

Chemical Analysis Report

NW-DIST-2020-01-17-02

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

Event Description: **Crestview Run**
Request ID: **RQ-2020-01-13-42**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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

Date Certified: 06-FEB-2020 10:37

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: Big Horse Creek upstream of Old River Road Collection Date/Time: 01/16/2020 10:00

Field ID: G4NW0298

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150395	EPA 8321B	2,4-D	0.0020	U	ug/L	P377352	
		Acesulfame K**	0.10	U	ug/L	P377476	
		AMPA**	0.10	U	ug/L	P377476	
		Sucralose**	0.020	I	ug/L	P377476	
		Acetaminophen**	0.0080	U	ug/L	P377352	
		Acetamiprid**	0.0020	U	ug/L	P377352	
		Endothall**	0.25	U	ug/L	P377476	
		Glufosinate**	0.10	U	ug/L	P377476	
		Glyphosate**	0.10	U	ug/L	P377476	
		Afidopyropen**	0.0020	UJ	ug/L	P377352	
		Bentazon	8.0E-04	U	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**	0.0062	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	
		MCPP	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	
		Tolfenpyrad**	0.0020	U	ug/L	P377352	
		Triclopyr**	0.0040	U	ug/L	P377352	

Ref. Method and Comment:

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: Panther Creek upstream of High Bridge Road Collection Date/Time: 01/16/2020 10:30

Field ID: G4NW0297

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150396	EPA 8321B	2,4-D	0.0020	U	ug/L	P377352	
		Acesulfame K**	0.10	U	ug/L	P377476	
		AMPA**	0.10	U	ug/L	P377476	
		Sucralose**	0.018	I	ug/L	P377476	
		Acetaminophen**	0.0080	U	ug/L	P377352	
		Acetamiprid**	0.0020	U	ug/L	P377352	
		Endothall**	0.25	U	ug/L	P377476	
		Glufosinate**	0.10	U	ug/L	P377476	
		Glyphosate**	0.10	U	ug/L	P377476	
		Afidopyropen**	0.0020	UJ	ug/L	P377352	
		Bentazon	8.0E-04	U	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**	0.0040	U	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	
		MCPP	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	
		Tolfenpyrad**	0.0020	U	ug/L	P377352	
		Triclopyr**	0.0040	U	ug/L	P377352	

Ref. Method and Comment:

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: Panther Creek upstream John Riley Barnhill Road

Collection Date/Time: 01/16/2020 11:05

Field ID: G4NW0296

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150397	EPA 8321B	2,4-D	0.0020	U	ug/L	P377352	
		Acesulfame K**	0.10	U	ug/L	P377476	
		AMPA**	0.10	U	ug/L	P377476	
		Sucralose**	0.016	I	ug/L	P377476	
		Acetaminophen**	0.0080	U	ug/L	P377352	
		Acetamiprid**	0.0020	U	ug/L	P377352	
		Endothall**	0.25	U	ug/L	P377476	
		Glufosinate**	0.10	U	ug/L	P377476	
		Glyphosate**	0.10	U	ug/L	P377476	
		Afidopyropen**	0.0020	UJ	ug/L	P377352	
		Bentazon	8.0E-04	U	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**	0.0040	U	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	
		MCPP	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	
		Tolfenpyrad**	0.0020	U	ug/L	P377352	
		Triclopyr**	0.0040	U	ug/L	P377352	

Ref. Method and Comment:

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: Deadfall Creek upstream of Shockley Springs Rd. **Collection Date/Time: 01/16/2020 11:39**

Field ID: G4NW0490

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150371	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P377775	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P377878	
		Sulfate	1.4		mg SO4/L	P377881	
	SM 2120 B-2011	Color (true)	45	A	PCU	P377483	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P377699	
	SM 2540 C-2011	TDS	19	I	mg/L	P377792	
	SM 2540 D-2011	TSS	3	I	mg/L	P377579	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P377704	
2150375	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P378012	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P377892	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P377673	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P377686	
	SM 5310 B-2011	Organic Carbon	5.3		mg C/L	P377828	
2150379	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P377564	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample was analyzed out of holding time because of analytical difficulties.

