

Chemical Analysis Report

NE-DIST-2021-03-10-01

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

Event Description: **Nassau North 2021**

Request ID: **RQ-2021-02-15-15**

Customer: **NE-DIST**

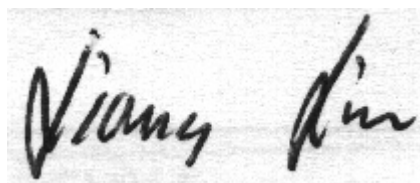
Project ID: **SMP**

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: 31-MAR-2021 12:42

A handwritten signature in black ink, appearing to read "Liang Lin", 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: Mills CR @ CR 115

Collection Date/Time: 03/09/2021 10:10

Field ID: 19010097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230419	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P394760	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P394951	
		Sulfate	3.2		mg SO4/L	P394955	
		Color (true)	190		PCU	P394751	
	SM 2320 B-2011	Total Alkalinity	1.5	I	mg CaCO3/L	P394943	
	SM 2540 C-2011	TDS	82		mg/L	P395161	
	SM 2540 D-2011	TSS	2	U	mg/L	P395153	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P394947	
2230420	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P394935	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P395141	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P394891	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P394989	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P395275	
2230421	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P394745	
2230436	EPA 200.7 Rev. 4.4	Barium	17.5		ug/L	P394985	
		Calcium	3.63		mg/L	P394985	
		Iron	950		ug/L	P394985	
		Magnesium	1.10		mg/L	P394985	
		Manganese	12.3		ug/L	P394985	
		Potassium	0.66	I	mg/L	P394985	
		Sodium	6.6		mg/L	P394985	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P394985	
		Aluminum	461		ug/L	P394985	
		Antimony	0.050	U	ug/L	P394985	
		Arsenic	0.31		ug/L	P394985	
		Beryllium	0.042		ug/L	P394985	
		Boron**	13.7		ug/L	P394985	
		Cadmium	0.020	U	ug/L	P394985	
		Chromium	0.58	I	ug/L	P394985	
		Copper	0.40	U	ug/L	P394985	
		Lead	0.38	I	ug/L	P394985	
		Nickel	0.57	I	ug/L	P394985	
		Selenium	0.20	U	ug/L	P394985	
		Silver	0.010	U	ug/L	P394985	
		Thallium	0.10	U	ug/L	P394985	
		Hardness	13.6		mg/L	P394985	

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.

Sample Location: Pigeon Creek at US 1

Collection Date/Time: 03/09/2021 11:05

Field ID: 19010099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230433	EPA 8321B	2,4-D	0.0020	U	ug/L	P394766	
		Acesulfame K	0.10	U	ug/L	P394775	
		2,4,5-T	0.0040	U	ug/L	P394766	
		AMPA	0.10	U	ug/L	P394775	
		Sucralose	0.010	U	ug/L	P394775	
		Acetaminophen	0.017	I	ug/L	P394766	
		Acetamiprid	0.0020	U	ug/L	P394766	
		Endothall	0.25	U	ug/L	P394775	
		Glufosinate	0.10	U	ug/L	P394775	
		Glyphosate	0.10	U	ug/L	P394775	
		Afidopyropen	0.0020	U	ug/L	P394766	
		Bentazon	8.0E-04	U	ug/L	P394766	
		Benzovindiflupyr	0.0020	U	ug/L	P394766	
		Carbamazepine	8.0E-04	U	ug/L	P394766	
		Clothianidin	0.0020	U	ug/L	P394766	
		Dinotefuran	0.0020	U	ug/L	P394766	
		Diuron	0.0020	U	ug/L	P394766	
		Fenuron	0.016	U	ug/L	P394766	
		Fluridone	8.0E-04	U	ug/L	P394766	
		Imazapyr	0.011	I	ug/L	P394766	
		Hydrocodone	0.0020	U	ug/L	P394766	
		Ibuprofen	0.020	U	ug/L	P394766	
		Imidacloprid	0.0020	U	ug/L	P394766	
		Linuron	0.0040	U	ug/L	P394766	
		Mandestrobin	0.0020	U	ug/L	P394766	
		MCPP	0.0020	U	ug/L	P394766	
		Naproxen	0.0080	U	ug/L	P394766	
		Primidone	0.0040	U	ug/L	P394766	
		Pyraclostrobin	0.0020	U	ug/L	P394766	
		Thiamethoxam	0.0020	U	ug/L	P394766	
		Tolfenpyrad	0.0020	U	ug/L	P394766	
		Triclopyr	0.0040	U	ug/L	P394766	
2230437	EPA 200.7 Rev. 4.4	Barium	15.7		ug/L	P394985	
		Calcium	3.33		mg/L	P394985	
		Iron	990		ug/L	P394985	
		Magnesium	0.92		mg/L	P394985	
		Manganese	13.4		ug/L	P394985	
		Potassium	0.59	I	mg/L	P394985	
		Sodium	6.5		mg/L	P394985	
		Zinc	5.0	U	ug/L	P394985	
	EPA 200.8 Rev. 5.4	Aluminum	345		ug/L	P394985	
		Antimony	0.050	U	ug/L	P394985	
		Arsenic	0.31		ug/L	P394985	
		Beryllium	0.034	I	ug/L	P394985	

Field ID: 19010099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230437	EPA 200.8 Rev. 5.4	Boron**	15.4		ug/L	P394985	
		Cadmium	0.020	U	ug/L	P394985	
		Chromium	0.45	I	ug/L	P394985	
		Copper	0.43	I	ug/L	P394985	
		Lead	0.40		ug/L	P394985	
		Nickel	0.50	U	ug/L	P394985	
		Selenium	0.20	U	ug/L	P394985	
		Silver	0.010	U	ug/L	P394985	
		Thallium	0.10	U	ug/L	P394985	
		Hardness	12.1		mg/L	P394985	
	SM 2340B						

Sample Location: Pigeon Creek @ Andrews Rd.

