

Chemical Analysis Report

TLH-ROC-2021-01-26-01

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

Event Description: **Run 10**
Request ID: **RQ-2021-01-11-47**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 16-FEB-2021 09:27

A handwritten signature in black ink, appearing to read "Colin Wright", is shown on a light-colored background.

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: Dead Lakes @ Sr22

Collection Date/Time: 01/26/2021 11:40

Field ID: G2TLHR0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221527	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P392996	
	EPA 300.0 Rev. 2.1	Chloride	5.0	A	mg Cl/L	P393370	
		Sulfate	1.5	A	mg SO4/L	P393373	
	SM 2120 B-2011	Color (true)	37		PCU	P392930	
	SM 2320 B-2011	Total Alkalinity	66		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	94	A	mg/L	P393483	
	SM 2540 D-2011	TSS	2	IA	mg/L	P393357	
	SM 4500 F-C-2011	Fluoride	0.036	I	mg F/L	P393218	
2221528	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P393462	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P393258	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.66		mg N/L	P393108	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P393248	
	SM 5310 B-2011	Organic Carbon	3.9		mg C/L	P393187	
2221529	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P392944	

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: Apalachicola River 500m From Lola Landing Boat Ramp

Collection Date/Time: 01/26/2021 11:10

Field ID: G2TLHR0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221536	EPA 180.1 Rev. 2.0	Turbidity	8.3	A	NTU	P392997	
	EPA 300.0 Rev. 2.1	Chloride	5.6		mg Cl/L	P393370	
		Sulfate	6.0		mg SO4/L	P393373	
	SM 2120 B-2011	Color (true)	24	A	PCU	P392940	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	72		mg/L	P393483	
	SM 2540 D-2011	TSS	4	I	mg/L	P393357	
2221538	SM 4500 F-C-2011	Fluoride	0.052	I	mg F/L	P393218	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P393463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P393259	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.73		mg N/L	P393108	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P393248	
2221540	SM 5310 B-2011	Organic Carbon	2.8		mg C/L	P393187	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P392944	
2221551	EPA 8321B	2,4-D	0.016		ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	1.1		ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	0.0013	I	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	9.5E-04	I	ug/L	P392967	
		Imazapyr**	0.026		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0054	I	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCPP	0.0031	I	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	

Field ID: G2TLHR0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221551	EPA 8321B	Thiamethoxam**	0.0020	U	ug/L	P392967	
		Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	
2221554	EPA 200.7 Rev. 4.4	Barium	20.5		ug/L	P393014	
		Calcium	14.6		mg/L	P393014	
		Iron	700		ug/L	P393014	
		Magnesium	1.95		mg/L	P393014	
		Manganese	33.8		ug/L	P393014	
		Potassium	1.9		mg/L	P393014	
		Sodium	6.0		mg/L	P393014	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P393014	
		Aluminum	246		ug/L	P393014	
		Antimony	0.058	I	ug/L	P393014	
		Arsenic	0.30		ug/L	P393014	
		Beryllium	0.018	I	ug/L	P393014	
		Boron**	15.7		ug/L	P393014	
		Cadmium	0.020	U	ug/L	P393014	
		Chromium	0.53	I	ug/L	P393014	
		Copper	0.65	I	ug/L	P393014	
		Lead	0.29	I	ug/L	P393014	
		Nickel	0.50	U	ug/L	P393014	
		Selenium	0.20	U	ug/L	P393014	
		Silver	0.010	U	ug/L	P393014	
		Thallium	0.10	U	ug/L	P393014	
		Hardness	44.6		mg/L	P393014	
	SM 2340B						

Ref. Method and Comment:

SM 2540 D-2011: 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: Sandy Branch @ Sr22

Collection Date/Time: 01/26/2021 10:30

Field ID: G3TLHR0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221533	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P392996	
	EPA 300.0 Rev. 2.1	Chloride	4.1		mg Cl/L	P393370	
		Sulfate	0.45	I	mg SO4/L	P393373	
	SM 2120 B-2011	Color (true)	90		PCU	P392930	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	32		mg/L	P393483	
	SM 2540 D-2011	TSS	3	I	mg/L	P393357	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P393218	
2221534	EPA 350.1 Rev. 2.0	Ammonia-N	0.085		mg N/L	P393462	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P393259	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P393108	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P393248	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P393187	
2221535	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392944	

Ref. Method and Comment:

SM 2540 D-2011: 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: Big Branch @ Rd5

