

Chemical Analysis Report

NW-DIST-2022-05-05-01

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-2022-05-02-41**

Customer: **NW-DIST**

Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 02-JUN-2022 11:20

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Twin Lake

Collection Date/Time: 05/04/2022 10:20

Field ID: G3NW0215

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324934	DEP SOP: NU-094-1	Color (true)**	61		PCU	P413463	
	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P413438	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P413635	
		Sulfate	9.5		mg SO4/L	P413637	
	SM 2320 B-2011	Total Alkalinity	62		mg CaCO3/L	P413853	
	SM 2540 C-2011	TDS	147		mg/L	P413945	
	SM 2540 D-2011	TSS	11		mg/L	P413947	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P413858	
2324935	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P413703	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P413871	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413811	
	EPA 365.1 Rev. 2.0	Total-P	0.74		mg P/L	P413895	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P413819	
2324950	EPA 8321B	2,4-D	0.0020	U	ug/L	P413605	
		Acesulfame K	0.17	I	ug/L	P413413	
		2,4,5-T	0.0040	U	ug/L	P413605	
		AMPA	0.10	U	ug/L	P413413	
		Acetaminophen	0.0080	U	ug/L	P413605	
		Acetamiprid	0.0020	U	ug/L	P413605	
		Endothall	0.25	U	ug/L	P413413	
		Glufosinate	0.10	U	ug/L	P413413	
		Glyphosate	0.10	U	ug/L	P413413	
		Afidopyropen	0.0020	U	ug/L	P413605	
		Bentazon	8.0E-04	U	ug/L	P413605	
		Sucralose	12		ug/L	P413413	
		Benzovindiflupyr	0.0020	U	ug/L	P413605	
		Carbamazepine	0.0067		ug/L	P413605	
		Clothianidin	0.0020	U	ug/L	P413605	
		Dinotefuran	0.0065	I	ug/L	P413605	
		Diuron	0.0020	U	ug/L	P413605	
		Fenuron	0.032	U	ug/L	P413605	
		Fluridone	8.0E-04	U	ug/L	P413605	
		Imazapyr	0.0040	U	ug/L	P413605	
		Hydrocodone	0.0020	U	ug/L	P413605	
		Ibuprofen	0.020	U	ug/L	P413605	
		Imidacloprid	0.0037	I	ug/L	P413605	
		Linuron	0.0040	U	ug/L	P413605	
		Mandestrobin	0.0020	U	ug/L	P413605	
		MCP	0.0040	U	ug/L	P413605	
		Naproxen	0.0080	U	ug/L	P413605	
		Primidone	0.013	I	ug/L	P413605	
		Pyraclostrobin	0.0020	U	ug/L	P413605	
		Silvex	0.0040	U	ug/L	P413605	
		Thiamethoxam	0.0020	U	ug/L	P413605	

Field ID: G3NW0215

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324950	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P413605	
		Triclopyr	0.0040	U	ug/L	P413605	

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: Twin Lake south Lobe

Collection Date/Time: 05/04/2022 10:50

Field ID: G3NW0448

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324936	DEP SOP: NU-094-1	Color (true)**	54		PCU	P413463	
	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P413438	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P413635	
		Sulfate	9.6		mg SO4/L	P413637	
	SM 2320 B-2011	Total Alkalinity	69		mg CaCO3/L	P413855	
	SM 2540 C-2011	TDS	142		mg/L	P413945	
	SM 2540 D-2011	TSS	3	I	mg/L	P413947	
	SM 4500-F- C-2011	Fluoride	0.14		mg F/L	P413860	
2324938	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P413704	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P413874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P413811	
	EPA 365.1 Rev. 2.0	Total-P	0.36		mg P/L	P413896	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P413820	

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: 05/04/2022 12:00

Field ID: G3NW0216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324940	DEP SOP: NU-094-1	Color (true)**	39		PCU	P413463	
	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P413438	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P413937	
		Sulfate	7.4		mg SO4/L	P413941	
	SM 2320 B-2011	Total Alkalinity	51		mg CaCO3/L	P413855	
	SM 2540 C-2011	TDS	108		mg/L	P413945	
	SM 2540 D-2011	TSS	4	I	mg/L	P413947	
	SM 4500-F- C-2011	Fluoride	0.094	I	mg F/L	P413860	
2324941	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P413704	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P413874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413811	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P413687	
	SM 5310 B-2011	Organic Carbon	6.7		mg C/L	P413820	
2324951	EPA 8321B	2,4-D	0.0020	U	ug/L	P413605	
		Acesulfame K	0.10	I	ug/L	P413413	
		2,4,5-T	0.0040	U	ug/L	P413605	
		AMPA	0.10	U	ug/L	P413413	
		Acetaminophen	0.0080	U	ug/L	P413605	
		Acetamiprid	0.0020	U	ug/L	P413605	
		Endothall	0.25	U	ug/L	P413413	
		Glufosinate	0.10	U	ug/L	P413413	
		Glyphosate	0.10	U	ug/L	P413413	
		Afidopyropen	0.0020	U	ug/L	P413605	
		Bentazon	8.0E-04	U	ug/L	P413605	
		Sucralose	5.4		ug/L	P413413	
		Benzovindiflupyr	0.0020	U	ug/L	P413605	
		Carbamazepine	0.0029	I	ug/L	P413605	
		Clothianidin	0.0020	U	ug/L	P413605	
		Dinotefuran	0.0023	I	ug/L	P413605	
		Diuron	0.0033	I	ug/L	P413605	
		Fenuron	0.032	U	ug/L	P413605	
		Fluridone	8.0E-04	U	ug/L	P413605	
		Imazapyr	0.0040	U	ug/L	P413605	
		Hydrocodone	0.0020	U	ug/L	P413605	
		Ibuprofen	0.020	U	ug/L	P413605	
		Imidacloprid	0.0058	I	ug/L	P413605	
		Linuron	0.0040	U	ug/L	P413605	
		Mandestrobin	0.0020	U	ug/L	P413605	
		MCP	0.0040	U	ug/L	P413605	
		Naproxen	0.0080	U	ug/L	P413605	
		Primidone	0.0061	I	ug/L	P413605	
		Pyraclostrobin	0.0020	U	ug/L	P413605	
		Silvex	0.0040	U	ug/L	P413605	
		Thiamethoxam	0.0020	U	ug/L	P413605	