Collection Date/Time: 03/09/2021 11:20

Field ID: 19010098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230416	EPA 180.1 Rev. 2.0	Turbidity	2.2	A	NTU	P394760	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P394951	
		Sulfate	1.2		mg SO4/L	P394955	
	SM 2120 B-2011	Color (true)	280		PCU	P394751	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P394943	
	SM 2540 C-2011	TDS	84		mg/L	P395161	
	SM 2540 D-2011	TSS	2	U	mg/L	P395153	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P394947	
2230417	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P394935	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P395202	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P394890	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P394989	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P395275	
2230418	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P394745	
2230432	EPA 8321B	2,4-D	0.0020	U	ug/L	P394766	
		Acesulfame K	0.10	U	ug/L	P394775	
		2,4,5-T	0.0040	U	ug/L	P394766	
		AMPA	0.10	U	ug/L	P394775	
		Sucralose	0.010	U	ug/L	P394775	
		Acetaminophen	0.0080	U	ug/L	P394766	
		Acetamiprid	0.0020	U	ug/L	P394766	
		Endothall	0.25	U	ug/L	P394775	
		Glufosinate	0.10	U	ug/L	P394775	
		Glyphosate	0.10	U	ug/L	P394775	
		Afidopyropen	0.0020	U	ug/L	P394766	
		Bentazon	8.0E-04	U	ug/L	P394766	
		Benzovindiflupyr	0.0020	U	ug/L	P394766	
		Carbamazepine	8.0E-04	U	ug/L	P394766	
		Clothianidin	0.0020	U	ug/L	P394766	
		Dinotefuran	0.0020	U	ug/L	P394766	
		Diuron	0.0020	U	ug/L	P394766	
		Fenuron	0.016	U	ug/L	P394766	
		Fluridone	8.0E-04	U	ug/L	P394766	
		Imazapyr	0.013	I	ug/L	P394766	
		Hydrocodone	0.0020	U	ug/L	P394766	
		Ibuprofen	0.020	U	ug/L	P394766	
		Imidacloprid	0.0020	U	ug/L	P394766	
		Linuron	0.0040	U	ug/L	P394766	
		Mandestrobin	0.0020	U	ug/L	P394766	
		MCP	0.0020	U	ug/L	P394766	
		Naproxen	0.0080	U	ug/L	P394766	
		Primidone	0.0040	U	ug/L	P394766	
		Pyraclostrobin	0.0020	U	ug/L	P394766	

Field ID: 19010098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230432	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P394766	
		Tolfenpyrad	0.0020	U	ug/L	P394766	
		Triclopyr	0.0040	U	ug/L	P394766	
2230435	EPA 200.7 Rev. 4.4	Barium	12.1		ug/L	P394985	
		Calcium	1.43		mg/L	P394985	
		Iron	1.14E+03		ug/L	P394985	
		Magnesium	0.67		mg/L	P394985	
		Manganese	9.1		ug/L	P394985	
		Potassium	0.38	I	mg/L	P394985	
		Sodium	5.8		mg/L	P394985	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P394985	
		Aluminum	412		ug/L	P394985	
		Antimony	0.050	U	ug/L	P394985	
		Arsenic	0.30		ug/L	P394985	
		Beryllium	0.037	I	ug/L	P394985	
		Boron**	13.5		ug/L	P394985	
		Cadmium	0.020	U	ug/L	P394985	
		Chromium	0.46	I	ug/L	P394985	
		Copper	0.40	U	ug/L	P394985	
		Lead	0.59		ug/L	P394985	
		Nickel	0.50	U	ug/L	P394985	
		Selenium	0.20	U	ug/L	P394985	
		Silver	0.010	U	ug/L	P394985	
		Thallium	0.10	U	ug/L	P394985	
	SM 2340B	Hardness	6.3		mg/L	P394985	

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 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 03/18/2021.

Sample Location: Creek Draining Former Hampton Lake 100m Above Rd.

Collection Date/Time: 03/09/2021 10:45

Field ID: G4NE0292

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230422	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P394760	
	EPA 300.0 Rev. 2.1	Chloride	9.6		mg Cl/L	P394952	
		Sulfate	3.2		mg SO4/L	P394956	
		Color (true)	200		PCU	P394751	
	SM 2320 B-2011	Total Alkalinity	3.2		mg CaCO3/L	P394943	
	SM 2540 C-2011	TDS	71		mg/L	P395161	
	SM 2540 D-2011	TSS	2	U	mg/L	P395153	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P394947	
2230423	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P394935	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P395141	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P394891	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P394989	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P395275	
2230424	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P394745	
2230439	EPA 200.7 Rev. 4.4	Barium	15.7		ug/L	P394985	
		Calcium	3.59		mg/L	P394985	
		Iron	860		ug/L	P394985	
		Magnesium	0.92		mg/L	P394985	
		Manganese	13.4		ug/L	P394985	
		Potassium	0.54	I	mg/L	P394985	
		Sodium	6.3		mg/L	P394985	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P394985	
		Aluminum	338		ug/L	P394985	
		Antimony	0.050	U	ug/L	P394985	
		Arsenic	0.32		ug/L	P394985	
		Beryllium	0.028	I	ug/L	P394985	
		Boron**	14.5		ug/L	P394985	
		Cadmium	0.020	U	ug/L	P394985	
		Chromium	0.48	I	ug/L	P394985	
		Copper	0.40	U	ug/L	P394985	
		Lead	0.40	I	ug/L	P394985	
		Nickel	0.50	U	ug/L	P394985	
		Selenium	0.20	U	ug/L	P394985	
		Silver	0.010	U	ug/L	P394985	
		Thallium	0.10	U	ug/L	P394985	
	SM 2340B	Hardness	12.7		mg/L	P394985	

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.

