

Chemical Analysis Report

NE-DIST-2021-01-08-02

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

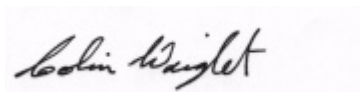
Event Description: **LSJR Lake 2021**
Request ID: **RQ-2021-01-04-40**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 29-JAN-2021 11:35

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular 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: Silver Lake Center

Collection Date/Time: 01/07/2021 10:00

Field ID: G2NE1132

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217530	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P392152	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P392251	
		Sulfate	4.6		mg SO4/L	P392253	
	SM 2120 B-2011	Color (true)	500		PCU	P392196	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P392571	
	SM 2540 C-2011	TDS	100		mg/L	P392619	
	SM 2540 D-2011	TSS	2	U	mg/L	P392538	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P392301	MS
2217531	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P392174	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P392765	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P392207	
	EPA 365.1 Rev. 2.0	Total-P	0.045		mg P/L	P392396	
	SM 5310 B-2011	Organic Carbon	36		mg C/L	P392512	
2217532	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P392157	

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: Lake Broward North

Collection Date/Time: 01/07/2021 11:05

Field ID: G2NE1219

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217533	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P392152	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P392251	
		Sulfate	10		mg SO4/L	P392253	
	SM 2120 B-2011	Color (true)	7.6		PCU	P392196	
	SM 2320 B-2011	Total Alkalinity	1.9	I	mg CaCO3/L	P392571	
	SM 2540 C-2011	TDS	47		mg/L	P392619	
	SM 2540 D-2011	TSS	3	I	mg/L	P392538	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P392301	MS
2217535	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P392174	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P392469	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P392208	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P392396	
	SM 5310 B-2011	Organic Carbon	5.0		mg C/L	P392358	
2217537	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392157	
2217556	EPA 8321B	2,4-D	0.17		ug/L	P392144	
		Acesulfame K**	0.10	U	ug/L	P392242	
		AMPA**	0.10	U	ug/L	P392242	
		Sucralose**	0.21		ug/L	P392242	
		Acetaminophen**	0.0080	U	ug/L	P392144	
		Acetamiprid**	0.0020	U	ug/L	P392144	
		Endothall**	0.25	U	ug/L	P392242	
		Glufosinate**	0.10	U	ug/L	P392242	
		Glyphosate**	0.10	U	ug/L	P392242	
		Afidopyropen**	0.0020	U	ug/L	P392144	
		Bentazon	8.0E-04	U	ug/L	P392144	
		Benzovindiflupyr**	0.0020	U	ug/L	P392144	
		Carbamazepine**	8.0E-04	U	ug/L	P392144	
		Clothianidin**	0.0020	U	ug/L	P392144	
		Dinotefuran**	0.0020	U	ug/L	P392144	
		Diuron	0.0020	U	ug/L	P392144	
		Fenuron	0.016	U	ug/L	P392144	
		Fluridone**	8.4E-04	I	ug/L	P392144	
		Imazapyr**	0.0077	I	ug/L	P392144	
		Hydrocodone**	0.0020	U	ug/L	P392144	
		Ibuprofen**	0.020	U	ug/L	P392144	
		Imidacloprid	0.0020	U	ug/L	P392144	
		Linuron	0.0040	U	ug/L	P392144	
		Mandestrobin**	0.0020	U	ug/L	P392144	
		MCPD	0.0020	U	ug/L	P392144	
		Naproxen**	0.0080	U	ug/L	P392144	
		Primidone**	0.0040	U	ug/L	P392144	
		Pyraclostrobin**	0.0020	U	ug/L	P392144	
		Thiamethoxam**	0.0020	U	ug/L	P392144	

Field ID: G2NE1219

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217556	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392144	
		Triclopyr**	0.0040	U	ug/L	P392144	
2217559	EPA 200.7 Rev. 4.4	Barium	10.3		ug/L	P392326	
		Calcium	3.96		mg/L	P392326	
		Iron	30	U	ug/L	P392326	
		Magnesium	1.61		mg/L	P392326	
		Manganese	2.3	I	ug/L	P392326	
		Potassium	1.1	I	mg/L	P392326	
		Sodium	9.2		mg/L	P392326	
		Zinc	5.0	U	ug/L	P392326	
	EPA 200.8 Rev. 5.4	Aluminum	48		ug/L	P392326	
		Antimony	0.088	I	ug/L	P392326	
		Arsenic	2.16		ug/L	P392326	
		Beryllium	0.010	U	ug/L	P392326	
		Boron**	29.9		ug/L	P392326	
		Cadmium	0.020	U	ug/L	P392326	
		Chromium	0.40	U	ug/L	P392326	
		Copper	0.64	I	ug/L	P392326	
		Lead	0.25	I	ug/L	P392326	
		Nickel	0.50	U	ug/L	P392326	
		Selenium	0.20	U	ug/L	P392326	
		Silver	0.010	U	ug/L	P392326	
		Thallium	0.10	U	ug/L	P392326	
	SM 2340B	Hardness	16.5		mg/L	P392326	

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 and relative percent difference are unavailable because of analytical difficulties.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Lake Broward South