Collection Date/Time: 01/26/2021 10:05

Field ID: G2TLHR0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221537	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P392997	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P393370	
		Sulfate	0.32	I	mg SO4/L	P393373	
	SM 2120 B-2011	Color (true)	46		PCU	P392940	
	SM 2320 B-2011	Total Alkalinity	4.7		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	23	I	mg/L	P393483	
	SM 2540 D-2011	TSS	2	I	mg/L	P393357	
2221539	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P393218	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P393463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P393259	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P393108	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P393248	
2221541	SM 5310 B-2011	Organic Carbon	3.4		mg C/L	P393187	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392947	
2221552	EPA 8321B	2,4-D	0.0020	U	ug/L	P392967	
		Acesulfame K	0.10	U	ug/L	P393118	
		AMPA	0.10	U	ug/L	P393118	
		Sucralose	0.010	U	ug/L	P393118	
		Acetaminophen**	0.0080	U	ug/L	P392967	
		Acetamiprid**	0.0020	U	ug/L	P392967	
		Endothall	0.25	U	ug/L	P393118	
		Glufosinate	0.10	U	ug/L	P393118	
		Glyphosate	0.10	U	ug/L	P393118	
		Afidopyropen**	0.0020	U	ug/L	P392967	
		Bentazon	8.0E-04	U	ug/L	P392967	
		Benzovindiflupyr**	0.0020	U	ug/L	P392967	
		Carbamazepine**	8.0E-04	U	ug/L	P392967	
		Clothianidin**	0.0020	U	ug/L	P392967	
		Dinotefuran**	0.0020	U	ug/L	P392967	
		Diuron	0.0020	U	ug/L	P392967	
		Fenuron	0.016	U	ug/L	P392967	
		Fluridone**	8.0E-04	U	ug/L	P392967	
		Imazapyr**	0.37		ug/L	P392967	
		Hydrocodone**	0.0020	U	ug/L	P392967	
		Ibuprofen**	0.020	U	ug/L	P392967	
		Imidacloprid	0.0020	U	ug/L	P392967	
		Linuron	0.0040	U	ug/L	P392967	
		Mandestrobin**	0.0020	U	ug/L	P392967	
		MCP	0.0020	U	ug/L	P392967	
		Naproxen**	0.0080	U	ug/L	P392967	
		Primidone**	0.0040	U	ug/L	P392967	
		Pyraclostrobin**	0.0020	U	ug/L	P392967	
		Thiamethoxam**	0.0020	U	ug/L	P392967	

Field ID: G2TLHR0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221552	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392967	
		Triclopyr**	0.0040	U	ug/L	P392967	
2221555	EPA 200.7 Rev. 4.4	Barium	9.0		ug/L	P393014	
		Calcium	2.35		mg/L	P393014	
		Iron	290		ug/L	P393014	
		Magnesium	0.40		mg/L	P393014	
		Manganese	6.1		ug/L	P393014	
		Potassium	0.30	U	mg/L	P393014	
		Sodium	2.2		mg/L	P393014	
		Zinc	5.0	U	ug/L	P393014	
	EPA 200.8 Rev. 5.4	Aluminum	190		ug/L	P393014	
		Antimony	0.050	U	ug/L	P393014	
		Arsenic	0.086	I	ug/L	P393014	
		Beryllium	0.017	I	ug/L	P393014	
		Boron**	7.5	I	ug/L	P393014	
		Cadmium	0.020	U	ug/L	P393014	
		Chromium	0.40	U	ug/L	P393014	
		Copper	0.40	U	ug/L	P393014	
		Lead	0.30	I	ug/L	P393014	
		Nickel	0.50	U	ug/L	P393014	
		Selenium	0.20	U	ug/L	P393014	
		Silver	0.010	U	ug/L	P393014	
		Thallium	0.10	U	ug/L	P393014	
	SM 2340B	Hardness	7.5		mg/L	P393014	

Ref. Method and Comment:

SM 2540 D-2011: 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: Stone Mill Creek Upstream S Dianna St

Collection Date/Time: 01/26/2021 09:45

Field ID: G2TLHR0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221530	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P392996	
	EPA 300.0 Rev. 2.1	Chloride	4.3		mg Cl/L	P393370	
		Sulfate	1.7		mg SO4/L	P393373	
		Color (true)	120		PCU	P392940	
	SM 2320 B-2011	Total Alkalinity	5.9		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	39		mg/L	P393483	
	SM 2540 D-2011	TSS	3	I	mg/L	P393357	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P393218	
2221531	EPA 350.1 Rev. 2.0	Ammonia-N	0.14		mg N/L	P393462	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P393259	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.090		mg N/L	P393108	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P393248	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P393187	
2221532	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392944	
2221553	EPA 200.7 Rev. 4.4	Barium	10.2		ug/L	P393014	
		Calcium	3.71		mg/L	P393014	
		Iron	490		ug/L	P393014	
		Magnesium	0.72		mg/L	P393014	
		Manganese	10.5		ug/L	P393014	
		Potassium	0.36	I	mg/L	P393014	
		Sodium	2.5		mg/L	P393014	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P393014	
		Aluminum	397		ug/L	P393014	
		Antimony	0.050	U	ug/L	P393014	
		Arsenic	0.18	I	ug/L	P393014	
		Beryllium	0.018	I	ug/L	P393014	
		Boron**	9.7		ug/L	P393014	
		Cadmium	0.020	U	ug/L	P393014	
		Chromium	0.42	I	ug/L	P393014	
		Copper	0.40	U	ug/L	P393014	
		Lead	0.42		ug/L	P393014	
		Nickel	0.50	U	ug/L	P393014	
		Selenium	0.20	U	ug/L	P393014	
		Silver	0.010	U	ug/L	P393014	
		Thallium	0.10	U	ug/L	P393014	
		Hardness	12.2		mg/L	P393014	