Sample Location: Little St. Marys at White Oak Rd.

Collection Date/Time: 03/09/2021 12:25

Field ID: G4NE0289

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230434	EPA 8321B	2,4-D	0.0020	U	ug/L	P394766	
		Acesulfame K	0.10	U	ug/L	P394775	
		2,4,5-T	0.0040	U	ug/L	P394766	
		AMPA	0.10	U	ug/L	P394775	
		Sucralose	0.082		ug/L	P394775	
		Acetaminophen	0.0080	U	ug/L	P394766	
		Acetamiprid	0.0020	U	ug/L	P394766	
		Endothall	0.25	U	ug/L	P394775	
		Glufosinate	0.10	U	ug/L	P394775	
		Glyphosate	0.10	U	ug/L	P394775	
		Afidopyropen	0.0020	U	ug/L	P394766	
		Bentazon	8.0E-04	U	ug/L	P394766	
		Benzovindiflupyr	0.0020	U	ug/L	P394766	
		Carbamazepine	8.0E-04	U	ug/L	P394766	
		Clothianidin	0.0020	U	ug/L	P394766	
		Dinotefuran	0.0020	U	ug/L	P394766	
		Diuron	0.0020	U	ug/L	P394766	
		Fenuron	0.016	U	ug/L	P394766	
		Fluridone	8.0E-04	U	ug/L	P394766	
		Imazapyr	0.081		ug/L	P394766	
		Hydrocodone	0.0020	U	ug/L	P394766	
		Ibuprofen	0.020	U	ug/L	P394766	
		Imidacloprid	0.0020	U	ug/L	P394766	
		Linuron	0.0040	U	ug/L	P394766	
		Mandestrobin	0.0020	U	ug/L	P394766	
		MCP	0.0020	U	ug/L	P394766	
		Naproxen	0.0080	U	ug/L	P394766	
		Primidone	0.0040	U	ug/L	P394766	
		Pyraclostrobin	0.0020	U	ug/L	P394766	
		Thiamethoxam	0.0020	U	ug/L	P394766	
		Tolfenpyrad	0.0020	U	ug/L	P394766	
		Triclopyr	0.0040	U	ug/L	P394766	
2230438	EPA 200.7 Rev. 4.4	Barium	17.7		ug/L	P394985	
		Calcium	7.86		mg/L	P394985	
		Iron	780		ug/L	P394985	
		Magnesium	3.60		mg/L	P394985	
		Manganese	12.1		ug/L	P394985	
		Potassium	0.98	I	mg/L	P394985	
		Sodium	13.5		mg/L	P394985	
		Zinc	5.0	U	ug/L	P394985	
	EPA 200.8 Rev. 5.4	Aluminum	528		ug/L	P394985	
		Antimony	0.050	U	ug/L	P394985	
		Arsenic	0.54		ug/L	P394985	
		Beryllium	0.052		ug/L	P394985	

Field ID: G4NE0289

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230438	EPA 200.8 Rev. 5.4	Boron**	18.8		ug/L	P394985	
		Cadmium	0.020	U	ug/L	P394985	
		Chromium	0.91	I	ug/L	P394985	
		Copper	0.46	I	ug/L	P394985	
		Lead	0.49		ug/L	P394985	
		Nickel	0.60	I	ug/L	P394985	
		Selenium	0.20	U	ug/L	P394985	
		Silver	0.010	U	ug/L	P394985	
		Thallium	0.10	U	ug/L	P394985	
		Hardness	34.5		mg/L	P394985	
	SM 2340B						

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P394760

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P394985

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: P394985

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: P394951

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394952

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394955

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394956

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394935

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395141

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395202

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394890

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394891

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394989

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394745

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

Reference Method: EPA 8321B
Batch ID: P394766

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P394766

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

Reference Method: EPA 8321B

Batch ID: P394775

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: P394751

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P394943

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

Reference Method: SM 2540 C-2011

Batch ID: P395161

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P395153

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P394947

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395275

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: P394985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	95.5		P	85 - 115
Calcium	105		P	85 - 115
Iron	103		P	85 - 115
Magnesium	103		P	85 - 115
Manganese	98.5		P	85 - 115
Potassium	101		P	85 - 115
Sodium	105		P	85 - 115
Zinc	92.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P394985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.3		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	97.5		P	85 - 115
Boron	97.5		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	98.2		P	85 - 115
Copper	98.9		P	85 - 115
Lead	103		P	85 - 115
Nickel	97.7		P	85 - 115
Selenium	101		P	85 - 115
Silver	101		P	85 - 115
Thallium	108		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394951