Collection Date/Time: 01/07/2021 11:25

Field ID: G2NE1218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217534	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P392152	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P392251	
		Sulfate	9.2		mg SO4/L	P392253	
	SM 2120 B-2011	Color (true)	18		PCU	P392196	
	SM 2320 B-2011	Total Alkalinity	3.2		mg CaCO3/L	P392571	
	SM 2540 C-2011	TDS	48		mg/L	P392619	
	SM 2540 D-2011	TSS	2	U	mg/L	P392538	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P392301	MS
2217536	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P392174	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P392469	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P392208	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P392396	
	SM 5310 B-2011	Organic Carbon	6.3		mg C/L	P392512	
2217538	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392157	
2217557	EPA 8321B	2,4-D	0.10		ug/L	P392144	
		Acesulfame K**	0.10	U	ug/L	P392242	
		AMPA**	0.10	U	ug/L	P392242	
		Sucralose**	0.37		ug/L	P392242	
		Acetaminophen**	0.0080	U	ug/L	P392144	
		Acetamiprid**	0.0020	U	ug/L	P392144	
		Endothall**	0.25	U	ug/L	P392242	
		Glufosinate**	0.10	U	ug/L	P392242	
		Glyphosate**	0.10	U	ug/L	P392242	
		Afidopyropen**	0.0020	U	ug/L	P392144	
		Bentazon	8.0E-04	U	ug/L	P392144	
		Benzovindiflupyr**	0.0020	U	ug/L	P392144	
		Carbamazepine**	8.0E-04	U	ug/L	P392144	
		Clothianidin**	0.0020	U	ug/L	P392144	
		Dinotefuran**	0.0020	U	ug/L	P392144	
		Diuron	0.0020	U	ug/L	P392144	
		Fenuron	0.016	U	ug/L	P392144	
		Fluridone**	0.011		ug/L	P392144	
		Imazapyr**	0.094		ug/L	P392144	
		Hydrocodone**	0.0020	U	ug/L	P392144	
		Ibuprofen**	0.020	U	ug/L	P392144	
		Imidacloprid	0.0020	U	ug/L	P392144	
		Linuron	0.0040	U	ug/L	P392144	
		Mandestrobin**	0.0020	U	ug/L	P392144	
		MCP	0.0020	U	ug/L	P392144	
		Naproxen**	0.0080	U	ug/L	P392144	
		Primidone**	0.0040	U	ug/L	P392144	
		Pyraclostrobin**	0.0020	U	ug/L	P392144	
		Thiamethoxam**	0.0020	U	ug/L	P392144	

Field ID: G2NE1218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217557	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392144	
		Triclopyr**	0.0040	U	ug/L	P392144	
2217560	EPA 200.7 Rev. 4.4	Barium	11.5		ug/L	P392326	
		Calcium	4.87		mg/L	P392326	
		Iron	30	U	ug/L	P392326	
		Magnesium	1.73		mg/L	P392326	
		Manganese	5.4		ug/L	P392326	
		Potassium	1.2	I	mg/L	P392326	
		Sodium	8.9		mg/L	P392326	
		Zinc	5.0	U	ug/L	P392326	
	EPA 200.8 Rev. 5.4	Aluminum	33		ug/L	P392326	
		Antimony	0.071	I	ug/L	P392326	
		Arsenic	2.79		ug/L	P392326	
		Beryllium	0.010	U	ug/L	P392326	
		Boron**	28.7		ug/L	P392326	
		Cadmium	0.020	U	ug/L	P392326	
		Chromium	0.40	U	ug/L	P392326	
		Copper	1.38		ug/L	P392326	
		Lead	0.20	U	ug/L	P392326	
		Nickel	0.50	U	ug/L	P392326	
		Selenium	0.20	U	ug/L	P392326	
		Silver	0.010	U	ug/L	P392326	
		Thallium	0.10	U	ug/L	P392326	
	SM 2340B	Hardness	19.3		mg/L	P392326	

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 and relative percent difference are unavailable because of analytical difficulties.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: FB_010721

Collection Date/Time: 01/07/2021 11:40

Field ID: FB_010721

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217539	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P392152	MS
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P392251	
		Sulfate	0.20	U	mg SO4/L	P392253	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P392196	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P392571	
	SM 2540 C-2011	TDS	15	U	mg/L	P392617	
	SM 2540 D-2011	TSS	2	U	mg/L	P392536	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P392301	
2217540	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P392174	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P392469	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P392208	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P392396	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P392512	
2217541	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392157	
2217558	EPA 8321B	2,4-D	0.0020	U	ug/L	P392144	
		Acesulfame K**	0.10	U	ug/L	P392242	
		AMPA**	0.10	U	ug/L	P392242	
		Sucralose**	0.010	U	ug/L	P392242	
		Acetaminophen**	0.0080	U	ug/L	P392144	
		Acetamiprid**	0.0020	U	ug/L	P392144	
		Endothall**	0.25	U	ug/L	P392242	
		Glufosinate**	0.10	U	ug/L	P392242	
		Glyphosate**	0.10	U	ug/L	P392242	
		Afidopyropen**	0.0020	U	ug/L	P392144	
		Bentazon	8.0E-04	U	ug/L	P392144	
		Benzovindiflupyr**	0.0020	U	ug/L	P392144	
		Carbamazepine**	8.0E-04	U	ug/L	P392144	
		Clothianidin**	0.0020	U	ug/L	P392144	
		Dinotefuran**	0.0020	U	ug/L	P392144	
		Diuron	0.0020	U	ug/L	P392144	
		Fenuron	0.016	U	ug/L	P392144	
		Fluridone**	8.0E-04	U	ug/L	P392144	
		Imazapyr**	0.0040	U	ug/L	P392144	
		Hydrocodone**	0.0020	U	ug/L	P392144	
		Ibuprofen**	0.020	U	ug/L	P392144	
		Imidacloprid	0.0020	U	ug/L	P392144	
		Linuron	0.0040	U	ug/L	P392144	
		Mandestrobin**	0.0020	U	ug/L	P392144	
		MCP	0.0020	U	ug/L	P392144	
		Naproxen**	0.0080	U	ug/L	P392144	
		Primidone**	0.0040	U	ug/L	P392144	
		Pyraclostrobin**	0.0020	U	ug/L	P392144	
		Thiamethoxam**	0.0020	U	ug/L	P392144	

