

Chemical Analysis Report

NW-DIST-2022-02-11-02

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

Event Description: **Twin Lakes Continuous Monitoring**

Request ID: **RQ-2022-02-07-54**

Customer: **NW-DIST**

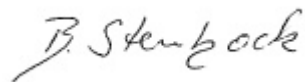
Project ID: **SMP**

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Date Certified: 08-MAR-2022 16:44



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: Kell-Aire Lake

Collection Date/Time: 02/10/2022 13:13

Field ID: G3NW0217

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305332	DEP SOP: NU-094-1	Color (true)**	35		PCU	P409756	
	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P409760	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P410028	
		Sulfate	10		mg SO4/L	P410031	
	SM 2320 B-2011	Total Alkalinity	50		mg CaCO3/L	P410035	RPD
	SM 2540 C-2011	TDS	106		mg/L	P410161	
	SM 2540 D-2011	TSS	4	I	mg/L	P410192	
	SM 4500 F-C-2011	Fluoride	0.099	I	mg F/L	P409906	
2305333	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P410150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P409823	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P410170	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P409834	
	SM 5310 B-2011	Organic Carbon	6.9		mg C/L	P410394	
2305334	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P409750	
2305344	EPA 200.7 Rev. 4.4	Calcium	16.6		mg/L	P409769	
		Iron	55	I	ug/L	P409769	
		Magnesium	3.30		mg/L	P409769	
		Potassium	3.2		mg/L	P409769	
		Sodium	19.6		mg/L	P409769	
		Strontium	232		ug/L	P409769	
		Tin	3.0	U	ug/L	P409769	
	EPA 200.8 Rev. 5.4	Titanium	1.2	I	ug/L	P409769	
		Vanadium	2.0	U	ug/L	P409769	
		Zinc	5.0	U	ug/L	P409769	
		Aluminum	105		ug/L	P409769	
		Antimony	0.17	I	ug/L	P409769	
		Arsenic	2.50		ug/L	P409769	
		Barium	3.82		ug/L	P409769	
		Beryllium	0.010	U	ug/L	P409769	
		Boron**	56.6		ug/L	P409769	
		Cadmium	0.020	U	ug/L	P409769	
		Chromium	0.49	I	ug/L	P409769	
		Cobalt	0.045	I	ug/L	P409769	
		Copper	1.24		ug/L	P409769	
		Lead	0.20	U	ug/L	P409769	
		Manganese	5.08		ug/L	P409769	
		Molybdenum	0.67		ug/L	P409769	
		Nickel	0.50	U	ug/L	P409769	
		Selenium	0.20	I	ug/L	P409769	MS
		Silver	0.010	U	ug/L	P409769	
		Thallium	0.10	U	ug/L	P409769	
	SM 2340B	Hardness	55.2		mg/L	P409769	

Ref. Method and Comment:

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

Sample Location: Twin lake

Collection Date/Time: 02/10/2022 10:46

Field ID: G3NW0215

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305320	DEP SOP: NU-094-1	Color (true)**	44		PCU	P409756	
	EPA 180.1 Rev. 2.0	Turbidity	0.75	I	NTU	P409760	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P410027	
		Sulfate	13		mg SO4/L	P410029	
	SM 2320 B-2011	Total Alkalinity	55		mg CaCO3/L	P409896	
	SM 2540 C-2011	TDS	143		mg/L	P410160	
	SM 2540 D-2011	TSS	3	I	mg/L	P410191	
	SM 4500 F-C-2011	Fluoride	0.15		mg F/L	P409906	
2305321	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P410150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P409789	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P410169	
	SM 5310 B-2011	Organic Carbon	7.2		mg C/L	P410394	
2305322	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.56		mg P/L	P409750	
2305341	EPA 8321B	2,4-D	0.0020	U	ug/L	P409839	
		Acesulfame K	0.20	I	ug/L	P409687	
		2,4,5-T	0.0040	U	ug/L	P409839	
		AMPA	0.10	U	ug/L	P409687	
		Acetaminophen	0.0080	U	ug/L	P409839	
		Acetamiprid	0.0020	U	ug/L	P409839	
		Endothall	0.25	U	ug/L	P409687	
		Glufosinate	0.10	U	ug/L	P409687	
		Glyphosate	0.10	U	ug/L	P409687	
		Afidopyropen	0.0020	U	ug/L	P409839	
		Bentazon	8.0E-04	U	ug/L	P409839	
		Sucralose	10		ug/L	P409687	
		Benzovindiflupyr	0.0020	U	ug/L	P409839	
		Carbamazepine	0.018		ug/L	P409839	
		Clothianidin	0.0020	U	ug/L	P409839	
		Dinotefuran	0.016		ug/L	P409839	
		Diuron	0.0020	U	ug/L	P409839	
		Fenuron	0.016	U	ug/L	P409839	
		Fluridone	8.0E-04	U	ug/L	P409839	
		Imazapyr	0.0072	I	ug/L	P409839	
		Hydrocodone	0.0020	U	ug/L	P409839	
		Ibuprofen	0.020	U	ug/L	P409839	
		Imidacloprid	0.057		ug/L	P409839	
		Linuron	0.0040	U	ug/L	P409839	
		Mandestrobin	0.0020	U	ug/L	P409839	
		MCP	0.0040	U	ug/L	P409839	
		Naproxen	0.0080	U	ug/L	P409839	
		Primidone	0.026		ug/L	P409839	
		Pyraclostrobin	0.0020	U	ug/L	P409839	
		Silvex	0.0040	U	ug/L	P409839	

Field ID: G3NW0215

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305341	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P409839	
		Tolfenpyrad	0.0020	U	ug/L	P409839	
		Triclopyr	0.0040	U	ug/L	P409839	

