

Chemical Analysis Report

NE-DIST-2021-11-17-01

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

Event Description: **LSJR Lake**
Request ID: **RQ-2021-11-15-19**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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: Liang Lin, Environmental Administrator

Date Certified: 10-DEC-2021 16:52

A handwritten signature in black ink, appearing to read "Liang Lin", 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: Lake Broward North

Collection Date/Time: 11/16/2021 12:35

Field ID: G2NE1219

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290115	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P406466	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P406747	
		Sulfate	9.5		mg SO4/L	P406749	
	SM 2120 B-2011	Color (true)	10		PCU	P406461	
	SM 2320 B-2011	Total Alkalinity	1.8	I	mg CaCO3/L	P406619	
	SM 2540 C-2011	TDS	51		mg/L	P406776	
	SM 2540 D-2011	TSS	2	I	mg/L	P406735	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P406621	
2290117	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P406718	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P406823	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P406613	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P406625	
	SM 5310 B-2011	Organic Carbon	5.5		mg C/L	P407035	
2290119	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406450	
2290128	EPA 8321B	2,4-D	0.083		ug/L	P406433	
		Acesulfame K	0.10	U	ug/L	P406429	
		2,4,5-T	0.0040	U	ug/L	P406433	
		AMPA	0.10	U	ug/L	P406429	
		Acetaminophen	0.0080	U	ug/L	P406433	
		Acetamiprid	0.0020	U	ug/L	P406433	
		Endothall	0.25	U	ug/L	P406429	
		Glufosinate	0.10	U	ug/L	P406429	
		Glyphosate	0.10	U	ug/L	P406429	
		Afidopyropen	0.0020	U	ug/L	P406433	
		Bentazon	8.0E-04	U	ug/L	P406433	
		Sucralose	0.23		ug/L	P406429	
		Benzovindiflupyr	0.0020	U	ug/L	P406433	
		Carbamazepine	8.0E-04	U	ug/L	P406433	
		Clothianidin	0.0020	U	ug/L	P406433	
		Dinotefuran	0.0020	U	ug/L	P406433	
		Diuron	0.0020	U	ug/L	P406433	
		Fenuron	0.016	U	ug/L	P406433	
		Fluridone	9.0E-04	I	ug/L	P406433	
		Imazapyr	0.038		ug/L	P406433	
		Hydrocodone	0.0020	U	ug/L	P406433	
		Ibuprofen	0.020	U	ug/L	P406433	
		Imidacloprid	0.0020	U	ug/L	P406433	
		Linuron	0.0040	U	ug/L	P406433	
		Mandestrobin	0.0020	U	ug/L	P406433	
		MCP	0.0040	U	ug/L	P406433	
		Naproxen	0.0080	U	ug/L	P406433	
		Primidone	0.0040	UJ	ug/L	P406433	RPD
		Pyraclostrobin	0.0020	U	ug/L	P406433	

Field ID: G2NE1219

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290128	EPA 8321B	Silvex	0.0040	U	ug/L	P406433	
		Thiamethoxam	0.0020	U	ug/L	P406433	
		Tolfenpyrad	0.0020	U	ug/L	P406433	
		Triclopyr	0.0040	U	ug/L	P406433	
2290131	EPA 200.7 Rev. 4.4	Barium	8.9		ug/L	P406472	
		Calcium	3.90		mg/L	P406472	
		Iron	30	U	ug/L	P406472	
		Magnesium	1.57		mg/L	P406472	
	EPA 200.8 Rev. 5.4	Manganese	1.4	I	ug/L	P406472	
		Potassium	0.98	I	mg/L	P406472	
		Sodium	8.6		mg/L	P406472	
		Zinc	5.0	U	ug/L	P406472	
		Aluminum	34		ug/L	P406472	
		Antimony	0.061	I	ug/L	P406472	
		Arsenic	2.21		ug/L	P406472	
		Beryllium	0.010	U	ug/L	P406472	
		Boron**	28.6		ug/L	P406472	
		Cadmium	0.020	U	ug/L	P406472	
		Chromium	0.40	U	ug/L	P406472	
		Copper	0.40	U	ug/L	P406472	
		Lead	0.20	U	ug/L	P406472	
		Nickel	0.50	U	ug/L	P406472	
		Selenium	0.20	U	ug/L	P406472	MS
		Silver	0.010	U	ug/L	P406472	
		Thallium	0.10	U	ug/L	P406472	
	SM 2340B	Hardness	16.2		mg/L	P406472	

Ref. Method and Comment:

EPA 8321B: Matrix spikes are not available due to technical problems. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Field Blank