Field ID: FB_010721

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2217558	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392144	
		Triclopyr**	0.0040	U	ug/L	P392144	
2217561	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P392326	
		Calcium	0.075	U	mg/L	P392326	
		Iron	30	U	ug/L	P392326	
		Magnesium	0.040	U	mg/L	P392326	
		Manganese	1.0	U	ug/L	P392326	
		Potassium	0.30	U	mg/L	P392326	
		Sodium	0.50	U	mg/L	P392326	
		Zinc	5.0	U	ug/L	P392326	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P392326	
		Antimony	0.050	U	ug/L	P392326	
		Arsenic	0.050	U	ug/L	P392326	
		Beryllium	0.010	U	ug/L	P392326	
		Boron**	2.0	U	ug/L	P392326	
		Cadmium	0.020	U	ug/L	P392326	
		Chromium	0.40	U	ug/L	P392326	
		Copper	0.40	U	ug/L	P392326	
		Lead	0.20	U	ug/L	P392326	
		Nickel	0.50	U	ug/L	P392326	
		Selenium	0.20	U	ug/L	P392326	
		Silver	0.010	U	ug/L	P392326	
		Thallium	0.10	U	ug/L	P392326	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: The result was confirmed on 01/10/2021.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries and relative percent difference are unavailable because of analytical difficulties.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392152

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392326

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: P392326

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: P392251

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392253

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P392174

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P392469

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P392765

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392207

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392208

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P392396

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392157

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

Reference Method: EPA 8321B
Batch ID: P392144

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P392144

Component	Result	Code	Units
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: P392242

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: P392196

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P392571

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

Reference Method: SM 2540 C-2011
Batch ID: P392617

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P392619

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P392536

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P392538

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P392301

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P392358

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

Reference Method: SM 5310 B-2011
Batch ID: P392512

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: P392326

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	103		P	85 - 115
Calcium	106		P	85 - 115
Iron	104		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	104		P	85 - 115
Potassium	101		P	85 - 115
Sodium	100		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392326

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.6		P	85 - 115
Antimony	99.6		P	85 - 115
Arsenic	99.0		P	85 - 115
Beryllium	95.3		P	85 - 115
Boron	100		P	85 - 115
Cadmium	99.0		P	85 - 115
Chromium	98.3		P	85 - 115
Copper	93.8		P	85 - 115
Lead	103		P	85 - 115
Nickel	94.3		P	85 - 115
Selenium	96.7		P	85 - 115
Silver	104		P	85 - 115
Thallium	97.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392251

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392253

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P392174

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P392469

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P392765

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392207

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392208

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P392396

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392157

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.8		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P392144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	118		P	30 - 160
Acetaminophen	74.6		P	30 - 160
Acetamiprid	92.6		P	30 - 160
Afidopyropen	80.5		P	30 - 160
Bentazon	87.0		P	30 - 160
Benzovindiflupyr	78.4		P	30 - 160
Carbamazepine	77.8		P	30 - 160
Clothianidin	98.7		P	30 - 160
Dinotefuran	87.3		P	30 - 160
Diuron	61.2		P	30 - 160
Fenuron	92.7		P	30 - 160
Fluridone	83.1		P	30 - 160
Hydrocodone	106		P	30 - 160
Ibuprofen	93.2		P	30 - 160
Imazapyr	93.5		P	30 - 160
Imidacloprid	109		P	30 - 160
Linuron	73.5		P	30 - 160
Mandestrobin	88.7		P	30 - 160
MCPP	110		P	30 - 160
Naproxen	62.6		P	30 - 160
Primidone	112		P	30 - 160
Pyraclostrobin	85.1		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P392144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	106		P	30 - 160
Tolfenpyrad	53.2		P	30 - 160
Triclopyr	90.8		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	61.4		P	40 - 150
AMPA	79.1		P	40 - 150
Endothall	91.3		P	40 - 150
Glufosinate	92.3		P	40 - 150
Glyphosate	110		P	40 - 140
Sucralose	98.4		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P392196

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

Reference Method: SM 2320 B-2011
Batch ID: P392571

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.8		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P392301