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

Sample Location: Twin Lake eastern Lake

Collection Date/Time: 02/10/2022 11:25

Field ID: G3NW0449

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305323	DEP SOP: NU-094-1	Color (true)**	27	A	PCU	P409756	
	EPA 180.1 Rev. 2.0	Turbidity	1.9	A	NTU	P409760	
	EPA 300.0 Rev. 2.1	Chloride	17	A	mg Cl/L	P410028	
		Sulfate	6.9	A	mg SO4/L	P410031	
	SM 2320 B-2011	Total Alkalinity	45		mg CaCO3/L	P409896	
	SM 2540 C-2011	TDS	80		mg/L	P410160	
	SM 2540 D-2011	TSS	3	I	mg/L	P410191	
	SM 4500 F-C-2011	Fluoride	0.061	I	mg F/L	P409906	
2305325	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P410150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P409787	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P410170	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P409833	
	SM 5310 B-2011	Organic Carbon	5.9		mg C/L	P410394	
2305327	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.045		mg P/L	P409750	

Ref. Method and Comment:

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

Sample Location: Twin Lake South Lobe

Collection Date/Time: 02/10/2022 11:44

Field ID: G3NW0448

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305324	DEP SOP: NU-094-1	Color (true)**	52		PCU	P409756	
	EPA 180.1 Rev. 2.0	Turbidity	0.75	I	NTU	P409760	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P410028	
		Sulfate	12		mg SO4/L	P410031	
	SM 2320 B-2011	Total Alkalinity	62		mg CaCO3/L	P409896	
	SM 2540 C-2011	TDS	140		mg/L	P410160	
	SM 2540 D-2011	TSS	2	I	mg/L	P410191	
	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P409906	
2305326	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P410150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P409787	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P410170	
	EPA 365.1 Rev. 2.0	Total-P	0.38		mg P/L	P409833	
	SM 5310 B-2011	Organic Carbon	9.7		mg C/L	P410394	
2305328	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.31		mg P/L	P409750	

Ref. Method and Comment:

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

Sample Location: Coleman Lake

Collection Date/Time: 02/10/2022 12:44

Field ID: G3NW0216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305329	DEP SOP: NU-094-1	Color (true)**	38	A	PCU	P409757	
	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P409760	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P410028	
		Sulfate	9.5		mg SO4/L	P410031	
	SM 2320 B-2011	Total Alkalinity	54	A	mg CaCO3/L	P409896	
	SM 2540 C-2011	TDS	114	A	mg/L	P410161	
	SM 2540 D-2011	TSS	5	IA	mg/L	P410192	
	SM 4500 F-C-2011	Fluoride	0.094	I	mg F/L	P409906	
2305330	EPA 350.1 Rev. 2.0	Ammonia-N	0.062		mg N/L	P410150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P409823	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.25		mg N/L	P410170	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P409833	
	SM 5310 B-2011	Organic Carbon	6.8		mg C/L	P410394	
2305331	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.20		mg P/L	P409750	
2305342	EPA 8321B	2,4-D	0.0034	I	ug/L	P409839	
		Acesulfame K	0.14	I	ug/L	P409687	
		2,4,5-T	0.0040	U	ug/L	P409839	
		AMPA	0.10	U	ug/L	P409687	
		Acetaminophen	0.0080	U	ug/L	P409839	
		Acetamiprid	0.0020	U	ug/L	P409839	
		Endothall	0.25	U	ug/L	P409687	
		Glufosinate	0.10	U	ug/L	P409687	
		Glyphosate	0.10	U	ug/L	P409687	
		Afidopyropen	0.0020	U	ug/L	P409839	
		Bentazon	0.0013	I	ug/L	P409839	
		Sucralose	5.2		ug/L	P409687	
		Benzovindiflupyr	0.0020	U	ug/L	P409839	
		Carbamazepine	0.0096		ug/L	P409839	
		Clothianidin	0.0073	I	ug/L	P409839	
		Dinotefuran	0.0079	I	ug/L	P409839	
		Diuron	0.011		ug/L	P409839	
		Fenuron	0.016	U	ug/L	P409839	
		Fluridone	8.0E-04	U	ug/L	P409839	
		Imazapyr	0.029		ug/L	P409839	
		Hydrocodone	0.0020	U	ug/L	P409839	
		Ibuprofen	0.020	U	ug/L	P409839	
		Imidacloprid	0.15		ug/L	P409839	
		Linuron	0.0040	U	ug/L	P409839	
		Mandestrobin	0.0020	U	ug/L	P409839	
		MCP	0.0040	U	ug/L	P409839	
		Naproxen	0.0080	U	ug/L	P409839	
		Primidone	0.014	I	ug/L	P409839	
		Pyraclostrobin	0.0020	U	ug/L	P409839	

Field ID: G3NW0216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305342	EPA 8321B	Silvex	0.0040	U	ug/L	P409839	
		Thiamethoxam	0.0020	U	ug/L	P409839	
		Tolfenpyrad	0.0020	U	ug/L	P409839	
		Triclopyr	0.0040	U	ug/L	P409839	
2305343	EPA 200.7 Rev. 4.4	Calcium	17.7		mg/L	P409769	
		Iron	110	I	ug/L	P409769	
		Magnesium	3.27		mg/L	P409769	
		Potassium	3.1		mg/L	P409769	
		Sodium	19.2		mg/L	P409769	
		Strontium	229		ug/L	P409769	
		Tin	3.0	U	ug/L	P409769	
		Titanium	1.8	I	ug/L	P409769	
		Vanadium	2.0	U	ug/L	P409769	
		Zinc	5.0	U	ug/L	P409769	
	EPA 200.8 Rev. 5.4	Aluminum	205		ug/L	P409769	
		Antimony	0.15	I	ug/L	P409769	
		Arsenic	2.12		ug/L	P409769	
		Barium	4.01		ug/L	P409769	
		Beryllium	0.010	U	ug/L	P409769	
		Boron**	54.5		ug/L	P409769	
		Cadmium	0.020	U	ug/L	P409769	
		Chromium	0.56	I	ug/L	P409769	
		Cobalt	0.049	I	ug/L	P409769	
		Copper	1.47		ug/L	P409769	
		Lead	0.20	I	ug/L	P409769	
		Manganese	6.09		ug/L	P409769	
		Molybdenum	0.62		ug/L	P409769	
		Nickel	0.54	I	ug/L	P409769	
		Selenium	0.24	I	ug/L	P409769	MS
		Silver	0.010	U	ug/L	P409769	
		Thallium	0.10	U	ug/L	P409769	
		Hardness	57.8		mg/L	P409769	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P409756

