

Chemical Analysis Report

SW-DIST-2023-06-21-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Run 14**
Request ID: **RQ-2023-06-19-11**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Ben Paswater

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Certified by: Colin Wright, Program Administrator

Date Certified: 11-JUL-2023 12:08

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink 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: LITTLE BULLFROG CR DOWNSTREAM OF US 301 BRIDGE **Collection Date/Time: 06/20/2023 09:45**

Field ID: G2SW0162

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418708	DEP SOP: NU-094-1	Color (true)	93		PCU	P431604	
	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P431829	
		Sulfate	63		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P431770	
	SM 2540 C-2015	TDS	242		mg/L	P432043	
	SM 2540 D-2015	TSS	4	I	mg/L	P432045	
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P431773	MS
2418711	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P431839	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P431704	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P431815	
	EPA 365.1 Rev. 2.0	Total-P	0.089		mg P/L	P431633	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P431708	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

**Sample Location: MILLER MAC RD DITCH AT US 41 N OF DI
MERE PACKING**

Collection Date/Time: 06/20/2023 10:20

Field ID: G1SW0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418709	DEP SOP: NU-094-1	Color (true)	49	A	PCU	P431606	
	EPA 180.1 Rev. 2.0	Turbidity	150		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	62		mg Cl/L	P431829	
		Sulfate	100		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	85		mg CaCO3/L	P431770	
	SM 2540 C-2015	TDS	329		mg/L	P432043	
	SM 2540 D-2015	TSS	228		mg/L	P432045	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P431773	MS
2418712	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P431839	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P431704	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.099		mg N/L	P431815	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P431633	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P431708	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

**Sample Location: WOLF BRANCH CANAL AT MANNS HARBOR
DR BOATLIFT**

Collection Date/Time: 06/20/2023 10:45

Field ID: G1SW0092

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418716	DEP SOP: NU-094-1	Color (true)	20		PCU	P431607	
	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	1.8E+04		mg Cl/L	P431829	
		Sulfate	2.4E+03		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	124		mg CaCO3/L	P431796	
	SM 2540 C-2015	TDS	2.80E+04		mg/L	P432044	
	SM 2540 D-2015	TSS	7	I	mg/L	P432048	
	SM 4500-F- C-2011	Fluoride	1.2		mg F/L	P431698	
2418718	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P431661	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96	J	mg N/L	P431750	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431755	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P431733	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P431709	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500-F- C-2011: Batch matrix spike recoveries and relative percent difference are unavailable because of analytical difficulties.

EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: WOLF BRANCH CANAL AT MIDDLE OF LAKE Collection Date/Time: 06/20/2023 11:20

Field ID: G1SW0139

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418714	DEP SOP: NU-094-1	Color (true)	12	A	PCU	P431607	
	EPA 180.1 Rev. 2.0	Turbidity	7.5		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	1.3E+04		mg Cl/L	P431829	
		Sulfate	1.8E+03		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	104		mg CaCO3/L	P431796	
	SM 2540 C-2015	TDS	2.18E+04		mg/L	P432044	
	SM 2540 D-2015	TSS	10		mg/L	P432048	
2418715	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P431698	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P431661	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P431750	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431755	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P431733	
2418759	SM 5310 B-2011	Organic Carbon	11		mg C/L	P431709	
	EPA 8321B	2,4-D	0.056		ug/L	P431550	
		Acesulfame K	0.10	U	ug/L	P431641	
		2,4,5-T	0.0040	U	ug/L	P431550	
		AMPA	10	U	ug/L	P431641	
		Acetaminophen	0.0080	U	ug/L	P431550	
		Acetamiprid	0.0020	U	ug/L	P431550	
		Endothall	0.25	U	ug/L	P431641	
		Glufosinate	10	U	ug/L	P431641	
		Glyphosate	10	U	ug/L	P431641	
		Afidopyropen	0.0020	U	ug/L	P431550	
		Bentazon	0.071		ug/L	P431550	
		Sucralose	0.92		ug/L	P431641	
		Benzovindiflupyr	0.0020	U	ug/L	P431550	
		Carbamazepine	8.0E-04	U	ug/L	P431550	
		Clothianidin	0.0020	U	ug/L	P431550	
		Dinotefuran	0.0020	U	ug/L	P431550	
		Diuron	0.0020	U	ug/L	P431550	MS
		Fenuron	0.032	U	ug/L	P431550	
		Fluridone	0.25		ug/L	P431550	
		Imazapyr	0.010	I	ug/L	P431550	
		Hydrocodone	0.0020	U	ug/L	P431550	
		Ibuprofen	0.080	U	ug/L	P431550	
		Imidacloprid	0.0030	I	ug/L	P431550	
		Linuron	0.0040	U	ug/L	P431550	
		Mandestrobin	0.0020	U	ug/L	P431550	
		MCP	0.015		ug/L	P431550	
		Naproxen	0.0080	U	ug/L	P431550	
		Primidone	0.0040	U	ug/L	P431550	
		Pyraclostrobin	0.0020	U	ug/L	P431550	
		Silvex	0.0040	U	ug/L	P431550	
		Thiamethoxam	0.0020	U	ug/L	P431550	