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P392358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P392512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P392326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217559	Barium	101	104	P/P	80 - 120
2217559	Calcium	105	109	P/P	80 - 120
2217559	Iron	107	108	P/P	80 - 120
2217559	Magnesium	107	108	P/P	80 - 120
2217559	Manganese	103	106	P/P	80 - 120
2217559	Potassium	101	101	P/P	80 - 120
2217559	Sodium	94.2		P	80 - 120
2217559	Zinc	95.6	97.7	P/P	80 - 120
2218161	Barium	105		P	80 - 120
2218161	Calcium	102		P	80 - 120
2218161	Iron	104		P	80 - 120
2218161	Magnesium	108		P	80 - 120
2218161	Manganese	105		P	80 - 120
2218161	Potassium	103		P	80 - 120
2218161	Sodium	105		P	80 - 120
2218161	Zinc	94.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P392326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217559	Aluminum	98.3	99.5	P/P	80 - 120
2217559	Antimony	100	99.9	P/P	80 - 120
2217559	Arsenic	100	99.2	P/P	80 - 120
2217559	Beryllium	91.8	96.4	P/P	80 - 120
2217559	Boron	99.8	101	P/P	80 - 120
2217559	Cadmium	101	101	P/P	80 - 120
2217559	Chromium	99.2	99.8	P/P	80 - 120
2217559	Copper	95.0	96.1	P/P	80 - 120
2217559	Lead	104	104	P/P	80 - 120
2217559	Nickel	95.7	95.6	P/P	80 - 120
2217559	Selenium	96.7	96.0	P/P	80 - 120
2217559	Silver	103	104	P/P	80 - 120
2217559	Thallium	98.8	99.5	P/P	80 - 120
2218161	Aluminum	92.1		P	80 - 120
2218161	Antimony	96.2		P	80 - 120
2218161	Arsenic	97.7		P	80 - 120
2218161	Beryllium	91.6		P	80 - 120
2218161	Boron	101		P	80 - 120
2218161	Cadmium	101		P	80 - 120
2218161	Chromium	99.1		P	80 - 120
2218161	Copper	93.3		P	80 - 120
2218161	Lead	104		P	80 - 120
2218161	Nickel	95.1		P	80 - 120
2218161	Selenium	95.2		P	80 - 120
2218161	Silver	105		P	80 - 120
2218161	Thallium	99.5		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392251

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: P392251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217357	Chloride	102		P	90 - 110
2217533	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392253

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217357	Sulfate	102		P	90 - 110
2217533	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P392174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217535	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P392765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2218300	Kjeldahl Nitrogen	109	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217474	NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392208

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217535	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P392396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217525	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217483	O-Phosphate-P	97.9	98.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P392144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2216796	2,4-D	93.1	92.3	P/P	30 - 160
2216796	Acetaminophen	75.3	85.8	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P392144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2216796	Acetamiprid	77.2	78.5	P/P	30 - 160
2216796	Afidopyropen	64.3	64.8	P/P	30 - 160
2216796	Benzovindiflupyr	64.3	62.2	P/P	30 - 160
2216796	Carbamazepine	51.6	49.0	P/P	30 - 160
2216796	Clothianidin	88.5	79.5	P/P	30 - 160
2216796	Dinotefuran	94.4	85.3	P/P	30 - 160
2216796	Diuron	42.6	39.3	P/P	30 - 160
2216796	Fenuron	60.0	63.4	P/P	30 - 160
2216796	Fluridone	61.1	48.8	P/P	30 - 160
2216796	Hydrocodone	95.9	91.1	P/P	30 - 160
2216796	Ibuprofen	64.1	71.1	P/P	30 - 160
2216796	Imidacloprid	111	114	P/P	30 - 160
2216796	Linuron	52.4	50.3	P/P	30 - 160
2216796	Mandestrobin	69.4	65.0	P/P	30 - 160
2216796	MCPP	78.3	78.8	P/P	30 - 160
2216796	Naproxen	66.1	79.6	P/P	30 - 160
2216796	Primidone	99.4	74.8	P/P	30 - 160
2216796	Pyraclostrobin	72.2	72.4	P/P	30 - 160
2216796	Thiamethoxam	93.4	104	P/P	30 - 160
2216796	Tolfenpyrad	52.7	52.4	P/P	30 - 160
2216796	Triclopyr	72.2	79.9	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217556	Acesulfame K	58.6	58.4	P/P	40 - 150
2217556	AMPA	93.5	86.3	P/P	40 - 150
2217556	Endothall	96.9	93.0	P/P	40 - 150
2217556	Glufosinate	101	98.6	P/P	40 - 150
2217556	Glyphosate	94.7	97.3	P/P	40 - 140
2217556	Sucralose	103	104	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P392301

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217721	Fluoride	94.7	93.6	P/F	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P392358

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217524	Organic Carbon	94.4	95.8	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P392512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217576	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P392152

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217566	Turbidity	4.20	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P392326

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217559	Barium	2.57	Spike	P	0 - 20
2217559	Calcium	1.95	Spike	P	0 - 20
2217559	Iron	1.01	Spike	P	0 - 20
2217559	Magnesium	0.700	Spike	P	0 - 20
2217559	Manganese	2.05	Spike	P	0 - 20
2217559	Potassium	0.109	Spike	P	0 - 20
2217559	Sodium	1.30	Spike	P	0 - 20
2217559	Zinc	2.18	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P392326

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217559	Aluminum	1.22	Spike	P	0 - 20
2217559	Antimony	0.100	Spike	P	0 - 20
2217559	Arsenic	0.784	Spike	P	0 - 20
2217559	Beryllium	4.95	Spike	P	0 - 20
2217559	Boron	0.819	Spike	P	0 - 20
2217559	Cadmium	0.219	Spike	P	0 - 20
2217559	Chromium	0.611	Spike	P	0 - 20
2217559	Copper	1.10	Spike	P	0 - 20
2217559	Lead	0.00389	Spike	P	0 - 20
2217559	Nickel	0.130	Spike	P	0 - 20
2217559	Selenium	0.704	Spike	P	0 - 20
2217559	Silver	1.34	Spike	P	0 - 20
2217559	Thallium	0.633	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392251