Ref. Method and Comment:

SM 2540 D-2011: 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392996

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392997

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393014

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: P393014

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	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: P393370

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393373

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: P393462

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393258

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393259

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393108

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393248

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392947

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

Reference Method: EPA 8321B
Batch ID: P392967

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P392967

Component	Result	Code	Units
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P393118

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: P392930

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011

Batch ID: P392940

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P393215

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P393483

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393357

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P393187

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: P393014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.6		P	85 - 115
Calcium	106		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	98.4		P	85 - 115
Potassium	100		P	85 - 115
Sodium	102		P	85 - 115
Zinc	98.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.6		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	97.6		P	85 - 115
Beryllium	91.5		P	85 - 115
Boron	96.3		P	85 - 115
Cadmium	94.0		P	85 - 115
Chromium	96.1		P	85 - 115
Copper	96.4		P	85 - 115
Lead	100		P	85 - 115
Nickel	96.8		P	85 - 115
Selenium	98.2		P	85 - 115
Silver	104		P	80 - 120
Thallium	99.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393370

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393373

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393462

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393258

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393259

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393108

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393248

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392947

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

Reference Method: EPA 8321B
Batch ID: P392967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	129		P	30 - 160
Acetaminophen	94.9		P	30 - 160
Acetamiprid	113		P	30 - 160
Afidopyropen	83.0		P	30 - 160
Bentazon	86.7		P	30 - 160
Benzovindiflupyr	80.1		P	30 - 160
Carbamazepine	118		P	30 - 160
Clothianidin	108		P	30 - 160
Dinotefuran	103		P	30 - 160
Diuron	73.0		P	30 - 160
Fenuron	106		P	30 - 160
Fluridone	89.7		P	30 - 160
Hydrocodone	107		P	30 - 160
Ibuprofen	113		P	30 - 160
Imazapyr	103		P	30 - 160
Imidacloprid	114		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P392967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	81.0		P	30 - 160
Mandestrobin	95.4		P	30 - 160
MCPD	111		P	30 - 160
Naproxen	75.7		P	30 - 160
Primidone	99.3		P	30 - 160
Pyraclostrobin	84.4		P	30 - 160
Thiamethoxam	112		P	30 - 160
Tolfenpyrad	56.3		P	30 - 160
Triclopyr	91.4		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P393118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	90.4		P	40 - 150
Endothall	96.1		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	97.9		P	40 - 140
Sucralose	109		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P392930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P392940

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P393215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P393187

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221379	Barium	100		P	80 - 120
2221379	Calcium	107		P	80 - 120
2221379	Iron	109		P	80 - 120
2221379	Magnesium	114		P	80 - 120
2221379	Manganese	101		P	80 - 120
2221379	Potassium	104		P	80 - 120
2221379	Sodium	102		P	80 - 120
2221379	Zinc	108		P	80 - 120
2221555	Barium	104	103	P/P	80 - 120
2221555	Calcium	111	110	P/P	80 - 120
2221555	Iron	108	108	P/P	80 - 120
2221555	Magnesium	109	110	P/P	80 - 120
2221555	Manganese	103	102	P/P	80 - 120
2221555	Potassium	108	107	P/P	80 - 120
2221555	Sodium	106	105	P/P	80 - 120
2221555	Zinc	106	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221379	Aluminum	94.8		P	80 - 120
2221379	Antimony	98.8		P	80 - 120
2221379	Arsenic	95.1		P	80 - 120
2221379	Beryllium	88.7		P	80 - 120
2221379	Boron	97.5		P	80 - 120
2221379	Cadmium	93.3		P	80 - 120
2221379	Chromium	93.2		P	80 - 120
2221379	Copper	91.2		P	80 - 120
2221379	Lead	98.3		P	80 - 120
2221379	Nickel	91.7		P	80 - 120
2221379	Selenium	94.4		P	80 - 120
2221379	Silver	105		P	80 - 120
2221379	Thallium	102		P	80 - 120
2221555	Aluminum	97.2	96.9	P/P	80 - 120
2221555	Antimony	99.9	99.2	P/P	80 - 120
2221555	Arsenic	98.0	97.4	P/P	80 - 120
2221555	Beryllium	88.9	87.8	P/P	80 - 120
2221555	Boron	97.3	98.2	P/P	80 - 120
2221555	Cadmium	94.1	93.9	P/P	80 - 120
2221555	Chromium	97.3	95.3	P/P	80 - 120
2221555	Copper	97.1	95.8	P/P	80 - 120
2221555	Lead	100	99.7	P/P	80 - 120
2221555	Nickel	96.5	95.6	P/P	80 - 120
2221555	Selenium	98.7	98.1	P/P	80 - 120
2221555	Silver	89.0	101	P/P	80 - 120
2221555	Thallium	101	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393370

