/L	P380448	
	SM 2320 B-2011	Total Alkalinity	104	A	mg CaCO3/L	P380861	
	SM 2540 D-2011	TSS	10		mg/L	P380808	
	SM 4500 F-C-2011	Fluoride	0.30		mg F/L	P380870	
2162915	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	IY	mg N/L	P380612	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49	Y	mg N/L	P380383	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	UY	mg N/L	P380901	
	EPA 365.1 Rev. 2.0	Total-P	0.090	Y	mg P/L	P380656	
	SM 5310 B-2011	Organic Carbon	11	Y	mg C/L	P380563	
2162916	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.045		mg P/L	P380223	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was not preserved with sulfuric acid within 15 minutes of collection.

EPA 351.2 Rev. 2.0: Sample was not preserved with sulfuric acid within 15 minutes of collection.

EPA 353.2 Rev. 2.0: Sample was not preserved with sulfuric acid within 15 minutes of collection.

EPA 365.1 Rev. 2.0: Total-P: Sample was not preserved with sulfuric acid within 15 minutes of collection.

SM 5310 B-2011: Sample was not preserved with sulfuric acid within 15 minutes of collection.

Sample Location: Cracker Branch @ Pellicer Creek campground Collection Date/Time: 03/05/2020 11:00

Field ID: G5NE0582

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162899	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P380218	
	EPA 300.0 Rev. 2.1	Chloride	3.5E+03		mg Cl/L	P380495	
		Sulfate	510		mg SO4/L	P380497	
	SM 2120 B-2011	Color (true)	77		PCU	P380215	
	SM 2320 B-2011	Total Alkalinity	98		mg CaCO3/L	P380861	
	SM 2540 C-2011	TDS	5.60E+03		mg/L	P380816	
	SM 2540 D-2011	TSS	3	I	mg/L	P380805	
	SM 4500 F-C-2011	Fluoride	0.26		mg F/L	P380870	
2162900	EPA 350.1 Rev. 2.0	Ammonia-N	0.067		mg N/L	P380634	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P380381	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P380901	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P380448	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P380350	
2162901	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.070		mg P/L	P380223	
2162936	EPA 8321B	2,4-D	0.0020	U	ug/L	P380348	
		Acesulfame K**	1.0	U	ug/L	P380245	MS
		AMPA**	0.10	U	ug/L	P380245	
		Sucralose**	0.10	U	ug/L	P380245	
		Acetaminophen**	0.0080	U	ug/L	P380348	
		Acetamiprid**	0.0020	U	ug/L	P380348	
		Endothall**	2.5	U	ug/L	P380245	
		Glufosinate**	0.10	U	ug/L	P380245	
		Glyphosate**	0.10	U	ug/L	P380245	
		Afidopyropen**	0.0020	UJ	ug/L	P380348	
		Bentazon	0.0039		ug/L	P380348	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380348	
		Carbamazepine**	8.0E-04	U	ug/L	P380348	
		Clothianidin**	0.0020	U	ug/L	P380348	
		Dinotefuran**	0.0020	U	ug/L	P380348	
		Diuron	0.0020	U	ug/L	P380348	
		Fenuron	0.016	U	ug/L	P380348	
		Fluridone**	8.0E-04	U	ug/L	P380348	
		Imazapyr**	0.67		ug/L	P380348	
		Hydrocodone**	0.0020	U	ug/L	P380348	
		Ibuprofen**	0.020	U	ug/L	P380348	
		Imidacloprid	0.0020	I	ug/L	P380348	MS
		Linuron	0.0040	U	ug/L	P380348	
		Mandestrobin**	0.0020	UJ	ug/L	P380348	
		MCPD	0.0020	U	ug/L	P380348	
		Naproxen**	0.0080	U	ug/L	P380348	
		Primidone**	0.0040	U	ug/L	P380348	
		Pyraclostrobin**	0.0020	U	ug/L	P380348	
		Thiamethoxam**	0.0020	U	ug/L	P380348	MS

Field ID: G5NE0582

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2162936	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P380348	
		Triclopyr**	0.0040	U	ug/L	P380348	

Ref. Method and Comment:

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

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

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MDL elevated due to matrix interference.