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394952

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394955

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394956

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394935

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395141

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395202

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394890

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394891

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394989

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394745

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

Reference Method: EPA 8321B
Batch ID: P394766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	119		P	30 - 160
2,4,5-T	115		P	30 - 160
Acetaminophen	144		P	30 - 160
Acetamiprid	88.1		P	30 - 160
Afidopyropen	64.2		P	30 - 160
Bentazon	80.8		P	30 - 160
Benzovindiflupyr	98.0		P	30 - 160
Carbamazepine	102		P	30 - 160
Clothianidin	70.1		P	30 - 160
Dinotefuran	94.7		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P394766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	84.1		P	30 - 160
Fenuron	106		P	30 - 160
Fluridone	84.2		P	30 - 160
Hydrocodone	100		P	30 - 160
Ibuprofen	99.4		P	30 - 160
Imazapyr	90.4		P	30 - 160
Imidacloprid	99.3		P	30 - 160
Linuron	80.7		P	30 - 160
Mandestrobin	96.0		P	30 - 160
MCPP	133		P	30 - 160
Naproxen	63.5		P	30 - 160
Primidone	93.8		P	30 - 160
Pyraclostrobin	84.4		P	30 - 160
Thiamethoxam	101		P	30 - 160
Tolfenpyrad	56.5		P	30 - 160
Triclopyr	121		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P394775

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	85.5		P	40 - 150
AMPA	102		P	40 - 150
Endothall	84.9		P	40 - 150
Glufosinate	110		P	40 - 150
Glyphosate	136		P	40 - 140
Sucralose	105		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P394751

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: SM 2320 B-2011

Batch ID: P394943

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P394947

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	90 - 106

Reference Method: SM 5310 B-2011

Batch ID: P395275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P394985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230678	Barium	101		P	80 - 120
2230678	Calcium	106		P	80 - 120
2230678	Iron	107		P	80 - 120
2230678	Magnesium	105		P	80 - 120
2230678	Manganese	104		P	80 - 120
2230678	Potassium	106		P	80 - 120
2230678	Sodium	108		P	80 - 120
2230678	Zinc	96.6		P	80 - 120
2231042	Barium	102	102	P/P	80 - 120
2231042	Calcium	105		P	80 - 120
2231042	Iron	110	108	P/P	80 - 120
2231042	Magnesium	110	108	P/P	80 - 120
2231042	Manganese	105	104	P/P	80 - 120
2231042	Potassium	108	107	P/P	80 - 120
2231042	Sodium	104		P	80 - 120
2231042	Zinc	99.4	99.2	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P394985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230678	Aluminum	93.4		P	80 - 120
2230678	Antimony	105		P	80 - 120
2230678	Arsenic	102		P	80 - 120
2230678	Beryllium	93.7		P	80 - 120
2230678	Boron	95.1		P	80 - 120
2230678	Cadmium	104		P	80 - 120
2230678	Chromium	97.1		P	80 - 120
2230678	Copper	93.5		P	80 - 120
2230678	Lead	101		P	80 - 120
2230678	Nickel	95.3		P	80 - 120
2230678	Selenium	98.0		P	80 - 120
2230678	Silver	100		P	80 - 120
2230678	Thallium	108		P	80 - 120
2231042	Aluminum	97.7	98.0	P/P	80 - 120
2231042	Antimony	104	105	P/P	80 - 120
2231042	Arsenic	104	104	P/P	80 - 120
2231042	Beryllium	94.7	97.6	P/P	80 - 120
2231042	Boron	95.8	96.5	P/P	80 - 120
2231042	Cadmium	102	103	P/P	80 - 120
2231042	Chromium	97.5	98.4	P/P	80 - 120
2231042	Copper	100	100	P/P	80 - 120
2231042	Lead	102	103	P/P	80 - 120
2231042	Nickel	98.3	99.0	P/P	80 - 120
2231042	Selenium	101	99.9	P/P	80 - 120
2231042	Silver	98.2	100	P/P	80 - 120
2231042	Thallium	107	109	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230044	Chloride	103		P	90 - 110
2230373	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394952

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230422	Chloride	104		P	90 - 110
2230665	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230044	Sulfate	102		P	90 - 110
2230373	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230422	Sulfate	102		P	90 - 110
2230665	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230408	Ammonia-N	95.4	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395141

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230420	Kjeldahl Nitrogen	109	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230301	NO2NO3-N	92.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230420	NO2NO3-N	93.6	93.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394989