Collection Date/Time: 11/16/2021 12:45

Field ID: FB11162021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290121	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P406466	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P406747	
		Sulfate	0.20	U	mg SO4/L	P406749	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P406462	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P406620	
	SM 2540 C-2011	TDS	15	U	mg/L	P406775	
	SM 2540 D-2011	TSS	2	U	mg/L	P406734	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P406622	
2290122	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P406715	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P406823	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P406613	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P406625	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P407035	
2290123	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406450	
2290130	EPA 8321B	2,4-D	0.0020	U	ug/L	P406433	
		Acesulfame K	0.10	U	ug/L	P406430	MS
		2,4,5-T	0.0040	U	ug/L	P406433	
		AMPA	0.10	U	ug/L	P406430	
		Acetaminophen	0.0080	U	ug/L	P406433	
		Acetamiprid	0.0020	U	ug/L	P406433	
		Endothall	0.25	U	ug/L	P406430	
		Glufosinate	0.10	U	ug/L	P406430	
		Glyphosate	0.10	U	ug/L	P406430	
		Afidopyropen	0.0020	U	ug/L	P406433	
		Bentazon	8.0E-04	U	ug/L	P406433	
		Sucralose	0.010	U	ug/L	P406430	
		Benzovindiflupyr	0.0020	U	ug/L	P406433	
		Carbamazepine	8.0E-04	U	ug/L	P406433	
		Clothianidin	0.0020	U	ug/L	P406433	
		Dinotefuran	0.0020	U	ug/L	P406433	
		Diuron	0.0020	U	ug/L	P406433	
		Fenuron	0.016	U	ug/L	P406433	
		Fluridone	8.0E-04	U	ug/L	P406433	
		Imazapyr	0.0040	U	ug/L	P406433	
		Hydrocodone	0.0020	U	ug/L	P406433	
		Ibuprofen	0.020	U	ug/L	P406433	
		Imidacloprid	0.0020	U	ug/L	P406433	
		Linuron	0.0040	U	ug/L	P406433	
		Mandestrobin	0.0020	U	ug/L	P406433	
		MCP	0.0040	U	ug/L	P406433	
		Naproxen	0.0080	U	ug/L	P406433	
		Primidone	0.0040	UJ	ug/L	P406433	RPD
		Pyraclostrobin	0.0020	U	ug/L	P406433	

Field ID: FB11162021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290130	EPA 8321B	Silvex	0.0040	U	ug/L	P406433	
		Thiamethoxam	0.0020	U	ug/L	P406433	
		Tolfenpyrad	0.0020	U	ug/L	P406433	
		Triclopyr	0.0040	U	ug/L	P406433	
2290133	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P406472	
		Calcium	0.075	U	mg/L	P406472	
		Iron	30	U	ug/L	P406472	
		Magnesium	0.040	U	mg/L	P406472	
		Manganese	122		ug/L	P406808	
		Potassium	0.30	U	mg/L	P406472	
		Sodium	0.50	U	mg/L	P406472	
		Zinc	5.0	U	ug/L	P406472	
	EPA 200.8 Rev. 5.4	Aluminum	5.6	I	ug/L	P406472	
		Antimony	0.050	U	ug/L	P406472	
		Arsenic	0.050	U	ug/L	P406472	
		Beryllium	0.010	U	ug/L	P406472	
		Boron**	2.0	U	ug/L	P406472	
		Cadmium	0.020	U	ug/L	P406472	
		Chromium	0.40	U	ug/L	P406472	
		Copper	0.40	U	ug/L	P406472	
		Lead	0.20	U	ug/L	P406472	
		Nickel	0.50	U	ug/L	P406472	
		Selenium	0.20	U	ug/L	P406472	MS
		Silver	0.010	U	ug/L	P406472	
		Thallium	0.10	U	ug/L	P406472	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: Matrix spikes are not available due to technical problems. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: The manganese result was confirmed in the undigested sample on 12/01/2021.

EPA 200.8 Rev. 5.4: The aluminum result was confirmed in the undigested sample on 12/02/2021.

Sample Location: Lake Broward South

Collection Date/Time: 11/16/2021 13:10

Field ID: G2NE1218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290116	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P406466	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P406747	
		Sulfate	8.4		mg SO4/L	P406749	
	SM 2120 B-2011	Color (true)	23	A	PCU	P406462	
	SM 2320 B-2011	Total Alkalinity	4.1		mg CaCO3/L	P406620	
	SM 2540 C-2011	TDS	55		mg/L	P406777	RPD
	SM 2540 D-2011	TSS	2	I	mg/L	P406736	
2290118	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P406622	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P406718	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P406823	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P406614	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P406625	
2290120	SM 5310 B-2011	Organic Carbon	6.8		mg C/L	P407035	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406450	
2290129	EPA 8321B	2,4-D	0.033		ug/L	P406433	
		Acesulfame K	0.10	UJ	ug/L	P406430	MS
		2,4,5-T	0.0040	U	ug/L	P406433	
		AMPA	0.10	U	ug/L	P406430	
		Acetaminophen	0.0080	U	ug/L	P406433	
		Acetamiprid	0.0020	U	ug/L	P406433	
		Endothall	0.25	U	ug/L	P406430	
		Glufosinate	0.10	U	ug/L	P406430	
		Glyphosate	0.10	U	ug/L	P406430	
		Afidopyropen	0.0020	U	ug/L	P406433	
		Bentazon	8.0E-04	U	ug/L	P406433	
		Sucralose	0.34		ug/L	P406430	
		Benzovindiflupyr	0.0020	U	ug/L	P406433	
		Carbamazepine	8.0E-04	U	ug/L	P406433	
		Clothianidin	0.0020	U	ug/L	P406433	
		Dinotefuran	0.0020	U	ug/L	P406433	
		Diuron	0.0020	U	ug/L	P406433	
		Fenuron	0.016	U	ug/L	P406433	
		Fluridone	0.0087		ug/L	P406433	
		Imazapyr	0.33		ug/L	P406433	
		Hydrocodone	0.0020	U	ug/L	P406433	
		Ibuprofen	0.020	U	ug/L	P406433	
		Imidacloprid	0.0020	U	ug/L	P406433	
		Linuron	0.0040	U	ug/L	P406433	
		Mandestrobin	0.0020	U	ug/L	P406433	
		MCP	0.0040	U	ug/L	P406433	
		Naproxen	0.0080	U	ug/L	P406433	
		Primidone	0.0040	UJ	ug/L	P406433	RPD
		Pyraclostrobin	0.0020	U	ug/L	P406433	

