

Chemical Analysis Report

NE-DIST-2020-01-16-01

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

Event Description: **LSJR West 2020**
Request ID: **RQ-2020-01-13-29**
Customer: **NE-DIST**
Project ID: **SMP**

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

Date Certified: 10-FEB-2020 12:57

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: McGirts Creek at Old Plank Road

Collection Date/Time: 01/15/2020 10:20

Field ID: 20030346

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149736	EPA 180.1 Rev. 2.0	Turbidity	21	A	NTU	P377780	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P377407	
		Sulfate	16		mg SO4/L	P377409	
	SM 2120 B-2011	Color (true)	84	A	PCU	P377493	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P377697	
	SM 2540 C-2011	TDS	131		mg/L	P377592	
	SM 2540 D-2011	TSS	5	I	mg/L	P377444	
	SM 4500 F-C-2011	Fluoride	0.048	I	mg F/L	P377702	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P377373	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P377596	
2149737	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032		mg N/L	P377517	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P377630	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P377538	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.010		mg P/L	P377295	
	dissolved						
2149762	EPA 8321B	2,4-D	0.37		ug/L	P377352	
		Acesulfame K**	0.10	U	ug/L	P377313	MS
		AMPA**	0.13	I	ug/L	P377313	
		Sucralose**	0.16		ug/L	P377313	
		Acetaminophen**	0.0080	U	ug/L	P377352	
		Acetamiprid**	0.0020	U	ug/L	P377352	
		Endothall**	0.25	U	ug/L	P377313	
		Glufosinate**	0.10	U	ug/L	P377313	
		Glyphosate**	0.19	I	ug/L	P377313	
		Afidopyropen**	0.0020	UJ	ug/L	P377352	
		Bentazon	8.0E-04	UJ	ug/L	P377352	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377352	
		Carbamazepine**	8.0E-04	U	ug/L	P377352	
		Clothianidin**	0.0020	U	ug/L	P377352	
		Dinotefuran**	0.0020	U	ug/L	P377352	
		Diuron	0.0020	U	ug/L	P377352	
		Fenuron	0.016	U	ug/L	P377352	
		Fluridone**	8.0E-04	U	ug/L	P377352	
		Imazapyr**	1.6		ug/L	P377536	
		Hydrocodone**	0.0020	U	ug/L	P377352	
		Ibuprofen**	0.020	U	ug/L	P377352	
		Imidacloprid	0.0020	U	ug/L	P377352	
		Linuron	0.0040	U	ug/L	P377352	
		Mandestrobin**	0.0020	UJ	ug/L	P377352	
		MCPD	0.0020	U	ug/L	P377352	
		Naproxen**	0.0080	U	ug/L	P377352	
		Primidone**	0.0040	U	ug/L	P377352	
		Pyraclostrobin**	0.0020	U	ug/L	P377352	
		Thiamethoxam**	0.0020	U	ug/L	P377352	

Field ID: 20030346

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149762	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377352	
		Triclopyr**	0.0040	U	ug/L	P377352	

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. MS accuracy for imazapyr and 2,4-D could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Yellow Water CR at SR 228

Collection Date/Time: 01/15/2020 12:10

Field ID: 20030549

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149742	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P377780	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P377408	
		Sulfate	1.7		mg SO4/L	P377410	
		Color (true)	260		PCU	P377380	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P377697	
	SM 2540 C-2011	TDS	122		mg/L	P377592	
	SM 2540 D-2011	TSS	2	U	mg/L	P377444	
	SM 4500 F-C-2011	Fluoride	0.053	I	mg F/L	P377702	
2149743	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P377374	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P377597	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P377517	
	EPA 365.1 Rev. 2.0	Total-P	0.045		mg P/L	P377630	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P377538	
2149744	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P377295	
2149788	EPA 200.7 Rev. 4.4	Barium	22.3		ug/L	P377452	
		Calcium	12.6		mg/L	P377452	
		Iron	1.52E+03		ug/L	P377452	
		Magnesium	2.53		mg/L	P377452	
		Potassium	0.59	I	mg/L	P377452	
		Sodium	10.2		mg/L	P377452	
		Zinc	13	I	ug/L	P377452	
		Aluminum	373		ug/L	P377452	
	EPA 200.8 Rev. 5.4	Antimony	0.065	I	ug/L	P377974	
		Arsenic	0.53		ug/L	P377452	
		Boron**	20.0		ug/L	P377452	
		Cadmium	0.020	U	ug/L	P377452	
		Chromium	0.98	I	ug/L	P377452	
		Copper	2.59		ug/L	P377452	
		Lead	1.44		ug/L	P377452	
		Nickel	1.2	I	ug/L	P377452	
		Selenium	0.20	U	ug/L	P377452	
		Silver	0.010	U	ug/L	P377452	
		Thallium	0.10	U	ug/L	P377452	
	SM 2340B	Hardness	41.9		mg/L	P377452	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed on 02/04/2020.