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221286	Chloride	101		P	90 - 110
2221527	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221286	Sulfate	101		P	90 - 110
2221527	Sulfate	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P393462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221370	Ammonia-N	95.8	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P393463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221538	Ammonia-N	97.8	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P393258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221296	Kjeldahl Nitrogen	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P393108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221539	NO2NO3-N	97.2	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P393248

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221528	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P392944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221216	O-Phosphate-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P392947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221541	O-Phosphate-P	107	108	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P392967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221551	2,4-D	108	121	P/P	30 - 160
2221551	Acetaminophen	100	114	P/P	30 - 160
2221551	Acetamiprid	106	108	P/P	30 - 160
2221551	Afidopyropen	56.4	65.5	P/P	30 - 160
2221551	Bentazon	68.2	76.8	P/P	30 - 160
2221551	Benzovindiflupyr	84.4	78.5	P/P	30 - 160
2221551	Carbamazepine	97.3	99.6	P/P	30 - 160
2221551	Clothianidin	111	111	P/P	30 - 160
2221551	Dinotefuran	122	122	P/P	30 - 160
2221551	Diuron	67.4	63.8	P/P	30 - 160
2221551	Fenuron	88.9	94.3	P/P	30 - 160
2221551	Fluridone	87.2	76.4	P/P	30 - 160
2221551	Hydrocodone	103	104	P/P	30 - 160
2221551	Ibuprofen	83.2	92.7	P/P	30 - 160
2221551	Imazapyr	108	109	P/P	30 - 160
2221551	Imidacloprid	136	139	P/P	30 - 160
2221551	Linuron	71.0	73.6	P/P	30 - 160
2221551	Mandestrobin	86.6	85.6	P/P	30 - 160
2221551	MCCP	95.4	101	P/P	30 - 160
2221551	Naproxen	77.7	63.8	P/P	30 - 160
2221551	Primidone	106	108	P/P	30 - 160
2221551	Pyraclostrobin	82.9	83.3	P/P	30 - 160
2221551	Thiamethoxam	142	134	P/P	30 - 160
2221551	Tolfenpyrad	60.7	60.8	P/P	30 - 160
2221551	Triclopyr	88.8	85.6	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P393118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221551	Acesulfame K	126	124	P/P	40 - 150
2221551	AMPA	128	134	P/P	40 - 150
2221551	Endothall	102	96.6	P/P	40 - 150
2221551	Glufosinate	97.2	106	P/P	40 - 150
2221551	Glyphosate	98.3	99.3	P/P	40 - 140
2221551	Sucralose	108	106	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221631	Fluoride	102	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P393187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221589	Organic Carbon	98.6	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221369	Turbidity	6.75	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392997

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221536	Turbidity	2.52	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221555	Barium	0.543	Spike	P	0 - 20
2221555	Calcium	0.975	Spike	P	0 - 20
2221555	Iron	0.0581	Spike	P	0 - 20
2221555	Magnesium	0.567	Spike	P	0 - 20
2221555	Manganese	0.685	Spike	P	0 - 20
2221555	Potassium	0.760	Spike	P	0 - 20
2221555	Sodium	0.658	Spike	P	0 - 20
2221555	Zinc	1.00	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221555	Aluminum	0.266	Spike	P	0 - 20
2221555	Antimony	0.669	Spike	P	0 - 20
2221555	Arsenic	0.585	Spike	P	0 - 20
2221555	Beryllium	1.28	Spike	P	0 - 20
2221555	Boron	0.853	Spike	P	0 - 20
2221555	Cadmium	0.276	Spike	P	0 - 20
2221555	Chromium	2.04	Spike	P	0 - 20
2221555	Copper	1.34	Spike	P	0 - 20
2221555	Lead	0.287	Spike	P	0 - 20
2221555	Nickel	0.939	Spike	P	0 - 20
2221555	Selenium	0.554	Spike	P	0 - 20
2221555	Silver	12.3	Spike	P	0 - 20
2221555	Thallium	0.224	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221527	Chloride	0.397	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221527	Sulfate	0.201	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221370	Ammonia-N	3.24	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221538	Ammonia-N	0.458	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221296	Kjeldahl Nitrogen	0.0352	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221605	Kjeldahl Nitrogen	2.47	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221539	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221528	Total-P	1.69	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221216	O-Phosphate-P	1.36	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P392947