Sample Location: Deadfall Creek upstream of Old River Rd.

Collection Date/Time: 01/16/2020 11:55

Field ID: G4NW0491

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150372	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P377775	
	EPA 300.0 Rev. 2.1	Chloride	3.0		mg Cl/L	P377878	
		Sulfate	1.5		mg SO4/L	P377881	
		Color (true)	49		PCU	P377483	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P377699	
	SM 2540 C-2011	TDS	32		mg/L	P377793	
	SM 2540 D-2011	TSS	4	I	mg/L	P377580	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P377704	
2150376	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P378012	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P377892	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P377673	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P377686	
	SM 5310 B-2011	Organic Carbon	5.6		mg C/L	P377828	
2150380	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P377455	
2150399	EPA 200.7 Rev. 4.4	Barium	11.4		ug/L	P377529	
		Calcium	0.81		mg/L	P377529	
		Iron	310		ug/L	P377529	
		Magnesium	0.51		mg/L	P377529	
		Potassium	0.30	U	mg/L	P377529	
		Sodium	1.7	I	mg/L	P377529	
		Zinc	5.0	U	ug/L	P377529	
		Aluminum	263		ug/L	P377529	
		Antimony	0.050	U	ug/L	P377529	
		Arsenic	0.23		ug/L	P377529	
	EPA 200.8 Rev. 5.4	Boron**	7.3	I	ug/L	P377529	
		Cadmium	0.020	U	ug/L	P377529	
		Chromium	0.40	U	ug/L	P377529	
		Copper	0.40	U	ug/L	P377529	
		Lead	0.26	I	ug/L	P377529	
		Nickel	0.50	U	ug/L	P377529	
		Selenium	0.20	U	ug/L	P377529	
		Silver	0.010	U	ug/L	P377529	
		Thallium	0.10	U	ug/L	P377529	

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: Baggett Creek upstream of Keyser Mill Road

Collection Date/Time: 01/16/2020 13:00

Field ID: G4NW0335

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150373	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P377775	
	EPA 300.0 Rev. 2.1	Chloride	4.1		mg Cl/L	P377878	
		Sulfate	0.82		mg SO4/L	P377881	
		Color (true)	31	A	PCU	P377484	
	SM 2320 B-2011	Total Alkalinity	3.3		mg CaCO3/L	P377699	
	SM 2540 C-2011	TDS	27		mg/L	P377793	
	SM 2540 D-2011	TSS	3	I	mg/L	P377580	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P377704	
2150377	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P378012	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P377892	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.59		mg N/L	P377673	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P377686	
	SM 5310 B-2011	Organic Carbon	2.7		mg C/L	P377828	
2150381	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P377455	
2150400	EPA 200.7 Rev. 4.4	Barium	34.8		ug/L	P377529	
		Calcium	1.23		mg/L	P377529	
		Iron	510		ug/L	P377529	
		Magnesium	1.20		mg/L	P377529	
		Potassium	0.66	I	mg/L	P377529	
		Sodium	2.4		mg/L	P377529	
		Zinc	5.0	U	ug/L	P377529	
		Aluminum	127		ug/L	P377529	
		Antimony	0.050	U	ug/L	P377529	
		Arsenic	0.24		ug/L	P377529	
	EPA 200.8 Rev. 5.4	Boron**	9.2		ug/L	P377529	
		Cadmium	0.020	U	ug/L	P377529	
		Chromium	0.40	U	ug/L	P377529	
		Copper	0.40	U	ug/L	P377529	
		Lead	0.20	U	ug/L	P377529	
		Nickel	0.50	U	ug/L	P377529	
		Selenium	0.20	U	ug/L	P377529	
		Silver	0.010	U	ug/L	P377529	
		Thallium	0.10	U	ug/L	P377529	

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: Baggett Creek upstream of Hwy 90