Field ID: G3NW0216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324951	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P413605	
		Triclopyr	0.0040	U	ug/L	P413605	
2324952	EPA 200.7 Rev. 4.4	Calcium	16.0		mg/L	P413660	
		Iron	63	I	ug/L	P413660	
		Magnesium	3.02		mg/L	P413660	
		Potassium	2.5		mg/L	P413660	
		Sodium	18.2		mg/L	P413660	
		Strontium	213		ug/L	P413660	
		Tin	3.0	U	ug/L	P413660	
		Titanium	0.88	I	ug/L	P413660	
		Vanadium	2.0	U	ug/L	P413660	
		Zinc	5.0	U	ug/L	P413660	
	EPA 200.8 Rev. 5.4	Aluminum	70		ug/L	P413660	
		Antimony	0.14	I	ug/L	P413660	
		Arsenic	2.66		ug/L	P413660	
		Barium	4.35		ug/L	P413660	
		Beryllium	0.010	U	ug/L	P413660	
		Boron**	54.3		ug/L	P413660	
		Cadmium	0.020	U	ug/L	P413660	
		Chromium	0.40	U	ug/L	P413660	
		Cobalt	0.033	I	ug/L	P413660	
		Copper	1.32		ug/L	P413660	
		Lead	0.20	U	ug/L	P413660	
		Manganese	5.84		ug/L	P413660	
		Molybdenum	0.41	I	ug/L	P413660	
		Nickel	0.50	U	ug/L	P413660	
		Selenium	0.20	U	ug/L	P413660	MS
		Silver	0.010	U	ug/L	P413660	
		Thallium	0.10	U	ug/L	P413660	
	SM 2340 B-2011	Hardness	52.4		mg/L	P413660	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Twin lake eastern Lake

Collection Date/Time: 05/04/2022 11:20

Field ID: G3NW0449

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324937	DEP SOP: NU-094-1	Color (true)**	43		PCU	P413466	
	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P413438	
	EPA 300.0 Rev. 2.1	Chloride	18	A	mg Cl/L	P413937	
		Sulfate	5.9	A	mg SO4/L	P413941	
	SM 2320 B-2011	Total Alkalinity	52		mg CaCO3/L	P413855	
	SM 2540 C-2011	TDS	99		mg/L	P413945	
	SM 2540 D-2011	TSS	9	I	mg/L	P413947	
	SM 4500-F- C-2011	Fluoride	0.070	I	mg F/L	P413860	
2324939	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P413704	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.6		mg N/L	P414005	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P413811	
	EPA 365.1 Rev. 2.0	Total-P	0.088		mg P/L	P413687	
	SM 5310 B-2011	Organic Carbon	8.0		mg C/L	P413820	

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: Kell-Aire Lake

Collection Date/Time: 05/04/2022 12:15

Field ID: G3NW0217

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324942	DEP SOP: NU-094-1	Color (true)**	40		PCU	P413463	
	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P413438	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P413937	
		Sulfate	7.3		mg SO4/L	P413941	
	SM 2320 B-2011	Total Alkalinity	50		mg CaCO3/L	P413855	
	SM 2540 C-2011	TDS	108		mg/L	P413945	
	SM 2540 D-2011	TSS	7	I	mg/L	P413947	
2324943	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P413860	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P413704	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P413875	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P413633	
	EPA 365.1 Rev. 2.0	Total-P	0.32		mg P/L	P413691	
2324953	SM 5310 B-2011	Organic Carbon	7.0		mg C/L	P413820	
	EPA 200.7 Rev. 4.4	Calcium	15.3		mg/L	P413660	
		Iron	36	I	ug/L	P413660	
		Magnesium	3.04		mg/L	P413660	
		Potassium	2.6		mg/L	P413660	
		Sodium	18.4		mg/L	P413660	
		Strontium	212		ug/L	P413660	
		Tin	3.0	U	ug/L	P413660	
		Titanium	0.87	I	ug/L	P413660	
		Vanadium	2.0	U	ug/L	P413660	
		Zinc	5.0	U	ug/L	P413660	
	EPA 200.8 Rev. 5.4	Aluminum	70		ug/L	P413660	
		Antimony	0.12	I	ug/L	P413660	
		Arsenic	2.59		ug/L	P413660	
		Barium	3.89		ug/L	P413660	
		Beryllium	0.010	U	ug/L	P413660	
		Boron**	57.0		ug/L	P413660	
		Cadmium	0.020	U	ug/L	P413660	
		Chromium	0.40	U	ug/L	P413660	
		Cobalt	0.034	I	ug/L	P413660	
		Copper	0.85		ug/L	P413660	
		Lead	0.20	U	ug/L	P413660	
		Manganese	4.82		ug/L	P413660	
		Molybdenum	0.37	I	ug/L	P413660	
		Nickel	0.50	U	ug/L	P413660	
		Selenium	0.20	U	ug/L	P413660	MS
		Silver	0.010	U	ug/L	P413660	
		Thallium	0.10	U	ug/L	P413660	
	SM 2340 B-2011	Hardness	50.6		mg/L	P413660	

