

Chemical Analysis Report

SE-DIST-2019-09-25-02

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

Event Description: **SMP-Stuart**
Request ID: **RQ-2019-09-23-55**
Customer: **SE-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 18-OCT-2019 14:48



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: Roebuck Creek @ mouth

Collection Date/Time: 09/24/2019 11:30

Field ID: G2SE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122219	EPA 8321B	2,4-D	0.043		ug/L	P371346	
		Acesulfame K**	0.10	U	ug/L	P371269	
		AMPA**	1.1		ug/L	P371269	
		Sucralose**	0.88		ug/L	P371269	
		Acetaminophen**	0.0080	U	ug/L	P371346	
		Acetamiprid**	0.0020	U	ug/L	P371346	
		Endothall**	0.25	U	ug/L	P371269	
		Glufosinate**	0.10	U	ug/L	P371269	
		Glyphosate**	0.10	U	ug/L	P371269	
		Afidopyropen**	0.0020	UJ	ug/L	P371346	
		Bentazon	0.027		ug/L	P371346	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371346	
		Carbamazepine**	0.0016	I	ug/L	P371346	
		Clothianidin**	0.0021	I	ug/L	P371346	
		Dinotefuran**	0.0020	U	ug/L	P371346	
		Diuron	0.0026	I	ug/L	P371346	
		Fenuron	0.016	U	ug/L	P371346	
		Fluridone**	0.0029	I	ug/L	P371346	
		Imazapyr**	0.26		ug/L	P371346	
		Hydrocodone**	0.0020	U	ug/L	P371346	
		Ibuprofen**	0.020	U	ug/L	P371346	
		Imidacloprid	0.0039	I	ug/L	P371346	MS
		Linuron	0.0040	U	ug/L	P371346	
		Mandestrobin**	0.0020	UJ	ug/L	P371346	
		MCPP	0.0020	U	ug/L	P371346	MS
		Naproxen**	0.0080	U	ug/L	P371346	
		Primidone**	0.0040	U	ug/L	P371346	
		Pyraclostrobin**	0.0020	U	ug/L	P371346	
		Thiamethoxam**	0.0020	U	ug/L	P371346	
		Tolfenpyrad**	0.0020	U	ug/L	P371346	
		Triclopyr**	0.0040	U	ug/L	P371346	
2122223	EPA 200.7 Rev. 4.4	Iron	350		ug/L	P371400	
		Manganese	21.3		ug/L	P371400	
		Zinc	6.2	I	ug/L	P371400	
	EPA 200.8 Rev. 5.4	Aluminum	96		ug/L	P371400	
		Antimony	0.090	I	ug/L	P371400	
		Arsenic	1.47		ug/L	P371400	
		Cadmium	0.020	U	ug/L	P371400	
		Chromium	0.52	I	ug/L	P371400	
		Copper	1.51		ug/L	P371400	
		Lead	0.23	I	ug/L	P371400	
		Nickel	0.70	I	ug/L	P371400	
		Selenium	0.22	I	ug/L	P371400	
		Silver	0.010	U	ug/L	P371400	

Field ID: G2SE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122223	EPA 200.8 Rev. 5.4	Thallium	0.10	U	ug/L	P371400	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

Sample Location: Roebuck Creek @ Locks

Collection Date/Time: 09/24/2019 11:50

Field ID: G2SE0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122220	EPA 8321B	2,4-D	0.0048	I	ug/L	P371346	
		Acesulfame K**	0.40		ug/L	P371269	
		AMPA**	0.37	I	ug/L	P371269	
		Sucralose**	2.9		ug/L	P371269	
		Acetaminophen**	0.0080	U	ug/L	P371346	
		Acetamiprid**	0.0020	U	ug/L	P371346	
		Endothall**	0.25	U	ug/L	P371269	
		Glufosinate**	0.10	U	ug/L	P371269	
		Glyphosate**	1.1		ug/L	P371269	
		Afidopyropen**	0.0020	UJ	ug/L	P371346	
		Bentazon	0.10		ug/L	P371346	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371346	
		Carbamazepine**	0.0072		ug/L	P371346	
		Clothianidin**	0.015		ug/L	P371346	
		Dinotefuran**	0.0020	U	ug/L	P371346	
		Diuron	0.0020	U	ug/L	P371346	
		Fenuron	0.016	U	ug/L	P371346	
		Fluridone**	0.0014	I	ug/L	P371346	
		Imazapyr**	0.36		ug/L	P371346	
		Hydrocodone**	0.0020	U	ug/L	P371346	
		Ibuprofen**	0.020	U	ug/L	P371346	
		Imidacloprid	0.0060	I	ug/L	P371346	MS
		Linuron	0.0040	U	ug/L	P371346	
		Mandestrobin**	0.0020	UJ	ug/L	P371346	
		MCPP	0.0020	U	ug/L	P371346	MS
		Naproxen**	0.0080	U	ug/L	P371346	
		Primidone**	0.024		ug/L	P371346	
		Pyraclostrobin**	0.0020	U	ug/L	P371346	
		Thiamethoxam**	0.0020	U	ug/L	P371346	
		Tolfenpyrad**	0.0020	U	ug/L	P371346	
		Triclopyr**	0.0040	U	ug/L	P371346	
2122224	EPA 200.7 Rev. 4.4	Iron	780		ug/L	P371400	
		Manganese	40.0		ug/L	P371400	
		Zinc	5.0	U	ug/L	P371400	
	EPA 200.8 Rev. 5.4	Aluminum	240		ug/L	P371400	
		Antimony	0.062	I	ug/L	P371400	
		Arsenic	1.45		ug/L	P371400	
		Cadmium	0.020	U	ug/L	P371400	
		Chromium	0.68	I	ug/L	P371400	
		Copper	1.04		ug/L	P371400	
		Lead	0.51		ug/L	P371400	
		Nickel	0.95	I	ug/L	P371400	
		Selenium	0.22	I	ug/L	P371400	
		Silver	0.010	U	ug/L	P371400	