Non-Conformance Report

NCR ID: 8224

<u>Event(s)</u>	<u>Job(s)</u>	<u>Sample(s)</u>	<u>Test(s)</u>
NE-DIST-2020-03-06-01	TLH-2020-03-06-27	2162912	
NE-DIST-2020-03-06-01	TLH-2020-03-06-27	2162915	
NE-DIST-2020-03-06-01	TLH-2020-03-06-31	2162938	

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Samples not preserved within 15 minutes of collection.

Resolution: Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 3/9/2020

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380218

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380219

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380460

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: P380460

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 300.0 Rev. 2.1
Batch ID: P380448

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380495

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380497

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380611

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380612

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380634

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380638

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380381

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380382

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380383

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380600

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: P380901

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380448

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380492

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380656

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380221

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380223

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

Reference Method: EPA 8321B
 Batch ID: P380245

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
 Batch ID: P380348

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P380348

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

Reference Method: SM 2120 B-2011
Batch ID: P380215

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P380749

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

Reference Method: SM 2320 B-2011
Batch ID: P380861

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

Reference Method: SM 2540 C-2011
Batch ID: P380816

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P380805

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P380808

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P380714

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P380350

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

Reference Method: SM 5310 B-2011
Batch ID: P380561

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

Reference Method: SM 5310 B-2011
Batch ID: P380563

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: P380460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115
Manganese	107		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.1		P	85 - 115
Antimony	90.4		P	85 - 115
Arsenic	94.3		P	85 - 115
Cadmium	95.1		P	85 - 115
Chromium	94.6		P	85 - 115
Copper	97.7		P	85 - 115
Lead	89.6		P	85 - 115
Nickel	94.3		P	85 - 115
Selenium	94.3		P	85 - 115
Silver	91.0		P	85 - 115
Thallium	93.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380495

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380611

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380612

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380634

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380638

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380381

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	91.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380382

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380383

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380600

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380901

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380448

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380492

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P380656

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P380221

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P380223

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

Reference Method: EPA 8321B

Batch ID: P380245

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	76.1		P	40 - 150
AMPA	95.4		P	40 - 150
Endothall	139		P	40 - 150
Glufosinate	117		P	40 - 150
Glyphosate	110		P	40 - 140
Sucralose	94.2		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P380348

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	30 - 160
Acetaminophen	85.2		P	30 - 160
Acetamiprid	93.8		P	30 - 160
Afidopyropen	88.2		P	30 - 160
Bentazon	81.6		P	30 - 160
Benzovindiflupyr	83.2		P	30 - 160
Carbamazepine	100		P	30 - 160
Clothianidin	88.5		P	30 - 160
Dinotefuran	82.0		P	30 - 160
Diuron	91.6		P	30 - 160
Fenuron	92.0		P	30 - 160
Fluridone	80.9		P	30 - 160
Hydrocodone	90.5		P	30 - 160
Ibuprofen	84.1		P	30 - 160
Imazapyr	112		P	30 - 160
Imidacloprid	100		P	30 - 160
Linuron	78.3		P	30 - 160
Mandestrobin	77.6		P	30 - 160
MCPP	94.5		P	30 - 160
Naproxen	83.8		P	30 - 160
Primidone	98.0		P	30 - 160
Pyraclostrobin	77.6		P	30 - 160
Thiamethoxam	96.2		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P380348

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	62.2		P	30 - 160
Triclopyr	116		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P380215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P380749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 2320 B-2011
Batch ID: P380861

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P380714

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.1		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P380350

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.9		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P380561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P380563

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163449	Iron	106	107	P/P	70 - 130
2163449	Manganese	106	103	P/P	70 - 130
2163449	Zinc	109	109	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163449	Aluminum	92.3	94.0	P/P	70 - 130
2163449	Antimony	92.8	95.5	P/P	70 - 130
2163449	Arsenic	101	102	P/P	70 - 130
2163449	Cadmium	94.3	98.6	P/P	70 - 130
2163449	Chromium	95.5	98.0	P/P	70 - 130
2163449	Copper	97.5	99.4	P/P	70 - 130
2163449	Lead	91.4	92.8	P/P	70 - 130
2163449	Nickel	100	102	P/P	70 - 130
2163449	Selenium	96.5	101	P/P	70 - 130
2163449	Silver	87.0	88.0	P/P	70 - 130
2163449	Thallium	89.9	93.0	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162724	Bromide	91.6	91.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162902	Chloride	96.5		P	90 - 110
2163042	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162902	Sulfate	98.2		P	90 - 110
2163042	Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162626	Ammonia-N	97.7	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162912	Ammonia-N	103	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162728	Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162884	Ammonia-N	102	95.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162474	Kjeldahl Nitrogen	93.7	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162906	Kjeldahl Nitrogen	95.3	95.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162996	Kjeldahl Nitrogen	92.6	93.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380600