Field ID: G3NW0217

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P413463

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P413466

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413438

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413660

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: P413660

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: P413635

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413937

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413941

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413704

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413871

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413875

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413811

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413687

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413691

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413895

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413896

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

Reference Method: EPA 8321B
Batch ID: P413413

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P413605

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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P413853

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

Reference Method: SM 2320 B-2011

Batch ID: P413855

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

Reference Method: SM 2540 C-2011

Batch ID: P413945

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P413947

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P413858

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413860

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413819

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

Reference Method: SM 5310 B-2011
Batch ID: P413820

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: P413463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: DEP SOP: NU-094-1
Batch ID: P413466

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413438

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.1		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	104		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	104		P	85 - 115
Sodium	101		P	85 - 115
Strontium	99.4		P	85 - 115
Tin	102		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	95.4		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	98.1		P	85 - 115
Barium	102		P	85 - 115
Beryllium	91.9		P	85 - 115
Boron	107		P	85 - 115
Cadmium	99.6		P	85 - 115
Chromium	97.5		P	85 - 115
Cobalt	97.1		P	85 - 115
Copper	96.2		P	85 - 115
Lead	100		P	85 - 115
Manganese	97.2		P	85 - 115
Molybdenum	98.6		P	85 - 115
Nickel	97.4		P	85 - 115
Selenium	97.2		P	85 - 115
Silver	98.8		P	85 - 115
Thallium	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413937

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413704

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413871

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413875

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.5		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413811

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413687

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413691

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: P413895

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: P413896

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

Reference Method: EPA 8321B
Batch ID: P413413

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	105		P	40 - 150
AMPA	88.7		P	40 - 150
Endothall	94.8		P	40 - 150
Glufosinate	95.5		P	40 - 150
Glyphosate	88.5		P	40 - 150
Sucralose	99.1		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P413605

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	62.7		P	40 - 150
2,4,5-T	59.0		P	40 - 150
Acetaminophen	74.9		P	30 - 150
Acetamiprid	58.6		P	40 - 150
Afidopyropen	40.8		P	30 - 150
Bentazon	84.7		P	30 - 150
Benzovindiflupyr	60.0		P	40 - 150
Carbamazepine	59.7		P	40 - 150
Clothianidin	79.7		P	40 - 150
Dinotefuran	93.3		P	40 - 150
Diuron	63.9		P	40 - 150
Fenuron	81.2		P	40 - 150
Fluridone	62.4		P	40 - 150
Hydrocodone	88.4		P	40 - 150
Ibuprofen	63.4		P	40 - 150
Imazapyr	72.3		P	40 - 150
Imidacloprid	65.7		P	40 - 150
Linuron	56.7		P	40 - 150
Mandestrobin	58.0		P	40 - 150
MCPP	79.9		P	40 - 150
Naproxen	42.3		P	40 - 150
Primidone	82.0		P	40 - 150
Pyraclostrobin	51.7		P	40 - 150
Silvex	53.7		P	40 - 150
Thiamethoxam	74.3		P	40 - 150
Tolfenpyrad	35.5		P	30 - 150
Triclopyr	61.6		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P413853

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	94 - 106

Reference Method: SM 2320 B-2011

Batch ID: P413855

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

Reference Method: SM 4500-F- C-2011

Batch ID: P413858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	96 - 104

Reference Method: SM 4500-F- C-2011

Batch ID: P413860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P413819

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P413820

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324873	Calcium	103		P	80 - 120
2324873	Iron	104	115	P/P	80 - 120
2324873	Magnesium	108	107	P/P	80 - 120
2324873	Potassium	105	104	P/P	80 - 120
2324873	Sodium	101		P	80 - 120
2324873	Strontium	101	101	P/P	80 - 120
2324873	Tin	102	104	P/P	80 - 120
2324873	Titanium	101	109	P/P	80 - 120
2324873	Vanadium	97.2	101	P/P	80 - 120
2324873	Zinc	102	106	P/P	80 - 120
2325666	Iron	99.5		P	75 - 125
2325666	Strontium	102		P	75 - 125
2325666	Tin	98.9		P	75 - 125
2325666	Titanium	97.3		P	75 - 125
2325666	Vanadium	96.8		P	75 - 125
2325666	Zinc	91.9		P	75 - 125