Sample Location: Trout River at Garden St

Collection Date/Time: 01/15/2020 11:15

Field ID: 20030751

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149739	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P377780	
	EPA 300.0 Rev. 2.1	Chloride	21	A	mg Cl/L	P377408	
		Sulfate	11	A	mg SO4/L	P377410	
	SM 2120 B-2011	Color (true)	100		PCU	P377380	
	SM 2320 B-2011	Total Alkalinity	16		mg CaCO3/L	P377697	
	SM 2540 C-2011	TDS	102		mg/L	P377592	
	SM 2540 D-2011	TSS	2	U	mg/L	P377444	
	SM 4500 F-C-2011	Fluoride	0.039	I	mg F/L	P377702	
2149740	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P377374	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P377597	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.061		mg N/L	P377517	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P377630	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P377538	
2149741	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P377295	
2149763	EPA 8321B	2,4-D	0.0020	U	ug/L	P377352	
		Acesulfame K**	0.10	U	ug/L	P377313	MS
		AMPA**	0.10	U	ug/L	P377313	
		Sucralose**	0.23		ug/L	P377313	
		Acetaminophen**	0.0080	U	ug/L	P377352	
		Acetamiprid**	0.0020	U	ug/L	P377352	
		Endothall**	0.25	U	ug/L	P377313	
		Glufosinate**	0.10	U	ug/L	P377313	
		Glyphosate**	0.10	U	ug/L	P377313	
		Afidopyropen**	0.0020	UJ	ug/L	P377352	
		Bentazon	0.0018	I	ug/L	P377352	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377352	
		Carbamazepine**	8.0E-04	U	ug/L	P377352	
		Clothianidin**	0.0020	U	ug/L	P377352	
		Dinotefuran**	0.0020	U	ug/L	P377352	
		Diuron	0.0020	U	ug/L	P377352	
		Fenuron	0.016	U	ug/L	P377352	
		Fluridone**	9.1E-04	I	ug/L	P377352	
		Imazapyr**	0.0045	I	ug/L	P377352	
		Hydrocodone**	0.0020	U	ug/L	P377352	
		Ibuprofen**	0.020	U	ug/L	P377352	
		Imidacloprid	0.0020	U	ug/L	P377352	
		Linuron	0.0040	U	ug/L	P377352	
		Mandestrobin**	0.0020	UJ	ug/L	P377352	
		MCPD	0.0020	U	ug/L	P377352	
		Naproxen**	0.0080	U	ug/L	P377352	
		Primidone**	0.0040	U	ug/L	P377352	
		Pyraclostrobin**	0.0020	U	ug/L	P377352	
		Thiamethoxam**	0.0020	U	ug/L	P377352	

Field ID: 20030751

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149763	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377352	
		Triclopyr**	0.0040	U	ug/L	P377352	
2149787	EPA 200.7 Rev. 4.4	Barium	33.6		ug/L	P377452	
		Calcium	9.74		mg/L	P377452	
		Iron	500		ug/L	P377452	
		Magnesium	2.56		mg/L	P377452	
		Potassium	2.0		mg/L	P377452	
		Sodium	12.6		mg/L	P377452	
		Zinc	6.8	I	ug/L	P377452	
	EPA 200.8 Rev. 5.4	Aluminum	242		ug/L	P377452	
		Antimony	0.050	U	ug/L	P377452	
		Arsenic	0.38		ug/L	P377452	
		Boron**	29.0		ug/L	P377452	
		Cadmium	0.020	U	ug/L	P377452	
		Chromium	0.40	U	ug/L	P377452	
		Copper	0.40	U	ug/L	P377452	
		Lead	0.25	I	ug/L	P377452	
		Nickel	0.50	U	ug/L	P377452	
		Selenium	0.20	U	ug/L	P377452	
		Silver	0.010	U	ug/L	P377452	
		Thallium	0.10	U	ug/L	P377452	
	SM 2340B	Hardness	34.9		mg/L	P377452	

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. MS accuracy for imazapyr and 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Wills BR at Watergate rd.