Collection Date/Time: 01/16/2020 13:35

Field ID: G4NW0336

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150374	EPA 180.1 Rev. 2.0	Turbidity	3.6	A	NTU	P377776	
	EPA 300.0 Rev. 2.1	Chloride	3.7		mg Cl/L	P377878	
		Sulfate	1.3		mg SO4/L	P377881	
	SM 2120 B-2011	Color (true)	48		PCU	P377484	
	SM 2320 B-2011	Total Alkalinity	7.7		mg CaCO3/L	P377699	
	SM 2540 C-2011	TDS	37		mg/L	P377793	
	SM 2540 D-2011	TSS	6	I	mg/L	P377580	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P377704	
2150378	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P378012	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P377892	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P377673	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P377687	
	SM 5310 B-2011	Organic Carbon	4.3		mg C/L	P377828	
2150382	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P377455	
2150401	EPA 200.7 Rev. 4.4	Barium	20.7		ug/L	P377529	
		Calcium	2.72		mg/L	P377529	
		Iron	450		ug/L	P377529	
		Magnesium	1.25		mg/L	P377529	
		Potassium	0.53	I	mg/L	P377529	
		Sodium	2.4		mg/L	P377529	
		Zinc	5.0	U	ug/L	P377529	
		Aluminum	184		ug/L	P377529	
		Antimony	0.050	U	ug/L	P377529	
		Arsenic	0.26		ug/L	P377529	
	EPA 200.8 Rev. 5.4	Boron**	9.1		ug/L	P377529	
		Cadmium	0.020	U	ug/L	P377529	
		Chromium	0.40	U	ug/L	P377529	
		Copper	0.40	U	ug/L	P377529	
		Lead	0.20	U	ug/L	P377529	
		Nickel	0.50	U	ug/L	P377529	
		Selenium	0.20	U	ug/L	P377529	
		Silver	0.010	U	ug/L	P377529	
		Thallium	0.10	U	ug/L	P377529	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377775

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377776

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377529

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: P377529

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 300.0 Rev. 2.1
Batch ID: P377878

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377881

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: P378012

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377892

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377673

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377686

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377455

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377564

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P377352

Component	Result	Code	Units
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: P377476

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

Reference Method: SM 2120 B-2011
Batch ID: P377483

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P377484

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P377699

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

Reference Method: SM 2540 C-2011
Batch ID: P377792

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P377793

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377579

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377580

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377704

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377828

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: P377529

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	97.1		P	85 - 115
Calcium	103		P	85 - 115
Iron	103		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	99.9		P	85 - 115
Sodium	103		P	85 - 115
Zinc	96.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377529

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.0		P	85 - 115
Antimony	97.6		P	85 - 115
Arsenic	95.9		P	85 - 115
Boron	96.6		P	85 - 115
Cadmium	93.8		P	85 - 115
Chromium	92.7		P	85 - 115
Copper	93.8		P	85 - 115
Lead	100		P	85 - 115
Nickel	93.8		P	85 - 115
Selenium	89.2		P	85 - 115
Silver	105		P	85 - 115
Thallium	98.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377878

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377881

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378012

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377892

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377673

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: P377686

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377455

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377564

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

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	96.0		P	40 - 160
Tolfenpyrad	45.2		P	40 - 160
Triclopyr	114		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P377476

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	121		P	40 - 150
AMPA	91.1		P	40 - 150
Endothall	112		P	40 - 150
Glufosinate	93.8		P	40 - 150
Glyphosate	101		P	40 - 140
Sucralose	91.6		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P377483