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324873	Aluminum	103	104	P/P	80 - 120
2324873	Antimony	101	101	P/P	80 - 120
2324873	Arsenic	97.7	97.0	P/P	80 - 120
2324873	Barium	102	104	P/P	80 - 120
2324873	Beryllium	97.0	93.3	P/P	80 - 120
2324873	Boron	110	110	P/P	80 - 120
2324873	Cadmium	101	102	P/P	80 - 120
2324873	Chromium	98.0	97.8	P/P	80 - 120
2324873	Cobalt	97.1	96.5	P/P	80 - 120
2324873	Copper	97.8	96.7	P/P	80 - 120
2324873	Lead	102	102	P/P	80 - 120
2324873	Molybdenum	101	101	P/P	80 - 120
2324873	Nickel	96.9	95.7	P/P	80 - 120
2324873	Selenium	96.2	94.9	P/P	80 - 120
2324873	Silver	99.8	99.6	P/P	80 - 120
2324873	Thallium	104	104	P/P	80 - 120
2325666	Aluminum	104		P	75 - 125
2325666	Antimony	103		P	75 - 125
2325666	Arsenic	106		P	75 - 125
2325666	Barium	107		P	75 - 125
2325666	Beryllium	98.8		P	75 - 125
2325666	Cadmium	89.6		P	75 - 125
2325666	Chromium	78.6		P	75 - 125
2325666	Cobalt	116		P	75 - 125
2325666	Copper	94.4		P	75 - 125
2325666	Lead	103		P	75 - 125
2325666	Manganese	98.1		P	75 - 125
2325666	Molybdenum	115		P	75 - 125
2325666	Nickel	111		P	75 - 125
2325666	Selenium	48.4		F	75 - 125
2325666	Silver	82.3		P	75 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325666	Thallium	105		P	75 - 125

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324263	Chloride	97.1		P	90 - 110
2324445	Chloride	95.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324263	Sulfate	98.4		P	90 - 110
2324445	Sulfate	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324937	Chloride	97.8		P	90 - 110
2324940	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324937	Sulfate	96.1		P	90 - 110
2324940	Sulfate	95.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324926	Ammonia-N	97.6	98.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324939	Ammonia-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324850	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

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: P413874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324757	Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324851	Kjeldahl Nitrogen	104	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324748	Kjeldahl Nitrogen	96.4	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324757	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324886	NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324664	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325007	Total-P	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324852	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325438	Total-P	103	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P413413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324862	Acesulfame K	102	101	P/P	40 - 150
2324862	AMPA	85.1	89.4	P/P	40 - 150
2324862	Endothall	96.0	97.1	P/P	40 - 150
2324862	Glufosinate	80.4	85.5	P/P	40 - 150
2324862	Glyphosate	79.9	82.3	P/P	40 - 150
2324862	Sucralose	104	103	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413605

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324863	2,4-D	84.5	58.8	P/P	40 - 150
2324863	2,4,5-T	74.2	48.4	P/P	40 - 150
2324863	Acetaminophen	116	117	P/P	30 - 150
2324863	Acetamiprid	107	81.4	P/P	40 - 150
2324863	Afidopyropen	45.6	34.8	P/P	30 - 150
2324863	Bentazon	54.8	58.8	P/P	30 - 150
2324863	Benzovindiflupyr	50.6	52.4	P/P	40 - 150
2324863	Carbamazepine	46.4	46.2	P/P	40 - 150
2324863	Clothianidin	52.4	51.4	P/P	40 - 150
2324863	Dinotefuran	102	101	P/P	40 - 150
2324863	Diuron	95.7	89.0	P/P	40 - 150
2324863	Fenuron	52.3	49.9	P/P	40 - 150
2324863	Fluridone	53.6	43.0	P/P	40 - 150
2324863	Hydrocodone	53.9	40.3	P/P	40 - 150
2324863	Ibuprofen	59.4	60.4	P/P	40 - 150
2324863	Imazapyr	73.0	74.2	P/P	40 - 150
2324863	Imidacloprid	40.5	43.1	P/P	40 - 150
2324863	Linuron	43.7	41.9	P/P	40 - 150
2324863	Mandestrobin	55.4	56.2	P/P	40 - 150
2324863	MCPP	107	83.9	P/P	40 - 150
2324863	Naproxen	44.0	42.4	P/P	40 - 150
2324863	Primidone	78.5	79.4	P/P	40 - 150
2324863	Pyraclostrobin	56.8	58.0	P/P	40 - 150
2324863	Silvex	75.1	44.7	P/P	40 - 150
2324863	Thiamethoxam	40.8	40.8	P/P	40 - 150
2324863	Tolfenpyrad	37.5	40.4	P/P	30 - 150
2324863	Triclopyr	80.5	40.7	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P413860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325326	Fluoride	100	100	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P413819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324925	Organic Carbon	96.0	98.2	P/P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P413820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324938	Organic Carbon	95.6	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P413463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324885	Color (true)	3.91	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P413466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324846	Color (true)	1.26	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324885	Turbidity	6.49	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324873	Calcium	0.736	Spike	P	0 - 20
2324873	Iron	7.40	Spike	P	0 - 20
2324873	Magnesium	0.248	Spike	P	0 - 20
2324873	Potassium	0.701	Spike	P	0 - 20
2324873	Sodium	0.820	Spike	P	0 - 20
2324873	Strontium	0.129	Spike	P	0 - 20
2324873	Tin	2.21	Spike	P	0 - 20
2324873	Titanium	6.81	Spike	P	0 - 20
2324873	Vanadium	3.98	Spike	P	0 - 20
2324873	Zinc	3.37	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324873	Aluminum	1.58	Spike	P	0 - 20
2324873	Antimony	0.0351	Spike	P	0 - 20
2324873	Arsenic	0.674	Spike	P	0 - 20
2324873	Barium	1.24	Spike	P	0 - 20
2324873	Beryllium	3.33	Spike	P	0 - 20
2324873	Boron	0.0423	Spike	P	0 - 20
2324873	Cadmium	0.367	Spike	P	0 - 20
2324873	Chromium	0.177	Spike	P	0 - 20
2324873	Cobalt	0.641	Spike	P	0 - 20
2324873	Copper	1.11	Spike	P	0 - 20
2324873	Lead	0.547	Spike	P	0 - 20
2324873	Manganese	1.04	Spike	P	0 - 20
2324873	Molybdenum	0.723	Spike	P	0 - 20
2324873	Nickel	1.25	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324873	Selenium	1.45	Spike	P	0 - 20
2324873	Silver	0.180	Spike	P	0 - 20
2324873	Thallium	0.272	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324263	Chloride	0.116	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324263	Sulfate	0.0768	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324937	Chloride	0.142	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324937	Sulfate	0.266	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324926	Ammonia-N	0.588	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324939	Ammonia-N	0.860	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413871