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217357	Chloride	1.04	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392253

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217357	Sulfate	1.36	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P392174

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217535	Ammonia-N	0.787	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P392765

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2218300	Kjeldahl Nitrogen	0.412	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P392207

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217474	NO2NO3-N	0.432	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P392208

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217535	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P392396

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217525	Total-P	0.722	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P392157

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217483	O-Phosphate-P	0.204	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P392144

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2216796	2,4-D	0.714	Spike	P	0 - 30
2216796	Acetaminophen	7.39	Spike	P	0 - 30
2216796	Acetamiprid	1.72	Spike	P	0 - 30
2216796	Afidopyropen	0.897	Spike	P	0 - 30
2216796	Bentazon	3.71	Spike	P	0 - 30
2216796	Benzovindiflupyr	3.33	Spike	P	0 - 30
2216796	Carbamazepine	5.20	Spike	P	0 - 30
2216796	Clothianidin	10.7	Spike	P	0 - 30
2216796	Dinotefuran	10.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P392144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2216796	Diuron	7.45	Spike	P	0 - 30
2216796	Fenuron	5.56	Spike	P	0 - 30
2216796	Fluridone	18.9	Spike	P	0 - 30
2216796	Hydrocodone	5.14	Spike	P	0 - 30
2216796	Ibuprofen	10.3	Spike	P	0 - 30
2216796	Imazapyr	11.4	Spike	P	0 - 30
2216796	Imidacloprid	2.92	Spike	P	0 - 30
2216796	Linuron	4.07	Spike	P	0 - 30
2216796	Mandestrobin	6.57	Spike	P	0 - 30
2216796	MCPPP	0.582	Spike	P	0 - 30
2216796	Naproxen	18.6	Spike	P	0 - 30
2216796	Primidone	28.2	Spike	P	0 - 30
2216796	Pyraclostrobin	0.305	Spike	P	0 - 30
2216796	Thiamethoxam	11.1	Spike	P	0 - 30
2216796	Tolfenpyrad	0.595	Spike	P	0 - 30
2216796	Triclopyr	10.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217556	Acesulfame K	0.346	Spike	P	0 - 30
2217556	AMPA	8.09	Spike	P	0 - 30
2217556	Endothall	4.06	Spike	P	0 - 30
2217556	Glufosinate	2.87	Spike	P	0 - 30
2217556	Glyphosate	2.70	Spike	P	0 - 30
2217556	Sucralose	1.28	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P392196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217522	Color (true)	0.523	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P392571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2218508	Total Alkalinity	0.00832	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P392617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217173	TDS	0.0	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P392619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217242	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P392301

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217721	Fluoride	0.463	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P392358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217524	Organic Carbon	0.775	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P392512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217576	Organic Carbon	1.25	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2217556

Field Sample ID: G2NE1219

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.1	P	30 - 160
EPA 8321B	Diuron-d6	44.0	P	30 - 160
EPA 8321B	Endothall-d6	83.5	P	40 - 160
EPA 8321B	Endothall-d6	83.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	66.8	P	30 - 160
EPA 8321B	Primidone-d5	73.1	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2217557

Field Sample ID: G2NE1218

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	99.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.3	P	30 - 160
EPA 8321B	Diuron-d6	44.9	P	30 - 160
EPA 8321B	Endothall-d6	84.0	P	40 - 160
EPA 8321B	Endothall-d6	84.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	93.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	93.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	62.9	P	30 - 160
EPA 8321B	Primidone-d5	75.1	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2217558

Field Sample ID: FB_010721

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.3	P	30 - 160
EPA 8321B	Diuron-d6	73.9	P	30 - 160
EPA 8321B	Endothall-d6	89.6	P	40 - 160
EPA 8321B	Endothall-d6	89.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Ibuprofen-d3	75.5	P	30 - 160
EPA 8321B	Primidone-d5	99.4	P	30 - 160
EPA 8321B	Sucralose-d6	96.0	P	30 - 160
EPA 8321B	Sucralose-d6	96.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102965

Included Lab Sample IDs: 2217530, 2217533, 2217534, 2217539

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102966

Included Lab Sample IDs: 2217532, 2217537, 2217538, 2217541

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102972

Included Lab Sample IDs: 2217531, 2217535, 2217536, 2217540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	99.8	P/P	90 - 110
Ammonia-N	99.4	98.5	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A102981

Included Lab Sample IDs: 2217530, 2217533, 2217534, 2217539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115
Color (true)	103	102	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102983

Included Lab Sample IDs: 2217531, 2217535, 2217536, 2217540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	98.5	P/P	90 - 110
NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103007

Included Lab Sample IDs: 2217530, 2217533, 2217534, 2217539

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

Reference Method: SM 4500 F-C-2011

Run ID: A103018

Included Lab Sample IDs: 2217530, 2217533, 2217534, 2217539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103028

Included Lab Sample IDs: 2217556, 2217557, 2217558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	87.4	69.3	P/P	60 - 160
AMPA	94.1	85.7	P/P	60 - 160
Endothall	83.3	92.1	P/P	60 - 160
Glufosinate	95.3	102	P/P	60 - 160
Glyphosate	152	149	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103029