Field ID: G2SE0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122224	EPA 200.8 Rev. 5.4	Thallium	0.10	U	ug/L	P371400	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

Sample Location: South Fork SLR @ Halpatiokee Trail

Collection Date/Time: 09/24/2019 12:00

Field ID: G2SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122195	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P371321	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P371795	
		Sulfate	11		mg SO4/L	P371797	
		Color (true)	160		PCU	P371357	
	SM 2320 B-97	Total Alkalinity	163		mg CaCO3/L	P371878	
	SM 2540 C-97	TDS	287		mg/L	P371955	
	SM 2540 D-97	TSS	3	I	mg/L	P371816	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P371881	
2122196	EPA 350.1 Rev. 2.0	Ammonia-N	0.050		mg N/L	P371745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P371452	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P371471	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P371497	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P371505	
2122197	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.090		mg P/L	P371332	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: South Fork SLR @ Gaines Ave

Collection Date/Time: 09/24/2019 12:30

Field ID: G2SE0039

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122192	EPA 180.1 Rev. 2.0	Turbidity	4.0	A	NTU	P371321	
	EPA 300.0	Bromide	0.18		mg Br/L	P371834	
	SM 2320 B-97	Total Alkalinity	159		mg CaCO3/L	P371878	
	SM 2540 D-97	TSS	3	I	mg/L	P371818	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P371881	
2122193	EPA 350.1 Rev. 2.0	Ammonia-N	0.062		mg N/L	P371745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P371452	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P371471	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P371497	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P371505	
2122194	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.094		mg P/L	P371332	
2122222	EPA 200.7 Rev. 4.4	Iron	1.07E+03		ug/L	P371400	
		Manganese	36.1		ug/L	P371400	
		Zinc	5.0	U	ug/L	P371400	
	EPA 200.8 Rev. 5.4	Aluminum	114		ug/L	P371400	
		Antimony	0.081	I	ug/L	P371400	
		Arsenic	1.93		ug/L	P371400	
		Cadmium	0.020	U	ug/L	P371400	
		Chromium	0.65	I	ug/L	P371400	
		Copper	1.02		ug/L	P371400	
		Lead	0.20	U	ug/L	P371400	
		Nickel	0.50	U	ug/L	P371400	
		Selenium	0.20	U	ug/L	P371400	
		Silver	0.010	U	ug/L	P371400	
		Thallium	0.10	U	ug/L	P371400	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Warner Creek @ 24th

Collection Date/Time: 09/24/2019 13:00

Field ID: G2SE0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122205	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P371322	
	EPA 300.0	Bromide	0.11		mg Br/L	P371834	
	SM 2320 B-97	Total Alkalinity	51		mg CaCO3/L	P371879	
	SM 2540 D-97	TSS	2	I	mg/L	P371818	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P371882	
2122206	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P371745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P371452	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P371472	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P371498	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P371505	
2122207	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P371332	
2122226	EPA 200.7 Rev. 4.4	Iron	130		ug/L	P371400	
		Manganese	3.7	I	ug/L	P371400	
		Zinc	5.0	U	ug/L	P371400	
	EPA 200.8 Rev. 5.4	Aluminum	189		ug/L	P371400	
		Antimony	0.090	I	ug/L	P371400	
		Arsenic	0.66		ug/L	P371400	
		Cadmium	0.020	U	ug/L	P371400	
		Chromium	0.87	I	ug/L	P371400	
		Copper	0.82		ug/L	P371400	
		Lead	0.29	I	ug/L	P371400	
		Nickel	0.50	U	ug/L	P371400	
		Selenium	0.20	U	ug/L	P371400	
		Silver	0.010	U	ug/L	P371400	
		Thallium	0.10	U	ug/L	P371400	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Danforth Creek @ Martin Hwy

Collection Date/Time: 09/24/2019 14:00

Field ID: G2SE0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122199	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P371322	
	EPA 300.0 Rev. 2.1	Chloride	58		mg Cl/L	P371795	
		Sulfate	88		mg SO4/L	P371797	
		Color (true)	46		PCU	P371358	
	SM 2320 B-97	Total Alkalinity	101		mg CaCO3/L	P371878	
	SM 2540 C-97	TDS	356		mg/L	P371955	
	SM 2540 D-97	TSS	5	I	mg/L	P371816	
	SM 4500 F-C-97	Fluoride	0.055	I	mg F/L	P371881	
2122200	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P371745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P371452	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.065		mg N/L	P371471	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P371498	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P371505	
2122201	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P371332	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Danforth Creek @ Martin Hwy