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162906	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380901

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162725	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162471	Total-P	94.2	94.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162871	Total-P	102	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380656

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162728	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162885	O-Phosphate-P	96.9	93.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162726	O-Phosphate-P	95.7	96.8	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P380245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162569	Acesulfame K	21.6	22.9	F/F	40 - 150
2162569	AMPA	82.5	89.5	P/P	40 - 150
2162569	Endothall	139	149	P/P	40 - 150
2162569	Glufosinate	102	95.0	P/P	40 - 150
2162569	Glyphosate	73.1	84.4	P/P	40 - 140
2162569	Sucralose	104	81.4	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P380348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163209	2,4-D	110	105	P/P	30 - 160
2163209	Acetaminophen	93.0	90.7	P/P	30 - 160
2163209	Acetamiprid	103	86.8	P/P	30 - 160
2163209	Afidopyropen	103	99.3	P/P	30 - 160
2163209	Bentazon	54.9	52.8	P/P	30 - 160
2163209	Benzovindiflupyr	82.2	79.7	P/P	30 - 160
2163209	Carbamazepine	94.2	96.7	P/P	30 - 160
2163209	Clothianidin	128	132	P/P	30 - 160
2163209	Dinotefuran	115	119	P/P	30 - 160
2163209	Diuron	86.6	83.0	P/P	30 - 160
2163209	Fenuron	75.0	76.4	P/P	30 - 160
2163209	Fluridone	81.3	74.4	P/P	30 - 160
2163209	Hydrocodone	103	79.3	P/P	30 - 160
2163209	Ibuprofen	80.4	75.6	P/P	30 - 160
2163209	Imazapyr	95.4	123	P/P	30 - 160
2163209	Imidacloprid	185	150	F/P	30 - 160
2163209	Linuron	83.1	80.4	P/P	30 - 160
2163209	Mandestrobin	76.1	75.5	P/P	30 - 160
2163209	MCCP	103	97.5	P/P	30 - 160
2163209	Naproxen	90.9	84.2	P/P	30 - 160
2163209	Primidone	98.0	104	P/P	30 - 160
2163209	Pyraclostrobin	80.7	78.4	P/P	30 - 160
2163209	Thiamethoxam	169	156	F/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P380348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163209	Tolfenpyrad	59.8	64.0	P/P	30 - 160
2163209	Triclopyr	125	105	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P380714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162882	Fluoride	101	102	P/P	89 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162914	Fluoride	97.1	97.1	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P380350

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162626	Organic Carbon	99.9	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P380561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163096	Organic Carbon	89.6	98.2	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P380563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162998	Organic Carbon	97.6	98.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162911	Turbidity	3.81	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162903	Turbidity	7.24	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163449	Iron	0.278	Spike	P	0 - 20
2163449	Manganese	2.72	Spike	P	0 - 20
2163449	Zinc	0.0455	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163449	Aluminum	1.80	Spike	P	0 - 20
2163449	Antimony	2.92	Spike	P	0 - 20
2163449	Arsenic	1.38	Spike	P	0 - 20
2163449	Cadmium	4.44	Spike	P	0 - 20
2163449	Chromium	2.59	Spike	P	0 - 20
2163449	Copper	1.92	Spike	P	0 - 20
2163449	Lead	1.51	Spike	P	0 - 20
2163449	Nickel	1.82	Spike	P	0 - 20
2163449	Selenium	4.79	Spike	P	0 - 20
2163449	Silver	1.15	Spike	P	0 - 20
2163449	Thallium	3.43	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162724	Bromide	0.380	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162902	Chloride	0.397	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162902	Sulfate	0.0556	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162626	Ammonia-N	3.48	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162912	Ammonia-N	0.568	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162728	Ammonia-N	0.516	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162884	Ammonia-N	3.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162474	Kjeldahl Nitrogen	3.72	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162906	Kjeldahl Nitrogen	0.197	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162996	Kjeldahl Nitrogen	1.18	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162906	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380901