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P377484

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P377699

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

Reference Method: SM 4500 F-C-2011
Batch ID: P377704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150329	Barium	97.0	98.4	P/P	80 - 120
2150329	Calcium	106		P	80 - 120
2150329	Iron	99.3	102	P/P	80 - 120
2150329	Magnesium	98.6	102	P/P	80 - 120
2150329	Potassium	98.0	100	P/P	80 - 120
2150329	Sodium	97.4	101	P/P	80 - 120
2150329	Zinc	96.7	99.0	P/P	80 - 120
2150400	Barium	104		P	80 - 120
2150400	Calcium	110		P	80 - 120
2150400	Iron	109		P	80 - 120
2150400	Magnesium	111		P	80 - 120
2150400	Potassium	107		P	80 - 120
2150400	Sodium	108		P	80 - 120
2150400	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150329	Aluminum	95.8	96.3	P/P	80 - 120
2150329	Antimony	97.6	98.2	P/P	80 - 120
2150329	Arsenic	94.8	95.7	P/P	80 - 120
2150329	Boron	95.5	96.7	P/P	80 - 120
2150329	Cadmium	95.0	95.4	P/P	80 - 120
2150329	Chromium	95.9	96.9	P/P	80 - 120
2150329	Copper	95.7	98.5	P/P	80 - 120
2150329	Lead	101	102	P/P	80 - 120
2150329	Nickel	93.9	95.2	P/P	80 - 120
2150329	Selenium	90.2	91.1	P/P	80 - 120
2150329	Silver	104	105	P/P	80 - 120
2150329	Thallium	101	102	P/P	80 - 120
2150400	Aluminum	96.0		P	80 - 120
2150400	Antimony	98.1		P	80 - 120
2150400	Arsenic	96.1		P	80 - 120
2150400	Boron	98.3		P	80 - 120
2150400	Cadmium	95.1		P	80 - 120
2150400	Chromium	94.7		P	80 - 120
2150400	Copper	94.7		P	80 - 120
2150400	Lead	102		P	80 - 120
2150400	Nickel	94.3		P	80 - 120
2150400	Selenium	90.5		P	80 - 120
2150400	Silver	103		P	80 - 120
2150400	Thallium	99.7		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150292	Chloride	102		P	90 - 110
2150531	Chloride	104		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150292	Sulfate	101		P	90 - 110
2150531	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150293	Ammonia-N	99.2	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P377892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150375	Kjeldahl Nitrogen	105	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150376	NO2NO3-N	98.2	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150285	Total-P	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150378	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377455

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150326	O-Phosphate-P	94.8	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150379	O-Phosphate-P	96.7	99.6	P/P	90 - 110

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

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	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
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: P377476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150259	Acesulfame K	45.1	46.4	P/P	40 - 150
2150259	AMPA	74.8	76.0	P/P	40 - 150
2150259	Endothall	131	135	P/P	40 - 150
2150259	Glufosinate	77.9	83.3	P/P	40 - 150
2150259	Glyphosate	82.0	81.8	P/P	40 - 140
2150259	Sucralose	70.7	53.3	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P377704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150322	Fluoride	99.6	99.6	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P377828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150377	Organic Carbon	98.1	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150277	Turbidity	5.28	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150374	Turbidity	3.36	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150329	Barium	1.38	Spike	P	0 - 20
2150329	Calcium	2.48	Spike	P	0 - 20
2150329	Iron	2.29	Spike	P	0 - 20
2150329	Magnesium	2.11	Spike	P	0 - 20
2150329	Potassium	2.22	Spike	P	0 - 20
2150329	Sodium	2.27	Spike	P	0 - 20
2150329	Zinc	2.33	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150329	Aluminum	0.512	Spike	P	0 - 20
2150329	Antimony	0.613	Spike	P	0 - 20
2150329	Arsenic	0.988	Spike	P	0 - 20
2150329	Boron	1.14	Spike	P	0 - 20
2150329	Cadmium	0.487	Spike	P	0 - 20
2150329	Chromium	1.01	Spike	P	0 - 20
2150329	Copper	2.93	Spike	P	0 - 20
2150329	Lead	0.725	Spike	P	0 - 20
2150329	Nickel	1.36	Spike	P	0 - 20
2150329	Selenium	1.02	Spike	P	0 - 20
2150329	Silver	1.46	Spike	P	0 - 20
2150329	Thallium	0.826	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150292	Chloride	0.353	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150292	Sulfate	0.0535	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150293	Ammonia-N	0.0712	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150375	Kjeldahl Nitrogen	0.354	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150376	NO2NO3-N	0.412	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150285	Total-P	1.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150378	Total-P	1.12	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150326	O-Phosphate-P	0.782	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150379	O-Phosphate-P	2.95	Spike	P	0 - 20