Field ID: G2NE1218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2290129	EPA 8321B	Silvex	0.0040	U	ug/L	P406433	
		Thiamethoxam	0.0020	U	ug/L	P406433	
		Tolfenpyrad	0.0020	U	ug/L	P406433	
		Triclopyr	0.0040	U	ug/L	P406433	
2290132	EPA 200.7 Rev. 4.4	Barium	11.6		ug/L	P406472	
		Calcium	4.40		mg/L	P406472	
		Iron	32	I	ug/L	P406472	
		Magnesium	1.49		mg/L	P406472	
		Manganese	4.0		ug/L	P406472	
		Potassium	1.0	I	mg/L	P406472	
		Sodium	8.1		mg/L	P406472	
		Zinc	5.0	U	ug/L	P406472	
	EPA 200.8 Rev. 5.4	Aluminum	46		ug/L	P406472	
		Antimony	0.050	U	ug/L	P406472	
		Arsenic	2.96		ug/L	P406472	
		Beryllium	0.010	U	ug/L	P406472	
		Boron**	28.7		ug/L	P406472	
		Cadmium	0.020	U	ug/L	P406472	
		Chromium	0.40	U	ug/L	P406472	
		Copper	0.49	I	ug/L	P406472	
		Lead	0.20	U	ug/L	P406472	
		Nickel	0.50	U	ug/L	P406472	
		Selenium	0.20	U	ug/L	P406472	MS
		Silver	0.010	U	ug/L	P406472	
		Thallium	0.10	U	ug/L	P406472	
	SM 2340B	Hardness	17.1		mg/L	P406472	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: Matrix spikes are not available due to technical problems. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P406466

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P406472

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 200.7 Rev. 4.4
Batch ID: P406808

Component	Result	Code	Units
Manganese	1.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P406472

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: P406747

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406749

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: P406715

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406718

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406823

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406613

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406614

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406625

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406450

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

Reference Method: EPA 8321B
Batch ID: P406429

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P406430

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

Reference Method: EPA 8321B

Batch ID: P406433

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.045		ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011

Batch ID: P406461

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011

Batch ID: P406462

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P406619

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

Reference Method: SM 2320 B-2011
Batch ID: P406620

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

Reference Method: SM 2540 C-2011
Batch ID: P406775

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P406776

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P406777

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P406734

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P406735

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P406736

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P406621

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P406622

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P407035

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: P406472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	109		P	85 - 115
Iron	109		P	85 - 115
Magnesium	112		P	85 - 115
Manganese	107		P	85 - 115
Potassium	102		P	85 - 115
Sodium	99.0		P	85 - 115
Zinc	109		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P406808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Manganese	99.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P406472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	109		P	85 - 115
Arsenic	104		P	85 - 115
Beryllium	107		P	85 - 115
Boron	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	100		P	85 - 115
Copper	102		P	85 - 115
Lead	99.4		P	85 - 115
Nickel	101		P	85 - 115
Selenium	103		P	85 - 115
Silver	101		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406747

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.6		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	91.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406823

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406613

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406614

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406625

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: P406450

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

Reference Method: EPA 8321B
Batch ID: P406429

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.0		P	40 - 150
AMPA	97.6		P	40 - 160
Endothall	130		P	40 - 150
Glufosinate	103		P	40 - 160
Glyphosate	99.7		P	40 - 160
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P406430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	123		P	40 - 150
AMPA	104		P	40 - 160
Endothall	94.0		P	40 - 150
Glufosinate	93.4		P	40 - 160
Glyphosate	124		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P406430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P406433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	94.3	109	P/P	40 - 150
2,4,5-T	83.1	103	P/P	40 - 150
Acetaminophen	78.8	87.2	P/P	30 - 150
Acetamiprid	91.9	96.0	P/P	40 - 150
Afidopyropen	77.5	82.2	P/P	40 - 150
Bentazon	90.8	94.0	P/P	30 - 150
Benzovindiflupyr	73.4	79.9	P/P	40 - 150
Carbamazepine	85.8	100	P/P	40 - 150
Clothianidin	93.4	87.3	P/P	40 - 150
Dinotefuran	89.6	103	P/P	40 - 150
Diuron	83.1	89.0	P/P	40 - 150
Fenuron	85.9	96.3	P/P	40 - 150
Fluridone	94.5	94.6	P/P	40 - 150
Hydrocodone	93.6	99.9	P/P	40 - 150
Ibuprofen	73.9	61.8	P/P	40 - 150
Imazapyr	86.7	84.2	P/P	40 - 150
Imidacloprid	85.9	94.3	P/P	40 - 150
Linuron	78.9	77.4	P/P	40 - 150
Mandestrobin	98.3	99.0	P/P	40 - 150
MCPP	108	117	P/P	40 - 150
Naproxen	82.9	79.3	P/P	40 - 150
Primidone	64.3	99.2	P/P	40 - 150
Pyraclostrobin	66.5	78.2	P/P	40 - 150
Silvex	95.2	87.6	P/P	40 - 150
Thiamethoxam	94.2	104	P/P	40 - 150
Tolfenpyrad	49.6	46.7	P/P	30 - 150
Triclopyr	81.9	110	P/P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P406461