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: P413871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324850	Kjeldahl Nitrogen	0.726	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324757	Kjeldahl Nitrogen	2.58	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324851	Kjeldahl Nitrogen	2.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324748	Kjeldahl Nitrogen	4.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324757	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324886	NO2NO3-N	0.257	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324664	Total-P	0.720	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325007	Total-P	1.00	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P413895

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324852	Total-P	0.665	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P413896

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325438	Total-P	1.88	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P413413

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324862	Acesulfame K	0.959	Spike	P	0 - 30
2324862	AMPA	4.99	Spike	P	0 - 30
2324862	Endothall	1.15	Spike	P	0 - 30
2324862	Glufosinate	6.15	Spike	P	0 - 30
2324862	Glyphosate	3.00	Spike	P	0 - 30
2324862	Sucralose	1.28	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413605

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324863	2,4-D	19.2	Spike	P	0 - 30
2324863	2,4,5-T	23.6	Spike	P	0 - 30
2324863	Acetaminophen	0.990	Spike	P	0 - 30
2324863	Acetamiprid	27.2	Spike	P	0 - 30
2324863	Afidopyropen	27.0	Spike	P	0 - 30
2324863	Bentazon	6.92	Spike	P	0 - 30
2324863	Benzovindiflupyr	3.52	Spike	P	0 - 30
2324863	Carbamazepine	0.257	Spike	P	0 - 30
2324863	Clothianidin	1.93	Spike	P	0 - 30
2324863	Dinotefuran	0.870	Spike	P	0 - 30
2324863	Diuron	7.26	Spike	P	0 - 30
2324863	Fenuron	4.65	Spike	P	0 - 30
2324863	Fluridone	21.9	Spike	P	0 - 30
2324863	Hydrocodone	28.7	Spike	P	0 - 30
2324863	Ibuprofen	1.72	Spike	P	0 - 30
2324863	Imazapyr	1.20	Spike	P	0 - 30
2324863	Imidacloprid	6.10	Spike	P	0 - 30
2324863	Linuron	4.14	Spike	P	0 - 30
2324863	Mandestrobin	1.56	Spike	P	0 - 30
2324863	MCPP	24.0	Spike	P	0 - 30
2324863	Naproxen	3.60	Spike	P	0 - 30
2324863	Primidone	1.20	Spike	P	0 - 30
2324863	Pyraclostrobin	2.22	Spike	P	0 - 30
2324863	Silvex	16.8	Spike	P	0 - 30
2324863	Thiamethoxam	0.0937	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P413605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324863	Tolfenpyrad	7.60	Spike	P	0 - 30
2324863	Triclopyr	25.3	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P413853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325271	Total Alkalinity	0.0107	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P413855

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325326	Total Alkalinity	1.71	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P413945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324923	TDS	2.67	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P413858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325271	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P413860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325326	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P413819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324925	Organic Carbon	1.63	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P413820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324938	Organic Carbon	0.895	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2324950

Field Sample ID: G3NW0215

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	33.3	P	30 - 160
EPA 8321B	Diuron-d6	30.1	P	30 - 160
EPA 8321B	Endothall-d6	92.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.5	P	30 - 160
EPA 8321B	Primidone-d5	56.3	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2324951

Field Sample ID: G3NW0216

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	71.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	39.0	P	30 - 160
EPA 8321B	Diuron-d6	37.3	P	30 - 160
EPA 8321B	Endothall-d6	87.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.0	P	30 - 160
EPA 8321B	Primidone-d5	65.7	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111945

Included Lab Sample IDs: 2324934, 2324936, 2324937, 2324940, 2324942

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	98.0	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A111955

Included Lab Sample IDs: 2324934, 2324936, 2324937, 2324940, 2324942

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	85 - 115
Color (true)	98.0	101	P/P	85 - 115

Reference Method: EPA 8321B

Run ID: A111978

Included Lab Sample IDs: 2324950, 2324951

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	84.3	92.9	P/P	60 - 160
Endothall	85.8	91.1	P/P	60 - 160
Glufosinate	85.3	95.4	P/P	60 - 160
Glyphosate	89.1	90.3	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111979

Included Lab Sample IDs: 2324950, 2324951

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	107	109	P/P	60 - 160
Sucralose	100	98.6	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112023

Included Lab Sample IDs: 2324943

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112033

Included Lab Sample IDs: 2324934, 2324936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.4	96.8	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112066

Included Lab Sample IDs: 2324935, 2324938, 2324939, 2324941, 2324943

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	97.1	P/P	90 - 110
Ammonia-N	97.6	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112092

Included Lab Sample IDs: 2324952, 2324953

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Strontium	99.2	98.7	P/P	90 - 110
Tin	100	99.4	P/P	90 - 110
Titanium	98.9	97.7	P/P	90 - 110
Vanadium	101	99.2	P/P	90 - 110
Zinc	102	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112109