Collection Date/Time: 09/24/2019 14:10

Field ID: G2SE0018_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122202	EPA 180.1 Rev. 2.0	Turbidity	5.2		NTU	P371322	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P371795	
		Sulfate	89		mg SO4/L	P371797	
		Color (true)	45		PCU	P371358	
	SM 2320 B-97	Total Alkalinity	101		mg CaCO3/L	P371879	
	SM 2540 C-97	TDS	364		mg/L	P371955	
	SM 2540 D-97	TSS	6	I	mg/L	P371816	
	SM 4500 F-C-97	Fluoride	0.053	I	mg F/L	P371882	
2122203	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P371745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P371452	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.062		mg N/L	P371471	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P371498	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P371505	
2122204	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P371332	
2122225	EPA 200.7 Rev. 4.4	Barium	19.5		ug/L	P371400	
		Calcium	76.6		mg/L	P371400	
		Iron	550		ug/L	P371400	
		Magnesium	5.06		mg/L	P371400	
		Potassium	2.1		mg/L	P371400	
		Sodium	34.9		mg/L	P371400	
		Zinc	5.0	U	ug/L	P371400	
	EPA 200.8 Rev. 5.4	Aluminum	299		ug/L	P371400	
		Antimony	0.065	I	ug/L	P371400	
		Arsenic	0.85		ug/L	P371400	
		Boron**	37.5		ug/L	P371400	
		Cadmium	0.020	U	ug/L	P371400	
		Chromium	0.68	I	ug/L	P371400	
		Copper	0.61	I	ug/L	P371400	
		Lead	0.20	U	ug/L	P371400	
		Nickel	0.50	U	ug/L	P371400	
		Selenium	0.20	U	ug/L	P371400	
		Silver	0.010	U	ug/L	P371400	
		Thallium	0.10	U	ug/L	P371400	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Bessey Creek @ Murphy

Collection Date/Time: 09/24/2019 14:40

Field ID: G2SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122198	EPA 300.0	Bromide	1.0		mg Br/L	P371834	
2122221	EPA 8321B	2,4-D	0.12		ug/L	P371346	
		Acesulfame K**	0.30	I	ug/L	P371269	
		AMPA**	0.50		ug/L	P371269	
		Sucralose**	2.1		ug/L	P371269	
		Acetaminophen**	0.0080	U	ug/L	P371346	
		Acetamiprid**	0.0020	U	ug/L	P371346	
		Endothall**	0.25	U	ug/L	P371269	
		Glufosinate**	0.10	U	ug/L	P371269	
		Glyphosate**	0.10	U	ug/L	P371269	
		Afidopyropen**	0.0020	UJ	ug/L	P371346	
		Bentazon	0.15		ug/L	P371346	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371346	
		Carbamazepine**	0.0052		ug/L	P371346	
		Clothianidin**	0.0023	I	ug/L	P371346	
		Dinotefuran**	0.0020	U	ug/L	P371346	
		Diuron	0.0025	I	ug/L	P371346	
		Fenuron	0.016	U	ug/L	P371346	
		Fluridone**	0.0052		ug/L	P371346	
		Imazapyr**	0.30		ug/L	P371346	
		Hydrocodone**	0.0020	U	ug/L	P371346	
		Ibuprofen**	0.020	U	ug/L	P371346	
		Imidacloprid	0.025		ug/L	P371346	MS
		Linuron	0.0040	U	ug/L	P371346	
		Mandestrobin**	0.0020	UJ	ug/L	P371346	
		MCPP	0.0020	U	ug/L	P371346	MS
		Naproxen**	0.0080	U	ug/L	P371346	
		Primidone**	0.0077	I	ug/L	P371346	
		Pyraclostrobin**	0.0020	U	ug/L	P371346	
		Thiamethoxam**	0.0020	U	ug/L	P371346	
		Tolfenpyrad**	0.0020	U	ug/L	P371346	
		Triclopyr**	0.0040	U	ug/L	P371346	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371321

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371322

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371400

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
Manganese	1.0	U	ug/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: P371400

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
Batch ID: P371834

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371795

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: P371797

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371745

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371452

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371471

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371472

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371497

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371498

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371332

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

Reference Method: EPA 8321B
Batch ID: P371269

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P371269

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

Reference Method: EPA 8321B
Batch ID: P371346

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: SM 2120 B
Batch ID: P371357

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P371358

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P371878

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P371879

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

Reference Method: SM 2540 C-97
Batch ID: P371955

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P371816

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P371818

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P371881

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371882

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P371505

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: P371400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	85 - 115
Calcium	112		P	85 - 115
Iron	109		P	85 - 115
Magnesium	113		P	85 - 115
Manganese	103		P	85 - 115
Potassium	106		P	85 - 115
Sodium	109		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Boron	102		P	85 - 115
Cadmium	97.0		P	85 - 115
Chromium	98.9		P	85 - 115
Copper	101		P	85 - 115
Lead	102		P	85 - 115
Nickel	100		P	85 - 115
Selenium	104		P	85 - 115
Silver	99.6		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P371834

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371795

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371797

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371745

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371452

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371471

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: P371472

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: P371497

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371498

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371332

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

Reference Method: EPA 8321B
Batch ID: P371269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	87.8		P	40 - 150
AMPA	97.3		P	40 - 150
Endothall	81.4		P	40 - 150
Glufosinate	82.4		P	40 - 150
Glyphosate	107		P	40 - 140
Sucralose	111		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P371346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	159		P	40 - 160
Acetaminophen	96.0		P	30 - 160
Acetamiprid	108		P	40 - 160
Afidopyropen	101		P	40 - 160
Bentazon	146		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P371346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Benzovindiflupyr	95.5		P	40 - 160
Carbamazepine	103		P	40 - 160
Clothianidin	92.3		P	40 - 160
Dinotefuran	101		P	40 - 160
Diuron	91.9		P	40 - 160
Fenuron	107		P	40 - 160
Fluridone	88.1		P	40 - 160
Hydrocodone	92.2		P	40 - 160
Ibuprofen	88.5		P	30 - 160
Imazapyr	107		P	40 - 160
Imidacloprid	115		P	40 - 160
Linuron	73.4		P	40 - 160
Mandestrobin	89.5		P	40 - 160
MCPP	148		P	40 - 160
Naproxen	75.0		P	40 - 160
Primidone	82.1		P	40 - 160
Pyraclostrobin	83.9		P	30 - 160
Thiamethoxam	107		P	40 - 160
Tolfenpyrad	60.5		P	40 - 160
Triclopyr	134		P	30 - 160