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

Reference Method: SM 2120 B-2011
Batch ID: P406462

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

Reference Method: SM 2320 B-2011
Batch ID: P406619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.8		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P406620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P406621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P406622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P407035

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289682	Barium	108	107	P/P	80 - 120
2289682	Calcium	109	108	P/P	80 - 120
2289682	Iron	110	109	P/P	80 - 120
2289682	Magnesium	114	112	P/P	80 - 120
2289682	Manganese	107	106	P/P	80 - 120
2289682	Potassium	99.5	97.5	P/P	80 - 120
2289682	Sodium	99.0		P	80 - 120
2289682	Zinc	111	108	P/P	80 - 120
2290132	Barium	107		P	80 - 120
2290132	Calcium	107		P	80 - 120
2290132	Iron	107		P	80 - 120
2290132	Magnesium	109		P	80 - 120
2290132	Manganese	105		P	80 - 120
2290132	Potassium	95.8		P	80 - 120
2290132	Sodium	101		P	80 - 120
2290132	Zinc	106		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2291009	Manganese	101	102	P/P	80 - 120
2291225	Manganese	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P406472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289682	Aluminum	103	105	P/P	80 - 120
2289682	Antimony	108	108	P/P	80 - 120
2289682	Arsenic	104	105	P/P	80 - 120
2289682	Beryllium	106	106	P/P	80 - 120
2289682	Boron	101	101	P/P	80 - 120
2289682	Cadmium	101	101	P/P	80 - 120
2289682	Chromium	102	101	P/P	80 - 120
2289682	Copper	106	103	P/P	80 - 120
2289682	Lead	98.8	99.6	P/P	80 - 120
2289682	Nickel	102	102	P/P	80 - 120
2289682	Selenium	64.7	64.9	F/F	80 - 120
2289682	Silver	99.9	100	P/P	80 - 120
2289682	Thallium	104	106	P/P	80 - 120
2290132	Aluminum	103		P	80 - 120
2290132	Antimony	108		P	80 - 120
2290132	Arsenic	100		P	80 - 120
2290132	Beryllium	102		P	80 - 120
2290132	Boron	100		P	80 - 120
2290132	Cadmium	102		P	80 - 120
2290132	Chromium	101		P	80 - 120
2290132	Copper	96.8		P	80 - 120
2290132	Lead	98.9		P	80 - 120
2290132	Nickel	97.0		P	80 - 120
2290132	Selenium	97.6		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P406472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290132	Silver	98.4		P	80 - 120
2290132	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289864	Chloride	96.6		P	90 - 110
2290115	Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289864	Sulfate	97.1		P	90 - 110
2290115	Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289695	Ammonia-N	96.4	94.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289708	Ammonia-N	93.6	94.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406823

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290117	Kjeldahl Nitrogen	98.9	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290010	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290118	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290117	Total-P	106	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290011	O-Phosphate-P	99.3	98.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P406429

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289536	Acesulfame K	102	130	P/P	40 - 150
2289536	AMPA	95.8	93.7	P/P	40 - 160
2289536	Endothall	137	141	P/P	40 - 150
2289536	Glufosinate	93.1	96.6	P/P	40 - 160
2289536	Glyphosate	117	127	P/P	40 - 160
2289536	Sucralose	121	119	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P406430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290129	Acesulfame K	164	127	F/P	40 - 150
2290129	AMPA	112	106	P/P	40 - 160
2290129	Endothall	113	103	P/P	40 - 150
2290129	Glufosinate	95.3	92.5	P/P	40 - 160
2290129	Glyphosate	100	105	P/P	40 - 160
2290129	Sucralose	129	112	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P406621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2289929	Fluoride	101	101	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P407035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290178	Organic Carbon	95.0	95.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P406466

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290009	Turbidity	4.03	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406472

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289682	Barium	0.828	Spike	P	0 - 20
2289682	Calcium	1.48	Spike	P	0 - 20
2289682	Iron	1.33	Spike	P	0 - 20
2289682	Magnesium	1.34	Spike	P	0 - 20
2289682	Manganese	1.56	Spike	P	0 - 20
2289682	Potassium	1.79	Spike	P	0 - 20
2289682	Sodium	1.88	Spike	P	0 - 20
2289682	Zinc	2.55	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P406808

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2291009	Manganese	0.921	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P406472

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289682	Aluminum	1.36	Spike	P	0 - 20
2289682	Antimony	0.164	Spike	P	0 - 20
2289682	Arsenic	0.771	Spike	P	0 - 20
2289682	Beryllium	0.257	Spike	P	0 - 20
2289682	Boron	0.0121	Spike	P	0 - 20
2289682	Cadmium	0.756	Spike	P	0 - 20
2289682	Chromium	0.397	Spike	P	0 - 20
2289682	Copper	2.94	Spike	P	0 - 20
2289682	Lead	0.785	Spike	P	0 - 20
2289682	Nickel	0.103	Spike	P	0 - 20
2289682	Selenium	0.223	Spike	P	0 - 20
2289682	Silver	0.167	Spike	P	0 - 20
2289682	Thallium	1.79	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406747