Collection Date/Time: 01/15/2020 13:30

Field ID: G2NE1183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149745	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P377780	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P377408	
		Sulfate	26		mg SO4/L	P377410	
	SM 2120 B-2011	Color (true)	63		PCU	P377380	
	SM 2320 B-2011	Total Alkalinity	113		mg CaCO3/L	P377697	
	SM 2540 C-2011	TDS	240		mg/L	P377592	
	SM 2540 D-2011	TSS	6	I	mg/L	P377444	
	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P377702	
2149746	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P377374	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P377597	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P377518	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P377630	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P377538	
2149747	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.071		mg P/L	P377295	
2149764	EPA 8321B	2,4-D	0.0020	U	ug/L	P377352	
		Acesulfame K**	0.10	I	ug/L	P377313	MS
		AMPA**	0.42		ug/L	P377313	
		Sucralose**	0.87		ug/L	P377313	
		Acetaminophen**	0.0080	U	ug/L	P377352	
		Acetamiprid**	0.0020	U	ug/L	P377352	
		Endothall**	0.25	U	ug/L	P377313	
		Glufosinate**	0.10	U	ug/L	P377313	
		Glyphosate**	2.3		ug/L	P377313	
		Afidopyrophen**	0.0020	UJ	ug/L	P377352	
		Bentazon	0.0080		ug/L	P377352	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377352	
		Carbamazepine**	0.0017	I	ug/L	P377352	
		Clothianidin**	0.0020	U	ug/L	P377352	
		Dinotefuran**	0.0020	U	ug/L	P377352	
		Diuron	0.014		ug/L	P377352	
		Fenuron	0.016	U	ug/L	P377352	
		Fluridone**	0.0064		ug/L	P377352	
		Imazapyr**	0.24		ug/L	P377352	
		Hydrocodone**	0.0020	U	ug/L	P377352	
		Ibuprofen**	0.020	U	ug/L	P377352	
		Imidacloprid	0.0073	I	ug/L	P377352	
		Linuron	0.0040	U	ug/L	P377352	
		Mandestrobin**	0.0020	UJ	ug/L	P377352	
		MCP	0.0049	I	ug/L	P377352	
		Naproxen**	0.0080	U	ug/L	P377352	
		Primidone**	0.0076	I	ug/L	P377352	
		Pyraclostrobin**	0.0020	U	ug/L	P377352	
		Thiamethoxam**	0.0020	U	ug/L	P377352	

Field ID: G2NE1183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149764	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P377352	
		Triclopyr**	0.0040	U	ug/L	P377352	

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. MS accuracy for imazapyr and 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377780

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377452

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377452

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377974

Component	Result	Code	Units
Antimony	0.050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377407

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377408

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377409

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377410

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377373

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377374

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377596

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377597

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377517

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377518

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377630

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377295

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

Reference Method: EPA 8321B
Batch ID: P377313

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: P377352

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: P377536

Component	Result	Code	Units
Imazapyr	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P377380

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P377493

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P377697

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

Reference Method: SM 2540 C-2011
Batch ID: P377592

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377444

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377702

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377538

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: P377452

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.6		P	85 - 115
Calcium	104		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	99.7		P	85 - 115
Sodium	102		P	85 - 115
Zinc	97.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377452

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	99.5		P	85 - 115
Boron	105		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	94.2		P	85 - 115
Copper	97.8		P	85 - 115
Lead	103		P	85 - 115
Nickel	101		P	85 - 115
Selenium	99.3		P	85 - 115
Silver	105		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377407

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377408

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377409

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377410

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377373

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: P377374

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: P377596

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377597

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377517

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377518

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377630

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377295

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377313

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	87.2		P	40 - 150
AMPA	85.0		P	40 - 150
Endothall	131		P	40 - 150
Glufosinate	93.7		P	40 - 150
Glyphosate	99.1		P	40 - 140
Sucralose	92.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P377352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	121		P	40 - 160
Acetaminophen	101		P	30 - 160
Acetamiprid	97.0		P	40 - 160
Afidopyropen	110		P	40 - 160
Bentazon	63.5		P	30 - 160
Benzovindiflupyr	80.3		P	40 - 160
Carbamazepine	101		P	40 - 160
Clothianidin	99.1		P	40 - 160
Dinotefuran	97.2		P	40 - 160
Diuron	88.7		P	40 - 160
Fenuron	95.0		P	40 - 160
Fluridone	99.2		P	40 - 160
Hydrocodone	97.5		P	40 - 160
Ibuprofen	90.2		P	30 - 160
Imazapyr	80.5		P	40 - 160
Imidacloprid	104		P	40 - 160
Linuron	68.7		P	40 - 160
Mandestrobin	91.9		P	40 - 160
MCPP	132		P	40 - 160
Naproxen	76.0		P	40 - 160
Primidone	90.2		P	40 - 160
Pyraclostrobin	71.5		P	30 - 160
Thiamethoxam	96.0		P	40 - 160
Tolfenpyrad	45.2		P	40 - 160
Triclopyr	114		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P377536

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imazapyr	77.0		P	40 - 160

Reference Method: SM 2120 B-2011
Batch ID: P377380

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.2		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P377493

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P377697

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

Reference Method: SM 4500 F-C-2011
Batch ID: P377702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377538