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221541	O-Phosphate-P	1.21	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P392967

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221551	2,4-D	9.29	Spike	P	0 - 30
2221551	Acetaminophen	13.3	Spike	P	0 - 30
2221551	Acetamiprid	2.53	Spike	P	0 - 30
2221551	Afidopyropen	15.0	Spike	P	0 - 30
2221551	Bentazon	11.8	Spike	P	0 - 30
2221551	Benzovindiflupyr	7.20	Spike	P	0 - 30
2221551	Carbamazepine	2.22	Spike	P	0 - 30
2221551	Clothianidin	0.473	Spike	P	0 - 30
2221551	Dinotefuran	0.755	Spike	P	0 - 30
2221551	Diuron	5.51	Spike	P	0 - 30
2221551	Fenuron	5.92	Spike	P	0 - 30
2221551	Fluridone	12.4	Spike	P	0 - 30
2221551	Hydrocodone	0.967	Spike	P	0 - 30
2221551	Ibuprofen	10.8	Spike	P	0 - 30
2221551	Imazapyr	0.856	Spike	P	0 - 30
2221551	Imidacloprid	2.05	Spike	P	0 - 30
2221551	Linuron	3.66	Spike	P	0 - 30
2221551	Mandestrobin	1.22	Spike	P	0 - 30
2221551	MCPP	5.69	Spike	P	0 - 30
2221551	Naproxen	19.5	Spike	P	0 - 30
2221551	Primidone	1.16	Spike	P	0 - 30
2221551	Pyraclostrobin	0.471	Spike	P	0 - 30
2221551	Thiamethoxam	6.10	Spike	P	0 - 30
2221551	Tolfenpyrad	0.225	Spike	P	0 - 30
2221551	Triclopyr	3.67	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P393118

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221551	Acesulfame K	2.18	Spike	P	0 - 30
2221551	AMPA	4.41	Spike	P	0 - 30
2221551	Endothall	5.61	Spike	P	0 - 30
2221551	Glufosinate	9.04	Spike	P	0 - 30
2221551	Glyphosate	1.08	Spike	P	0 - 30
2221551	Sucralose	1.11	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P392930

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221289	Color (true)	2.11	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P392940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221536	Color (true)	8.89	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P393215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221631	Total Alkalinity	0.608	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221527	TDS	4.26	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P393218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221631	Fluoride	0.495	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P393187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221589	Organic Carbon	1.67	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2221551

Field Sample ID: G2TLHR0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.3	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	91.5	P	40 - 160
EPA 8321B	Endothall-d6	91.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	71.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	71.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	84.6	P	30 - 160
EPA 8321B	Primidone-d5	99.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2221552

Field Sample ID: G2TLHR0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.8	P	30 - 160
EPA 8321B	Diuron-d6	60.6	P	30 - 160
EPA 8321B	Endothall-d6	95.4	P	40 - 160
EPA 8321B	Endothall-d6	95.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	96.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	96.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	88.6	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A103248

Included Lab Sample IDs: 2221527, 2221533

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

Reference Method: SM 2120 B-2011

Run ID: A103255

Included Lab Sample IDs: 2221530, 2221536, 2221537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103257

Included Lab Sample IDs: 2221529, 2221532, 2221535, 2221540, 2221541

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103269

Included Lab Sample IDs: 2221527, 2221530, 2221533, 2221536, 2221537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105
Turbidity	101	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103300

Included Lab Sample IDs: 2221528, 2221531, 2221534, 2221538, 2221539

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103332

Included Lab Sample IDs: 2221553, 2221554, 2221555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.7	100	P/P	90 - 110
Calcium	104	102	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	105	101	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Potassium	101	97.0	P/P	90 - 110
Sodium	100	99.3	P/P	90 - 110
Zinc	104	103	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A103337

Included Lab Sample IDs: 2221528, 2221531, 2221534, 2221538, 2221539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A103337

Included Lab Sample IDs: 2221528, 2221531, 2221534, 2221538, 2221539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	100	P/P	90 - 110
Organic Carbon	103	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A103340

Included Lab Sample IDs: 2221551, 2221552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	106	106	P/P	60 - 160
AMPA	108	103	P/P	60 - 160
Endothall	93.4	107	P/P	60 - 160
Glufosinate	89.1	86.3	P/P	60 - 160
Glyphosate	89.0	93.5	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A103352

Included Lab Sample IDs: 2221527, 2221530, 2221533, 2221536, 2221537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.9	96.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A103352