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289864	Chloride	0.471	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289864	Sulfate	0.307	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289695	Ammonia-N	1.91	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P406718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289708	Ammonia-N	0.350	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406823

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290117	Kjeldahl Nitrogen	0.350	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290010	NO2NO3-N	0.475	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P406614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290118	NO2NO3-N	0.460	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P406625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290117	Total-P	0.140	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290011	O-Phosphate-P	0.910	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P406429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289536	Acesulfame K	23.7	Spike	P	0 - 30
2289536	AMPA	2.19	Spike	P	0 - 30
2289536	Endothall	2.62	Spike	P	0 - 30
2289536	Glufosinate	3.68	Spike	P	0 - 30
2289536	Glyphosate	8.06	Spike	P	0 - 30
2289536	Sucralose	1.14	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P406430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290129	Acesulfame K	25.3	Spike	P	0 - 30
2290129	AMPA	5.58	Spike	P	0 - 30
2290129	Endothall	8.84	Spike	P	0 - 30
2290129	Glufosinate	2.98	Spike	P	0 - 30
2290129	Glyphosate	4.27	Spike	P	0 - 30
2290129	Sucralose	12.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P406433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	2,4-D	14.4	LCS	P	0 - 30
LFB	2,4,5-T	21.4	LCS	P	0 - 30
LFB	Acetaminophen	10.2	LCS	P	0 - 30
LFB	Acetamiprid	4.38	LCS	P	0 - 30
LFB	Afidopyropen	5.96	LCS	P	0 - 30
LFB	Bentazon	3.43	LCS	P	0 - 30
LFB	Benzovindiflupyr	8.49	LCS	P	0 - 30
LFB	Carbamazepine	15.7	LCS	P	0 - 30
LFB	Clothianidin	6.74	LCS	P	0 - 30
LFB	Dinotefuran	14.3	LCS	P	0 - 30
LFB	Diuron	6.84	LCS	P	0 - 30
LFB	Fenuron	11.4	LCS	P	0 - 30
LFB	Fluridone	0.183	LCS	P	0 - 30
LFB	Hydrocodone	6.44	LCS	P	0 - 30
LFB	Ibuprofen	17.8	LCS	P	0 - 30
LFB	Imazapyr	2.89	LCS	P	0 - 30
LFB	Imidacloprid	9.36	LCS	P	0 - 30
LFB	Linuron	1.93	LCS	P	0 - 30
LFB	Mandestrobin	0.698	LCS	P	0 - 30
LFB	MCPP	8.15	LCS	P	0 - 30
LFB	Naproxen	4.46	LCS	P	0 - 30
LFB	Primidone	42.7	LCS	F	0 - 30
LFB	Pyraclostrobin	16.2	LCS	P	0 - 30
LFB	Silvex	8.27	LCS	P	0 - 30
LFB	Thiamethoxam	9.76	LCS	P	0 - 30
LFB	Tolfenpyrad	6.14	LCS	P	0 - 30
LFB	Triclopyr	29.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P406461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289928	Color (true)	3.12	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P406462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290116	Color (true)	2.58	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P406619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289929	Total Alkalinity	0.0923	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P406620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290141	Total Alkalinity	1.01	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P406775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289514	TDS	3.42	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P406776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289658	TDS	1.92	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P406777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290141	TDS	10.0	Sample	F	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P406735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289658	TSS	7.69	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P406621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2289929	Fluoride	0.487	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P406622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290141	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P407035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290178	Organic Carbon	0.492	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2290128

Field Sample ID: G2NE1219

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	119	P	30 - 160
EPA 8321B	Diuron-d6	80.8	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.1	P	30 - 160
EPA 8321B	Primidone-d5	82.7	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Lab Sample ID: 2290129

Field Sample ID: G2NE1218

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	65.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Diuron-d6	74.4	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.1	P	30 - 160
EPA 8321B	Primidone-d5	64.4	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2290130

Field Sample ID: FB11162021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	56.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	83.8	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.3	P	30 - 160
EPA 8321B	Primidone-d5	97.9	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A108949

Included Lab Sample IDs: 2290119, 2290120, 2290123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	99.5	P/P	90 - 110
O-Phosphate-P	99.1	98.5	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A108950

Included Lab Sample IDs: 2290115, 2290116, 2290121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	85 - 115
Color (true)	98.6	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A108951

Included Lab Sample IDs: 2290115, 2290116, 2290121

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

Reference Method: EPA 8321B

Run ID: A108986

Included Lab Sample IDs: 2290128, 2290129, 2290130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	116	P/P	60 - 160
AMPA	99.4	104	P/P	60 - 160
Glufosinate	86.2	93.4	P/P	60 - 160
Glufosinate	97.7	99.5	P/P	60 - 160
Glyphosate	118	128	P/P	60 - 160
Glyphosate	127	121	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109021

Included Lab Sample IDs: 2290117, 2290118, 2290122

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

Reference Method: SM 2320 B-2011

Run ID: A109022

Included Lab Sample IDs: 2290115, 2290116, 2290121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.8	98.6	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109022