Field ID: G1SW0139

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418759	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P431550	
		Triclopyr	0.0040	U	ug/L	P431550	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500-F- C-2011: Batch matrix spike recoveries and relative percent difference are unavailable because of analytical difficulties.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Sample Location: WOLF BRANCH AT 12TH STREET NE

Collection Date/Time: 06/20/2023 11:50

Field ID: G1SW0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418710	DEP SOP: NU-094-1	Color (true)	32		PCU	P431606	
	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	95		mg Cl/L	P431829	
		Sulfate	240		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	138		mg CaCO3/L	P431954	
	SM 2540 C-2015	TDS	632		mg/L	P432043	
	SM 2540 D-2015	TSS	28		mg/L	P432045	
	SM 4500-F- C-2011	Fluoride	0.61		mg F/L	P431774	
2418713	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P431839	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P431704	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P431815	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P431633	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P431708	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: 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: HERITAGE PARK CREEK

Collection Date/Time: 06/20/2023 12:30

Field ID: G2SW0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418717	DEP SOP: NU-094-1	Color (true)	27		PCU	P431607	
	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	1.6E+04		mg Cl/L	P431829	
		Sulfate	2.2E+03		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	102		mg CaCO3/L	P431797	
	SM 2540 C-2015	TDS	2.60E+04		mg/L	P432044	
	SM 2540 D-2015	TSS	20		mg/L	P432048	
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P431809	RPD
2418719	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P431801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P431750	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P431755	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P431733	
	SM 5310 B-2011	Organic Carbon	8.1		mg C/L	P431709	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BUFFALO CANAL PAST THE WW DISCHARGE Collection Date/Time: 06/20/2023 13:30

Field ID: G1SW0140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418720	DEP SOP: NU-094-1	Color (true)	28		PCU	P431607	
	EPA 180.1 Rev. 2.0	Turbidity	7.0		NTU	P431593	
	EPA 300.0 Rev. 2.1	Chloride	72		mg Cl/L	P431829	
		Sulfate	150		mg SO4/L	P431832	
	SM 2320 B-2011	Total Alkalinity	125		mg CaCO3/L	P431954	
	SM 2540 C-2015	TDS	476		mg/L	P432043	
	SM 2540 D-2015	TSS	8	I	mg/L	P432045	
2418721	SM 4500-F- C-2011	Fluoride	0.66		mg F/L	P431774	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P431839	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P431748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P431815	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P431633	
2418760	SM 5310 B-2011	Organic Carbon	12		mg C/L	P431708	
	EPA 8321B	2,4-D	0.025		ug/L	P431550	
		Acesulfame K	0.10	U	ug/L	P431641	
		2,4,5-T	0.0040	U	ug/L	P431550	
		AMPA	1.2		ug/L	P431641	
		Acetaminophen	0.0080	U	ug/L	P431550	
		Acetamiprid	0.0020	U	ug/L	P431550	
		Endothall	0.25	U	ug/L	P431641	
		Glufosinate	0.10	U	ug/L	P431641	
		Glyphosate	1.1		ug/L	P431641	
		Afidopyropen	0.0020	U	ug/L	P431550	
		Bentazon	0.19		ug/L	P431550	
		Sucralose	3.5		ug/L	P431641	
		Benzovindiflupyr	0.0020	U	ug/L	P431550	
		Carbamazepine	0.0018	I	ug/L	P431550	
		Clothianidin	0.015		ug/L	P431550	
		Dinotefuran	0.0020	U	ug/L	P431550	
		Diuron	0.014		ug/L	P431550	MS
		Fenuron	0.032	U	ug/L	P431550	
		Fluridone	0.75		ug/L	P431550	
		Imazapyr	0.24		ug/L	P431550	
		Hydrocodone	0.0020	U	ug/L	P431550	
		Ibuprofen	0.080	U	ug/L	P431550	
		Imidacloprid	0.030		ug/L	P431550	
		Linuron	0.0040	U	ug/L	P431550	
		Mandestrobin	0.0020	U	ug/L	P431550	
		MCPP	0.0041	I	ug/L	P431550	
		Naproxen	0.0080	U	ug/L	P431550	
		Primidone	0.013	I	ug/L	P431550	
		Pyraclostrobin	0.0020	U	ug/L	P431550	
		Silvex	0.0040	U	ug/L	P431550	
		Thiamethoxam	0.0020	U	ug/L	P431550	