Included Lab Sample IDs: 2221527, 2221530, 2221533, 2221536, 2221537

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

Reference Method: EPA 8321B

Run ID: A103371

Included Lab Sample IDs: 2221551, 2221552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	116	118	P/P	50 - 150
Acetaminophen	106	102	P/P	60 - 160
Acetamiprid	119	114	P/P	50 - 150
Afidopyropen	104	104	P/P	50 - 150
Bentazon	119	112	P/P	50 - 160
Benzovindiflupyr	102	105	P/P	50 - 160
Carbamazepine	120	108	P/P	60 - 150
Clothianidin	109	107	P/P	60 - 150
Dinotefuran	105	93.8	P/P	50 - 150
Diuron	118	115	P/P	60 - 160
Fenuron	113	102	P/P	60 - 150
Fluridone	106	103	P/P	60 - 160
Hydrocodone	113	100	P/P	60 - 150
Ibuprofen	124	120	P/P	50 - 160
Imazapyr	107	93.7	P/P	50 - 160
Imidacloprid	102	95.6	P/P	60 - 150
Linuron	110	106	P/P	60 - 150
Mandestrobin	121	110	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103371

Included Lab Sample IDs: 2221551, 2221552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCPD	111	115	P/P	50 - 150
Naproxen	103	92.7	P/P	50 - 160
Primidone	110	98.9	P/P	60 - 150
Pyraclostrobin	112	111	P/P	60 - 150
Thiamethoxam	113	104	P/P	50 - 150
Tolfenpyrad	117	111	P/P	60 - 150
Triclopyr	97.4	103	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103395

Included Lab Sample IDs: 2221528, 2221531, 2221534, 2221538, 2221539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	94.2	P/P	90 - 110
Kjeldahl Nitrogen	95.0	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103412

Included Lab Sample IDs: 2221527, 2221530, 2221533, 2221536, 2221537

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103417

Included Lab Sample IDs: 2221528, 2221531, 2221534, 2221538, 2221539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103455

Included Lab Sample IDs: 2221528, 2221531, 2221534, 2221538, 2221539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.5	P/P	90 - 110
Ammonia-N	97.7	99.1	P/P	90 - 110
Ammonia-N	98.5	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A103516

Included Lab Sample IDs: 2221551, 2221552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	107	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103531

Included Lab Sample IDs: 2221553, 2221554, 2221555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.1	98.4	P/P	90 - 110
Aluminum	98.7	97.1	P/P	90 - 110
Antimony	101	99.4	P/P	90 - 110
Antimony	98.6	98.9	P/P	90 - 110
Arsenic	96.2	95.3	P/P	90 - 110
Arsenic	99.2	97.1	P/P	90 - 110
Beryllium	93.1	91.4	P/P	90 - 110
Beryllium	96.1	96.2	P/P	90 - 110
Boron	104	100	P/P	90 - 110
Boron	96.7	99.0	P/P	90 - 110
Cadmium	95.1	96.5	P/P	90 - 110
Cadmium	96.5	95.7	P/P	90 - 110
Chromium	94.0	94.9	P/P	90 - 110
Chromium	95.8	95.2	P/P	90 - 110
Copper	93.6	93.3	P/P	90 - 110
Copper	97.2	94.9	P/P	90 - 110
Lead	99.1	99.4	P/P	90 - 110
Lead	99.3	98.4	P/P	90 - 110
Nickel	93.9	94.3	P/P	90 - 110
Nickel	97.2	95.0	P/P	90 - 110
Selenium	97.8	97.3	P/P	90 - 110
Selenium	99.0	97.2	P/P	90 - 110
Thallium	101	102	P/P	90 - 110
Thallium	101	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103547