Included Lab Sample IDs: 2290115, 2290116, 2290121

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A109029

Included Lab Sample IDs: 2290128, 2290129, 2290130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	104	85.4	P/P	60 - 160
Acesulfame K	86.3	104	P/P	60 - 160
Endothall	91.5	94.2	P/P	60 - 160
Endothall	94.2	94.0	P/P	60 - 160
Sucralose	104	106	P/P	60 - 160
Sucralose	106	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109031

Included Lab Sample IDs: 2290128, 2290129, 2290130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.7	87.7	P/P	50 - 150
2,4,5-T	114	106	P/P	50 - 150
Acetaminophen	106	99.2	P/P	60 - 160
Acetamiprid	113	108	P/P	50 - 150
Afidopyropen	101	89.6	P/P	50 - 150
Bentazon	125	118	P/P	50 - 160
Benzovindiflupyr	103	93.4	P/P	50 - 150
Carbamazepine	95.5	107	P/P	60 - 150
Clothianidin	116	104	P/P	60 - 150
Dinotefuran	113	108	P/P	50 - 150
Diuron	97.0	102	P/P	60 - 160
Fenuron	101	101	P/P	60 - 150
Fluridone	112	111	P/P	60 - 160
Hydrocodone	104	110	P/P	60 - 150
Ibuprofen	150	85.3	P/P	50 - 160
Imazapyr	86.8	99.0	P/P	50 - 150
Imidacloprid	96.8	102	P/P	60 - 150
Linuron	87.0	109	P/P	60 - 150
Mandestrobin	115	108	P/P	50 - 150
MCPP	97.3	110	P/P	50 - 150
Naproxen	97.3	117	P/P	50 - 160
Primidone	94.0	99.3	P/P	60 - 150
Pyraclostrobin	93.8	97.9	P/P	60 - 150
Silvex	117	119	P/P	50 - 150
Thiamethoxam	107	113	P/P	50 - 150
Tolfenpyrad	88.7	91.6	P/P	60 - 150
Triclopyr	92.0	117	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A109059

Included Lab Sample IDs: 2290117, 2290118, 2290122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	93.6	94.0	P/P	90 - 110
Ammonia-N	94.0	93.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109066

Included Lab Sample IDs: 2290117, 2290118, 2290122

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A109076

Included Lab Sample IDs: 2290131, 2290132, 2290133

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	106	108	P/P	90 - 110
Barium	106	105	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Magnesium	104	103	P/P	90 - 110
Manganese	104	105	P/P	90 - 110
Potassium	95.6	94.1	P/P	90 - 110
Potassium	96.1	95.0	P/P	90 - 110
Sodium	98.0	97.5	P/P	90 - 110
Sodium	98.9	98.0	P/P	90 - 110
Zinc	103	106	P/P	90 - 110
Zinc	106	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109102

Included Lab Sample IDs: 2290131, 2290132, 2290133

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	101	101	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Antimony	102	101	P/P	90 - 110
Arsenic	101	96.5	P/P	90 - 110
Arsenic	96.5	98.6	P/P	90 - 110
Arsenic	99.8	101	P/P	90 - 110
Beryllium	101	104	P/P	90 - 110
Beryllium	98.2	99.5	P/P	90 - 110
Boron	101	99.0	P/P	90 - 110
Boron	98.2	99.3	P/P	90 - 110
Boron	99.3	101	P/P	90 - 110
Cadmium	98.7	99.3	P/P	90 - 110
Cadmium	99.3	99.7	P/P	90 - 110
Cadmium	100	98.7	P/P	90 - 110
Chromium	94.5	95.1	P/P	90 - 110
Chromium	96.2	94.5	P/P	90 - 110
Chromium	96.9	96.2	P/P	90 - 110
Copper	92.6	93.2	P/P	90 - 110
Copper	97.0	97.4	P/P	90 - 110
Lead	93.3	93.6	P/P	90 - 110
Lead	93.7	93.3	P/P	90 - 110
Lead	93.9	93.7	P/P	90 - 110
Nickel	92.0	92.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109102

Included Lab Sample IDs: 2290131, 2290132, 2290133

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	96.7	97.0	P/P	90 - 110
Nickel	97.0	92.0	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Selenium	101	99.2	P/P	90 - 110
Selenium	99.2	101	P/P	90 - 110
Silver	94.5	95.1	P/P	90 - 110
Silver	95.9	94.5	P/P	90 - 110
Silver	96.4	95.9	P/P	90 - 110
Thallium	95.6	95.3	P/P	90 - 110
Thallium	96.8	97.3	P/P	90 - 110
Thallium	97.3	95.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A109104

Included Lab Sample IDs: 2290115, 2290116, 2290121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Chloride	99.4	101	P/P	90 - 110
Sulfate	99.0	99.4	P/P	90 - 110
Sulfate	99.7	99.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109132

Included Lab Sample IDs: 2290131, 2290132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.3	97.8	P/P	90 - 110
Aluminum	98.9	98.3	P/P	90 - 110
Beryllium	99.9	96.5	P/P	90 - 110
Copper	95.4	90.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A109157

Included Lab Sample IDs: 2290133

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109176

Included Lab Sample IDs: 2290117, 2290118, 2290122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.0	98.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109183

Included Lab Sample IDs: 2290133

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109183

Included Lab Sample IDs: 2290133

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	98.4	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A109206