Included Lab Sample IDs: 2217556, 2217557, 2217558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.5	91.6	P/P	50 - 150
Acetaminophen	107	106	P/P	60 - 160
Acetamiprid	114	97.3	P/P	50 - 150
Afidopyropen	105	109	P/P	50 - 150
Bentazon	94.3	92.4	P/P	50 - 160
Benzovindiflupyr	112	113	P/P	50 - 160
Carbamazepine	106	111	P/P	60 - 150
Clothianidin	107	97.3	P/P	60 - 150
Dinotefuran	108	110	P/P	50 - 150
Diuron	117	113	P/P	60 - 160
Fenuron	108	83.3	P/P	60 - 150
Fluridone	120	119	P/P	60 - 160
Hydrocodone	97.8	130	P/P	60 - 150
Ibuprofen	116	107	P/P	50 - 160
Imazapyr	88.1	90.7	P/P	50 - 160
Imidacloprid	101	112	P/P	60 - 150
Linuron	98.7	98.7	P/P	60 - 150
Mandestrobin	112	106	P/P	50 - 150
MCPP	94.0	98.0	P/P	50 - 150
Naproxen	108	109	P/P	50 - 160
Primidone	109	111	P/P	60 - 150
Pyraclostrobin	107	107	P/P	60 - 150
Thiamethoxam	109	107	P/P	50 - 150
Tolfenpyrad	104	102	P/P	60 - 150
Triclopyr	96.0	99.0	P/P	50 - 150

Reference Method: SM 5310 B-2011

Run ID: A103042

Included Lab Sample IDs: 2217535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	95.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103074

Included Lab Sample IDs: 2217559, 2217560, 2217561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	102	P/P	95 - 105
Barium	103	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103074

Included Lab Sample IDs: 2217559, 2217560, 2217561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.0	P/P	95 - 105
Calcium	99.6	102	P/P	90 - 110
Iron	100	97.0	P/P	95 - 105
Iron	97.9	101	P/P	90 - 110
Magnesium	100	97.4	P/P	95 - 105
Magnesium	98.8	101	P/P	90 - 110
Manganese	104	104	P/P	95 - 105
Manganese	105	104	P/P	90 - 110
Potassium	95.9	97.6	P/P	90 - 110
Potassium	98.4	95.0	P/P	95 - 105
Sodium	98.0	98.7	P/P	90 - 110
Sodium	99.0	97.4	P/P	95 - 105
Zinc	104	105	P/P	95 - 105

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103077

Included Lab Sample IDs: 2217559, 2217560

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	97.7	97.4	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103081

Included Lab Sample IDs: 2217531, 2217535, 2217536, 2217540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.0	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A103104

Included Lab Sample IDs: 2217531, 2217536, 2217540

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

Reference Method: SM 2320 B-2011

Run ID: A103127

Included Lab Sample IDs: 2217530, 2217533, 2217534, 2217539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	97.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103128

Included Lab Sample IDs: 2217559, 2217560, 2217561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.7	98.8	P/P	90 - 110
Aluminum	98.8	98.0	P/P	90 - 110
Antimony	96.8	97.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103128

Included Lab Sample IDs: 2217559, 2217560, 2217561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	97.6	96.3	P/P	90 - 110
Arsenic	98.7	98.4	P/P	90 - 110
Arsenic	99.9	98.7	P/P	90 - 110
Beryllium	98.0	97.5	P/P	90 - 110
Beryllium	98.2	98.0	P/P	90 - 110
Boron	106	107	P/P	90 - 110
Boron	107	104	P/P	90 - 110
Cadmium	100	102	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	98.6	99.5	P/P	90 - 110
Chromium	99.5	100	P/P	90 - 110
Copper	94.6	94.1	P/P	90 - 110
Copper	94.7	94.6	P/P	90 - 110
Lead	105	106	P/P	90 - 110
Lead	106	106	P/P	90 - 110
Nickel	94.5	94.6	P/P	90 - 110
Nickel	94.9	94.5	P/P	90 - 110
Selenium	100	99.4	P/P	90 - 110
Selenium	99.4	99.1	P/P	90 - 110
Thallium	100	100	P/P	90 - 110
Thallium	99.1	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103144

Included Lab Sample IDs: 2217535, 2217536, 2217540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103145

Included Lab Sample IDs: 2217559, 2217560, 2217561

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

Reference Method: EPA 8321B

Run ID: A103189

Included Lab Sample IDs: 2217556, 2217557, 2217558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.8	87.3	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103216