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149681	Barium	99.9	100	P/P	80 - 120
2149681	Calcium	105	106	P/P	80 - 120
2149681	Iron	104	105	P/P	80 - 120
2149681	Magnesium	105	107	P/P	80 - 120
2149681	Potassium	103	105	P/P	80 - 120
2149681	Sodium	101	102	P/P	80 - 120
2149681	Zinc	99.3	99.5	P/P	80 - 120
2149787	Barium	98.8		P	80 - 120
2149787	Calcium	102		P	80 - 120
2149787	Iron	102		P	80 - 120
2149787	Magnesium	101		P	80 - 120
2149787	Potassium	98.3		P	80 - 120
2149787	Sodium	102		P	80 - 120
2149787	Zinc	99.5		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149681	Aluminum	100	101	P/P	80 - 120
2149681	Antimony	99.2	101	P/P	80 - 120
2149681	Arsenic	97.7	96.6	P/P	80 - 120
2149681	Boron	102	101	P/P	80 - 120
2149681	Cadmium	107	107	P/P	80 - 120
2149681	Chromium	93.8	95.3	P/P	80 - 120
2149681	Copper	99.0	100	P/P	80 - 120
2149681	Lead	105	105	P/P	80 - 120
2149681	Nickel	106	105	P/P	80 - 120
2149681	Selenium	96.3	97.6	P/P	80 - 120
2149681	Silver	104	103	P/P	80 - 120
2149681	Thallium	103	103	P/P	80 - 120
2149787	Aluminum	98.6		P	80 - 120
2149787	Antimony	103		P	80 - 120
2149787	Arsenic	97.3		P	80 - 120
2149787	Boron	102		P	80 - 120
2149787	Cadmium	108		P	80 - 120
2149787	Chromium	93.0		P	80 - 120
2149787	Copper	98.8		P	80 - 120
2149787	Lead	106		P	80 - 120
2149787	Nickel	105		P	80 - 120
2149787	Selenium	96.6		P	80 - 120
2149787	Silver	104		P	80 - 120
2149787	Thallium	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149712	Antimony	105	103	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149552	Chloride	99.8		P	90 - 110
2149614	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149739	Chloride	102		P	90 - 110
2149772	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149552	Sulfate	95.6		P	90 - 110
2149614	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377410

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149739	Sulfate	101		P	90 - 110
2149772	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149697	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377374

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149774	Ammonia-N	99.8	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149697	Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377597

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149774	Kjeldahl Nitrogen	100	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149670	NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149746	NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149737	Total-P	103	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149754	O-Phosphate-P	96.0	95.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P377313

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149642	Acesulfame K	37.8	38.7	F/F	40 - 150
2149642	AMPA	92.2	95.2	P/P	40 - 150
2149642	Endothall	138	140	P/P	40 - 150
2149642	Glufosinate	88.7	101	P/P	40 - 150
2149642	Glyphosate	91.1	83.8	P/P	40 - 140
2149642	Sucralose	87.8	93.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P377352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149762	Acetaminophen	96.4	101	P/P	30 - 160
2149762	Acetamiprid	98.2	103	P/P	40 - 160
2149762	Afidopyropen	64.6	54.8	P/P	40 - 160
2149762	Bentazon	29.4	31.3	F/P	30 - 160
2149762	Benzovindiflupyr	66.6	67.8	P/P	40 - 160
2149762	Carbamazepine	77.7	84.4	P/P	40 - 160
2149762	Clothianidin	106	103	P/P	40 - 160
2149762	Dinotefuran	127	118	P/P	40 - 160
2149762	Diuron	68.2	67.9	P/P	40 - 160
2149762	Fenuron	81.4	85.1	P/P	40 - 160
2149762	Fluridone	89.6	90.8	P/P	40 - 160
2149762	Hydrocodone	79.9	64.8	P/P	40 - 160
2149762	Ibuprofen	70.6	71.3	P/P	30 - 160
2149762	Imidacloprid	156	154	P/P	40 - 160
2149762	Linuron	62.5	63.2	P/P	40 - 160
2149762	Mandestrobin	83.2	83.0	P/P	40 - 160
2149762	MCP	100	104	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P377352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149762	Naproxen	65.1	71.0	P/P	40 - 160
2149762	Primidone	94.1	97.0	P/P	40 - 160
2149762	Pyraclostrobin	68.0	69.0	P/P	30 - 160
2149762	Thiamethoxam	146	145	P/P	40 - 160
2149762	Tolfenpyrad	41.8	44.1	P/P	40 - 160
2149762	Triclopyr	75.6	91.3	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P377536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150536	Imazapyr	116	96.9	P/P	40 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P377702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150023	Fluoride	98.0	98.0	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P377538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149779	Organic Carbon	106	105	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149736	Turbidity	1.45	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149681	Barium	0.0969	Spike	P	0 - 20
2149681	Calcium	0.873	Spike	P	0 - 20
2149681	Iron	1.48	Spike	P	0 - 20
2149681	Magnesium	1.28	Spike	P	0 - 20
2149681	Potassium	1.40	Spike	P	0 - 20
2149681	Sodium	0.372	Spike	P	0 - 20
2149681	Zinc	0.270	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149681	Aluminum	0.897	Spike	P	0 - 20
2149681	Antimony	1.30	Spike	P	0 - 20
2149681	Arsenic	1.13	Spike	P	0 - 20
2149681	Boron	1.29	Spike	P	0 - 20
2149681	Cadmium	0.116	Spike	P	0 - 20
2149681	Chromium	1.57	Spike	P	0 - 20
2149681	Copper	1.11	Spike	P	0 - 20
2149681	Lead	0.0969	Spike	P	0 - 20
2149681	Nickel	1.48	Spike	P	0 - 20
2149681	Selenium	1.34	Spike	P	0 - 20
2149681	Silver	0.932	Spike	P	0 - 20
2149681	Thallium	0.00386	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149712	Antimony	1.63	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377407