Included Lab Sample IDs: 2290117, 2290118, 2290122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	97.0	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							4.03	
EPA 200.7 Rev. 4.4	Barium	108		108	107	107			0.828
	Calcium	109		109	108	107			1.48
	Iron	109		110	109	107			1.33
	Magnesium	112		114	112	109			1.34
	Manganese	107		107	106	105			1.56
	Manganese	99.0		101	102	100			0.921
	Potassium	102		99.5	97.5	95.8			1.79
	Sodium	99.0		99.0	101				1.88
	Zinc	109		111	108	106			2.55
EPA 200.8 Rev. 5.4	Aluminum	105		103	105	103			1.36
	Antimony	109		108	108	108			0.164
	Arsenic	104		104	105	100			0.771
	Beryllium	107		106	106	102			0.257
	Boron	102		101	101	100			0.0121
	Cadmium	101		101	101	102			0.756
	Chromium	100		102	101	101			0.397
	Copper	102		106	103	96.8			2.94
	Lead	99.4		98.8	99.6	98.9			0.785
	Nickel	101		102	102	97.0			0.103
	Selenium	103		97.6	64.7	64.9			0.223
	Silver	101		99.9	100	98.4			0.167
	Thallium	104		104	106	105			1.79
EPA 300.0 Rev. 2.1	Chloride	96.7		96.6	95.5			0.471	
	Sulfate	97.5		97.1	99.7			0.307	
EPA 350.1 Rev. 2.0	Ammonia-N	93.6		96.4	94.2				1.91
	Ammonia-N	91.6		93.6	94.0				0.350
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		98.9	98.5				0.350
EPA 353.2 Rev. 2.0	NO2NO3-N	103		106	105				0.475
	NO2NO3-N	102		104	104				0.460
EPA 365.1 Rev. 2.0	Total-P	104		106	106				0.140
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		99.3	98.4				0.910
EPA 8321B	2,4-D	109	94.3				14.4		
	2,4,5-T	103	83.1				21.4		
	Acesulfame K	94.0		102	130				23.7
	Acesulfame K	123		164	127				25.3
	Acetaminophen	87.2	78.8				10.2		
	Acetamiprid	96.0	91.9				4.38		
	Afidopyropen	82.2	77.5				5.96		
	AMPA	97.6		95.8	93.7				2.19
	AMPA	104		112	106				5.58
	Bentazon	94.0	90.8				3.43		
	Benzovindiflupyr	79.9	73.4				8.49		
	Carbamazepine	100	85.8				15.7		
	Clothianidin	87.3	93.4				6.74		
	Dinotefuran	103	89.6				14.3		
	Diuron	89.0	83.1				6.84		
	Endothall	130		137	141				2.62
	Endothall	94.0		113	103				8.84
	Fenuron	96.3	85.9				11.4		
	Fluridone	94.6	94.5				0.183		
	Glufosinate	103		93.1	96.6				3.68
	Glufosinate	93.4		95.3	92.5				2.98
	Glyphosate	99.7		117	127				8.06

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8321B	Glyphosate	124		100	105		4.27
	Hydrocodone	99.9	93.6			6.44	
	Ibuprofen	61.8	73.9			17.8	
	Imazapyr	84.2	86.7			2.89	
	Imidacloprid	94.3	85.9			9.36	
	Linuron	77.4	78.9			1.93	
	Mandestrobin	99.0	98.3			0.698	
	MCP	117	108			8.15	
	Naproxen	79.3	82.9			4.46	
	Primidone	99.2	64.3			42.7	
	Pyraclostrobin	78.2	66.5			16.2	
	Silvex	87.6	95.2			8.27	
	Sucralose	113		121	119		1.14
	Sucralose	113		129	112		12.4
	Thiamethoxam	104	94.2			9.76	
	Tolfenpyrad	46.7	49.6			6.14	
	Triclopyr	110	81.9			29.5	
SM 2120 B-2011	Color (true)	100					3.12
	Color (true)	101					2.58
SM 2320 B-2011	Total Alkalinity	99.8					0.0923
	Total Alkalinity	99.6					1.01
SM 2540 C-2011	TDS						3.42
	TDS						1.92
	TDS						10.0
SM 2540 D-2011	TSS						7.69
SM 4500 F-C-2011	Fluoride	101		101	101		0.487
	Fluoride	101					0.0
SM 5310 B-2011	Organic Carbon	98.6		95.0	95.9		0.492

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2290115, 2290116, 2290121
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2290131, 2290132, 2290133
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2290131, 2290132, 2290133
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2290115, 2290116, 2290121
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2290115, 2290116, 2290121
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2290117, 2290118, 2290122
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2290117, 2290118, 2290122
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2290117, 2290118, 2290122
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2290117, 2290118, 2290122
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2290119, 2290120, 2290123
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2290128, 2290129, 2290130
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2290115, 2290116, 2290121
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2290115, 2290116, 2290121
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2290131, 2290132
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2290115, 2290116, 2290121
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2290115, 2290116, 2290121
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2290115, 2290116, 2290121
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2290117, 2290118, 2290122