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P394989

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230376	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P394745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230418	O-Phosphate-P	96.8	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P394766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229932	2,4-D	101	119	P/P	30 - 160
2229932	2,4,5-T	103	106	P/P	30 - 160
2229932	Acetaminophen	93.0	98.4	P/P	30 - 160
2229932	Acetamiprid	84.4	89.6	P/P	30 - 160
2229932	Afidopyropen	67.3	77.7	P/P	30 - 160
2229932	Bentazon	60.1	65.2	P/P	30 - 160
2229932	Benzovindiflupyr	88.7	99.1	P/P	30 - 160
2229932	Carbamazepine	93.9	104	P/P	30 - 160
2229932	Clothianidin	69.2	78.9	P/P	30 - 160
2229932	Dinotefuran	94.4	108	P/P	30 - 160
2229932	Diuron	70.2	72.2	P/P	30 - 160
2229932	Fenuron	93.4	97.9	P/P	30 - 160
2229932	Fluridone	77.5	78.4	P/P	30 - 160
2229932	Hydrocodone	96.6	109	P/P	30 - 160
2229932	Ibuprofen	72.5	85.8	P/P	30 - 160
2229932	Imazapyr	76.1	86.5	P/P	30 - 160
2229932	Imidacloprid	119	127	P/P	30 - 160
2229932	Linuron	65.3	72.2	P/P	30 - 160
2229932	Mandestrobin	94.4	98.9	P/P	30 - 160
2229932	MCCP	119	136	P/P	30 - 160
2229932	Naproxen	64.5	58.0	P/P	30 - 160
2229932	Primidone	101	105	P/P	30 - 160
2229932	Pyraclostrobin	83.4	91.7	P/P	30 - 160
2229932	Thiamethoxam	118	122	P/P	30 - 160
2229932	Tolfenpyrad	55.5	59.4	P/P	30 - 160
2229932	Triclopyr	108	110	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P394775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229932	Acesulfame K	126	114	P/P	40 - 150
2229932	AMPA	120	116	P/P	40 - 150
2229932	Endothall	86.4	100	P/P	40 - 150
2229932	Glufosinate	117	120	P/P	40 - 150
2229932	Glyphosate	109	128	P/P	40 - 140
2229932	Sucralose	115	116	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P395275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230760	Organic Carbon	94.7	95.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P394760

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230416	Turbidity	5.53	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P394985

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231042	Barium	0.479	Spike	P	0 - 20
2231042	Calcium	2.13	Spike	P	0 - 20
2231042	Iron	1.58	Spike	P	0 - 20
2231042	Magnesium	1.78	Spike	P	0 - 20
2231042	Manganese	0.744	Spike	P	0 - 20
2231042	Potassium	0.930	Spike	P	0 - 20
2231042	Sodium	1.60	Spike	P	0 - 20
2231042	Zinc	0.255	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P394985

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231042	Aluminum	0.278	Spike	P	0 - 20
2231042	Antimony	0.660	Spike	P	0 - 20
2231042	Arsenic	0.152	Spike	P	0 - 20
2231042	Beryllium	2.93	Spike	P	0 - 20
2231042	Boron	0.610	Spike	P	0 - 20
2231042	Cadmium	0.522	Spike	P	0 - 20
2231042	Chromium	0.901	Spike	P	0 - 20
2231042	Copper	0.109	Spike	P	0 - 20
2231042	Lead	0.553	Spike	P	0 - 20
2231042	Nickel	0.748	Spike	P	0 - 20
2231042	Selenium	1.45	Spike	P	0 - 20
2231042	Silver	2.04	Spike	P	0 - 20
2231042	Thallium	1.20	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394951

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230044	Chloride	0.954	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394952

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230665	Chloride	0.182	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230044	Sulfate	1.03	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230665	Sulfate	1.26	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230408	Ammonia-N	1.89	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230420	Kjeldahl Nitrogen	1.31	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230911	Kjeldahl Nitrogen	7.29	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230301	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230420	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230376	Total-P	1.59	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230418	O-Phosphate-P	0.290	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P394766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229932	2,4-D	14.6	Spike	P	0 - 30
2229932	2,4,5-T	2.72	Spike	P	0 - 30
2229932	Acetaminophen	5.69	Spike	P	0 - 30
2229932	Acetamiprid	5.98	Spike	P	0 - 30
2229932	Afidopyropen	14.3	Spike	P	0 - 30
2229932	Bentazon	8.06	Spike	P	0 - 30
2229932	Benzovindiflupyr	11.1	Spike	P	0 - 30
2229932	Carbamazepine	10.4	Spike	P	0 - 30
2229932	Clothianidin	13.1	Spike	P	0 - 30
2229932	Dinotefuran	13.5	Spike	P	0 - 30
2229932	Diuron	2.89	Spike	P	0 - 30
2229932	Fenuron	4.75	Spike	P	0 - 30
2229932	Fluridone	1.23	Spike	P	0 - 30
2229932	Hydrocodone	11.9	Spike	P	0 - 30
2229932	Ibuprofen	16.8	Spike	P	0 - 30
2229932	Imazapyr	12.9	Spike	P	0 - 30
2229932	Imidacloprid	6.71	Spike	P	0 - 30
2229932	Linuron	10.1	Spike	P	0 - 30
2229932	Mandestrobin	4.61	Spike	P	0 - 30
2229932	MCP	13.3	Spike	P	0 - 30
2229932	Naproxen	10.7	Spike	P	0 - 30
2229932	Primidone	4.17	Spike	P	0 - 30
2229932	Pyraclostrobin	9.49	Spike	P	0 - 30
2229932	Thiamethoxam	3.02	Spike	P	0 - 30
2229932	Tolfenpyrad	6.95	Spike	P	0 - 30
2229932	Triclopyr	2.15	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P394775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229932	Acesulfame K	9.72	Spike	P	0 - 30
2229932	AMPA	3.80	Spike	P	0 - 30
2229932	Endothall	14.7	Spike	P	0 - 30
2229932	Glufosinate	2.43	Spike	P	0 - 30
2229932	Glyphosate	15.9	Spike	P	0 - 30
2229932	Sucralose	0.905	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P394751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P394751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230373	Color (true)	1.99	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P394943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230287	Total Alkalinity	0.513	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P395161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230509	TDS	2.68	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P394947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230287	Fluoride	0.454	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P395275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230760	Organic Carbon	0.285	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2230432