Included Lab Sample IDs: 2324952, 2324953

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	100	P/P	90 - 110
Antimony	99.5	99.2	P/P	90 - 110
Arsenic	98.7	95.9	P/P	90 - 110
Barium	99.6	99.0	P/P	90 - 110
Beryllium	98.1	95.6	P/P	90 - 110
Boron	103	104	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Chromium	98.2	96.8	P/P	90 - 110
Cobalt	97.3	95.7	P/P	90 - 110
Copper	97.1	95.6	P/P	90 - 110
Lead	100	99.1	P/P	90 - 110
Manganese	98.7	98.2	P/P	90 - 110
Molybdenum	98.7	98.2	P/P	90 - 110
Nickel	98.5	96.2	P/P	90 - 110
Selenium	98.1	97.8	P/P	90 - 110
Silver	99.0	98.8	P/P	90 - 110
Thallium	99.6	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112119

Included Lab Sample IDs: 2324935, 2324938, 2324939, 2324941

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

Reference Method: SM 5310 B-2011

Run ID: A112128

Included Lab Sample IDs: 2324935, 2324938, 2324939, 2324941, 2324943

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	97.4	P/P	90 - 110
Organic Carbon	97.8	98.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112132

Included Lab Sample IDs: 2324939, 2324941, 2324943

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

Reference Method: SM 2320 B-2011

Run ID: A112155

Included Lab Sample IDs: 2324934, 2324936, 2324937, 2324940, 2324942

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.4	97.7	P/P	90 - 110
Total Alkalinity	96.5	98.8	P/P	90 - 110
Total Alkalinity	98.8	95.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112155

Included Lab Sample IDs: 2324934, 2324936, 2324937, 2324940, 2324942

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

Reference Method: EPA 8321B

Run ID: A112177

Included Lab Sample IDs: 2324950, 2324951

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	78.3	94.8	P/P	50 - 150
2,4,5-T	97.1	100	P/P	50 - 150
Acetaminophen	107	107	P/P	60 - 160
Acetamiprid	103	105	P/P	50 - 150
Afidopyropen	80.6	77.0	P/P	50 - 150
Bentazon	102	127	P/P	50 - 160
Benzovindiflupyr	100	98.2	P/P	50 - 150
Carbamazepine	106	105	P/P	60 - 150
Clothianidin	104	105	P/P	60 - 150
Dinotefuran	106	106	P/P	50 - 150
Diuron	108	109	P/P	60 - 160
Fenuron	101	101	P/P	60 - 150
Fluridone	103	101	P/P	60 - 160
Hydrocodone	108	106	P/P	60 - 150
Ibuprofen	94.3	112	P/P	50 - 160
Imazapyr	93.0	93.3	P/P	50 - 150
Imidacloprid	108	104	P/P	60 - 150
Linuron	105	102	P/P	60 - 150
Mandestrobin	94.9	95.2	P/P	50 - 150
MCPP	97.8	92.7	P/P	50 - 150
Naproxen	82.5	84.0	P/P	50 - 160
Primidone	98.3	99.6	P/P	60 - 150
Pyraclostrobin	95.6	91.9	P/P	60 - 150
Silvex	92.6	99.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A112177

Included Lab Sample IDs: 2324950, 2324951

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thiamethoxam	108	107	P/P	50 - 150
Tolfenpyrad	86.3	85.3	P/P	60 - 150
Triclopyr	91.5	115	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112198

Included Lab Sample IDs: 2324937, 2324940, 2324942

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112260

Included Lab Sample IDs: 2324935, 2324938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	101	P/P	90 - 110
Total-P	98.4	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112268

Included Lab Sample IDs: 2324935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.3	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112278

Included Lab Sample IDs: 2324938, 2324941, 2324943

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	96.8	P/P	90 - 110
Kjeldahl Nitrogen	97.8	99.3	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	98.2				3.91	
	Color (true)	101				1.26	
EPA 180.1 Rev. 2.0	Turbidity	95.1				6.49	
EPA 200.7 Rev. 4.4	Calcium	104	103				0.736
	Iron	104	99.5	104	115		7.40
	Magnesium	105	108	107			0.248
	Potassium	104	105	104			0.701
	Sodium	101	101				0.820
	Strontium	99.4	101	101	102		0.129
	Tin	102	102	104	98.9		2.21
	Titanium	102	97.3	101	109		6.81
	Vanadium	95.4	97.2	101	96.8		3.98
	Zinc	103	102	106	91.9		3.37
EPA 200.8 Rev. 5.4	Aluminum	101	103	104	104		1.58
	Antimony	100	103	101	101		0.0351
	Arsenic	98.1	106	97.7	97.0		0.674
	Barium	102	107	102	104		1.24
	Beryllium	91.9	98.8	97.0	93.3		3.33
	Boron	107	110	110			0.0423
	Cadmium	99.6	89.6	101	102		0.367
	Chromium	97.5	78.6	98.0	97.8		0.177
	Cobalt	97.1	116	97.1	96.5		0.641
	Copper	96.2	94.4	97.8	96.7		1.11
	Lead	100	103	102	102		0.547
	Manganese	97.2	98.1				1.04
	Molybdenum	98.6	115	101	101		0.723
	Nickel	97.4	111	96.9	95.7		1.25
	Selenium	97.2	48.4	96.2	94.9		1.45
	Silver	98.8	82.3	99.8	99.6		0.180
	Thallium	101	105	104	104		0.272
EPA 300.0 Rev. 2.1	Chloride	98.7	97.1	95.0		0.116	
	Chloride	101	97.8	97.6		0.142	
	Sulfate	102	98.4	99.1		0.0768	
	Sulfate	99.6	96.1	95.5		0.266	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	97.6	98.2			0.588
	Ammonia-N	95.8	98.0	99.0			0.860
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.8	102	103			0.726
	Kjeldahl Nitrogen	105	101	104			2.58
	Kjeldahl Nitrogen	95.5	104	107			2.70
	Kjeldahl Nitrogen	99.1	96.4	105			4.44
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.5				0.0
	NO2NO3-N	99.0	98.0	97.5			0.257
EPA 365.1 Rev. 2.0	Total-P	100	102	101			0.720
	Total-P	102	103	101			1.00
	Total-P	102	102	103			0.665
	Total-P	99.5	103	105			1.88
EPA 8321B	2,4-D	62.7	84.5	58.8			19.2
	2,4,5-T	59.0	74.2	48.4			23.6
	Acesulfame K	105	102	101			0.959
	Acetaminophen	74.9	116	117			0.990
	Acetamiprid	58.6	107	81.4			27.2
	Afidopyropen	40.8	45.6	34.8			27.0
	AMPA	88.7	85.1	89.4			4.99
	Bentazon	84.7	54.8	58.8			6.92