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149552	Chloride	0.842	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149739	Chloride	1.19	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149552	Sulfate	0.237	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149739	Sulfate	0.905	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149697	Ammonia-N	0.144	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149774	Ammonia-N	1.54	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149697	Kjeldahl Nitrogen	2.44	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149774	Kjeldahl Nitrogen	6.72	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149670	NO2NO3-N	0.213	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149746	NO2NO3-N	0.244	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149737	Total-P	3.08	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149754	O-Phosphate-P	0.211	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P377313

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149642	Acesulfame K	2.14	Spike	P	0 - 30
2149642	AMPA	3.11	Spike	P	0 - 30
2149642	Endothall	1.67	Spike	P	0 - 30
2149642	Glufosinate	13.1	Spike	P	0 - 30
2149642	Glyphosate	8.40	Spike	P	0 - 30
2149642	Sucralose	6.36	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149762	2,4-D	9.45	Spike	P	0 - 30
2149762	Acetaminophen	4.81	Spike	P	0 - 30
2149762	Acetamiprid	4.49	Spike	P	0 - 30
2149762	Afidopyropen	16.4	Spike	P	0 - 30
2149762	Bentazon	6.15	Spike	P	0 - 30
2149762	Benzovindiflupyr	1.79	Spike	P	0 - 30
2149762	Carbamazepine	8.18	Spike	P	0 - 30
2149762	Clothianidin	2.92	Spike	P	0 - 30
2149762	Dinotefuran	7.10	Spike	P	0 - 30
2149762	Diuron	0.487	Spike	P	0 - 30
2149762	Fenuron	4.35	Spike	P	0 - 30
2149762	Fluridone	1.29	Spike	P	0 - 30
2149762	Hydrocodone	20.9	Spike	P	0 - 30
2149762	Ibuprofen	1.01	Spike	P	0 - 30
2149762	Imazapyr	0.322	Spike	P	0 - 30
2149762	Imidacloprid	1.63	Spike	P	0 - 30
2149762	Linuron	1.11	Spike	P	0 - 30
2149762	Mandestrobin	0.332	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P377352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149762	MCP	4.00	Spike	P	0 - 30
2149762	Naproxen	8.66	Spike	P	0 - 30
2149762	Primidone	3.06	Spike	P	0 - 30
2149762	Pyraclostrobin	1.37	Spike	P	0 - 30
2149762	Thiamethoxam	0.518	Spike	P	0 - 30
2149762	Tolfenpyrad	5.32	Spike	P	0 - 30
2149762	Triclopyr	18.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150536	Imazapyr	18.0	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P377380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149718	Color (true)	5.78	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P377493

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149736	Color (true)	0.565	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P377697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150023	Total Alkalinity	0.297	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P377592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149674	TDS	2.76	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P377702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150023	Fluoride	0.0	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P377538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149779	Organic Carbon	0.423	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2149762
Field Sample ID: 20030346

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	99.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.9	P	30 - 160
EPA 8321B	Diuron-d6	75.2	P	30 - 160
EPA 8321B	Endothall-d6	144	P	30 - 160
EPA 8321B	Endothall-d6	144	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	71.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	71.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.2	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	87.9	P	30 - 160
EPA 8321B	Sucralose-d6	87.9	P	30 - 160

Lab Sample ID: 2149763
Field Sample ID: 20030751

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.6	P	30 - 160
EPA 8321B	Diuron-d6	76.4	P	30 - 160
EPA 8321B	Endothall-d6	151	P	30 - 160
EPA 8321B	Endothall-d6	151	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.1	P	30 - 160
EPA 8321B	Primidone-d5	96.4	P	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	30 - 160

Lab Sample ID: 2149764
Field Sample ID: G2NE1183

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.0	P	30 - 160
EPA 8321B	Diuron-d6	76.4	P	30 - 160
EPA 8321B	Endothall-d6	148	P	30 - 160
EPA 8321B	Endothall-d6	148	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	78.3	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96853

Included Lab Sample IDs: 2149736, 2149739, 2149742, 2149745

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A96944

Included Lab Sample IDs: 2149738, 2149741, 2149744, 2149747

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96977

Included Lab Sample IDs: 2149737, 2149740, 2149743, 2149746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	98.9	P/P	90 - 110
Ammonia-N	101	101	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A96978

Included Lab Sample IDs: 2149739, 2149745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115

Reference Method: EPA 8321B

Run ID: A96995

Included Lab Sample IDs: 2149762, 2149763, 2149764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	104	101	P/P	60 - 160
Glufosinate	82.2	98.9	P/P	60 - 160
Glyphosate	92.1	96.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A96997