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162725	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162471	Total-P	0.324	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162871	Total-P	1.25	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162728	Total-P	0.0484	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162885	O-Phosphate-P	3.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162726	O-Phosphate-P	1.14	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P380245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162569	Acesulfame K	5.56	Spike	P	0 - 30
2162569	AMPA	6.45	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P380245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162569	Endothall	7.17	Spike	P	0 - 30
2162569	Glufosinate	7.19	Spike	P	0 - 30
2162569	Glyphosate	9.27	Spike	P	0 - 30
2162569	Sucralose	23.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163209	2,4-D	4.35	Spike	P	0 - 30
2163209	Acetaminophen	2.42	Spike	P	0 - 30
2163209	Acetamiprid	16.8	Spike	P	0 - 30
2163209	Afidopyropen	3.95	Spike	P	0 - 30
2163209	Bentazon	3.92	Spike	P	0 - 30
2163209	Benzovindiflupyr	3.13	Spike	P	0 - 30
2163209	Carbamazepine	2.59	Spike	P	0 - 30
2163209	Clothianidin	3.43	Spike	P	0 - 30
2163209	Dinotefuran	3.36	Spike	P	0 - 30
2163209	Diuron	4.31	Spike	P	0 - 30
2163209	Fenuron	1.87	Spike	P	0 - 30
2163209	Fluridone	8.86	Spike	P	0 - 30
2163209	Hydrocodone	25.9	Spike	P	0 - 30
2163209	Ibuprofen	6.22	Spike	P	0 - 30
2163209	Imazapyr	25.4	Spike	P	0 - 30
2163209	Imidacloprid	20.6	Spike	P	0 - 30
2163209	Linuron	3.24	Spike	P	0 - 30
2163209	Mandestrobin	0.825	Spike	P	0 - 30
2163209	MCP	5.29	Spike	P	0 - 30
2163209	Naproxen	7.61	Spike	P	0 - 30
2163209	Primidone	5.48	Spike	P	0 - 30
2163209	Pyraclostrobin	2.82	Spike	P	0 - 30
2163209	Thiamethoxam	7.88	Spike	P	0 - 30
2163209	Tolfenpyrad	6.82	Spike	P	0 - 30
2163209	Triclopyr	18.0	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P380215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162881	Color (true)	0.497	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P380749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163041	Total Alkalinity	0.206	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
 Batch ID: P380861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162914	Total Alkalinity	0.425	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
 Batch ID: P380816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162870	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P380714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162882	Fluoride	0.516	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
 Batch ID: P380870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162914	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
 Batch ID: P380350

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162626	Organic Carbon	1.33	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P380561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163096	Organic Carbon	5.44	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P380563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162998	Organic Carbon	1.03	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2162936
Field Sample ID: G5NE0582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.3	P	30 - 160
EPA 8321B	Diuron-d6	93.0	P	30 - 160
EPA 8321B	Endothall-d6	78.9	P	30 - 160
EPA 8321B	Endothall-d6	78.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	39.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	39.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.3	P	30 - 160
EPA 8321B	Primidone-d5	95.9	P	30 - 160
EPA 8321B	Sucralose-d6	43.9	P	30 - 160
EPA 8321B	Sucralose-d6	43.9	P	30 - 160

Lab Sample ID: 2162937
Field Sample ID: G5NE0592

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	110	P	30 - 160
EPA 8321B	Endothall-d6	452	F	30 - 160
EPA 8321B	Endothall-d6	452	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	66.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.8	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	30.3	P	30 - 160
EPA 8321B	Sucralose-d6	30.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A98042

Included Lab Sample IDs: 2162899, 2162902, 2162903, 2162904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	103	P/P	90 - 115
Color (true)	102	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A98043

Included Lab Sample IDs: 2162901, 2162908, 2162909, 2162910, 2162913, 2162916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	97.7	P/P	90 - 110
O-Phosphate-P	98.3	98.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A98044

Included Lab Sample IDs: 2162899, 2162902, 2162903, 2162904, 2162911, 2162914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.0	P/P	95 - 105
Turbidity	99.0	98.5	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98086

Included Lab Sample IDs: 2162911, 2162914

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98096

Included Lab Sample IDs: 2162899, 2162902, 2162903, 2162904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	99.5	P/P	90 - 110
Sulfate	99.5	100	P/P	90 - 110
Sulfate	99.7	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A98099