Field Sample ID: 19010098

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.4	P	30 - 160
EPA 8321B	Diuron-d6	61.7	P	30 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	89.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	89.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	85.8	P	30 - 160
EPA 8321B	Primidone-d5	63.2	P	30 - 160
EPA 8321B	Sucralose-d6	63.8	P	30 - 160
EPA 8321B	Sucralose-d6	63.8	P	30 - 160

Lab Sample ID: 2230433

Field Sample ID: 19010099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	129	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.0	P	30 - 160
EPA 8321B	Diuron-d6	67.1	P	30 - 160
EPA 8321B	Endothall-d6	102	P	40 - 160
EPA 8321B	Endothall-d6	102	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	85.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	85.2	P	40 - 160
EPA 8321B	Ibuprofen-d3	85.9	P	30 - 160
EPA 8321B	Primidone-d5	79.4	P	30 - 160
EPA 8321B	Sucralose-d6	73.6	P	30 - 160
EPA 8321B	Sucralose-d6	73.6	P	30 - 160

Lab Sample ID: 2230434

Field Sample ID: G4NE0289

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.4	P	30 - 160
EPA 8321B	Diuron-d6	58.2	P	30 - 160
EPA 8321B	Endothall-d6	127	P	40 - 160
EPA 8321B	Endothall-d6	127	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	77.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	77.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	86.2	P	30 - 160
EPA 8321B	Primidone-d5	63.2	P	30 - 160
EPA 8321B	Sucralose-d6	54.5	P	30 - 160
EPA 8321B	Sucralose-d6	54.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103990

Included Lab Sample IDs: 2230418, 2230421, 2230424

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.6	99.3	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A103991

Included Lab Sample IDs: 2230416, 2230419, 2230422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103994

Included Lab Sample IDs: 2230416, 2230419, 2230422

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104033

Included Lab Sample IDs: 2230417, 2230420, 2230423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.0	P/P	90 - 110
NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A104048

Included Lab Sample IDs: 2230417, 2230420, 2230423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A104052

Included Lab Sample IDs: 2230416, 2230419, 2230422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.6	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104052

Included Lab Sample IDs: 2230416, 2230419, 2230422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104057

Included Lab Sample IDs: 2230416, 2230419, 2230422

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104057

Included Lab Sample IDs: 2230416, 2230419, 2230422

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

Reference Method: EPA 8321B

Run ID: A104071

Included Lab Sample IDs: 2230432, 2230433, 2230434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	103	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104108

Included Lab Sample IDs: 2230417, 2230420, 2230423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	101	P/P	90 - 110
Total-P	101	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104118

Included Lab Sample IDs: 2230435, 2230436, 2230437, 2230438, 2230439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.5	100	P/P	90 - 110
Antimony	99.8	101	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Beryllium	102	99.6	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	100	103	P/P	90 - 110
Copper	98.5	96.0	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Nickel	101	99.5	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	98.7	98.3	P/P	90 - 110
Thallium	106	105	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104145

Included Lab Sample IDs: 2230435, 2230436, 2230437, 2230438, 2230439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	90.9	92.6	P/P	90 - 110
Boron	92.6	92.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104157

Included Lab Sample IDs: 2230432, 2230433, 2230434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.2	105	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104157

Included Lab Sample IDs: 2230432, 2230433, 2230434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	113	102	P/P	50 - 150
Acetaminophen	92.6	111	P/P	60 - 160
Acetamiprid	106	106	P/P	50 - 150
Afidopyropen	103	102	P/P	50 - 150
Bentazon	102	103	P/P	50 - 160
Benzovindiflupyr	105	104	P/P	50 - 160
Carbamazepine	110	105	P/P	60 - 150
Clothianidin	99.5	95.2	P/P	60 - 150
Dinotefuran	107	105	P/P	50 - 150
Diuron	122	118	P/P	60 - 160
Fenuron	95.1	109	P/P	60 - 150
Fluridone	109	116	P/P	60 - 160
Hydrocodone	105	105	P/P	60 - 150
Ibuprofen	126	110	P/P	50 - 160
Imazapyr	82.9	98.7	P/P	50 - 160
Imidacloprid	96.6	96.2	P/P	60 - 150
Linuron	102	99.5	P/P	60 - 150
Mandestrobin	116	116	P/P	50 - 150
MCPP	105	101	P/P	50 - 150
Naproxen	98.4	69.7	P/P	50 - 160
Primidone	108	94.6	P/P	60 - 150
Pyraclostrobin	105	103	P/P	60 - 150
Thiamethoxam	105	102	P/P	50 - 150
Tolfenpyrad	106	106	P/P	60 - 150
Triclopyr	88.9	109	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A104164

Included Lab Sample IDs: 2230432, 2230433, 2230434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.6	74.9	P/P	60 - 160
AMPA	113	117	P/P	60 - 160
Endothall	87.9	121	P/P	60 - 160
Glufosinate	114	108	P/P	60 - 160
Glyphosate	153	149	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104186

Included Lab Sample IDs: 2230435, 2230436, 2230437, 2230438, 2230439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.8	99.4	P/P	95 - 105
Barium	99.4	100	P/P	90 - 110
Calcium	101	102	P/P	95 - 105
Calcium	102	103	P/P	90 - 110
Iron	103	104	P/P	95 - 105
Iron	104	106	P/P	90 - 110
Magnesium	101	101	P/P	95 - 105
Magnesium	101	103	P/P	90 - 110
Manganese	102	102	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104186