Included Lab Sample IDs: 2221553, 2221554, 2221555

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	101	99.2	P/P	90 - 110
Silver	90.0	92.3	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						6.75	
	Turbidity						2.52	
EPA 200.7 Rev. 4.4	Barium	98.6	100	104	103			0.543
	Calcium	106	107	111	110			0.975
	Iron	105	109	108	108			0.0581
	Magnesium	105	114	109	110			0.567
	Manganese	98.4	101	103	102			0.685
	Potassium	100	104	108	107			0.760
	Sodium	102	102	106	105			0.658
	Zinc	98.1	108	106	105			1.00
EPA 200.8 Rev. 5.4	Aluminum	96.6	97.2	96.9	94.8			0.266
	Antimony	101	99.9	99.2	98.8			0.669
	Arsenic	97.6	98.0	97.4	95.1			0.585
	Beryllium	91.5	88.9	87.8	88.7			1.28
	Boron	96.3	97.3	98.2	97.5			0.853
	Cadmium	94.0	94.1	93.9	93.3			0.276
	Chromium	96.1	97.3	95.3	93.2			2.04
	Copper	96.4	97.1	95.8	91.2			1.34
	Lead	100	100	99.7	98.3			0.287
	Nickel	96.8	96.5	95.6	91.7			0.939
	Selenium	98.2	98.7	98.1	94.4			0.554
	Silver	104	89.0	101	105			12.3
	Thallium	99.5	101	101	102			0.224
EPA 300.0 Rev. 2.1	Chloride	100	100	101			0.397	
	Sulfate	100	99.4	101			0.201	
EPA 350.1 Rev. 2.0	Ammonia-N	98.5	95.8	99.5				3.24
	Ammonia-N	99.7	97.8	98.4				0.458
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	103	103				0.0352
	Kjeldahl Nitrogen	106						2.47
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	97.2	97.8				0.480
EPA 365.1 Rev. 2.0	Total-P	106	105	107				1.69
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	102	103				1.36
	O-Phosphate-P	105	107	108				1.21
EPA 8321B	2,4-D	129	108	121				9.29
	Acesulfame K	107	126	124				2.18
	Acetaminophen	94.9	100	114				13.3
	Acetamiprid	113	106	108				2.53
	Afidopyropen	83.0	56.4	65.5				15.0
	AMPA	90.4	128	134				4.41
	Bentazon	86.7	68.2	76.8				11.8
	Benzovindiflupyr	80.1	84.4	78.5				7.20
	Carbamazepine	118	97.3	99.6				2.22
	Clothianidin	108	111	111				0.473
	Dinotefuran	103	122	122				0.755
	Diuron	73.0	67.4	63.8				5.51
	Endothall	96.1	102	96.6				5.61
	Fenuron	106	88.9	94.3				5.92
	Fluridone	89.7	87.2	76.4				12.4
	Glufosinate	104	97.2	106				9.04
	Glyphosate	97.9	98.3	99.3				1.08
	Hydrocodone	107	103	104				0.967
	Ibuprofen	113	83.2	92.7				10.8
	Imazapyr	103	108	109				0.856
	Imidacloprid	114	136	139				2.05

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Linuron	81.0	71.0	73.6		3.66
	Mandestrobin	95.4	86.6	85.6		1.22
	MCCP	111	95.4	101		5.69
	Naproxen	75.7	77.7	63.8		19.5
	Primidone	99.3	106	108		1.16
	Pyraclostrobin	84.4	82.9	83.3		0.471
	Sucralose	109	108	106		1.11
	Thiamethoxam	112	142	134		6.10
	Tolfenpyrad	56.3	60.7	60.8		0.225
	Triclopyr	91.4	88.8	85.6		3.67
SM 2120 B-2011	Color (true)	99.3			2.11	
	Color (true)	98.8			8.89	
SM 2320 B-2011	Total Alkalinity	95.6			0.608	
SM 2540 C-2011	TDS				4.26	
SM 4500 F-C-2011	Fluoride	97.6	102	102		0.495
SM 5310 B-2011	Organic Carbon	101	98.6	101		1.67

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2221527, 2221530, 2221533, 2221536, 2221537
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2221553, 2221554, 2221555
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2221553, 2221554, 2221555
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2221527, 2221530, 2221533, 2221536, 2221537
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2221527, 2221530, 2221533, 2221536, 2221537
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2221528, 2221531, 2221534, 2221538, 2221539
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2221528, 2221531, 2221534, 2221538, 2221539
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2221528, 2221531, 2221534, 2221538, 2221539
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2221528, 2221531, 2221534, 2221538, 2221539
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2221529, 2221532, 2221535, 2221540, 2221541
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2221551, 2221552
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2221551, 2221552
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2221527, 2221530, 2221533, 2221536, 2221537
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2221527, 2221530, 2221533, 2221536, 2221537
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2221553, 2221554, 2221555
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2221527, 2221530, 2221533, 2221536, 2221537
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2221527, 2221530, 2221533, 2221536, 2221537
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2221527, 2221530, 2221533, 2221536, 2221537
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2221528, 2221531, 2221534, 2221538, 2221539