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P409757

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409760

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409769

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	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
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410027

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410028

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410031

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410150

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409787

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409789

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409823

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410170

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409833

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409834

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409750

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

Reference Method: EPA 8321B
Batch ID: P409687

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: P409839

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
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P409839

Component	Result	Code	Units
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 2320 B-2011
Batch ID: P409896

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

Reference Method: SM 2320 B-2011
Batch ID: P410035

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

Reference Method: SM 2540 C-2011
Batch ID: P410160

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P410161

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P410191

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P410192

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P410394

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P409756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	85 - 115

Reference Method: DEP SOP: NU-094-1
Batch ID: P409757

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.9		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409760

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.0		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	109		P	85 - 115
Sodium	104		P	85 - 115
Strontium	105		P	85 - 115
Tin	109		P	85 - 115
Titanium	107		P	85 - 115
Vanadium	99.4		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	98.9		P	85 - 115
Arsenic	102		P	85 - 115
Barium	103		P	85 - 115
Beryllium	98.8		P	85 - 115
Boron	103		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	96.5		P	85 - 115
Cobalt	102		P	85 - 115
Copper	98.4		P	85 - 115
Lead	99.1		P	85 - 115
Manganese	98.3		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	104		P	85 - 115
Selenium	101		P	85 - 115
Silver	99.9		P	85 - 115
Thallium	103		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410027

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410028

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410031

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410150

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: P409787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409823

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410170

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: P409833

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409834

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: P409750

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

Reference Method: EPA 8321B
Batch ID: P409687

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 150
AMPA	95.6		P	40 - 150
Endothall	68.0		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	101		P	40 - 150
Sucralose	93.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P409839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	115		P	40 - 150
2,4,5-T	69.2		P	40 - 150
Acetaminophen	88.3		P	30 - 150
Acetamiprid	109		P	40 - 150
Afidopyropen	91.0		P	40 - 150
Bentazon	85.0		P	30 - 150
Benzovindiflupyr	66.3		P	40 - 150
Carbamazepine	107		P	40 - 150
Clothianidin	92.1		P	40 - 150
Dinotefuran	106		P	40 - 150
Diuron	73.5		P	40 - 150
Fenuron	102		P	40 - 150
Fluridone	99.3		P	40 - 150
Hydrocodone	109		P	40 - 150
Ibuprofen	76.7		P	40 - 150
Imazapyr	106		P	40 - 150
Imidacloprid	107		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P409839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	81.5		P	40 - 150
Mandestrobin	99.2		P	40 - 150
MCPP	98.7		P	40 - 150
Naproxen	66.5		P	40 - 150
Primidone	84.7		P	40 - 150
Pyraclostrobin	72.0		P	40 - 150
Silvex	64.0		P	40 - 150
Thiamethoxam	115		P	40 - 150
Tolfenpyrad	36.2		P	30 - 150
Triclopyr	72.7		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P409896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P410035

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.5		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P410394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P409769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304833	Calcium	110		P	80 - 120
2304833	Iron	111	107	P/P	80 - 120
2304833	Magnesium	108		P	80 - 120
2304833	Potassium	109	104	P/P	80 - 120
2304833	Sodium	107		P	80 - 120
2304833	Strontium	107	101	P/P	80 - 120
2304833	Tin	110	105	P/P	80 - 120
2304833	Titanium	109	104	P/P	80 - 120
2304833	Vanadium	103	98.0	P/P	80 - 120
2304833	Zinc	106	100	P/P	80 - 120
2305312	Calcium	109		P	80 - 120
2305312	Iron	109		P	80 - 120
2305312	Magnesium	109		P	80 - 120
2305312	Potassium	106		P	80 - 120
2305312	Sodium	104		P	80 - 120
2305312	Strontium	105		P	80 - 120
2305312	Tin	108		P	80 - 120
2305312	Titanium	108		P	80 - 120
2305312	Vanadium	99.5		P	80 - 120
2305312	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P409769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304833	Aluminum	102	102	P/P	80 - 120
2304833	Antimony	103	102	P/P	80 - 120
2304833	Arsenic	103	103	P/P	80 - 120
2304833	Barium	105	104	P/P	80 - 120
2304833	Beryllium	95.6	97.6	P/P	80 - 120
2304833	Boron	110	111	P/P	80 - 120
2304833	Cadmium	102	104	P/P	80 - 120
2304833	Chromium	100	101	P/P	80 - 120
2304833	Cobalt	103	102	P/P	80 - 120
2304833	Copper	98.7	99.3	P/P	80 - 120
2304833	Lead	99.7	101	P/P	80 - 120
2304833	Manganese	101	102	P/P	80 - 120
2304833	Molybdenum	105	105	P/P	80 - 120
2304833	Nickel	102	101	P/P	80 - 120
2304833	Selenium	79.5	79.2	F/F	80 - 120
2304833	Silver	102	102	P/P	80 - 120
2304833	Thallium	106	108	P/P	80 - 120
2305312	Aluminum	102		P	80 - 120
2305312	Antimony	99.9		P	80 - 120
2305312	Arsenic	99.7		P	80 - 120
2305312	Barium	102		P	80 - 120
2305312	Beryllium	93.3		P	80 - 120
2305312	Boron	109		P	80 - 120
2305312	Cadmium	102		P	80 - 120
2305312	Chromium	99.0		P	80 - 120
2305312	Cobalt	99.9		P	80 - 120
2305312	Copper	97.8		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305312	Lead	100		P	80 - 120
2305312	Manganese	97.7		P	80 - 120
2305312	Molybdenum	101		P	80 - 120
2305312	Nickel	98.4		P	80 - 120
2305312	Selenium	99.7		P	80 - 120
2305312	Silver	98.6		P	80 - 120
2305312	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305105	Chloride	99.5		P	90 - 110
2305189	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305323	Chloride	103		P	90 - 110
2305515	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305105	Sulfate	99.9		P	90 - 110
2305189	Sulfate	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305323	Sulfate	101		P	90 - 110
2305515	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305321	Ammonia-N	99.6	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305358	Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409789