Reference Method: SM 2120 B

Batch ID: P371357

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

Reference Method: SM 2120 B

Batch ID: P371358

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

Reference Method: SM 2320 B-97

Batch ID: P371878

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

Reference Method: SM 2320 B-97

Batch ID: P371879

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

Reference Method: SM 4500 F-C-97

Batch ID: P371881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P371882

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P371505

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122104	Barium	103	105	P/P	80 - 120
2122104	Calcium	109	109	P/P	80 - 120
2122104	Iron	106	107	P/P	80 - 120
2122104	Magnesium	109	110	P/P	80 - 120
2122104	Manganese	100	101	P/P	80 - 120
2122104	Potassium	111	110	P/P	80 - 120
2122104	Sodium	106	108	P/P	80 - 120
2122104	Zinc	101	102	P/P	80 - 120
2122358	Barium	106		P	80 - 120
2122358	Calcium	111		P	80 - 120
2122358	Iron	109		P	80 - 120
2122358	Magnesium	111		P	80 - 120
2122358	Manganese	104		P	80 - 120
2122358	Potassium	103		P	80 - 120
2122358	Sodium	108		P	80 - 120
2122358	Zinc	106		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122104	Aluminum	102	102	P/P	80 - 120
2122104	Antimony	103	103	P/P	80 - 120
2122104	Arsenic	101	102	P/P	80 - 120
2122104	Boron	100	103	P/P	80 - 120
2122104	Cadmium	100	100	P/P	80 - 120
2122104	Chromium	99.2	100	P/P	80 - 120
2122104	Copper	100	103	P/P	80 - 120
2122104	Lead	103	104	P/P	80 - 120
2122104	Nickel	100	102	P/P	80 - 120
2122104	Selenium	96.0	98.8	P/P	80 - 120
2122104	Silver	100	102	P/P	80 - 120
2122104	Thallium	107	108	P/P	80 - 120
2122358	Aluminum	102		P	80 - 120
2122358	Antimony	104		P	80 - 120
2122358	Arsenic	103		P	80 - 120
2122358	Boron	104		P	80 - 120
2122358	Cadmium	101		P	80 - 120
2122358	Chromium	102		P	80 - 120
2122358	Copper	101		P	80 - 120
2122358	Lead	105		P	80 - 120
2122358	Nickel	101		P	80 - 120
2122358	Selenium	97.5		P	80 - 120
2122358	Silver	101		P	80 - 120
2122358	Thallium	107		P	80 - 120

Reference Method: EPA 300.0
Batch ID: P371834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122192	Bromide	94.9	96.5	P/P	90 - 110
2122205	Bromide	96.2		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122386	Chloride	100		P	90 - 110
2122388	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122386	Sulfate	100		P	90 - 110
2122388	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122347	Ammonia-N	99.1	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122148	NO2NO3-N	98.8	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122206	NO2NO3-N	97.6	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122121	Total-P	98.8	93.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122200	Total-P	95.1	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371332