Included Lab Sample IDs: 2162900, 2162905

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

Reference Method: EPA 8321B

Run ID: A98125

Included Lab Sample IDs: 2162936, 2162937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.0	88.4	P/P	40 - 200
AMPA	97.6	84.7	P/P	40 - 200
Glufosinate	117	111	P/P	40 - 200
Glufosinate	123	114	P/P	40 - 200

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A98125

Included Lab Sample IDs: 2162936, 2162937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	113	108	P/P	40 - 200
Glyphosate	114	116	P/P	40 - 200

Reference Method: EPA 8321B

Run ID: A98129

Included Lab Sample IDs: 2162936, 2162937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	75.8	76.6	P/P	60 - 160
Acesulfame K	82.4	79.7	P/P	60 - 160
Endothall	127	115	P/P	60 - 160
Endothall	139	130	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A98141

Included Lab Sample IDs: 2162900, 2162905, 2162906, 2162907, 2162912, 2162915

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	97.5	P/P	90 - 110
Kjeldahl Nitrogen	96.6	100	P/P	90 - 110
Kjeldahl Nitrogen	99.3	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98160

Included Lab Sample IDs: 2162936, 2162937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	100	97.5	P/P	60 - 160
Sucralose	101	102	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A98163

Included Lab Sample IDs: 2162906, 2162907, 2162912, 2162915

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	94.6	P/P	90 - 110
Organic Carbon	103	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98176

Included Lab Sample IDs: 2162905, 2162906, 2162907

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	99.5	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A98179

Included Lab Sample IDs: 2162905, 2162912, 2162915

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A98179

Included Lab Sample IDs: 2162905, 2162912, 2162915

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A98182

Included Lab Sample IDs: 2162900, 2162906, 2162907

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	103	P/P	90 - 110
Ammonia-N	103	98.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A98195

Included Lab Sample IDs: 2162938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	102	P/P	90 - 110
Manganese	105	106	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98197

Included Lab Sample IDs: 2162938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.5	95.7	P/P	90 - 110
Antimony	90.8	91.7	P/P	90 - 110
Arsenic	95.1	96.4	P/P	90 - 110
Cadmium	94.8	94.7	P/P	90 - 110
Chromium	94.0	95.2	P/P	90 - 110
Copper	96.9	98.2	P/P	90 - 110
Lead	92.7	92.5	P/P	90 - 110
Nickel	97.4	100	P/P	90 - 110
Selenium	96.2	94.9	P/P	90 - 110
Silver	92.6	92.2	P/P	90 - 110
Thallium	90.2	91.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98206

Included Lab Sample IDs: 2162905

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98209

Included Lab Sample IDs: 2162906, 2162907

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.4	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98211

Included Lab Sample IDs: 2162900

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

Reference Method: EPA 8321B

Run ID: A98214

Included Lab Sample IDs: 2162936, 2162937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	75.4	84.9	P/P	50 - 150
Acetaminophen	90.4	97.1	P/P	60 - 160
Acetamiprid	111	101	P/P	50 - 150
Afidopyropen	122	115	P/P	50 - 150
Bentazon	129	122	P/P	50 - 160
Benzovindiflupyr	106	107	P/P	50 - 150
Carbamazepine	113	103	P/P	60 - 150
Clothianidin	82.4	92.8	P/P	60 - 150
Dinotefuran	93.7	77.6	P/P	50 - 150
Diuron	111	110	P/P	60 - 150
Fenuron	107	87.4	P/P	60 - 150
Fluridone	102	94.5	P/P	60 - 160
Hydrocodone	92.5	94.3	P/P	60 - 150
Ibuprofen	97.6	92.0	P/P	50 - 160
Imazapyr	104	92.6	P/P	50 - 150
Imidacloprid	102	86.9	P/P	60 - 150
Linuron	112	101	P/P	60 - 150
Mandestrobin	95.2	95.6	P/P	50 - 150
MCPP	80.6	74.7	P/P	50 - 150
Naproxen	99.3	70.9	P/P	50 - 160
Primidone	93.4	99.6	P/P	60 - 150
Pyraclostrobin	95.0	112	P/P	60 - 150
Thiamethoxam	111	91.4	P/P	50 - 150
Tolfenpyrad	114	114	P/P	60 - 150
Triclopyr	112	113	P/P	50 - 150

Reference Method: SM 4500 F-C-2011

Run ID: A98215

Included Lab Sample IDs: 2162902, 2162903, 2162904

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

Reference Method: SM 2320 B-2011

Run ID: A98231

Included Lab Sample IDs: 2162902, 2162903, 2162904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98240