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305289	Kjeldahl Nitrogen	97.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409823

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305190	Kjeldahl Nitrogen	98.6	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305270	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305326	NO2NO3-N	99.5	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305271	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305333	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409750

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305286	O-Phosphate-P	99.8	100	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P409687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305124	Acesulfame K	102	94.3	P/P	40 - 150
2305124	AMPA	98.8	97.3	P/P	40 - 150
2305124	Endothall	76.4	82.9	P/P	40 - 150
2305124	Glufosinate	107	105	P/P	40 - 150
2305124	Glyphosate	93.0	90.3	P/P	40 - 150
2305124	Sucralose	80.0	83.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P409839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305308	2,4-D	94.5	81.9	P/P	40 - 150
2305308	2,4,5-T	60.7	77.5	P/P	40 - 150
2305308	Acetaminophen	83.5	93.5	P/P	30 - 150
2305308	Acetamiprid	76.7	91.7	P/P	40 - 150
2305308	Afidopyropen	59.3	57.9	P/P	40 - 150
2305308	Bentazon	76.2	62.5	P/P	30 - 150
2305308	Benzovindiflupyr	92.9	97.4	P/P	40 - 150
2305308	Carbamazepine	96.7	88.7	P/P	40 - 150
2305308	Clothianidin	92.0	76.2	P/P	40 - 150
2305308	Dinotefuran	115	120	P/P	40 - 150
2305308	Diuron	64.9	81.8	P/P	40 - 150
2305308	Fenuron	93.6	99.7	P/P	40 - 150
2305308	Fluridone	96.3	96.5	P/P	40 - 150
2305308	Hydrocodone	103	99.8	P/P	40 - 150
2305308	Ibuprofen	65.1	57.6	P/P	40 - 150
2305308	Imazapyr	99.9	99.8	P/P	40 - 150
2305308	Imidacloprid	140	106	P/P	40 - 150
2305308	Linuron	103	79.4	P/P	40 - 150
2305308	Mandestrobin	91.9	92.1	P/P	40 - 150
2305308	MCCP	85.6	105	P/P	40 - 150
2305308	Naproxen	59.3	55.0	P/P	40 - 150
2305308	Primidone	86.5	111	P/P	40 - 150
2305308	Pyraclostrobin	92.2	86.3	P/P	40 - 150
2305308	Silvex	55.1	62.6	P/P	40 - 150
2305308	Thiamethoxam	122	116	P/P	40 - 150
2305308	Tolfenpyrad	41.5	49.0	P/P	30 - 150
2305308	Triclopyr	70.0	70.7	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P409906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305329	Fluoride	99.5	98.9	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P410394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305163	Organic Carbon	100		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P409756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305323	Color (true)	1.66	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P409757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305329	Color (true)	0.364	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305323	Turbidity	18.7	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304833	Calcium	4.87	Spike	P	0 - 20
2304833	Iron	4.13	Spike	P	0 - 20
2304833	Magnesium	4.40	Spike	P	0 - 20
2304833	Potassium	3.97	Spike	P	0 - 20
2304833	Sodium	4.61	Spike	P	0 - 20
2304833	Strontium	4.68	Spike	P	0 - 20
2304833	Tin	4.72	Spike	P	0 - 20
2304833	Titanium	5.28	Spike	P	0 - 20
2304833	Vanadium	5.25	Spike	P	0 - 20
2304833	Zinc	5.10	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304833	Aluminum	0.613	Spike	P	0 - 20
2304833	Antimony	1.04	Spike	P	0 - 20
2304833	Arsenic	0.462	Spike	P	0 - 20
2304833	Barium	0.483	Spike	P	0 - 20
2304833	Beryllium	2.05	Spike	P	0 - 20
2304833	Boron	1.02	Spike	P	0 - 20
2304833	Cadmium	2.02	Spike	P	0 - 20
2304833	Chromium	0.394	Spike	P	0 - 20
2304833	Cobalt	0.196	Spike	P	0 - 20
2304833	Copper	0.663	Spike	P	0 - 20
2304833	Lead	1.68	Spike	P	0 - 20
2304833	Manganese	0.733	Spike	P	0 - 20
2304833	Molybdenum	0.118	Spike	P	0 - 20
2304833	Nickel	0.784	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304833	Selenium	0.347	Spike	P	0 - 20
2304833	Silver	0.265	Spike	P	0 - 20
2304833	Thallium	1.82	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305105	Chloride	0.625	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305323	Chloride	0.231	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305105	Sulfate	0.00956	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305323	Sulfate	0.128	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305321	Ammonia-N	0.559	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305358	Kjeldahl Nitrogen	0.275	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305289	Kjeldahl Nitrogen	2.90	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409823