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122153	O-Phosphate-P	95.5	96.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P371269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121760	Acesulfame K	75.8	76.2	P/P	40 - 150
2121760	AMPA	80.2	82.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P371269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121760	Endothall	101	103	P/P	40 - 150
2121760	Glufosinate	93.1	82.1	P/P	40 - 150
2121760	Glyphosate	110	90.9	P/P	40 - 140
2121760	Sucralose	129	138	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P371346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2121892	2,4-D	159	159	P/P	40 - 160
2121892	Acetaminophen	88.8	96.8	P/P	30 - 160
2121892	Acetamiprid	115	122	P/P	40 - 160
2121892	Afidopyropen	108	124	P/P	40 - 160
2121892	Benzovindiflupyr	102	95.0	P/P	40 - 160
2121892	Carbamazepine	109	111	P/P	40 - 160
2121892	Dinotefuran	126	118	P/P	40 - 160
2121892	Diuron	95.1	76.6	P/P	40 - 160
2121892	Fenuron	98.2	100	P/P	40 - 160
2121892	Hydrocodone	104	105	P/P	40 - 160
2121892	Ibuprofen	95.0	89.9	P/P	30 - 160
2121892	Imazapyr	137	127	P/P	40 - 160
2121892	Imidacloprid	194	165	F/F	40 - 160
2121892	Linuron	72.1	68.5	P/P	40 - 160
2121892	Mandestrobin	92.6	88.9	P/P	40 - 160
2121892	MCP	172	150	F/P	40 - 160
2121892	Naproxen	88.8	86.9	P/P	40 - 160
2121892	Primidone	104	103	P/P	40 - 160
2121892	Pyraclostrobin	93.4	92.2	P/P	30 - 160
2121892	Tolfenpyrad	67.9	67.7	P/P	40 - 160
2121892	Triclopyr	134	129	P/P	30 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P371881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122047	Fluoride	97.4	96.3	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122391	Fluoride	95.7	95.7	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P371505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122369	Organic Carbon	101	99.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122192	Turbidity	2.02	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122275	Turbidity	3.08	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122104	Barium	1.25	Spike	P	0 - 20
2122104	Calcium	0.0580	Spike	P	0 - 20
2122104	Iron	0.730	Spike	P	0 - 20
2122104	Magnesium	0.826	Spike	P	0 - 20
2122104	Manganese	1.24	Spike	P	0 - 20
2122104	Potassium	0.0912	Spike	P	0 - 20
2122104	Sodium	0.823	Spike	P	0 - 20
2122104	Zinc	1.19	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122104	Aluminum	0.124	Spike	P	0 - 20
2122104	Antimony	0.268	Spike	P	0 - 20
2122104	Arsenic	1.53	Spike	P	0 - 20
2122104	Boron	2.17	Spike	P	0 - 20
2122104	Cadmium	0.215	Spike	P	0 - 20
2122104	Chromium	1.18	Spike	P	0 - 20
2122104	Copper	2.47	Spike	P	0 - 20
2122104	Lead	0.861	Spike	P	0 - 20
2122104	Nickel	1.94	Spike	P	0 - 20
2122104	Selenium	2.84	Spike	P	0 - 20
2122104	Silver	1.47	Spike	P	0 - 20
2122104	Thallium	1.71	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P371834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122192	Bromide	1.24	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122386	Chloride	3.10	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122386	Sulfate	2.19	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122347	Ammonia-N	0.100	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122150	Kjeldahl Nitrogen	7.28	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122148	NO2NO3-N	1.56	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122206	NO2NO3-N	1.53	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122121	Total-P	3.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122200	Total-P	1.04	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122153	O-Phosphate-P	0.813	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P371269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121760	Acesulfame K	0.501	Spike	P	0 - 30
2121760	AMPA	1.20	Spike	P	0 - 30
2121760	Endothall	1.68	Spike	P	0 - 30
2121760	Glufosinate	12.6	Spike	P	0 - 30
2121760	Glyphosate	8.56	Spike	P	0 - 30
2121760	Sucralose	6.73	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P371346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2121892	2,4-D	0.180	Spike	P	0 - 30
2121892	Acetaminophen	8.64	Spike	P	0 - 30
2121892	Acetamiprid	5.44	Spike	P	0 - 30
2121892	Afidopyrophen	13.5	Spike	P	0 - 30
2121892	Bentazon	1.96	Spike	P	0 - 30
2121892	Benzovindiflupyr	7.10	Spike	P	0 - 30
2121892	Carbamazepine	2.17	Spike	P	0 - 30
2121892	Clothianidin	8.16	Spike	P	0 - 30
2121892	Dinotefuran	6.16	Spike	P	0 - 30
2121892	Diuron	20.3	Spike	P	0 - 30
2121892	Fenuron	1.39	Spike	P	0 - 30
2121892	Fluridone	3.47	Spike	P	0 - 30
2121892	Hydrocodone	0.552	Spike	P	0 - 30
2121892	Ibuprofen	5.53	Spike	P	0 - 30
2121892	Imazapyr	6.19	Spike	P	0 - 30
2121892	Imidacloprid	11.8	Spike	P	0 - 30
2121892	Linuron	5.11	Spike	P	0 - 30
2121892	Mandestrobin	4.04	Spike	P	0 - 30
2121892	MCPP	13.9	Spike	P	0 - 30
2121892	Naproxen	2.15	Spike	P	0 - 30
2121892	Primidone	1.51	Spike	P	0 - 30
2121892	Pyraclostrobin	1.29	Spike	P	0 - 30
2121892	Thiamethoxam	1.05	Spike	P	0 - 30
2121892	Tolfenpyrad	0.355	Spike	P	0 - 30
2121892	Triclopyr	4.26	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P371357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122047	Color (true)	2.28	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P371358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122342	Color (true)	2.84	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P371878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122047	Total Alkalinity	0.0644	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
 Batch ID: P371879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122391	Total Alkalinity	1.09	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P371955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122142	TDS	3.80	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P371881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122047	Fluoride	0.963	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
 Batch ID: P371882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122391	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P371505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122369	Organic Carbon	1.41	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2122219
Field Sample ID: G2SE0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.8	P	30 - 160
EPA 8321B	Bentazon-d7	77.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.8	P	30 - 160
EPA 8321B	Diuron-d6	83.4	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.5	P	30 - 160
EPA 8321B	Primidone-d5	99.1	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	30 - 160

Lab Sample ID: 2122220
Field Sample ID: G2SE0029

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	158	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.8	P	30 - 160
EPA 8321B	Bentazon-d7	95.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	90.9	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	88.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	88.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	98.6	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	68.7	P	30 - 160
EPA 8321B	Sucralose-d6	68.7	P	30 - 160

Lab Sample ID: 2122221
Field Sample ID: G2SE0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	141	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.6	P	30 - 160
EPA 8321B	Bentazon-d7	64.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.2	P	30 - 160
EPA 8321B	Diuron-d6	77.8	P	30 - 160
EPA 8321B	Endothall-d6	93.8	P	30 - 160
EPA 8321B	Endothall-d6	93.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.2	P	30 - 160
EPA 8321B	Primidone-d5	107	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94497

Included Lab Sample IDs: 2122192, 2122195, 2122199, 2122202, 2122205

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A94499

Included Lab Sample IDs: 2122194, 2122197, 2122201, 2122204, 2122207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	97.1	P/P	90 - 110
O-Phosphate-P	98.6	98.1	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A94510

Included Lab Sample IDs: 2122195, 2122199, 2122202

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	103	104	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94525

Included Lab Sample IDs: 2122193, 2122196, 2122200, 2122203, 2122206

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

Reference Method: EPA 8321B

Run ID: A94527

Included Lab Sample IDs: 2122219, 2122220, 2122221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.1	93.8	P/P	60 - 160
Glufosinate	82.5	94.9	P/P	60 - 160
Glyphosate	96.2	109	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94549

Included Lab Sample IDs: 2122219, 2122220, 2122221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	95.0	77.0	P/P	60 - 160
Endothall	96.8	107	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A94565