Included Lab Sample IDs: 2230435, 2230436, 2230437, 2230438, 2230439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Manganese	102	102	P/P	90 - 110
Potassium	103	104	P/P	95 - 105
Potassium	104	105	P/P	90 - 110
Sodium	100	101	P/P	95 - 105
Sodium	101	103	P/P	90 - 110
Zinc	100	101	P/P	90 - 110
Zinc	100	100	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A104189

Included Lab Sample IDs: 2230417, 2230420, 2230423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.6	95.4	P/P	90 - 110
Organic Carbon	95.4	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104202

Included Lab Sample IDs: 2230420, 2230423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	93.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104257

Included Lab Sample IDs: 2230417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.5	95.8	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						5.53	
EPA 200.7 Rev. 4.4	Barium	95.5	101	102	102			0.479
	Calcium	105	106	105				2.13
	Iron	103	107	110	108			1.58
	Magnesium	103	105	110	108			1.78
	Manganese	98.5	104	105	104			0.744
	Potassium	101	106	108	107			0.930
	Sodium	105	108	104				1.60
	Zinc	92.7	96.6	99.4	99.2			0.255
EPA 200.8 Rev. 5.4	Aluminum	98.3	97.7	98.0	93.4			0.278
	Antimony	105	104	105	105			0.660
	Arsenic	102	104	104	102			0.152
	Beryllium	97.5	94.7	97.6	93.7			2.93
	Boron	97.5	95.8	96.5	95.1			0.610
	Cadmium	103	102	103	104			0.522
	Chromium	98.2	97.5	98.4	97.1			0.901
	Copper	98.9	100	100	93.5			0.109
	Lead	103	102	103	101			0.553
	Nickel	97.7	98.3	99.0	95.3			0.748
	Selenium	101	101	99.9	98.0			1.45
	Silver	101	98.2	100	100			2.04
	Thallium	108	107	109	108			1.20
EPA 300.0 Rev. 2.1	Chloride	103	103	102			0.954	
	Chloride	104	103	104			0.182	
	Sulfate	102	102	100			1.03	
	Sulfate	103	100	102			1.26	
EPA 350.1 Rev. 2.0	Ammonia-N	101	95.4	97.4				1.89
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	109	107				1.31
	Kjeldahl Nitrogen	108						7.29
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.0	92.8					0.0
	NO ₂ NO ₃ -N	97.5	93.6	93.6				0.0
EPA 365.1 Rev. 2.0	Total-P	107	104	105				1.59
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9	96.8	96.5				0.290
EPA 8321B	2,4-D	119	101	119				14.6
	2,4,5-T	115	103	106				2.72
	Acesulfame K	85.5	126	114				9.72
	Acetaminophen	144	93.0	98.4				5.69
	Acetamiprid	88.1	84.4	89.6				5.98
	Afidopyropen	64.2	67.3	77.7				14.3
	AMPA	102	120	116				3.80
	Bentazon	80.8	60.1	65.2				8.06
	Benzovindiflupyr	98.0	88.7	99.1				11.1
	Carbamazepine	102	93.9	104				10.4
	Clothianidin	70.1	69.2	78.9				13.1
	Dinotefuran	94.7	94.4	108				13.5
	Diuron	84.1	70.2	72.2				2.89
	Endothall	84.9	86.4	100				14.7
	Fenuron	106	93.4	97.9				4.75
	Fluridone	84.2	77.5	78.4				1.23
	Glufosinate	110	117	120				2.43
	Glyphosate	136	109	128				15.9
	Hydrocodone	100	96.6	109				11.9
	Ibuprofen	99.4	72.5	85.8				16.8
	Imazapyr	90.4	76.1	86.5				12.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imidacloprid	99.3	119	127		6.71
	Linuron	80.7	65.3	72.2		10.1
	Mandestrobin	96.0	94.4	98.9		4.61
	MCP	133	119	136		13.3
	Naproxen	63.5	64.5	58.0		10.7
	Primidone	93.8	101	105		4.17
	Pyraclostrobin	84.4	83.4	91.7		9.49
	Sucralose	105	116	115		0.905
	Thiamethoxam	101	118	122		3.02
	Tolfenpyrad	56.5	55.5	59.4		6.95
	Triclopyr	121	108	110		2.15
SM 2120 B-2011	Color (true)	102			1.99	
SM 2320 B-2011	Total Alkalinity	100			0.513	
SM 2540 C-2011	TDS				2.68	
SM 4500 F-C-2011	Fluoride	97.3				0.454
SM 5310 B-2011	Organic Carbon	94.2	94.7	95.1		0.285

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2230416, 2230419, 2230422
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2230435, 2230436, 2230437, 2230438, 2230439
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2230435, 2230436, 2230437, 2230438, 2230439
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2230416, 2230419, 2230422
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2230416, 2230419, 2230422
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2230417, 2230420, 2230423
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2230417, 2230420, 2230423
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2230417, 2230420, 2230423
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2230417, 2230420, 2230423
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2230418, 2230421, 2230424
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2230432, 2230433, 2230434
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2230432, 2230433, 2230434
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2230416, 2230419, 2230422
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2230416, 2230419, 2230422
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2230435, 2230436, 2230437, 2230438, 2230439
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2230416, 2230419, 2230422
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2230416, 2230419, 2230422
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2230416, 2230419, 2230422
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2230417, 2230420, 2230423