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305190	Kjeldahl Nitrogen	1.67	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305270	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305326	NO2NO3-N	0.966	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305271	Total-P	0.692	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305333	Total-P	0.527	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409750

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305286	O-Phosphate-P	0.200	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P409687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305124	Acesulfame K	7.82	Spike	P	0 - 30
2305124	AMPA	1.46	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P409687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305124	Endothall	8.18	Spike	P	0 - 30
2305124	Glufosinate	1.83	Spike	P	0 - 30
2305124	Glyphosate	2.99	Spike	P	0 - 30
2305124	Sucralose	3.66	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P409839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305308	2,4-D	14.2	Spike	P	0 - 30
2305308	2,4,5-T	24.4	Spike	P	0 - 30
2305308	Acetaminophen	11.3	Spike	P	0 - 30
2305308	Acetamiprid	17.9	Spike	P	0 - 30
2305308	Afidopyropen	2.32	Spike	P	0 - 30
2305308	Bentazon	13.7	Spike	P	0 - 30
2305308	Benzovindiflupyr	4.76	Spike	P	0 - 30
2305308	Carbamazepine	8.71	Spike	P	0 - 30
2305308	Clothianidin	18.1	Spike	P	0 - 30
2305308	Dinotefuran	3.84	Spike	P	0 - 30
2305308	Diuron	23.1	Spike	P	0 - 30
2305308	Fenuron	6.38	Spike	P	0 - 30
2305308	Fluridone	0.199	Spike	P	0 - 30
2305308	Hydrocodone	2.80	Spike	P	0 - 30
2305308	Ibuprofen	12.2	Spike	P	0 - 30
2305308	Imazapyr	0.0729	Spike	P	0 - 30
2305308	Imidacloprid	26.9	Spike	P	0 - 30
2305308	Linuron	26.3	Spike	P	0 - 30
2305308	Mandestrobin	0.196	Spike	P	0 - 30
2305308	MCP	20.0	Spike	P	0 - 30
2305308	Naproxen	7.57	Spike	P	0 - 30
2305308	Primidone	25.1	Spike	P	0 - 30
2305308	Pyraclostrobin	6.59	Spike	P	0 - 30
2305308	Silvex	12.7	Spike	P	0 - 30
2305308	Thiamethoxam	5.32	Spike	P	0 - 30
2305308	Tolfenpyrad	16.6	Spike	P	0 - 30
2305308	Triclopyr	0.904	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P409896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305329	Total Alkalinity	2.53	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P410035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306102	Total Alkalinity	6.63	Sample	F	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P410160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305249	TDS	0.619	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P410161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305329	TDS	4.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305329	Fluoride	0.500	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305163	Organic Carbon	0.322	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2305341

Field Sample ID: G3NW0215

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	76.4	P	30 - 160
EPA 8321B	Endothall-d6	89.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	133	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.4	P	30 - 160
EPA 8321B	Primidone-d5	97.5	P	30 - 160
EPA 8321B	Sucralose-d6	80.0	P	30 - 160

Lab Sample ID: 2305342

Field Sample ID: G3NW0216

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	81.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	76.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.2	P	30 - 160
EPA 8321B	Diuron-d6	78.9	P	30 - 160
EPA 8321B	Endothall-d6	82.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Ibuprofen-d3	47.5	P	30 - 160
EPA 8321B	Primidone-d5	121	P	30 - 160
EPA 8321B	Sucralose-d6	73.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A110364

Included Lab Sample IDs: 2305322, 2305327, 2305328, 2305331, 2305334

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	99.3	P/P	90 - 110
O-Phosphate-P	99.3	99.5	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A110369

Included Lab Sample IDs: 2305320, 2305323, 2305324, 2305329, 2305332

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110371

Included Lab Sample IDs: 2305320, 2305323, 2305324, 2305329, 2305332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A110387

Included Lab Sample IDs: 2305341, 2305342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.1	97.2	P/P	60 - 160
Glufosinate	103	105	P/P	60 - 160
Glyphosate	98.1	95.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A110393

Included Lab Sample IDs: 2305341, 2305342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	72.7	85.2	P/P	60 - 160
Acesulfame K	85.2	90.0	P/P	60 - 160
Endothall	60.4	66.8	P/P	60 - 160
Endothall	66.8	62.5	P/P	60 - 160
Sucralose	71.4	84.9	P/P	60 - 160
Sucralose	84.9	72.8	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110423

Included Lab Sample IDs: 2305320, 2305323, 2305324, 2305329, 2305332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	103	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110425

Included Lab Sample IDs: 2305343, 2305344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	103	P/P	90 - 110
Antimony	96.6	95.9	P/P	90 - 110
Arsenic	99.0	100	P/P	90 - 110
Barium	99.8	101	P/P	90 - 110
Beryllium	96.1	96.2	P/P	90 - 110
Boron	106	105	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	98.2	98.9	P/P	90 - 110
Cobalt	99.4	101	P/P	90 - 110
Copper	98.4	99.1	P/P	90 - 110
Lead	98.6	98.5	P/P	90 - 110
Manganese	98.3	99.0	P/P	90 - 110
Molybdenum	101	101	P/P	90 - 110
Nickel	100	100	P/P	90 - 110
Selenium	99.6	100	P/P	90 - 110
Silver	92.4	93.2	P/P	90 - 110
Thallium	104	103	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110433

Included Lab Sample IDs: 2305320, 2305323, 2305324, 2305329

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.8	91.3	P/P	90 - 110
Total Alkalinity	97.6	95.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110433