Included Lab Sample IDs: 2122193, 2122196, 2122200, 2122203, 2122206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	108	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94578

Included Lab Sample IDs: 2122193, 2122196, 2122200, 2122203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.2	P/P	90 - 110
Total-P	99.4	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94584

Included Lab Sample IDs: 2122206

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

Reference Method: EPA 8321B

Run ID: A94586

Included Lab Sample IDs: 2122219, 2122220, 2122221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	111	105	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94597

Included Lab Sample IDs: 2122193, 2122196, 2122200, 2122203, 2122206

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

Reference Method: EPA 8321B

Run ID: A94609

Included Lab Sample IDs: 2122219, 2122220, 2122221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	123	P/P	50 - 150
2,4-D	123	117	P/P	50 - 150
Acetaminophen	125	129	P/P	60 - 160
Acetaminophen	129	108	P/P	60 - 160
Acetamiprid	120	128	P/P	50 - 150
Acetamiprid	124	120	P/P	50 - 150
Afidopyropen	116	117	P/P	50 - 150
Afidopyropen	117	135	P/P	50 - 150
Bentazon	129	140	P/P	50 - 160
Bentazon	131	129	P/P	50 - 160
Benzovindiflupyr	113	115	P/P	50 - 150
Benzovindiflupyr	115	120	P/P	50 - 150
Carbamazepine	112	112	P/P	60 - 150
Carbamazepine	116	112	P/P	60 - 150
Clothianidin	110	91.5	P/P	60 - 150
Clothianidin	116	110	P/P	60 - 150
Dinotefuran	106	111	P/P	50 - 150
Dinotefuran	111	123	P/P	50 - 150
Diuron	111	114	P/P	60 - 150
Diuron	114	116	P/P	60 - 150
Fenuron	120	121	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94609

Included Lab Sample IDs: 2122219, 2122220, 2122221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	121	112	P/P	60 - 150
Fluridone	101	102	P/P	60 - 160
Fluridone	102	102	P/P	60 - 160
Hydrocodone	107	105	P/P	60 - 150
Hydrocodone	111	107	P/P	60 - 150
Ibuprofen	104	90.8	P/P	50 - 160
Ibuprofen	88.2	104	P/P	50 - 160
Imazapyr	116	124	P/P	50 - 150
Imazapyr	124	118	P/P	50 - 150
Imidacloprid	120	122	P/P	60 - 150
Imidacloprid	122	119	P/P	60 - 150
Linuron	101	104	P/P	60 - 150
Linuron	104	105	P/P	60 - 150
Mandestrobin	107	107	P/P	50 - 150
Mandestrobin	107	106	P/P	50 - 150
MCPP	127	128	P/P	50 - 150
MCPP	128	116	P/P	50 - 150
Naproxen	110	82.5	P/P	50 - 160
Naproxen	123	110	P/P	50 - 160
Primidone	112	116	P/P	60 - 150
Primidone	116	109	P/P	60 - 150
Pyraclostrobin	103	107	P/P	60 - 150
Pyraclostrobin	108	103	P/P	60 - 150
Thiamethoxam	119	120	P/P	50 - 150
Thiamethoxam	120	115	P/P	50 - 150
Tolfenpyrad	117	126	P/P	60 - 150
Tolfenpyrad	121	117	P/P	60 - 150
Triclopyr	115	123	P/P	50 - 150
Triclopyr	117	115	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94640

Included Lab Sample IDs: 2122222, 2122223, 2122224, 2122225, 2122226

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	104	104	P/P	90 - 110
Calcium	104	103	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Magnesium	104	104	P/P	90 - 110
Manganese	100	102	P/P	90 - 110
Manganese	100	100	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Zinc	100	103	P/P	90 - 110
Zinc	103	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94667

Included Lab Sample IDs: 2122193, 2122196, 2122200, 2122203, 2122206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	96.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A94686

Included Lab Sample IDs: 2122195, 2122199, 2122202

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A94704

Included Lab Sample IDs: 2122192, 2122198, 2122205

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	101	102	P/P	90 - 110
Bromide	102	104	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A94719

Included Lab Sample IDs: 2122192, 2122195, 2122199, 2122202, 2122205

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

Reference Method: SM 4500 F-C-97

Run ID: A94719

Included Lab Sample IDs: 2122192, 2122195, 2122199, 2122202, 2122205

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.0	P/P	90 - 110
Fluoride	99.0	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94947

Included Lab Sample IDs: 2122222, 2122223, 2122224, 2122225, 2122226

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	103	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	104	104	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Chromium	101	98.6	P/P	90 - 110
Copper	103	102	P/P	90 - 110
Lead	103	105	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Silver	98.1	98.9	P/P	90 - 110
Thallium	98.7	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94978