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	01/26/2021			01/26/2021 16:32	Yen Ta	2221527, 2221530, 2221533, 2221536, 2221537
EPA 200.7 Rev. 4.4	01/26/2021	01/27/2021 16:10	Elliott D. Healy	01/29/2021 14:43	Betina Topolski	2221553
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	01/29/2021 14:48	Betina Topolski	2221554
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	01/29/2021 14:57	Betina Topolski	2221555
EPA 200.8 Rev. 5.4	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/10/2021 13:42	Alexander Thompson	2221555
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/10/2021 16:26	Alexander Thompson	2221553
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/10/2021 16:33	Alexander Thompson	2221554
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/11/2021 13:43	Alexander Thompson	2221555
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/11/2021 15:15	Alexander Thompson	2221553
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/11/2021 15:19	Alexander Thompson	2221554
EPA 300.0 Rev. 2.1	01/26/2021			02/03/2021 15:28	Lipi Saha	2221527
	01/26/2021			02/03/2021 18:29	Lipi Saha	2221530
	01/26/2021			02/03/2021 18:41	Lipi Saha	2221533
	01/26/2021			02/03/2021 18:53	Lipi Saha	2221536
	01/26/2021			02/03/2021 19:05	Lipi Saha	2221537
EPA 350.1 Rev. 2.0	01/26/2021			02/07/2021 11:47	Ping Hua	2221528
	01/26/2021			02/07/2021 11:48	Ping Hua	2221531
	01/26/2021			02/07/2021 11:50	Ping Hua	2221534
	01/26/2021			02/07/2021 12:08	Ping Hua	2221538
	01/26/2021			02/07/2021 12:27	Ping Hua	2221539
EPA 351.2 Rev. 2.0	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 15:22	Julia Storbeck	2221528
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 15:31	Julia Storbeck	2221531
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 15:33	Julia Storbeck	2221534
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 15:35	Julia Storbeck	2221538
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 15:40	Julia Storbeck	2221539
EPA 353.2 Rev. 2.0	01/26/2021			01/28/2021 11:15	Beverly Y. Sanders	2221528
	01/26/2021			01/28/2021 11:27	Beverly Y. Sanders	2221531
	01/26/2021			01/28/2021 11:28	Beverly Y. Sanders	2221534
	01/26/2021			01/28/2021 11:29	Beverly Y. Sanders	2221538
	01/26/2021			01/28/2021 11:30	Beverly Y. Sanders	2221539
EPA 365.1 Rev. 2.0	01/26/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 12:25	Shengyu Wang	2221528
	01/26/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 12:26	Shengyu Wang	2221531
	01/26/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 12:27	Shengyu Wang	2221534
	01/26/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 12:28	Shengyu Wang	2221538
	01/26/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 12:29	Shengyu Wang	2221539
EPA 365.1 Rev. 2.0 dissolved	01/26/2021			01/26/2021 15:56	Blanca Fach	2221529
	01/26/2021			01/26/2021 16:01	Blanca Fach	2221532
	01/26/2021			01/26/2021 16:02	Blanca Fach	2221535
	01/26/2021			01/26/2021 16:03	Blanca Fach	2221540

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	01/26/2021			01/26/2021 16:07	Blanca Fach	2221541
EPA 8321B	01/26/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 01:07	Juyoung Kim	2221551
	01/26/2021	01/29/2021 09:00	Hoor Shaik	01/30/2021 01:42	Juyoung Kim	2221552
	01/26/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 14:38	Rebecca Ware	2221551
	01/26/2021	01/29/2021 10:00	Rebecca Ware	01/29/2021 14:52	Rebecca Ware	2221552
	01/26/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 18:05	Rebecca Ware	2221551
	01/26/2021	01/29/2021 10:00	Rebecca Ware	02/09/2021 18:16	Rebecca Ware	2221552
SM 2120 B-2011	01/26/2021			01/26/2021 17:01	Benjamin T. Nordmann	2221527
	01/26/2021			01/26/2021 17:03	Benjamin T. Nordmann	2221533
	01/26/2021			01/26/2021 21:27	Madeline Gruver	2221536
	01/26/2021			01/26/2021 21:28	Madeline Gruver	2221537
	01/26/2021			01/26/2021 21:29	Madeline Gruver	2221530
SM 2320 B-2011	01/26/2021			01/29/2021 23:08	Dale L. Simmons	2221527
	01/26/2021			01/29/2021 23:19	Dale L. Simmons	2221530
	01/26/2021			01/29/2021 23:27	Dale L. Simmons	2221533
	01/26/2021			01/29/2021 23:38	Dale L. Simmons	2221536
	01/26/2021			01/29/2021 23:49	Dale L. Simmons	2221537
SM 2340B	01/26/2021			01/29/2021 14:43	Betina Topolski	2221553
	01/26/2021			01/29/2021 14:48	Betina Topolski	2221554
	01/26/2021			01/29/2021 14:57	Betina Topolski	2221555
SM 2540 C-2011	01/26/2021			01/29/2021 15:32	Yijie Li	2221527, 2221530, 2221533, 2221536, 2221537
SM 2540 D-2011	01/26/2021			01/29/2021 15:32	Yijie Li	2221527, 2221530, 2221533, 2221536, 2221537
SM 4500 F-C-2011	01/26/2021			01/29/2021 23:08	Dale L. Simmons	2221527
	01/26/2021			01/29/2021 23:19	Dale L. Simmons	2221530
	01/26/2021			01/29/2021 23:27	Dale L. Simmons	2221533
	01/26/2021			01/29/2021 23:38	Dale L. Simmons	2221536
	01/26/2021			01/29/2021 23:49	Dale L. Simmons	2221537
SM 5310 B-2011	01/26/2021			01/30/2021 01:22	Madeline Gruver	2221528
	01/26/2021			01/30/2021 01:34	Madeline Gruver	2221531
	01/26/2021			01/30/2021 01:46	Madeline Gruver	2221534
	01/26/2021			01/30/2021 01:58	Madeline Gruver	2221538
	01/26/2021			01/30/2021 02:35	Madeline Gruver	2221539