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Benzovindiflupyr	60.0	50.6	52.4			3.52
	Carbamazepine	59.7	46.4	46.2			0.257
	Clothianidin	79.7	52.4	51.4			1.93
	Dinotefuran	93.3	102	101			0.870
	Diuron	63.9	95.7	89.0			7.26
	Endothall	94.8	96.0	97.1			1.15
	Fenuron	81.2	52.3	49.9			4.65
	Fluridone	62.4	53.6	43.0			21.9
	Glufosinate	95.5	80.4	85.5			6.15
	Glyphosate	88.5	79.9	82.3			3.00
	Hydrocodone	88.4	53.9	40.3			28.7
	Ibuprofen	63.4	59.4	60.4			1.72
	Imazapyr	72.3	73.0	74.2			1.20
	Imidacloprid	65.7	40.5	43.1			6.10
	Linuron	56.7	43.7	41.9			4.14
	Mandestrobin	58.0	55.4	56.2			1.56
	MCPP	79.9	107	83.9			24.0
	Naproxen	42.3	44.0	42.4			3.60
	Primidone	82.0	78.5	79.4			1.20
	Pyraclostrobin	51.7	56.8	58.0			2.22
	Silvex	53.7	75.1	44.7			16.8
	Sucralose	99.1	104	103			1.28
	Thiamethoxam	74.3	40.8	40.8			0.0937
	Tolfenpyrad	35.5	37.5	40.4			7.60
	Triclopyr	61.6	80.5	40.7			25.3
SM 2320 B-2011	Total Alkalinity	98.1				0.0107	
	Total Alkalinity	99.6				1.71	
SM 2540 C-2011	TDS					2.67	
SM 4500-F- C-2011	Fluoride	98.8					0.0
	Fluoride	100	100	100			0.0
SM 5310 B-2011	Organic Carbon	96.8	96.0	98.2			1.63
	Organic Carbon	95.2	95.6	97.0			0.895

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2324934, 2324936, 2324937, 2324940, 2324942
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2324934, 2324936, 2324937, 2324940, 2324942
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2324952, 2324953
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2324952, 2324953
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2324934, 2324936, 2324937, 2324940, 2324942
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2324934, 2324936, 2324937, 2324940, 2324942
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2324935, 2324938, 2324939, 2324941, 2324943
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2324935, 2324938, 2324939, 2324941, 2324943
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2324935, 2324938, 2324939, 2324941, 2324943

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2324935, 2324938, 2324939, 2324941, 2324943
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2324950, 2324951
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2324934, 2324936, 2324937, 2324940, 2324942
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2324952, 2324953
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2324934, 2324936, 2324937, 2324940, 2324942
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2324934, 2324936, 2324937, 2324940, 2324942
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2324934, 2324936, 2324937, 2324940, 2324942
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2324935, 2324938, 2324939, 2324941, 2324943