Included Lab Sample IDs: 2122222, 2122223, 2122224, 2122225, 2122226

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	97.6	96.1	P/P	90 - 110

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.02	
	Turbidity						3.08	
EPA 200.7 Rev. 4.4	Barium	104	103	105	106			1.25
	Calcium	112	109	109	111			0.0580
	Iron	109	106	107	109			0.730
	Magnesium	113	109	110	111			0.826
	Manganese	103	100	101	104			1.24
	Potassium	106	111	110	103			0.0912
	Sodium	109	106	108	108			0.823
	Zinc	102	101	102	106			1.19
EPA 200.8 Rev. 5.4	Aluminum	101	102	102	102			0.124
	Antimony	102	103	103	104			0.268
	Arsenic	102	101	102	103			1.53
	Boron	102	100	103	104			2.17
	Cadmium	97.0	100	100	101			0.215
	Chromium	98.9	99.2	100	102			1.18
	Copper	101	100	103	101			2.47
	Lead	102	103	104	105			0.861
	Nickel	100	100	102	101			1.94
	Selenium	104	96.0	98.8	97.5			2.84
	Silver	99.6	100	102	101			1.47
	Thallium	104	107	108	107			1.71
EPA 300.0	Bromide	97.3	94.9	96.5	96.2			1.24
EPA 300.0 Rev. 2.1	Chloride	100	100	101			3.10	
	Sulfate	101	100	101			2.19	
EPA 350.1 Rev. 2.0	Ammonia-N	97.3	99.1	99.2				0.100
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100						7.28
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	98.8	96.8				1.56
	NO ₂ NO ₃ -N	102	97.6	99.6				1.53
EPA 365.1 Rev. 2.0	Total-P	99.6	98.8	93.7				3.57
	Total-P	101	95.1	96.2				1.04
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	95.5	96.5				0.813
EPA 8321B	2,4-D	159	159	159				0.180
	Acesulfame K	87.8	75.8	76.2				0.501
	Acetaminophen	96.0	88.8	96.8				8.64
	Acetamiprid	108	115	122				5.44
	Afidopyropen	101	108	124				13.5
	AMPA	97.3	80.2	82.4				1.20
	Bentazon	146						1.96
	Benzovindiflupyr	95.5	102	95.0				7.10
	Carbamazepine	103	109	111				2.17
	Clothianidin	92.3						8.16
	Dinotefuran	101	126	118				6.16
	Diuron	91.9	95.1	76.6				20.3
	Endothall	81.4	101	103				1.68
	Fenuron	107	98.2	100				1.39
	Fluridone	88.1						3.47
	Glufosinate	82.4	93.1	82.1				12.6
	Glyphosate	107	110	90.9				8.56
	Hydrocodone	92.2	104	105				0.552
	Ibuprofen	88.5	95.0	89.9				5.53
	Imazapyr	107	137	127				6.19
	Imidacloprid	115	194	165				11.8
	Linuron	73.4	72.1	68.5				5.11

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Mandestrobin	89.5	92.6	88.9		4.04
	MCPD	148	172	150		13.9
	Naproxen	75.0	88.8	86.9		2.15
	Primidone	82.1	104	103		1.51
	Pyraclostrobin	83.9	93.4	92.2		1.29
	Sucralose	111	129	138		6.73
	Thiamethoxam	107				1.05
	Tolfenpyrad	60.5	67.9	67.7		0.355
	Triclopyr	134	134	129		4.26
SM 2120 B	Color (true)	101			2.28	
	Color (true)	101			2.84	
SM 2320 B-97	Total Alkalinity	102			0.0644	
	Total Alkalinity	103			1.09	
SM 2540 C-97	TDS				3.80	
SM 4500 F-C-97	Fluoride	96.4	97.4	96.3		0.963
	Fluoride	95.5	95.7	95.7		0.0
SM 5310 B-00	Organic Carbon	98.6	101	99.2		1.41

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2122192, 2122195, 2122199, 2122202, 2122205
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2122222, 2122223, 2122224, 2122225, 2122226
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2122222, 2122223, 2122224, 2122225, 2122226
EPA 300.0 / E31780	Bromide in aqueous matrices	2122192, 2122198, 2122205
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2122195, 2122199, 2122202
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2122195, 2122199, 2122202
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2122193, 2122196, 2122200, 2122203, 2122206
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2122193, 2122196, 2122200, 2122203, 2122206
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2122193, 2122196, 2122200, 2122203, 2122206
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2122193, 2122196, 2122200, 2122203, 2122206
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2122194, 2122197, 2122201, 2122204, 2122207
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2122219, 2122220, 2122221
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2122219, 2122220, 2122221
SM 2120 B / E31780	True Color measured at 450 nm	2122195, 2122199, 2122202
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2122192, 2122195, 2122199, 2122202, 2122205
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2122195, 2122199, 2122202
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2122192, 2122195, 2122199, 2122202, 2122205
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2122192, 2122195, 2122199, 2122202, 2122205
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2122193, 2122196, 2122200, 2122203, 2122206