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	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
2149762	MCPP	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: P377476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150259	Acesulfame K	2.83	Spike	P	0 - 30
2150259	AMPA	1.01	Spike	P	0 - 30
2150259	Endothall	3.02	Spike	P	0 - 30
2150259	Glufosinate	6.76	Spike	P	0 - 30
2150259	Glyphosate	0.139	Spike	P	0 - 30
2150259	Sucralose	27.1	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P377483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150371	Color (true)	0.990	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P377484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150373	Color (true)	2.79	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
 Batch ID: P377699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150322	Total Alkalinity	0.476	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
 Batch ID: P377792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150154	TDS	0.394	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
 Batch ID: P377793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150414	TDS	1.02	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P377704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150322	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
 Batch ID: P377828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150377	Organic Carbon	0.0896	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2150395
Field Sample ID: G4NW0298

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	83.6	P	30 - 160
EPA 8321B	Endothall-d6	147	P	30 - 160
EPA 8321B	Endothall-d6	147	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.1	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	91.1	P	30 - 160
EPA 8321B	Sucralose-d6	91.1	P	30 - 160

Lab Sample ID: 2150396
Field Sample ID: G4NW0297

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.5	P	30 - 160
EPA 8321B	Diuron-d6	77.0	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.2	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	92.4	P	30 - 160
EPA 8321B	Sucralose-d6	92.4	P	30 - 160

Lab Sample ID: 2150397
Field Sample ID: G4NW0296

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.8	P	30 - 160
EPA 8321B	Diuron-d6	88.5	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.7	P	30 - 160
EPA 8321B	Primidone-d5	117	P	30 - 160
EPA 8321B	Sucralose-d6	92.7	P	30 - 160
EPA 8321B	Sucralose-d6	92.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A96994

Included Lab Sample IDs: 2150380, 2150381, 2150382

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.1	96.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2150395, 2150396, 2150397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.9	92.7	P/P	50 - 150
Acetaminophen	100	102	P/P	60 - 160
Acetamiprid	105	110	P/P	50 - 150
Afidopyropen	109	90.5	P/P	50 - 150
Bentazon	92.9	92.7	P/P	50 - 160
Benzovindiflupyr	93.8	92.6	P/P	50 - 150
Carbamazepine	90.3	102	P/P	60 - 150
Clothianidin	99.0	112	P/P	60 - 150
Dinotefuran	86.3	94.5	P/P	50 - 150
Diuron	110	109	P/P	60 - 150
Fenuron	109	105	P/P	60 - 150
Fluridone	112	113	P/P	60 - 160
Hydrocodone	97.8	100	P/P	60 - 150
Ibuprofen	97.0	85.8	P/P	50 - 160
Imazapyr	82.0	85.1	P/P	50 - 150
Imidacloprid	97.9	95.1	P/P	60 - 150
Linuron	97.2	107	P/P	60 - 150
Mandestrobin	107	102	P/P	50 - 150
MCPP	91.4	91.6	P/P	50 - 150
Naproxen	80.1	68.4	P/P	50 - 160
Primidone	100	104	P/P	60 - 150
Pyraclostrobin	87.1	86.1	P/P	60 - 150
Thiamethoxam	101	103	P/P	50 - 150
Tolfenpyrad	82.2	82.6	P/P	60 - 150
Triclopyr	95.4	93.2	P/P	50 - 150

Reference Method: SM 2120 B-2011

Run ID: A97023

Included Lab Sample IDs: 2150371, 2150372, 2150373, 2150374

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	101	P/P	85 - 115
Color (true)	103	103	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97060

Included Lab Sample IDs: 2150379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97071

Included Lab Sample IDs: 2150395, 2150396, 2150397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	77.1	73.8	P/P	25 - 200
AMPA	81.3	77.1	P/P	25 - 200
Glufosinate	80.8	95.8	P/P	25 - 200
Glufosinate	95.8	78.5	P/P	25 - 200
Glyphosate	94.1	95.9	P/P	25 - 200
Glyphosate	95.9	99.7	P/P	25 - 200

Reference Method: EPA 8321B

Run ID: A97072

Included Lab Sample IDs: 2150395, 2150396, 2150397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	117	99.3	P/P	60 - 160
Acesulfame K	99.3	97.8	P/P	60 - 160
Endothall	130	132	P/P	60 - 160
Endothall	132	131	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97081

Included Lab Sample IDs: 2150399, 2150400, 2150401

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	102	P/P	90 - 110
Calcium	103	102	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Magnesium	103	104	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Sodium	101	99.7	P/P	90 - 110
Zinc	101	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97091