Included Lab Sample IDs: 2162912, 2162915

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98241

Included Lab Sample IDs: 2162900, 2162912, 2162915

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

Reference Method: SM 2320 B-2011

Run ID: A98269

Included Lab Sample IDs: 2162899, 2162911, 2162914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A98269

Included Lab Sample IDs: 2162899, 2162911, 2162914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	105	99.5	P/P	90 - 110
Fluoride	94.6	105	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					3.81	
	Turbidity					7.24	
EPA 200.7 Rev. 4.4	Iron	105	106	107			0.278
	Manganese	107	106	103			2.72
	Zinc	107	109	109			0.0455
EPA 200.8 Rev. 5.4	Aluminum	93.1	92.3	94.0			1.80
	Antimony	90.4	92.8	95.5			2.92
	Arsenic	94.3	101	102			1.38
	Cadmium	95.1	94.3	98.6			4.44
	Chromium	94.6	95.5	98.0			2.59
	Copper	97.7	97.5	99.4			1.92
	Lead	89.6	91.4	92.8			1.51
	Nickel	94.3	100	102			1.82
	Selenium	94.3	96.5	101			4.79
	Silver	91.0	87.0	88.0			1.15
	Thallium	93.8	89.9	93.0			3.43
EPA 300.0 Rev. 2.1	Bromide	97.1	91.6	91.0			0.380
	Chloride	98.8	96.5	97.9		0.397	
	Sulfate	99.1	98.2	97.2		0.0556	
EPA 350.1 Rev. 2.0	Ammonia-N	101	97.7	101			3.48
	Ammonia-N	99.5	103	102			0.568
	Ammonia-N	100	103	104			0.516
	Ammonia-N	98.4	102	95.7			3.74
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	91.9	93.7	98.4			3.72
	Kjeldahl Nitrogen	101	95.3	95.1			0.197
	Kjeldahl Nitrogen	93.3	92.6	93.8			1.18
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	99.5			0.501
	NO2NO3-N	100	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	104	94.2	94.5			0.324
	Total-P	103	102	104			1.25
	Total-P	104	102	102			0.0484
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4	96.9	93.7			3.22
	O-Phosphate-P	97.6	95.7	96.8			1.14
EPA 8321B	2,4-D	104	110	105			4.35
	Acesulfame K	76.1	21.6	22.9			5.56
	Acetaminophen	85.2	93.0	90.7			2.42
	Acetamiprid	93.8	103	86.8			16.8
	Afidopyropen	88.2	103	99.3			3.95
	AMPA	95.4	82.5	89.5			6.45
	Bentazon	81.6	54.9	52.8			3.92
	Benzovindiflupyr	83.2	82.2	79.7			3.13
	Carbamazepine	100	94.2	96.7			2.59
	Clothianidin	88.5	128	132			3.43
	Dinotefuran	82.0	115	119			3.36
	Diuron	91.6	86.6	83.0			4.31
	Endothall	139	139	149			7.17
	Fenuron	92.0	75.0	76.4			1.87
	Fluridone	80.9	81.3	74.4			8.86
	Glufosinate	117	102	95.0			7.19
	Glyphosate	110	73.1	84.4			9.27
	Hydrocodone	90.5	103	79.3			25.9
	Ibuprofen	84.1	80.4	75.6			6.22
	Imazapyr	112	95.4	123			25.4
	Imidacloprid	100	185	150			20.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Linuron	78.3	83.1	80.4		3.24
	Mandestrobin	77.6	76.1	75.5		0.825
	MCCP	94.5	103	97.5		5.29
	Naproxen	83.8	90.9	84.2		7.61
	Primidone	98.0	98.0	104		5.48
	Pyraclostrobin	77.6	80.7	78.4		2.82
	Sucralose	94.2	104	81.4		23.3
	Thiamethoxam	96.2	169	156		7.88
	Tolfenpyrad	62.2	59.8	64.0		6.82
	Triclopyr	116	125	105		18.0
SM 2120 B-2011	Color (true)	100			0.497	
SM 2320 B-2011	Total Alkalinity	103			0.206	
	Total Alkalinity	102			0.425	
SM 2540 C-2011	TDS				0.0	
SM 4500 F-C-2011	Fluoride	96.7	101	102		0.516
	Fluoride	94.1	97.1	97.1		0.0
SM 5310 B-2011	Organic Carbon	98.9	99.9	102		1.33
	Organic Carbon	98.6	89.6	98.2		5.44
	Organic Carbon	103	97.6	98.7		1.03