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	05/05/2022			05/05/2022 15:25	Blanca Fach	2324934
	05/05/2022			05/05/2022 15:26	Blanca Fach	2324936
	05/05/2022			05/05/2022 15:28	Blanca Fach	2324940, 2324942
	05/05/2022			05/05/2022 15:53	Blanca Fach	2324937
	05/05/2022			05/05/2022 13:51	Anna M. Plaviak	2324934
EPA 180.1 Rev. 2.0	05/05/2022			05/05/2022 13:53	Anna M. Plaviak	2324936
	05/05/2022			05/05/2022 13:55	Anna M. Plaviak	2324937
	05/05/2022			05/05/2022 13:57	Anna M. Plaviak	2324940
	05/05/2022			05/05/2022 13:59	Anna M. Plaviak	2324942
	05/05/2022	05/11/2022 10:15	Megan Whitefoot	05/11/2022 21:30	McKinley C Carter	2324952
	05/05/2022	05/11/2022 10:15	Megan Whitefoot	05/11/2022 21:38	McKinley C Carter	2324953
EPA 200.8 Rev. 5.4	05/05/2022	05/11/2022 10:15	Megan Whitefoot	05/12/2022 14:55	Alexander Thompson	2324952
	05/05/2022	05/11/2022 10:15	Megan Whitefoot	05/12/2022 15:05	Alexander Thompson	2324953
EPA 300.0 Rev. 2.1	05/05/2022			05/10/2022 11:22	Anna M. Plaviak	2324934
	05/05/2022			05/10/2022 11:34	Anna M. Plaviak	2324936
	05/05/2022			05/16/2022 19:45	Anna M. Plaviak	2324937
	05/05/2022			05/16/2022 20:10	Anna M. Plaviak	2324940
	05/05/2022			05/16/2022 20:46	Anna M. Plaviak	2324942
EPA 350.1 Rev. 2.0	05/05/2022			05/11/2022 11:02	Ping Hua	2324935
	05/05/2022			05/11/2022 11:14	Ping Hua	2324939
	05/05/2022			05/11/2022 11:18	Ping Hua	2324938
	05/05/2022			05/11/2022 11:20	Ping Hua	2324941
	05/05/2022			05/11/2022 11:21	Ping Hua	2324943
EPA 351.2 Rev. 2.0	05/05/2022	05/17/2022 14:29	Samantha L Bates	05/19/2022 11:36	Samantha L Bates	2324935
	05/05/2022	05/18/2022 12:24	Samantha L Bates	05/19/2022 16:48	Samantha L Bates	2324938
	05/05/2022	05/18/2022 12:24	Samantha L Bates	05/19/2022 16:49	Samantha L Bates	2324941
	05/05/2022	05/18/2022 12:24	Samantha L Bates	05/19/2022 17:14	Samantha L Bates	2324943
	05/05/2022	05/19/2022 15:12	Samantha L Bates	05/20/2022 13:38	Samantha L Bates	2324939
EPA 353.2 Rev. 2.0	05/05/2022			05/10/2022 11:47	Beverly Y. Sanders	2324943
	05/05/2022			05/12/2022 17:21	Nathaniel J Jones	2324935
	05/05/2022			05/12/2022 17:22	Nathaniel J Jones	2324938
	05/05/2022			05/12/2022 17:23	Nathaniel J Jones	2324939
	05/05/2022			05/12/2022 17:24	Nathaniel J Jones	2324941
EPA 365.1 Rev. 2.0	05/05/2022	05/12/2022 16:34	Simonne.V. Calhoun	05/13/2022 12:16	Sarah A Nixon	2324939
	05/05/2022	05/12/2022 16:34	Simonne.V. Calhoun	05/13/2022 12:19	Sarah A Nixon	2324941
	05/05/2022	05/12/2022 16:34	Simonne.V. Calhoun	05/13/2022 13:02	Sarah A Nixon	2324943
	05/05/2022	05/17/2022 14:42	Simonne.V. Calhoun	05/18/2022 19:29	Sarah A Nixon	2324935
	05/05/2022	05/17/2022 14:42	Simonne.V. Calhoun	05/18/2022 19:37	Sarah A Nixon	2324938
EPA 8321B	05/05/2022	05/06/2022 12:30	Umesh Chiluwal	05/06/2022 19:20	Umesh Chiluwal	2324950
	05/05/2022	05/06/2022 12:30	Umesh Chiluwal	05/06/2022 19:33	Umesh Chiluwal	2324951

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/05/2022	05/06/2022 12:30	Umesh Chiluwal	05/07/2022 06:32	Umesh Chiluwal	2324950
	05/05/2022	05/06/2022 12:30	Umesh Chiluwal	05/07/2022 06:47	Umesh Chiluwal	2324951
	05/05/2022	05/10/2022 10:00	June Rhew	05/11/2022 08:51	Juyoung Kim	2324950
	05/05/2022	05/10/2022 10:00	June Rhew	05/11/2022 09:09	Juyoung Kim	2324951
SM 2320 B-2011	05/05/2022			05/14/2022 08:04	Dale L. Simmons	2324934
	05/05/2022			05/14/2022 15:28	Dale L. Simmons	2324936
	05/05/2022			05/14/2022 15:40	Dale L. Simmons	2324937
	05/05/2022			05/14/2022 15:52	Dale L. Simmons	2324940
	05/05/2022			05/14/2022 16:33	Dale L. Simmons	2324942
SM 2340 B-2011	05/05/2022			05/11/2022 21:30	McKinley C Carter	2324952
	05/05/2022			05/11/2022 21:38	McKinley C Carter	2324953
SM 2540 C-2011	05/05/2022			05/09/2022 15:28	Yijie Li	2324934, 2324936, 2324937, 2324940, 2324942
SM 2540 D-2011	05/05/2022			05/09/2022 13:28	Yijie Li	2324934, 2324936, 2324937, 2324940, 2324942
SM 4500-F- C-2011	05/05/2022			05/14/2022 08:04	Dale L. Simmons	2324934
	05/05/2022			05/14/2022 15:28	Dale L. Simmons	2324936
	05/05/2022			05/14/2022 15:40	Dale L. Simmons	2324937
	05/05/2022			05/14/2022 15:52	Dale L. Simmons	2324940
	05/05/2022			05/14/2022 16:33	Dale L. Simmons	2324942
SM 5310 B-2011	05/05/2022			05/12/2022 15:56	Judith K. Clark	2324935
	05/05/2022			05/12/2022 22:26	Judith K. Clark	2324938
	05/05/2022			05/12/2022 23:24	Judith K. Clark	2324939
	05/05/2022			05/12/2022 23:38	Judith K. Clark	2324941
	05/05/2022			05/12/2022 23:53	Judith K. Clark	2324943