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/25/2019			09/25/2019 16:25	Samantha Davila	2122192, 2122195, 2122199, 2122202, 2122205
EPA 200.7 Rev. 4.4	09/25/2019	09/26/2019 15:30	Elliott D. Healy	09/30/2019 16:37	Alexander Thompson	2122222
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	09/30/2019 16:45	Alexander Thompson	2122223
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	09/30/2019 16:53	Alexander Thompson	2122224
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	09/30/2019 17:25	Alexander Thompson	2122225
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	09/30/2019 17:32	Alexander Thompson	2122226
EPA 200.8 Rev. 5.4	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/14/2019 11:52	Robert K Palmer	2122222
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/14/2019 12:02	Robert K Palmer	2122223
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/14/2019 12:11	Robert K Palmer	2122224
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/14/2019 12:21	Robert K Palmer	2122225
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/14/2019 12:31	Robert K Palmer	2122226
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/15/2019 18:43	Robert K Palmer	2122222
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/15/2019 18:50	Robert K Palmer	2122223
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/15/2019 18:56	Robert K Palmer	2122224
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/15/2019 19:02	Robert K Palmer	2122225
	09/25/2019	09/26/2019 15:30	Elliott D. Healy	10/15/2019 19:08	Robert K Palmer	2122226
EPA 300.0	09/25/2019			10/02/2019 22:16	Julia Storbeck	2122192
	09/25/2019			10/02/2019 23:07	Julia Storbeck	2122205
	09/25/2019			10/03/2019 02:32	Julia Storbeck	2122198
EPA 300.0 Rev. 2.1	09/25/2019			10/03/2019 01:12	Julia Storbeck	2122195
	09/25/2019			10/03/2019 01:24	Julia Storbeck	2122199
	09/25/2019			10/03/2019 01:37	Julia Storbeck	2122202
EPA 350.1 Rev. 2.0	09/25/2019			10/02/2019 13:22	Ping Hua	2122193
	09/25/2019			10/02/2019 13:23	Ping Hua	2122196
	09/25/2019			10/02/2019 13:25	Ping Hua	2122200
	09/25/2019			10/02/2019 13:26	Ping Hua	2122203
	09/25/2019			10/02/2019 13:28	Ping Hua	2122206
EPA 351.2 Rev. 2.0	09/25/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 15:27	Virginia P. Brown	2122193
	09/25/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 15:28	Virginia P. Brown	2122196
	09/25/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 15:33	Virginia P. Brown	2122200
	09/25/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 15:35	Virginia P. Brown	2122203
	09/25/2019	09/27/2019 12:10	Jhamieka S. Greenwood	09/30/2019 15:36	Virginia P. Brown	2122206
EPA 353.2 Rev. 2.0	09/25/2019			09/26/2019 12:07	Beverly Y. Sanders	2122206
	09/25/2019			09/26/2019 12:55	Beverly Y. Sanders	2122193
	09/25/2019			09/26/2019 12:56	Beverly Y. Sanders	2122196
	09/25/2019			09/26/2019 12:58	Beverly Y. Sanders	2122200
	09/25/2019			09/26/2019 12:59	Beverly Y. Sanders	2122203
EPA 365.1 Rev. 2.0	09/25/2019	09/27/2019 15:05	Lipi Saha	09/30/2019 10:01	Lipi Saha	2122193
	09/25/2019	09/27/2019 15:05	Lipi Saha	09/30/2019 10:02	Lipi Saha	2122196

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EPA 365.1 Rev. 2.0	09/25/2019	09/27/2019 15:05	Lipi Saha	09/30/2019 10:06	Lipi Saha	2122200
	09/25/2019	09/27/2019 15:05	Lipi Saha	09/30/2019 10:11	Lipi Saha	2122203
	09/25/2019	09/27/2019 15:05	Lipi Saha	09/30/2019 11:55	Lipi Saha	2122206
EPA 365.1 Rev. 2.0 dissolved	09/25/2019			09/25/2019 18:13	Ping Hua	2122194
	09/25/2019			09/25/2019 18:14	Ping Hua	2122197
	09/25/2019			09/25/2019 18:15	Ping Hua	2122201
	09/25/2019			09/25/2019 18:16	Ping Hua	2122204
	09/25/2019			09/25/2019 18:21	Ping Hua	2122207
	09/25/2019					
EPA 8321B	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/25/2019 17:27	Rebecca Ware	2122219
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/25/2019 17:38	Rebecca Ware	2122220
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/25/2019 17:49	Rebecca Ware	2122221
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/26/2019 19:52	Rebecca Ware	2122219
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/26/2019 20:05	Rebecca Ware	2122220
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/26/2019 20:19	Rebecca Ware	2122221
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/27/2019 23:55	Rebecca Ware	2122219
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/28/2019 00:07	Rebecca Ware	2122220
	09/25/2019	09/25/2019 11:30	Rebecca Ware	09/28/2019 00:19	Rebecca Ware	2122221
	09/25/2019	09/27/2019 09:00	Hoor Shaik	09/28/2019 00:12	Juyoung Kim	2122219
	09/25/2019	09/27/2019 09:00	Hoor Shaik	09/28/2019 01:21	Juyoung Kim	2122220
	09/25/2019	09/27/2019 09:00	Hoor Shaik	09/28/2019 01:55	Juyoung Kim	2122221
SM 2120 B	09/25/2019			09/25/2019 17:31	Madeline Funaro	2122199
	09/25/2019			09/25/2019 17:32	Madeline Funaro	2122202
	09/25/2019			09/25/2019 18:13	Madeline Funaro	2122195
SM 2320 B-97	09/25/2019			10/02/2019 03:14	Dale L. Simmons	2122192
	09/25/2019			10/02/2019 03:56	Dale L. Simmons	2122195
	09/25/2019			10/02/2019 04:09	Dale L. Simmons	2122199
	09/25/2019			10/02/2019 05:40	Dale L. Simmons	2122202
	09/25/2019			10/02/2019 05:53	Dale L. Simmons	2122205
SM 2540 C-97	09/25/2019			09/27/2019 14:08	Yijie Li	2122195, 2122199, 2122202
SM 2540 D-97	09/25/2019			09/27/2019 14:08	Yijie Li	2122192, 2122195, 2122199, 2122202, 2122205
SM 4500 F-C-97	09/25/2019			10/02/2019 03:14	Dale L. Simmons	2122192
	09/25/2019			10/02/2019 03:56	Dale L. Simmons	2122195
	09/25/2019			10/02/2019 04:09	Dale L. Simmons	2122199
	09/25/2019			10/02/2019 05:40	Dale L. Simmons	2122202
	09/25/2019			10/02/2019 05:53	Dale L. Simmons	2122205
SM 5310 B-00	09/25/2019			09/27/2019 23:03	Madeline Funaro	2122193
	09/25/2019			09/27/2019 23:16	Madeline Funaro	2122196
	09/25/2019			09/27/2019 23:30	Madeline Funaro	2122200
	09/25/2019			09/27/2019 23:42	Madeline Funaro	2122203

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SM 5310 B-00	09/25/2019			09/27/2019 23:54	Madeline Funaro	2122206