Included Lab Sample IDs: 2217531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.4	97.8	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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						4.20	
EPA 200.7 Rev. 4.4	Barium	103	101	104	105			2.57
	Calcium	106	105	109	102			1.95
	Iron	104	107	108	104			1.01
	Magnesium	105	107	108	108			0.700
	Manganese	104	103	106	105			2.05
	Potassium	101	101	101	103			0.109
	Sodium	100	94.2	105				1.30
	Zinc	104	95.6	97.7	94.3			2.18
EPA 200.8 Rev. 5.4	Aluminum	97.6	98.3	99.5	92.1			1.22
	Antimony	99.6	100	99.9	96.2			0.100
	Arsenic	99.0	100	99.2	97.7			0.784
	Beryllium	95.3	91.8	96.4	91.6			4.95
	Boron	100	99.8	101	101			0.819
	Cadmium	99.0	101	101	101			0.219
	Chromium	98.3	99.2	99.8	99.1			0.611
	Copper	93.8	95.0	96.1	93.3			1.10
	Lead	103	104	104	104			0.0038
	Nickel	94.3	95.7	95.6	95.1			0.130
	Selenium	96.7	96.7	96.0	95.2			0.704
	Silver	104	103	104	105			1.34
	Thallium	97.5	98.8	99.5	99.5			0.633
EPA 300.0 Rev. 2.1	Chloride	102	102	102			1.04	
	Sulfate	101	102	102			1.36	
EPA 350.1 Rev. 2.0	Ammonia-N	100	102	101				0.787
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106						
	Kjeldahl Nitrogen	99.3	109	110				0.412
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	98.5	98.0				0.432
	NO ₂ NO ₃ -N	99.5	99.5	99.0				0.504
EPA 365.1 Rev. 2.0	Total-P	104	103	104				0.722
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8	97.9	98.1				0.204
EPA 8321B	2,4-D	118	93.1	92.3				0.714
	Acesulfame K	61.4	58.6	58.4				0.346
	Acetaminophen	74.6	75.3	85.8				7.39
	Acetamiprid	92.6	77.2	78.5				1.72
	Afidopyropen	80.5	64.3	64.8				0.897
	AMPA	79.1	93.5	86.3				8.09
	Bentazon	87.0						3.71
	Benzovindiflupyr	78.4	64.3	62.2				3.33
	Carbamazepine	77.8	51.6	49.0				5.20
	Clothianidin	98.7	88.5	79.5				10.7
	Dinotefuran	87.3	94.4	85.3				10.1
	Diuron	61.2	42.6	39.3				7.45
	Endothall	91.3	96.9	93.0				4.06
	Fenuron	92.7	60.0	63.4				5.56
	Fluridone	83.1	61.1	48.8				18.9
	Glufosinate	92.3	101	98.6				2.87
	Glyphosate	110	94.7	97.3				2.70
	Hydrocodone	106	95.9	91.1				5.14
	Ibuprofen	93.2	64.1	71.1				10.3
	Imazapyr	93.5						11.4
	Imidacloprid	109	111	114				2.92
	Linuron	73.5	52.4	50.3				4.07
	Mandestrobin	88.7	69.4	65.0				6.57

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	MCPP	110	78.3	78.8		0.582
	Naproxen	62.6	66.1	79.6		18.6
	Primidone	112	99.4	74.8		28.2
	Pyraclostrobin	85.1	72.2	72.4		0.305
	Sucralose	98.4	103	104		1.28
	Thiamethoxam	106	93.4	104		11.1
	Tolfenpyrad	53.2	52.7	52.4		0.595
	Triclopyr	90.8	72.2	79.9		10.1
SM 2120 B-2011	Color (true)	100			0.523	
SM 2320 B-2011	Total Alkalinity	96.8			0.0083	
SM 2540 C-2011	TDS				0.0	
	TDS				3.31	
SM 4500 F-C-2011	Fluoride	97.2	94.7	93.6		0.463
SM 5310 B-2011	Organic Carbon	96.3	94.4	95.8		0.775
	Organic Carbon	97.7	103			1.25

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2217530, 2217533, 2217534, 2217539
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2217559, 2217560, 2217561
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2217559, 2217560, 2217561
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2217530, 2217533, 2217534, 2217539
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2217530, 2217533, 2217534, 2217539
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2217531, 2217535, 2217536, 2217540
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2217531, 2217535, 2217536, 2217540
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2217531, 2217535, 2217536, 2217540
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2217531, 2217535, 2217536, 2217540
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2217532, 2217537, 2217538, 2217541
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2217556, 2217557, 2217558
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2217556, 2217557, 2217558
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2217530, 2217533, 2217534, 2217539
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2217530, 2217533, 2217534, 2217539
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2217559, 2217560
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2217530, 2217533, 2217534, 2217539
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2217530, 2217533, 2217534, 2217539
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2217530, 2217533, 2217534, 2217539
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2217531, 2217535, 2217536, 2217540