Included Lab Sample IDs: 2150375, 2150376, 2150377, 2150378

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

Reference Method: SM 2320 B-2011

Run ID: A97099

Included Lab Sample IDs: 2150371, 2150372, 2150373, 2150374

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

Reference Method: SM 4500 F-C-2011

Run ID: A97099

Included Lab Sample IDs: 2150371, 2150372, 2150373, 2150374

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97109

Included Lab Sample IDs: 2150395, 2150396, 2150397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	94.2	103	P/P	60 - 160
Sucralose	94.4	94.2	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97139

Included Lab Sample IDs: 2150371, 2150372, 2150373, 2150374

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97154

Included Lab Sample IDs: 2150399, 2150400, 2150401

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	97.9	P/P	90 - 110
Aluminum	97.9	98.4	P/P	90 - 110
Antimony	96.7	97.4	P/P	90 - 110
Antimony	97.4	97.1	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Boron	98.0	99.4	P/P	90 - 110
Boron	99.4	98.1	P/P	90 - 110
Cadmium	98.7	99.8	P/P	90 - 110
Cadmium	99.8	99.5	P/P	90 - 110
Chromium	98.3	98.5	P/P	90 - 110
Chromium	98.5	99.3	P/P	90 - 110
Copper	97.4	97.3	P/P	90 - 110
Copper	97.6	97.4	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	97.5	98.1	P/P	90 - 110
Nickel	98.4	97.5	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Silver	108	109	P/P	90 - 110
Silver	109	109	P/P	90 - 110
Thallium	97.0	97.2	P/P	90 - 110
Thallium	97.2	96.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A97157

Included Lab Sample IDs: 2150375, 2150376, 2150377, 2150378

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	101	P/P	90 - 110
Organic Carbon	99.7	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97170

Included Lab Sample IDs: 2150371, 2150372, 2150373, 2150374

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	104	P/P	90 - 110
Sulfate	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97171

Included Lab Sample IDs: 2150375, 2150376, 2150377, 2150378

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	106	103	P/P	90 - 110
Total-P	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97209

Included Lab Sample IDs: 2150375, 2150376, 2150377, 2150378

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	110	P/P	90 - 110
Kjeldahl Nitrogen	110	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97220

Included Lab Sample IDs: 2150375, 2150376, 2150377, 2150378

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

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements. Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					5.28	
	Turbidity					3.36	
EPA 200.7 Rev. 4.4	Barium	97.1	97.0	98.4	104		1.38
	Calcium	103	106	110			2.48
	Iron	103	99.3	102	109		2.29
	Magnesium	103	98.6	102	111		2.11
	Potassium	99.9	98.0	100	107		2.22
	Sodium	103	97.4	101	108		2.27
	Zinc	96.3	96.7	99.0	103		2.33
EPA 200.8 Rev. 5.4	Aluminum	96.0	95.8	96.3	96.0		0.512
	Antimony	97.6	97.6	98.2	98.1		0.613
	Arsenic	95.9	94.8	95.7	96.1		0.988
	Boron	96.6	95.5	96.7	98.3		1.14
	Cadmium	93.8	95.0	95.4	95.1		0.487
	Chromium	92.7	95.9	96.9	94.7		1.01
	Copper	93.8	95.7	98.5	94.7		2.93
	Lead	100	101	102	102		0.725
	Nickel	93.8	93.9	95.2	94.3		1.36
	Selenium	89.2	90.2	91.1	90.5		1.02
	Silver	105	104	105	103		1.46
	Thallium	98.9	101	102	99.7		0.826
EPA 300.0 Rev. 2.1	Chloride	103	102	104		0.353	
	Sulfate	103	101	103		0.0535	
EPA 350.1 Rev. 2.0	Ammonia-N	99.5	99.2	99.2			0.0712
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	105	105			0.354
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	98.2	98.8			0.412
EPA 365.1 Rev. 2.0	Total-P	105	101	104			1.52
	Total-P	105	106	105			1.12
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	94.8	95.8			0.782
	O-Phosphate-P	98.4	96.7	99.6			2.95
EPA 8321B	2,4-D	121					9.45
	Acesulfame K	121	45.1	46.4			2.83
	Acetaminophen	101	96.4	101			4.81
	Acetamiprid	97.0	98.2	103			4.49
	Afidopyropen	110	64.6	54.8			16.4
	AMPA	91.1	74.8	76.0			1.01
	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	112	131	135			3.02
	Fenuron	95.0	81.4	85.1			4.35
	Fluridone	99.2	89.6	90.8			1.29
	Glufosinate	93.8	77.9	83.3			6.76
	Glyphosate	101	82.0	81.8			0.139
	Hydrocodone	97.5	79.9	64.8			20.9
	Ibuprofen	90.2	70.6	71.3			1.01
	Imazapyr	80.5					0.322
	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	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	91.6	70.7	53.3		27.1
	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)	101			0.990	
	Color (true)	100			2.79	
SM 2320 B-2011	Total Alkalinity	105			0.476	
SM 2540 C-2011	TDS				0.394	
	TDS				1.02	
SM 4500 F-C-2011	Fluoride	99.5	99.6	99.6		0.0
SM 5310 B-2011	Organic Carbon	96.5	98.1	98.2		0.0896