Included Lab Sample IDs: 2149762, 2149763, 2149764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	75.2	74.0	P/P	60 - 160
Endothall	126	139	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2149762, 2149763, 2149764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.6	91.9	P/P	50 - 150
Acetaminophen	122	100	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2149762, 2149763, 2149764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	97.0	105	P/P	50 - 150
Afidopyropen	102	109	P/P	50 - 150
Bentazon	94.6	92.9	P/P	50 - 160
Benzovindiflupyr	93.8	93.8	P/P	50 - 150
Carbamazepine	109	90.3	P/P	60 - 150
Clothianidin	113	99.0	P/P	60 - 150
Dinotefuran	106	86.3	P/P	50 - 150
Diuron	98.2	110	P/P	60 - 150
Fenuron	109	109	P/P	60 - 150
Fluridone	110	112	P/P	60 - 160
Hydrocodone	98.8	97.8	P/P	60 - 150
Ibuprofen	101	97.0	P/P	50 - 160
Imazapyr	95.0	82.0	P/P	50 - 150
Imidacloprid	98.0	97.9	P/P	60 - 150
Linuron	101	97.2	P/P	60 - 150
Mandestrobin	102	107	P/P	50 - 150
MCPP	82.4	91.4	P/P	50 - 150
Naproxen	72.4	80.1	P/P	50 - 160
Primidone	103	100	P/P	60 - 150
Pyraclostrobin	86.8	87.1	P/P	60 - 150
Thiamethoxam	112	101	P/P	50 - 150
Tolfenpyrad	82.0	82.2	P/P	60 - 150
Triclopyr	84.3	95.4	P/P	50 - 150

Reference Method: SM 2120 B-2011

Run ID: A97029

Included Lab Sample IDs: 2149736, 2149742

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115
Color (true)	101	101	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97036

Included Lab Sample IDs: 2149737, 2149740, 2149743, 2149746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110
NO2NO3-N	103	103	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A97050

Included Lab Sample IDs: 2149737, 2149740, 2149743, 2149746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97054

Included Lab Sample IDs: 2149787, 2149788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.6	99.0	P/P	90 - 110
Calcium	99.9	103	P/P	90 - 110
Iron	99.5	100	P/P	90 - 110
Magnesium	99.8	100	P/P	90 - 110
Potassium	98.7	98.9	P/P	90 - 110
Sodium	99.6	101	P/P	90 - 110
Zinc	100	99.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97087

Included Lab Sample IDs: 2149787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.0	98.6	P/P	90 - 110
Antimony	96.5	97.0	P/P	90 - 110
Boron	102	99.7	P/P	90 - 110
Chromium	96.1	97.3	P/P	90 - 110
Copper	101	99.8	P/P	90 - 110
Selenium	106	106	P/P	90 - 110
Silver	108	107	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97095

Included Lab Sample IDs: 2149787, 2149788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.1	96.2	P/P	90 - 110
Arsenic	100	99.5	P/P	90 - 110
Arsenic	99.5	100	P/P	90 - 110
Boron	102	102	P/P	90 - 110
Lead	102	103	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Selenium	98.2	97.9	P/P	90 - 110
Silver	109	110	P/P	90 - 110
Thallium	97.0	97.1	P/P	90 - 110
Thallium	97.1	96.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A97099

Included Lab Sample IDs: 2149736, 2149739, 2149742, 2149745

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

Reference Method: SM 4500 F-C-2011

Run ID: A97099

Included Lab Sample IDs: 2149736, 2149739, 2149742, 2149745

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97102

Included Lab Sample IDs: 2149746

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

Reference Method: EPA 8321B

Run ID: A97109

Included Lab Sample IDs: 2149762, 2149763, 2149764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	92.8	90.1	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97111

Included Lab Sample IDs: 2149737

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97112

Included Lab Sample IDs: 2149740, 2149743, 2149746

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	106	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97121

Included Lab Sample IDs: 2149762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	87.4	101	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97129

Included Lab Sample IDs: 2149787, 2149788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	100	100	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Chromium	95.0	94.6	P/P	90 - 110
Copper	96.6	95.6	P/P	90 - 110
Nickel	96.6	97.0	P/P	90 - 110
Nickel	97.0	95.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97141

Included Lab Sample IDs: 2149736, 2149739, 2149742, 2149745

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97149

Included Lab Sample IDs: 2149737, 2149740, 2149743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	105	P/P	90 - 110
Total-P	105	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97312