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	03/10/2021			03/10/2021 15:21	Yen Ta	2230416, 2230419, 2230422
EPA 200.7 Rev. 4.4	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/19/2021 13:50	Josef B Mick	2230435
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/19/2021 13:58	Josef B Mick	2230436
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/19/2021 14:06	Josef B Mick	2230437
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/19/2021 14:41	Josef B Mick	2230438
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/19/2021 14:49	Josef B Mick	2230439
EPA 200.8 Rev. 5.4	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/17/2021 18:00	Alexander Thompson	2230435
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/17/2021 18:10	Alexander Thompson	2230436
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/17/2021 18:19	Alexander Thompson	2230437
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/17/2021 18:29	Alexander Thompson	2230438
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/17/2021 18:38	Alexander Thompson	2230439
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/18/2021 13:32	Alexander Thompson	2230435
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/18/2021 13:39	Alexander Thompson	2230436
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/18/2021 13:45	Alexander Thompson	2230437
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/18/2021 14:30	Alexander Thompson	2230438
	03/10/2021	03/15/2021 16:40	Elliott D. Healy	03/18/2021 14:36	Alexander Thompson	2230439
EPA 300.0 Rev. 2.1	03/10/2021			03/13/2021 01:27	Lipi Saha	2230416
	03/10/2021			03/13/2021 01:39	Lipi Saha	2230419
	03/10/2021			03/13/2021 03:29	Lipi Saha	2230422
EPA 350.1 Rev. 2.0	03/10/2021			03/14/2021 11:54	Ping Hua	2230417
	03/10/2021			03/14/2021 11:55	Ping Hua	2230420
	03/10/2021			03/14/2021 12:02	Ping Hua	2230423
EPA 351.2 Rev. 2.0	03/10/2021	03/18/2021 12:47	Benjamin T. Nordmann	03/22/2021 18:11	Julia Storbeck	2230420
	03/10/2021	03/18/2021 12:47	Benjamin T. Nordmann	03/22/2021 18:16	Julia Storbeck	2230423
	03/10/2021	03/19/2021 12:22	Benjamin T. Nordmann	03/24/2021 15:29	Julia Storbeck	2230417
EPA 353.2 Rev. 2.0	03/10/2021			03/12/2021 09:34	Beverly Y. Sanders	2230417
	03/10/2021			03/12/2021 09:56	Beverly Y. Sanders	2230420
	03/10/2021			03/12/2021 10:05	Beverly Y. Sanders	2230423
EPA 365.1 Rev. 2.0	03/10/2021	03/15/2021 13:12	Yen Ta	03/17/2021 14:03	Shengyu Ding	2230417
	03/10/2021	03/15/2021 13:12	Yen Ta	03/17/2021 14:04	Shengyu Ding	2230420
	03/10/2021	03/15/2021 13:12	Yen Ta	03/17/2021 14:12	Shengyu Ding	2230423
EPA 365.1 Rev. 2.0 dissolved	03/10/2021			03/10/2021 15:11	Patrick M. Roche	2230418
	03/10/2021			03/10/2021 15:13	Patrick M. Roche	2230421
	03/10/2021			03/10/2021 15:14	Patrick M. Roche	2230424
EPA 8321B	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/11/2021 13:44	Rebecca Ware	2230432
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/11/2021 13:58	Rebecca Ware	2230433
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/11/2021 14:12	Rebecca Ware	2230434
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/13/2021 00:47	Rebecca Ware	2230432
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/13/2021 00:59	Rebecca Ware	2230433
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/13/2021 01:11	Rebecca Ware	2230434

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	03/10/2021	03/12/2021 14:30	Hoor Shaik	03/13/2021 01:40	Juyoung Kim	2230432
	03/10/2021	03/12/2021 14:30	Hoor Shaik	03/13/2021 02:14	Juyoung Kim	2230433
	03/10/2021	03/12/2021 14:30	Hoor Shaik	03/13/2021 02:49	Juyoung Kim	2230434
SM 2120 B-2011	03/10/2021			03/10/2021 16:31	Benjamin T. Nordmann	2230416
	03/10/2021			03/10/2021 16:32	Benjamin T. Nordmann	2230419, 2230422
SM 2320 B-2011	03/10/2021			03/11/2021 18:39	Dale L. Simmons	2230416
	03/10/2021			03/11/2021 18:48	Dale L. Simmons	2230419
	03/10/2021			03/11/2021 18:59	Dale L. Simmons	2230422
SM 2340B	03/10/2021			03/19/2021 13:50	Josef B Mick	2230435
	03/10/2021			03/19/2021 13:58	Josef B Mick	2230436
	03/10/2021			03/19/2021 14:06	Josef B Mick	2230437
	03/10/2021			03/19/2021 14:41	Josef B Mick	2230438
	03/10/2021			03/19/2021 14:49	Josef B Mick	2230439
SM 2540 C-2011	03/10/2021			03/12/2021 14:32	Yijie Li	2230416, 2230419, 2230422
SM 2540 D-2011	03/10/2021			03/12/2021 14:32	Yijie Li	2230416, 2230419, 2230422
SM 4500 F-C-2011	03/10/2021			03/11/2021 18:39	Dale L. Simmons	2230416
	03/10/2021			03/11/2021 18:48	Dale L. Simmons	2230419
	03/10/2021			03/11/2021 18:59	Dale L. Simmons	2230422
SM 5310 B-2011	03/10/2021			03/20/2021 01:22	Madeline Gruver	2230417
	03/10/2021			03/20/2021 01:52	Madeline Gruver	2230420
	03/10/2021			03/20/2021 02:03	Madeline Gruver	2230423