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2162899, 2162902, 2162903, 2162904, 2162911, 2162914
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2162938
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2162938
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2162911, 2162914
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2162899, 2162902, 2162903, 2162904
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2162899, 2162902, 2162903, 2162904, 2162911
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2162900, 2162905, 2162906, 2162907, 2162912, 2162915
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2162900, 2162905, 2162906, 2162907, 2162912, 2162915
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2162900, 2162905, 2162906, 2162907, 2162912, 2162915
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2162900, 2162905, 2162906, 2162907, 2162912, 2162915
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2162901, 2162908, 2162909, 2162910, 2162913, 2162916
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2162936, 2162937
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2162936, 2162937
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2162899, 2162902, 2162903, 2162904
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2162899, 2162902, 2162903, 2162904, 2162911, 2162914
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2162899, 2162902, 2162903, 2162904
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2162899, 2162902, 2162903, 2162904, 2162911, 2162914
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2162899, 2162902, 2162903, 2162904, 2162911, 2162914
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2162900, 2162905, 2162906, 2162907, 2162912, 2162915

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	03/06/2020			03/06/2020 15:29	Yen Ta	2162899, 2162902, 2162903, 2162904, 2162911, 2162914
EPA 200.7 Rev. 4.4	03/06/2020	03/11/2020 16:50	Elliott D. Healy	03/13/2020 21:06	Vijayalakshmi Reddy	2162938
EPA 200.8 Rev. 5.4	03/06/2020	03/11/2020 16:50	Elliott D. Healy	03/13/2020 13:31	Justin Cutchin	2162938
EPA 300.0 Rev. 2.1	03/06/2020			03/10/2020 17:42	Lipi Saha	2162911
	03/06/2020			03/10/2020 17:59	Lipi Saha	2162914
	03/06/2020			03/11/2020 20:10	Lipi Saha	2162902
	03/06/2020			03/11/2020 21:23	Lipi Saha	2162899
	03/06/2020			03/11/2020 21:35	Lipi Saha	2162903
	03/06/2020			03/11/2020 21:47	Lipi Saha	2162904
	03/06/2020			03/12/2020 00:49	Lipi Saha	2162911
EPA 350.1 Rev. 2.0	03/06/2020			03/10/2020 15:02	Ping Hua	2162905
	03/06/2020			03/10/2020 15:08	Ping Hua	2162912
	03/06/2020			03/10/2020 15:31	Ping Hua	2162915
	03/06/2020			03/11/2020 12:59	Ping Hua	2162900
	03/06/2020			03/11/2020 14:51	Ping Hua	2162906
	03/06/2020			03/11/2020 14:53	Ping Hua	2162907
EPA 351.2 Rev. 2.0	03/06/2020	03/10/2020 12:36	Sima Feizi	03/11/2020 17:51	Jhamieka S. Greenwood	2162900
	03/06/2020	03/10/2020 12:43	Sima Feizi	03/11/2020 18:25	Jhamieka S. Greenwood	2162906
	03/06/2020	03/10/2020 12:43	Sima Feizi	03/11/2020 18:30	Jhamieka S. Greenwood	2162905
	03/06/2020	03/10/2020 12:43	Sima Feizi	03/11/2020 18:31	Jhamieka S. Greenwood	2162907
	03/06/2020	03/10/2020 12:43	Sima Feizi	03/11/2020 18:54	Jhamieka S. Greenwood	2162912
	03/06/2020	03/10/2020 12:43	Sima Feizi	03/11/2020 18:56	Jhamieka S. Greenwood	2162915
EPA 353.2 Rev. 2.0	03/06/2020			03/11/2020 10:54	Beverly Y. Sanders	2162906
	03/06/2020			03/11/2020 11:03	Beverly Y. Sanders	2162905
	03/06/2020			03/11/2020 11:04	Beverly Y. Sanders	2162907
	03/06/2020			03/17/2020 11:03	Beverly Y. Sanders	2162900
	03/06/2020			03/17/2020 11:04	Beverly Y. Sanders	2162912
	03/06/2020			03/17/2020 11:05	Beverly Y. Sanders	2162915
EPA 365.1 Rev. 2.0	03/06/2020	03/11/2020 14:54	Yen Ta	03/13/2020 13:26	Benjamin T. Nordmann	2162905
	03/06/2020	03/11/2020 14:54	Yen Ta	03/13/2020 15:32	Benjamin T. Nordmann	2162900
	03/06/2020	03/11/2020 14:54	Yen Ta	03/13/2020 15:51	Benjamin T. Nordmann	2162906
	03/06/2020	03/11/2020 14:54	Yen Ta	03/13/2020 15:52	Benjamin T. Nordmann	2162907
	03/06/2020	03/13/2020 14:30	Yen Ta	03/16/2020 15:11	Benjamin T. Nordmann	2162912
	03/06/2020	03/13/2020 14:30	Yen Ta	03/16/2020 15:12	Benjamin T. Nordmann	2162915
EPA 365.1 Rev. 2.0 dissolved	03/06/2020			03/06/2020 16:11	Carlos Miranda	2162908, 2162909
	03/06/2020			03/06/2020 16:12	Carlos Miranda	2162910
	03/06/2020			03/06/2020 16:38	Carlos Miranda	2162901
	03/06/2020			03/06/2020 16:39	Carlos Miranda	2162913, 2162916
EPA 8321B	03/06/2020	03/09/2020 12:00	Rebecca Ware	03/09/2020 20:23	Rebecca Ware	2162936