Included Lab Sample IDs: 2149788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	98.4	98.9	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						1.45	
EPA 200.7 Rev. 4.4	Barium	98.6	99.9	100	98.8			0.0969
	Calcium	104	105	106	102			0.873
	Iron	103	104	105	102			1.48
	Magnesium	104	105	107	101			1.28
	Potassium	99.7	103	105	98.3			1.40
	Sodium	102	101	102	102			0.372
	Zinc	97.6	99.3	99.5	99.5			0.270
EPA 200.8 Rev. 5.4	Aluminum	102	100	101	98.6			0.897
	Antimony	101	99.2	101	103			1.30
	Antimony	101	105	103				1.63
	Arsenic	99.5	97.7	96.6	97.3			1.13
	Boron	105	102	101	102			1.29
	Cadmium	103	107	107	108			0.116
	Chromium	94.2	93.8	95.3	93.0			1.57
	Copper	97.8	99.0	100	98.8			1.11
	Lead	103	105	105	106			0.0969
	Nickel	101	106	105	105			1.48
	Selenium	99.3	96.3	97.6	96.6			1.34
	Silver	105	104	103	104			0.932
	Thallium	102	103	103	104			0.0038
EPA 300.0 Rev. 2.1	Chloride	99.0	99.8	100			0.842	
	Chloride	101	102	101			1.19	
	Sulfate	99.3	100	95.6			0.237	
	Sulfate	101	101	102			0.905	
EPA 350.1 Rev. 2.0	Ammonia-N	101	102	102				0.144
	Ammonia-N	100	99.8	102				1.54
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.5	103	106				2.44
	Kjeldahl Nitrogen	101	100	109				6.72
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	99.5					0.213
	NO ₂ NO ₃ -N	102	100					0.244
EPA 365.1 Rev. 2.0	Total-P	106	103	107				3.08
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	96.0	95.7				0.211
EPA 8321B	2,4-D	121						9.45
	Acesulfame K	87.2	37.8	38.7				2.14
	Acetaminophen	101	96.4	101				4.81
	Acetamiprid	97.0	98.2	103				4.49
	Afidopyropen	110	64.6	54.8				16.4
	AMPA	85.0	92.2	95.2				3.11
	Bentazon	63.5	29.4	31.3				6.15
	Benzovindiflupyr	80.3	66.6	67.8				1.79
	Carbamazepine	101	77.7	84.4				8.18
	Clothianidin	99.1	106	103				2.92
	Dinotefuran	97.2	127	118				7.10
	Diuron	88.7	68.2	67.9				0.487
	Endothall	131	138	140				1.67
	Fenuron	95.0	81.4	85.1				4.35
	Fluridone	99.2	89.6	90.8				1.29
	Glufosinate	93.7	88.7	101				13.1
	Glyphosate	99.1	91.1	83.8				8.40
	Hydrocodone	97.5	79.9	64.8				20.9
	Ibuprofen	90.2	70.6	71.3				1.01
	Imazapyr	80.5						0.322
	Imazapyr	77.0	116	96.9				18.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imidacloprid	104	156	154		1.63
	Linuron	68.7	62.5	63.2		1.11
	Mandestrobin	91.9	83.2	83.0		0.332
	MCPP	132	100	104		4.00
	Naproxen	76.0	65.1	71.0		8.66
	Primidone	90.2	94.1	97.0		3.06
	Pyraclostrobin	71.5	68.0	69.0		1.37
	Sucralose	92.4	87.8	93.9		6.36
	Thiamethoxam	96.0	146	145		0.518
	Tolfenpyrad	45.2	41.8	44.1		5.32
	Triclopyr	114	75.6	91.3		18.8
SM 2120 B-2011	Color (true)	97.2			5.78	
	Color (true)	99.3			0.565	
SM 2320 B-2011	Total Alkalinity	103			0.297	
SM 2540 C-2011	TDS				2.76	
SM 4500 F-C-2011	Fluoride	97.1	98.0	98.0		0.0
SM 5310 B-2011	Organic Carbon	101	106	105		0.423

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2149736, 2149739, 2149742, 2149745
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2149787, 2149788
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2149787, 2149788
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2149736, 2149739, 2149742, 2149745
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2149736, 2149739, 2149742, 2149745
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2149737, 2149740, 2149743, 2149746
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2149737, 2149740, 2149743, 2149746
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2149737, 2149740, 2149743, 2149746
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2149737, 2149740, 2149743, 2149746
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2149738, 2149741, 2149744, 2149747
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2149762, 2149763, 2149764
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2149762, 2149763, 2149764
SM 2120 B-2011 / E31780	True Color measured at 450 nm (not valid for NPDES monitoring)	2149736, 2149739, 2149742, 2149745
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2149736, 2149739, 2149742, 2149745
SM 2340B / E31780	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2149787, 2149788
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2149736, 2149739, 2149742, 2149745
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2149736, 2149739, 2149742, 2149745
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2149736, 2149739, 2149742, 2149745
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2149737, 2149740, 2149743, 2149746