Included Lab Sample IDs: 2305320, 2305323, 2305324, 2305329, 2305332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.0	P/P	90 - 110
Fluoride	99.0	100	P/P	90 - 110
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110453

Included Lab Sample IDs: 2305321, 2305325, 2305326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	99.1	P/P	90 - 110
Kjeldahl Nitrogen	99.3	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110467

Included Lab Sample IDs: 2305330, 2305333

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A110482

Included Lab Sample IDs: 2305332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	93.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110529

Included Lab Sample IDs: 2305325, 2305326, 2305330, 2305333

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110530

Included Lab Sample IDs: 2305321, 2305325, 2305326, 2305330, 2305333

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110534

Included Lab Sample IDs: 2305321, 2305325, 2305326, 2305330, 2305333

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110559

Included Lab Sample IDs: 2305343, 2305344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	103	P/P	90 - 110
Iron	101	103	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	98.7	100	P/P	90 - 110
Sodium	99.4	101	P/P	90 - 110
Strontium	103	102	P/P	90 - 110
Tin	105	104	P/P	90 - 110
Titanium	104	103	P/P	90 - 110
Vanadium	104	103	P/P	90 - 110
Zinc	104	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110620

Included Lab Sample IDs: 2305341, 2305342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	98.0	P/P	50 - 150
2,4-D	98.0	103	P/P	50 - 150
2,4,5-T	117	86.1	P/P	50 - 150
2,4,5-T	86.1	86.7	P/P	50 - 150
Acetaminophen	111	109	P/P	60 - 160
Acetaminophen	121	111	P/P	60 - 160

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8321B

Run ID: A110620

Included Lab Sample IDs: 2305341, 2305342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	105	106	P/P	50 - 150
Acetamiprid	106	121	P/P	50 - 150
Afidopyropen	83.5	88.4	P/P	50 - 150
Afidopyropen	88.4	123	P/P	50 - 150
Bentazon	107	111	P/P	50 - 160
Bentazon	111	120	P/P	50 - 160
Benzovindiflupyr	88.1	97.7	P/P	50 - 150
Benzovindiflupyr	97.7	84.7	P/P	50 - 150
Carbamazepine	93.7	100	P/P	60 - 150
Carbamazepine	100	104	P/P	60 - 150
Clothianidin	82.8	97.4	P/P	60 - 150
Clothianidin	97.4	99.7	P/P	60 - 150
Dinotefuran	101	104	P/P	50 - 150
Dinotefuran	108	101	P/P	50 - 150
Diuron	114	113	P/P	60 - 160
Diuron	118	114	P/P	60 - 160
Fenuron	99.5	106	P/P	60 - 150
Fenuron	99.8	99.5	P/P	60 - 150
Fluridone	116	104	P/P	60 - 160
Fluridone	92.7	116	P/P	60 - 160
Hydrocodone	104	112	P/P	60 - 150
Hydrocodone	112	101	P/P	60 - 150
Ibuprofen	114	62.7	P/P	50 - 160
Ibuprofen	90.9	114	P/P	50 - 160
Imazapyr	106	93.5	P/P	50 - 150
Imazapyr	93.5	91.2	P/P	50 - 150
Imidacloprid	91.3	99.1	P/P	60 - 150
Imidacloprid	99.1	103	P/P	60 - 150
Linuron	103	92.0	P/P	60 - 150
Linuron	92.0	99.0	P/P	60 - 150
Mandestrobin	110	96.8	P/P	50 - 150
Mandestrobin	96.8	99.4	P/P	50 - 150
MCP	103	95.4	P/P	50 - 150
MCP	95.4	96.3	P/P	50 - 150
Naproxen	129	89.5	P/P	50 - 160
Naproxen	89.5	91.0	P/P	50 - 160
Primidone	131	94.1	P/P	60 - 150
Primidone	94.1	68.5	P/P	60 - 150
Pyraclostrobin	115	94.5	P/P	60 - 150
Pyraclostrobin	94.5	101	P/P	60 - 150
Silvex	102	87.7	P/P	50 - 150
Silvex	92.1	102	P/P	50 - 150
Thiamethoxam	108	99.3	P/P	50 - 150
Thiamethoxam	88.2	108	P/P	50 - 150
Tolfenpyrad	114	105	P/P	60 - 150
Tolfenpyrad	123	114	P/P	60 - 150
Triclopyr	85.8	96.2	P/P	50 - 150
Triclopyr	96.2	93.3	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A110639