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	03/06/2020	03/09/2020 12:00	Rebecca Ware	03/09/2020 22:43	Rebecca Ware	2162937
	03/06/2020	03/09/2020 12:00	Rebecca Ware	03/10/2020 14:02	Rebecca Ware	2162937
	03/06/2020	03/09/2020 12:00	Rebecca Ware	03/10/2020 16:44	Rebecca Ware	2162936
	03/06/2020	03/09/2020 12:00	Rebecca Ware	03/12/2020 01:32	Rebecca Ware	2162937
	03/06/2020	03/09/2020 12:00	Rebecca Ware	03/12/2020 11:59	Rebecca Ware	2162936
	03/06/2020	03/11/2020 09:00	Hoor Shaik	03/14/2020 16:43	Juyoung Kim	2162936
	03/06/2020	03/11/2020 09:00	Hoor Shaik	03/14/2020 17:17	Juyoung Kim	2162937
	03/06/2020			03/06/2020 15:58	Madeline Gruver	2162899
SM 2120 B-2011	03/06/2020			03/06/2020 16:00	Madeline Gruver	2162903, 2162904
	03/06/2020			03/06/2020 16:15	Madeline Gruver	2162902
SM 2320 B-2011	03/06/2020			03/16/2020 23:05	Dale L. Simmons	2162902
	03/06/2020			03/16/2020 23:17	Dale L. Simmons	2162903
	03/06/2020			03/16/2020 23:28	Dale L. Simmons	2162904
	03/06/2020			03/17/2020 20:36	Dale L. Simmons	2162914
	03/06/2020			03/17/2020 20:49	Dale L. Simmons	2162899
	03/06/2020			03/17/2020 22:20	Dale L. Simmons	2162911
	03/06/2020			03/10/2020 15:32	Yijie Li	2162899, 2162902, 2162903, 2162904
SM 2540 D-2011	03/06/2020			03/10/2020 15:32	Yijie Li	2162899, 2162902, 2162903, 2162904, 2162911, 2162914
SM 4500 F-C-2011	03/06/2020			03/13/2020 01:08	Dale L. Simmons	2162902
	03/06/2020			03/13/2020 01:21	Dale L. Simmons	2162903
	03/06/2020			03/13/2020 01:35	Dale L. Simmons	2162904
	03/06/2020			03/17/2020 18:25	Dale L. Simmons	2162914
	03/06/2020			03/17/2020 18:36	Dale L. Simmons	2162899
	03/06/2020			03/17/2020 20:04	Dale L. Simmons	2162911
SM 5310 B-2011	03/06/2020			03/09/2020 20:49	Lauren Lees	2162900
	03/06/2020			03/09/2020 21:02	Lauren Lees	2162905
	03/06/2020			03/11/2020 16:51	Lauren Lees	2162906
	03/06/2020			03/11/2020 17:07	Lauren Lees	2162907
	03/06/2020			03/12/2020 07:48	Lauren Lees	2162912
	03/06/2020			03/12/2020 08:14	Lauren Lees	2162915