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	01/16/2020			01/16/2020 15:46	Yen Ta	2149736, 2149739, 2149742, 2149745
EPA 200.7 Rev. 4.4	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/22/2020 16:26	Betina Topolski	2149787
	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/22/2020 16:45	Betina Topolski	2149788
EPA 200.8 Rev. 5.4	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/23/2020 22:13	Justin Cutchin	2149787
	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/24/2020 22:47	Alexander Thompson	2149787
	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/24/2020 23:45	Alexander Thompson	2149788
	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/28/2020 00:09	Alexander Thompson	2149787
	01/16/2020	01/21/2020 15:00	Elliott D. Healy	01/28/2020 01:07	Alexander Thompson	2149788
	01/16/2020	01/30/2020 15:25	Elliott D. Healy	02/04/2020 15:11	Alexander Thompson	2149788
EPA 300.0 Rev. 2.1	01/16/2020			01/17/2020 20:25	Lipi Saha	2149736
	01/16/2020			01/17/2020 21:37	Lipi Saha	2149739
	01/16/2020			01/17/2020 22:25	Lipi Saha	2149742
	01/16/2020			01/17/2020 22:37	Lipi Saha	2149745
EPA 350.1 Rev. 2.0	01/16/2020			01/17/2020 12:20	Ping Hua	2149737
	01/16/2020			01/17/2020 12:38	Ping Hua	2149740
	01/16/2020			01/17/2020 12:39	Ping Hua	2149743
	01/16/2020			01/17/2020 12:41	Ping Hua	2149746
EPA 351.2 Rev. 2.0	01/16/2020	01/23/2020 11:30	Jhamieka S. Greenwood	01/24/2020 08:48	Jhamieka S. Greenwood	2149737
	01/16/2020	01/23/2020 11:30	Jhamieka S. Greenwood	01/24/2020 13:07	Julia Storbeck	2149740
	01/16/2020	01/23/2020 11:30	Jhamieka S. Greenwood	01/24/2020 13:08	Julia Storbeck	2149743
	01/16/2020	01/23/2020 11:30	Jhamieka S. Greenwood	01/24/2020 13:10	Julia Storbeck	2149746
EPA 353.2 Rev. 2.0	01/16/2020			01/22/2020 09:56	Beverly Y. Sanders	2149737
	01/16/2020			01/22/2020 09:57	Beverly Y. Sanders	2149740
	01/16/2020			01/22/2020 09:58	Beverly Y. Sanders	2149743
	01/16/2020			01/22/2020 10:05	Beverly Y. Sanders	2149746
EPA 365.1 Rev. 2.0	01/16/2020	01/23/2020 15:35	Yen Ta	01/24/2020 11:34	Benjamin T. Nordmann	2149746
	01/16/2020	01/23/2020 15:35	Yen Ta	01/28/2020 15:24	Benjamin T. Nordmann	2149737
	01/16/2020	01/23/2020 15:35	Yen Ta	01/28/2020 15:25	Benjamin T. Nordmann	2149740
	01/16/2020	01/23/2020 15:35	Yen Ta	01/28/2020 15:32	Benjamin T. Nordmann	2149743
EPA 365.1 Rev. 2.0 dissolved	01/16/2020			01/16/2020 13:18	Carlos Miranda	2149738, 2149741
	01/16/2020			01/16/2020 13:20	Carlos Miranda	2149744
	01/16/2020			01/16/2020 13:21	Carlos Miranda	2149747
EPA 8321B	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 17:45	Rebecca Ware	2149762
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 17:56	Rebecca Ware	2149763
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/17/2020 18:07	Rebecca Ware	2149764
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/19/2020 21:52	Rebecca Ware	2149762
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/19/2020 22:06	Rebecca Ware	2149763
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/19/2020 22:19	Rebecca Ware	2149764
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/24/2020 01:36	Rebecca Ware	2149762
	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/24/2020 01:48	Rebecca Ware	2149763

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/16/2020	01/17/2020 11:00	Rebecca Ware	01/24/2020 02:00	Rebecca Ware	2149764
	01/16/2020	01/21/2020 11:00	Hoor Shaik	01/21/2020 22:43	Juyoung Kim	2149762
	01/16/2020	01/21/2020 11:00	Hoor Shaik	01/21/2020 23:17	Juyoung Kim	2149763
	01/16/2020	01/21/2020 11:00	Hoor Shaik	01/21/2020 23:52	Juyoung Kim	2149764
	01/16/2020	01/21/2020 11:00	Hoor Shaik	01/24/2020 20:16	Juyoung Kim	2149762
SM 2120 B-2011	01/16/2020			01/16/2020 15:29	Madeline Funaro	2149739
	01/16/2020			01/16/2020 15:31	Madeline Funaro	2149745
	01/16/2020			01/16/2020 16:59	Madeline Funaro	2149742
	01/16/2020			01/16/2020 17:05	Madeline Funaro	2149736
SM 2320 B-2011	01/16/2020			01/25/2020 05:22	Dale L. Simmons	2149736
	01/16/2020			01/25/2020 05:35	Dale L. Simmons	2149739
	01/16/2020			01/25/2020 05:47	Dale L. Simmons	2149742
	01/16/2020			01/25/2020 06:00	Dale L. Simmons	2149745
SM 2340B	01/16/2020			01/22/2020 16:26	Betina Topolski	2149787
	01/16/2020			01/22/2020 16:45	Betina Topolski	2149788
SM 2540 C-2011	01/16/2020			01/17/2020 18:00	Blanca Fach	2149736, 2149739, 2149742, 2149745
SM 2540 D-2011	01/16/2020			01/17/2020 18:00	Blanca Fach	2149736, 2149739, 2149742, 2149745
SM 4500 F-C-2011	01/16/2020			01/25/2020 05:22	Dale L. Simmons	2149736
	01/16/2020			01/25/2020 05:35	Dale L. Simmons	2149739
	01/16/2020			01/25/2020 05:47	Dale L. Simmons	2149742
	01/16/2020			01/25/2020 06:00	Dale L. Simmons	2149745
SM 5310 B-2011	01/16/2020			01/22/2020 01:58	Madeline Funaro	2149737
	01/16/2020			01/22/2020 02:11	Madeline Funaro	2149740
	01/16/2020			01/22/2020 02:23	Madeline Funaro	2149743
	01/16/2020			01/22/2020 02:36	Madeline Funaro	2149746