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2150371, 2150372, 2150373, 2150374
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2150399, 2150400, 2150401
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2150399, 2150400, 2150401
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2150371, 2150372, 2150373, 2150374
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2150371, 2150372, 2150373, 2150374
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2150375, 2150376, 2150377, 2150378
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2150375, 2150376, 2150377, 2150378
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2150375, 2150376, 2150377, 2150378
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2150375, 2150376, 2150377, 2150378
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2150379, 2150380, 2150381, 2150382
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2150395, 2150396, 2150397
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2150395, 2150396, 2150397
SM 2120 B-2011 / E31780	True Color measured at 450 nm (not valid for NPDES monitoring)	2150371, 2150372, 2150373, 2150374
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2150371, 2150372, 2150373, 2150374
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2150371, 2150372, 2150373, 2150374
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2150371, 2150372, 2150373, 2150374
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2150371, 2150372, 2150373, 2150374
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2150375, 2150376, 2150377, 2150378

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	01/17/2020			01/17/2020 16:48	Yen Ta	2150371, 2150372, 2150373, 2150374
EPA 200.7 Rev. 4.4	01/17/2020	01/22/2020 14:45	Elliott D. Healy	01/23/2020 15:09	Betina Topolski	2150399
	01/17/2020	01/22/2020 14:45	Elliott D. Healy	01/23/2020 15:15	Betina Topolski	2150400
	01/17/2020	01/22/2020 14:45	Elliott D. Healy	01/23/2020 15:32	Betina Topolski	2150401
EPA 200.8 Rev. 5.4	01/17/2020	01/22/2020 14:45	Elliott D. Healy	01/28/2020 23:52	Alexander Thompson	2150400
	01/17/2020	01/22/2020 14:45	Elliott D. Healy	01/29/2020 00:50	Alexander Thompson	2150399
	01/17/2020	01/22/2020 14:45	Elliott D. Healy	01/29/2020 00:59	Alexander Thompson	2150401
EPA 300.0 Rev. 2.1	01/17/2020			01/29/2020 09:59	Lipi Saha	2150371
	01/17/2020			01/29/2020 10:11	Lipi Saha	2150372
	01/17/2020			01/29/2020 10:24	Lipi Saha	2150373
	01/17/2020			01/29/2020 10:36	Lipi Saha	2150374
EPA 350.1 Rev. 2.0	01/17/2020			01/29/2020 13:17	Ping Hua	2150375
	01/17/2020			01/29/2020 13:19	Ping Hua	2150376
	01/17/2020			01/29/2020 13:20	Ping Hua	2150377
	01/17/2020			01/29/2020 13:22	Ping Hua	2150378
EPA 351.2 Rev. 2.0	01/17/2020	01/29/2020 14:30	Jhamieka S. Greenwood	01/30/2020 13:26	Jhamieka S. Greenwood	2150375
	01/17/2020	01/29/2020 14:30	Jhamieka S. Greenwood	01/30/2020 13:40	Jhamieka S. Greenwood	2150376
	01/17/2020	01/29/2020 14:30	Jhamieka S. Greenwood	01/30/2020 13:42	Jhamieka S. Greenwood	2150377