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	01/08/2021			01/08/2021 15:37	Yen Ta	2217530, 2217533, 2217534, 2217539
EPA 200.7 Rev. 4.4	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/14/2021 13:42	Betina Topolski	2217561
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/14/2021 16:12	Betina Topolski	2217559
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/14/2021 16:44	Betina Topolski	2217560
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/15/2021 10:25	Betina Topolski	2217559
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/15/2021 10:44	Betina Topolski	2217560
EPA 200.8 Rev. 5.4	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/19/2021 16:24	Alexander Thompson	2217561
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/19/2021 17:09	Alexander Thompson	2217559
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/19/2021 18:45	Alexander Thompson	2217560
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/20/2021 17:45	Alexander Thompson	2217561
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/20/2021 18:12	Alexander Thompson	2217559
	01/08/2021	01/13/2021 14:00	Elliott D. Healy	01/20/2021 19:12	Alexander Thompson	2217560
EPA 300.0 Rev. 2.1	01/08/2021			01/12/2021 01:44	Lipi Saha	2217533
	01/08/2021			01/12/2021 04:09	Lipi Saha	2217530
	01/08/2021			01/12/2021 04:21	Lipi Saha	2217534
	01/08/2021			01/12/2021 04:33	Lipi Saha	2217539
EPA 350.1 Rev. 2.0	01/08/2021			01/10/2021 16:22	Ping Hua	2217535
	01/08/2021			01/10/2021 16:38	Ping Hua	2217540
	01/08/2021			01/10/2021 16:39	Ping Hua	2217531
	01/08/2021			01/10/2021 16:41	Ping Hua	2217536
EPA 351.2 Rev. 2.0	01/08/2021	01/15/2021 13:22	Yen Ta	01/20/2021 17:10	Julia Storbeck	2217535
	01/08/2021	01/15/2021 13:22	Yen Ta	01/20/2021 17:12	Julia Storbeck	2217536
	01/08/2021	01/15/2021 13:22	Yen Ta	01/20/2021 17:13	Julia Storbeck	2217540
	01/08/2021	01/22/2021 13:26	Yen Ta	01/25/2021 13:54	Julia Storbeck	2217531
EPA 353.2 Rev. 2.0	01/08/2021			01/11/2021 10:41	Beverly Y. Sanders	2217531
	01/08/2021			01/11/2021 10:48	Beverly Y. Sanders	2217535
	01/08/2021			01/11/2021 10:55	Beverly Y. Sanders	2217536
	01/08/2021			01/11/2021 10:57	Beverly Y. Sanders	2217540
EPA 365.1 Rev. 2.0	01/08/2021	01/14/2021 14:05	Shengyu Wang	01/15/2021 13:00	Shengyu Wang	2217531
	01/08/2021	01/14/2021 14:05	Shengyu Wang	01/15/2021 13:01	Shengyu Wang	2217535
	01/08/2021	01/14/2021 14:05	Shengyu Wang	01/15/2021 13:02	Shengyu Wang	2217536
	01/08/2021	01/14/2021 14:05	Shengyu Wang	01/15/2021 13:03	Shengyu Wang	2217540
EPA 365.1 Rev. 2.0 dissolved	01/08/2021			01/08/2021 15:56	Ping Hua	2217532
	01/08/2021			01/08/2021 15:57	Ping Hua	2217537
	01/08/2021			01/08/2021 15:58	Ping Hua	2217538
	01/08/2021			01/08/2021 16:06	Ping Hua	2217541
EPA 8321B	01/08/2021	01/11/2021 09:00	Hoor Shaik	01/13/2021 05:07	Juyoung Kim	2217556
	01/08/2021	01/11/2021 09:00	Hoor Shaik	01/13/2021 05:42	Juyoung Kim	2217557
	01/08/2021	01/11/2021 09:00	Hoor Shaik	01/13/2021 06:17	Juyoung Kim	2217558
	01/08/2021	01/12/2021 11:00	Rebecca Ware	01/12/2021 13:02	Rebecca Ware	2217556

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/08/2021	01/12/2021 11:00	Rebecca Ware	01/12/2021 13:16	Rebecca Ware	2217557
	01/08/2021	01/12/2021 11:00	Rebecca Ware	01/12/2021 13:29	Rebecca Ware	2217558
	01/08/2021	01/12/2021 11:00	Rebecca Ware	01/20/2021 20:53	Rebecca Ware	2217558
	01/08/2021	01/12/2021 11:00	Rebecca Ware	01/20/2021 21:40	Rebecca Ware	2217556
	01/08/2021	01/12/2021 11:00	Rebecca Ware	01/20/2021 21:52	Rebecca Ware	2217557
SM 2120 B-2011	01/08/2021			01/08/2021 17:06	Benjamin T. Nordmann	2217533
	01/08/2021			01/08/2021 17:07	Benjamin T. Nordmann	2217534
	01/08/2021			01/08/2021 17:08	Benjamin T. Nordmann	2217539
	01/08/2021			01/08/2021 17:40	Benjamin T. Nordmann	2217530
SM 2320 B-2011	01/08/2021			01/15/2021 01:53	Dale L. Simmons	2217530
	01/08/2021			01/15/2021 02:01	Dale L. Simmons	2217533
	01/08/2021			01/15/2021 02:08	Dale L. Simmons	2217534
	01/08/2021			01/15/2021 02:14	Dale L. Simmons	2217539
SM 2340B	01/08/2021			01/14/2021 16:12	Betina Topolski	2217559
	01/08/2021			01/14/2021 16:44	Betina Topolski	2217560
SM 2540 C-2011	01/08/2021			01/12/2021 15:25	Yijie Li	2217530, 2217533, 2217534, 2217539
SM 2540 D-2011	01/08/2021			01/12/2021 15:25	Yijie Li	2217530, 2217533, 2217534, 2217539
SM 4500 F-C-2011	01/08/2021			01/12/2021 13:33	Dale L. Simmons	2217530
	01/08/2021			01/12/2021 13:42	Dale L. Simmons	2217533
	01/08/2021			01/12/2021 13:52	Dale L. Simmons	2217534
	01/08/2021			01/12/2021 14:01	Dale L. Simmons	2217539
SM 5310 B-2011	01/08/2021			01/12/2021 08:58	Madeline Gruver	2217535
	01/08/2021			01/14/2021 19:18	Madeline Gruver	2217531
	01/08/2021			01/14/2021 19:31	Madeline Gruver	2217536
	01/08/2021			01/14/2021 20:07	Madeline Gruver	2217540