Included Lab Sample IDs: 2305321, 2305325, 2305326, 2305330, 2305333

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	92.2	P/P	90 - 110
Organic Carbon	95.4	103	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			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	99.5				1.66	
	Color (true)	99.9				0.364	
EPA 180.1 Rev. 2.0	Turbidity	96.0				18.7	
EPA 200.7 Rev. 4.4	Calcium	106	110	109			4.87
	Iron	107	111	107	109		4.13
	Magnesium	106	108	109			4.40
	Potassium	109	109	104	106		3.97
	Sodium	104	107	104			4.61
	Strontium	105	107	101	105		4.68
	Tin	109	110	105	108		4.72
	Titanium	107	109	104	108		5.28
	Vanadium	99.4	103	98.0	99.5		5.25
	Zinc	105	106	100	104		5.10
EPA 200.8 Rev. 5.4	Aluminum	101	102	102	102		0.613
	Antimony	98.9	103	102	99.9		1.04
	Arsenic	102	103	103	99.7		0.462
	Barium	103	105	104	102		0.483
	Beryllium	98.8	95.6	97.6	93.3		2.05
	Boron	103	110	111	109		1.02
	Cadmium	100	102	104	102		2.02
	Chromium	96.5	100	101	99.0		0.394
	Cobalt	102	103	102	99.9		0.196
	Copper	98.4	98.7	99.3	97.8		0.663
	Lead	99.1	99.7	101	100		1.68
	Manganese	98.3	101	102	97.7		0.733
	Molybdenum	101	105	105	101		0.118
	Nickel	104	102	101	98.4		0.784
	Selenium	101	79.5	79.2	99.7		0.347
	Silver	99.9	102	102	98.6		0.265
	Thallium	103	106	108	105		1.82
EPA 300.0 Rev. 2.1	Chloride	101	99.5	102		0.625	
	Chloride	103	103	102		0.231	
	Sulfate	99.7	99.9	99.2		0.0095	
	Sulfate	102	101	101		0.128	
EPA 350.1 Rev. 2.0	Ammonia-N	101	99.6	98.8			0.559
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.8	103	104			0.275
	Kjeldahl Nitrogen	97.6	97.8	101			2.90
	Kjeldahl Nitrogen	97.7	98.6	96.2			1.67
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	100			0.0
	NO2NO3-N	102	99.5	101			0.966
EPA 365.1 Rev. 2.0	Total-P	102	103	102			0.692
	Total-P	104	102	101			0.527
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5	99.8	100			0.200
EPA 8321B	2,4-D	115	94.5	81.9			14.2
	2,4,5-T	69.2	60.7	77.5			24.4
	Acesulfame K	102	102	94.3			7.82
	Acetaminophen	88.3	83.5	93.5			11.3
	Acetamiprid	109	76.7	91.7			17.9
	Afidopyropen	91.0	59.3	57.9			2.32
	AMPA	95.6	98.8	97.3			1.46
	Bentazon	85.0	76.2	62.5			13.7
	Benzovindiflupyr	66.3	92.9	97.4			4.76
	Carbamazepine	107	96.7	88.7			8.71
	Clothianidin	92.1	92.0	76.2			18.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Dinotefuran	106	115	120		3.84
	Diuron	73.5	64.9	81.8		23.1
	Endothall	68.0	76.4	82.9		8.18
	Fenuron	102	93.6	99.7		6.38
	Fluridone	99.3	96.3	96.5		0.199
	Glufosinate	108	107	105		1.83
	Glyphosate	101	93.0	90.3		2.99
	Hydrocodone	109	103	99.8		2.80
	Ibuprofen	76.7	65.1	57.6		12.2
	Imazapyr	106	99.9	99.8		0.0729
	Imidacloprid	107	140	106		26.9
	Linuron	81.5	103	79.4		26.3
	Mandestrobin	99.2	91.9	92.1		0.196
	MCPP	98.7	85.6	105		20.0
	Naproxen	66.5	59.3	55.0		7.57
	Primidone	84.7	86.5	111		25.1
	Pyraclostrobin	72.0	92.2	86.3		6.59
	Silvex	64.0	55.1	62.6		12.7
	Sucralose	93.5	80.0	83.2		3.66
	Thiamethoxam	115	122	116		5.32
	Tolfenpyrad	36.2	41.5	49.0		16.6
	Triclopyr	72.7	70.0	70.7		0.904
SM 2320 B-2011	Total Alkalinity	97.0			2.53	
	Total Alkalinity	96.5			6.63	
SM 2540 C-2011	TDS				0.619	
	TDS				4.41	
SM 4500 F-C-2011	Fluoride	98.9	99.5	98.9		0.500
SM 5310 B-2011	Organic Carbon	93.3	100			0.322

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2305320, 2305323, 2305324, 2305329, 2305332
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2305320, 2305323, 2305324, 2305329, 2305332
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2305343, 2305344
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2305343, 2305344
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2305320, 2305323, 2305324, 2305329, 2305332
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2305320, 2305323, 2305324, 2305329, 2305332
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2305321, 2305325, 2305326, 2305330, 2305333
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2305321, 2305325, 2305326, 2305330, 2305333
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2305321, 2305325, 2305326, 2305330, 2305333
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2305325, 2305326, 2305330, 2305333
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2305322, 2305327, 2305328, 2305331, 2305334
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2305341, 2305342

Reference Method Descriptions

Method	Description	Associated Samples
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2305320, 2305323, 2305324, 2305329, 2305332
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2305343, 2305344
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2305320, 2305323, 2305324, 2305329, 2305332
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2305320, 2305323, 2305324, 2305329, 2305332
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2305320, 2305323, 2305324, 2305329, 2305332
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2305321, 2305325, 2305326, 2305330, 2305333