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	11/17/2021			11/17/2021 15:13	Khloe J Berg	2290115, 2290116, 2290121
EPA 200.7 Rev. 4.4	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/23/2021 13:50	Josef B Mick	2290133
	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/23/2021 17:23	Josef B Mick	2290131
	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/23/2021 17:31	Josef B Mick	2290132
	11/17/2021	11/30/2021 10:30	Vijayalakshmi Reddy	12/01/2021 14:08	Josef B Mick	2290133
EPA 200.8 Rev. 5.4	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/23/2021 18:03	Alexander Thompson	2290133
	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/23/2021 20:56	Alexander Thompson	2290132
	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/23/2021 22:03	Alexander Thompson	2290131
	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/30/2021 14:57	Alexander Thompson	2290132
	11/17/2021	11/18/2021 10:00	Emily M Philpot	11/30/2021 15:48	Alexander Thompson	2290131
	11/17/2021	11/18/2021 10:00	Emily M Philpot	12/02/2021 13:09	Alexander Thompson	2290133
EPA 300.0 Rev. 2.1	11/17/2021			11/22/2021 19:13	James L Waggeberby	2290115
	11/17/2021			11/22/2021 22:15	James L Waggeberby	2290116
	11/17/2021			11/22/2021 22:27	James L Waggeberby	2290121
EPA 350.1 Rev. 2.0	11/17/2021			11/23/2021 13:57	Roberta Tatti	2290122
	11/17/2021			11/23/2021 14:21	Roberta Tatti	2290117
	11/17/2021			11/23/2021 14:22	Roberta Tatti	2290118
EPA 351.2 Rev. 2.0	11/17/2021	11/30/2021 12:32	Benjamin T. Nordmann	12/02/2021 11:50	Alexandra J Mattheus	2290117
	11/17/2021	11/30/2021 12:32	Benjamin T. Nordmann	12/02/2021 11:55	Alexandra J Mattheus	2290118
	11/17/2021	11/30/2021 12:32	Benjamin T. Nordmann	12/02/2021 11:56	Alexandra J Mattheus	2290122
EPA 353.2 Rev. 2.0	11/17/2021			11/19/2021 10:44	Beverly Y. Sanders	2290117
	11/17/2021			11/19/2021 10:45	Beverly Y. Sanders	2290122
	11/17/2021			11/19/2021 10:52	Beverly Y. Sanders	2290118
EPA 365.1 Rev. 2.0	11/17/2021	11/22/2021 17:50	Simonne.V. Calhoun	11/23/2021 16:05	Sarah A Nixon	2290122
	11/17/2021	11/22/2021 17:50	Simonne.V. Calhoun	11/23/2021 16:06	Sarah A Nixon	2290117
	11/17/2021	11/22/2021 17:50	Simonne.V. Calhoun	11/23/2021 16:09	Sarah A Nixon	2290118
EPA 365.1 Rev. 2.0 dissolved	11/17/2021			11/17/2021 14:30	James L Waggeberby	2290119, 2290120
	11/17/2021			11/17/2021 14:35	James L Waggeberby	2290123
EPA 8321B	11/17/2021	11/17/2021 14:30	Hoor Shaik	11/20/2021 15:28	Juyoung Kim	2290128
	11/17/2021	11/17/2021 14:30	Hoor Shaik	11/20/2021 16:03	Juyoung Kim	2290129
	11/17/2021	11/17/2021 14:30	Hoor Shaik	11/20/2021 16:38	Juyoung Kim	2290130
	11/17/2021	11/17/2021 15:00	Juyoung Kim	11/18/2021 13:52	Juyoung Kim	2290128
	11/17/2021	11/17/2021 15:00	Juyoung Kim	11/19/2021 16:49	Manjita Shrestha	2290128
	11/17/2021	11/19/2021 08:30	Juyoung Kim	11/19/2021 09:53	Juyoung Kim	2290129
	11/17/2021	11/19/2021 08:30	Juyoung Kim	11/19/2021 10:04	Juyoung Kim	2290130
	11/17/2021	11/19/2021 08:30	Juyoung Kim	11/19/2021 18:48	Manjita Shrestha	2290129
	11/17/2021	11/19/2021 08:30	Juyoung Kim	11/19/2021 19:03	Manjita Shrestha	2290130
SM 2120 B-2011	11/17/2021			11/17/2021 15:48	Benjamin T. Nordmann	2290115
	11/17/2021			11/17/2021 15:53	Benjamin T. Nordmann	2290116
	11/17/2021			11/17/2021 15:54	Benjamin T. Nordmann	2290121

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	11/17/2021			11/18/2021 20:55	Dale L. Simmons	2290115
	11/17/2021			11/18/2021 22:08	Dale L. Simmons	2290116
	11/17/2021			11/18/2021 22:16	Dale L. Simmons	2290121
SM 2340B	11/17/2021			11/23/2021 17:23	Josef B Mick	2290131
	11/17/2021			11/23/2021 17:31	Josef B Mick	2290132
SM 2540 C-2011	11/17/2021			11/18/2021 15:56	Yijie Li	2290115, 2290116, 2290121
SM 2540 D-2011	11/17/2021			11/18/2021 15:56	Yijie Li	2290115, 2290116, 2290121
SM 4500 F-C-2011	11/17/2021			11/18/2021 20:55	Dale L. Simmons	2290115
	11/17/2021			11/18/2021 22:08	Dale L. Simmons	2290116
	11/17/2021			11/18/2021 22:16	Dale L. Simmons	2290121
SM 5310 B-2011	11/17/2021			12/01/2021 22:13	Khloe J Berg	2290117
	11/17/2021			12/01/2021 22:24	Khloe J Berg	2290118
	11/17/2021			12/01/2021 22:33	Khloe J Berg	2290122