	01/17/2020	01/29/2020 14:30	Jhamieka S. Greenwood	01/30/2020 13:43	Jhamieka S. Greenwood	2150378
EPA 353.2 Rev. 2.0	01/17/2020			01/24/2020 10:30	Beverly Y. Sanders	2150376
	01/17/2020			01/24/2020 10:37	Beverly Y. Sanders	2150375
	01/17/2020			01/24/2020 10:38	Beverly Y. Sanders	2150377
	01/17/2020			01/24/2020 10:39	Beverly Y. Sanders	2150378
EPA 365.1 Rev. 2.0	01/17/2020	01/24/2020 13:35	Yen Ta	01/29/2020 14:10	Benjamin T. Nordmann	2150375
	01/17/2020	01/24/2020 13:35	Yen Ta	01/29/2020 14:11	Benjamin T. Nordmann	2150376
	01/17/2020	01/24/2020 13:35	Yen Ta	01/29/2020 14:12	Benjamin T. Nordmann	2150377
	01/17/2020	01/24/2020 13:35	Yen Ta	01/29/2020 14:22	Benjamin T. Nordmann	2150378
EPA 365.1 Rev. 2.0 dissolved	01/17/2020			01/17/2020 14:16	Carlos Miranda	2150380, 2150382
	01/17/2020			01/17/2020 14:17	Carlos Miranda	2150381
	01/17/2020			01/22/2020 13:41	Carlos Miranda	2150379
EPA 8321B	01/17/2020	01/21/2020 11:00	Hoor Shaik	01/22/2020 06:15	Juyoung Kim	2150395
	01/17/2020	01/21/2020 11:00	Hoor Shaik	01/22/2020 06:50	Juyoung Kim	2150396
	01/17/2020	01/21/2020 11:00	Hoor Shaik	01/22/2020 07:24	Juyoung Kim	2150397
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 12:13	Rebecca Ware	2150395
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 12:27	Rebecca Ware	2150396
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 12:56	Rebecca Ware	2150397
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 17:10	Rebecca Ware	2150395
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 17:20	Rebecca Ware	2150396
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 17:42	Rebecca Ware	2150397
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/24/2020 04:44	Rebecca Ware	2150395

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/24/2020 04:56	Rebecca Ware	2150396
	01/17/2020	01/22/2020 10:30	Rebecca Ware	01/24/2020 05:19	Rebecca Ware	2150397
SM 2120 B-2011	01/17/2020			01/17/2020 17:38	Madeline Funaro	2150371
	01/17/2020			01/17/2020 17:39	Madeline Funaro	2150372
	01/17/2020			01/17/2020 17:43	Madeline Funaro	2150373
	01/17/2020			01/17/2020 17:44	Madeline Funaro	2150374
SM 2320 B-2011	01/17/2020			01/25/2020 18:39	Dale L. Simmons	2150371
	01/17/2020			01/25/2020 18:53	Dale L. Simmons	2150372
	01/17/2020			01/25/2020 19:09	Dale L. Simmons	2150373
	01/17/2020			01/25/2020 19:19	Dale L. Simmons	2150374
SM 2540 C-2011	01/17/2020			01/21/2020 15:30	Sima Feizi	2150371, 2150372, 2150373, 2150374
SM 2540 D-2011	01/17/2020			01/21/2020 15:30	Sima Feizi	2150371, 2150372, 2150373, 2150374
SM 4500 F-C-2011	01/17/2020			01/25/2020 18:39	Dale L. Simmons	2150371
	01/17/2020			01/25/2020 18:53	Dale L. Simmons	2150372
	01/17/2020			01/25/2020 19:09	Dale L. Simmons	2150373
	01/17/2020			01/25/2020 19:19	Dale L. Simmons	2150374
SM 5310 B-2011	01/17/2020			01/27/2020 20:45	Madeline Funaro	2150377
	01/17/2020			01/27/2020 23:26	Madeline Funaro	2150375
	01/17/2020			01/27/2020 23:39	Madeline Funaro	2150376
	01/17/2020			01/27/2020 23:51	Madeline Funaro	2150378