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	02/11/2022			02/11/2022 16:13	Anna M. Plaviak	2305320
	02/11/2022			02/11/2022 16:15	Anna M. Plaviak	2305323
	02/11/2022			02/11/2022 16:16	Anna M. Plaviak	2305324, 2305332
	02/11/2022			02/11/2022 16:24	Anna M. Plaviak	2305329
EPA 180.1 Rev. 2.0	02/11/2022			02/11/2022 14:27	Khloe J Berg	2305323
	02/11/2022			02/11/2022 15:01	Khloe J Berg	2305320
	02/11/2022			02/11/2022 15:04	Khloe J Berg	2305324
	02/11/2022			02/11/2022 15:05	Khloe J Berg	2305329
	02/11/2022			02/11/2022 15:07	Khloe J Berg	2305332
EPA 200.7 Rev. 4.4	02/11/2022	02/14/2022 10:40	Megan Whitefoot	02/22/2022 17:12	Josef B Mick	2305343
	02/11/2022	02/14/2022 10:40	Megan Whitefoot	02/22/2022 17:20	Josef B Mick	2305344
EPA 200.8 Rev. 5.4	02/11/2022	02/14/2022 10:40	Megan Whitefoot	02/15/2022 18:52	Alexander Thompson	2305343
	02/11/2022	02/14/2022 10:40	Megan Whitefoot	02/15/2022 19:02	Alexander Thompson	2305344
EPA 300.0 Rev. 2.1	02/11/2022			02/17/2022 17:33	Roberta Tatti	2305320
	02/11/2022			02/17/2022 18:45	Roberta Tatti	2305323
	02/11/2022			02/17/2022 19:33	Roberta Tatti	2305324
	02/11/2022			02/17/2022 19:45	Roberta Tatti	2305329
	02/11/2022			02/17/2022 19:57	Roberta Tatti	2305332
EPA 350.1 Rev. 2.0	02/11/2022			02/21/2022 13:16	Ping Hua	2305321
	02/11/2022			02/21/2022 13:24	Ping Hua	2305325
	02/11/2022			02/21/2022 13:25	Ping Hua	2305326
	02/11/2022			02/21/2022 13:26	Ping Hua	2305330
	02/11/2022			02/21/2022 13:28	Ping Hua	2305333
EPA 351.2 Rev. 2.0	02/11/2022	02/15/2022 13:57	Samantha L Bates	02/16/2022 14:46	Alexandra J Mattheus	2305325
	02/11/2022	02/15/2022 13:57	Samantha L Bates	02/16/2022 14:47	Alexandra J Mattheus	2305326
	02/11/2022	02/15/2022 13:57	Samantha L Bates	02/16/2022 16:44	Alexandra J Mattheus	2305321
	02/11/2022	02/16/2022 13:48	Samantha L Bates	02/17/2022 12:08	Alexandra J Mattheus	2305330
	02/11/2022	02/16/2022 13:48	Samantha L Bates	02/17/2022 12:10	Alexandra J Mattheus	2305333
EPA 353.2 Rev. 2.0	02/11/2022			02/22/2022 10:40	Beverly Y. Sanders	2305321
	02/11/2022			02/22/2022 10:47	Beverly Y. Sanders	2305326
	02/11/2022			02/22/2022 10:52	Beverly Y. Sanders	2305325
	02/11/2022			02/22/2022 10:53	Beverly Y. Sanders	2305330
	02/11/2022			02/22/2022 10:54	Beverly Y. Sanders	2305333
EPA 365.1 Rev. 2.0	02/11/2022	02/16/2022 14:20	Simonne.V. Calhoun	02/17/2022 15:30	Shengyu Ding	2305325
	02/11/2022	02/16/2022 14:20	Simonne.V. Calhoun	02/17/2022 15:31	Shengyu Ding	2305326
	02/11/2022	02/16/2022 14:20	Simonne.V. Calhoun	02/17/2022 15:32	Shengyu Ding	2305330
	02/11/2022	02/16/2022 14:20	Simonne.V. Calhoun	02/17/2022 15:35	Shengyu Ding	2305333
EPA 365.1 Rev. 2.0 dissolved	02/11/2022			02/11/2022 14:56	James L Waggeberby	2305322
	02/11/2022			02/11/2022 14:58	James L Waggeberby	2305327
	02/11/2022			02/11/2022 15:00	James L Waggeberby	2305331

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	02/11/2022			02/11/2022 15:01	James L Waggeberby	2305334
	02/11/2022			02/11/2022 15:13	James L Waggeberby	2305328
EPA 8321B	02/11/2022	02/11/2022 14:00	Umesh Chiluwal	02/11/2022 17:40	Umesh Chiluwal	2305341
	02/11/2022	02/11/2022 14:00	Umesh Chiluwal	02/11/2022 17:51	Umesh Chiluwal	2305342
	02/11/2022	02/11/2022 14:00	Umesh Chiluwal	02/11/2022 23:13	Umesh Chiluwal	2305341
	02/11/2022	02/11/2022 14:00	Umesh Chiluwal	02/11/2022 23:42	Umesh Chiluwal	2305342
	02/11/2022	02/16/2022 09:00	June Rhew	02/17/2022 17:34	Juyoung Kim	2305341
	02/11/2022	02/16/2022 09:00	June Rhew	02/17/2022 18:44	Juyoung Kim	2305342
SM 2320 B-2011	02/11/2022			02/15/2022 21:51	Dale L. Simmons	2305329
	02/11/2022			02/16/2022 00:25	Dale L. Simmons	2305320
	02/11/2022			02/16/2022 00:36	Dale L. Simmons	2305323
	02/11/2022			02/16/2022 00:48	Dale L. Simmons	2305324
SM 2340B	02/11/2022			02/18/2022 00:38	Dale L. Simmons	2305332
	02/11/2022			02/22/2022 17:12	Josef B Mick	2305343
SM 2540 C-2011	02/11/2022			02/22/2022 17:20	Josef B Mick	2305344
	02/11/2022			02/16/2022 15:36	Yijie Li	2305320, 2305323, 2305324, 2305329, 2305332
SM 2540 D-2011	02/11/2022			02/16/2022 15:36	Yijie Li	2305320, 2305323, 2305324, 2305329, 2305332
SM 4500 F-C-2011	02/11/2022			02/15/2022 21:42	Dale L. Simmons	2305329
	02/11/2022			02/16/2022 00:25	Dale L. Simmons	2305320
	02/11/2022			02/16/2022 00:36	Dale L. Simmons	2305323
	02/11/2022			02/16/2022 00:48	Dale L. Simmons	2305324
	02/11/2022			02/16/2022 02:14	Dale L. Simmons	2305332
SM 5310 B-2011	02/11/2022			02/27/2022 00:31	Touraj Touran	2305321
	02/11/2022			02/27/2022 13:05	Touraj Touran	2305325
	02/11/2022			02/27/2022 14:40	Touraj Touran	2305330
	02/11/2022			02/27/2022 15:14	Touraj Touran	2305333
	02/11/2022			02/27/2022 15:51	Touraj Touran	2305326