Field ID: G1SW0140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2418760	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P431550	
		Triclopyr	0.0040	U	ug/L	P431550	
2418761	EPA 200.7 Rev. 4.4	Calcium	82.8		mg/L	P431650	
		Iron	310		ug/L	P431650	
		Magnesium	24.5		mg/L	P431650	
		Potassium	7.4		mg/L	P431650	
		Sodium	36.5		mg/L	P431650	
		Strontium	761		ug/L	P431650	
		Tin	3.0	U	ug/L	P431650	
		Titanium	7.8		ug/L	P431650	
		Vanadium	4.4	I	ug/L	P431650	
		Zinc	5.0	U	ug/L	P431650	
	EPA 200.8 Rev. 5.4	Aluminum	170		ug/L	P431650	
		Antimony	0.68		ug/L	P431650	
		Arsenic	5.96		ug/L	P431650	
		Barium	28.0		ug/L	P431650	
		Beryllium	0.013	I	ug/L	P431650	
		Boron	78.4		ug/L	P431650	
		Cadmium	0.020	U	ug/L	P431650	
		Chromium	0.47	I	ug/L	P431650	
		Cobalt	0.175		ug/L	P431650	
		Copper	1.36		ug/L	P431650	
		Lead	0.24	I	ug/L	P431650	
		Manganese	21.7		ug/L	P431650	
		Molybdenum	5.78		ug/L	P431650	
		Nickel	3.7		ug/L	P431650	
		Selenium	0.90		ug/L	P431650	
		Silver	0.010	U	ug/L	P431650	
		Thallium	0.10	U	ug/L	P431650	
	SM 2340 B-2011	Hardness	308		mg/L	P431650	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P431604

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P431606

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P431607

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431593

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431650

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: P431650

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431650

Component	Result	Code	Units
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431829

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431832

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431661

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431801

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431839

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431704

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431750

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431755

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431815

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431633

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431733

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

Reference Method: EPA 8321B
Batch ID: P431550

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	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P431641

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

Reference Method: SM 2320 B-2011
Batch ID: P431770

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

Reference Method: SM 2320 B-2011
Batch ID: P431796

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

Reference Method: SM 2320 B-2011
Batch ID: P431797

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

Reference Method: SM 2320 B-2011
Batch ID: P431954

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

Reference Method: SM 2540 C-2015
Batch ID: P432043

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P432044

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P432045

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P432048

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431698

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431773

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431809

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P431708

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

Reference Method: SM 5310 B-2011
Batch ID: P431709

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: P431604

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.4		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P431606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.0		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P431607

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431593

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	101		P	85 - 115
Sodium	101		P	85 - 115
Strontium	99.5		P	85 - 115
Tin	101		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	99.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	102		P	85 - 115
Barium	106		P	85 - 115
Beryllium	99.8		P	85 - 115
Boron	103		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	98.9		P	85 - 115
Cobalt	98.8		P	85 - 115
Copper	98.2		P	85 - 115
Lead	96.0		P	85 - 115
Manganese	98.8		P	85 - 115
Molybdenum	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Nickel	99.2		P	85 - 115
Selenium	102		P	85 - 115
Silver	104		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431829

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431832

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431661

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: P431801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431839

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431750

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431755

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431815

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431633

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431733

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

Reference Method: EPA 8321B
Batch ID: P431550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	40 - 150
2,4,5-T	86.1		P	40 - 150
Acetaminophen	95.0		P	30 - 150
Acetamiprid	84.4		P	40 - 150
Afidopyropen	64.2		P	30 - 150
Bentazon	114		P	30 - 150
Benzovindiflupyr	93.4		P	40 - 150
Carbamazepine	77.8		P	40 - 150
Clothianidin	97.9		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	82.4		P	40 - 150
Fenuron	95.0		P	40 - 150
Fluridone	94.0		P	40 - 150
Hydrocodone	86.9		P	40 - 150
Ibuprofen	82.3		P	40 - 150
Imazapyr	95.4		P	40 - 150
Imidacloprid	74.0		P	40 - 150
Linuron	82.7		P	40 - 150
Mandestrobin	98.7		P	40 - 150
MCPP	101		P	40 - 150
Naproxen	68.7		P	40 - 150
Primidone	75.6		P	40 - 150
Pyraclostrobin	88.1		P	40 - 150
Silvex	78.9		P	40 - 150
Thiamethoxam	78.7		P	40 - 150
Tolfenpyrad	53.0		P	30 - 150
Triclopyr	93.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P431641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	79.4		P	40 - 150
AMPA	95.6		P	40 - 150
Endothall	97.5		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	95.9		P	40 - 150
Sucralose	112		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P431770

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.1		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P431796

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.9		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P431797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.3		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P431954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.8		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P432043

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

Reference Method: SM 2540 C-2015
Batch ID: P432044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.3		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P432045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.4		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P432048

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431698

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	105		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	105		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P431708

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

Reference Method: SM 5310 B-2011
Batch ID: P431709

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P431650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418460	Calcium	107	107	P/P	80 - 120
2418460	Iron	109	108	P/P	80 - 120
2418460	Magnesium	106	105	P/P	80 - 120
2418460	Potassium	103	103	P/P	80 - 120
2418460	Sodium	99.3		P	80 - 120
2418460	Strontium	102	101	P/P	80 - 120
2418460	Tin	105	101	P/P	80 - 120
2418460	Titanium	103	103	P/P	80 - 120
2418460	Vanadium	104	104	P/P	80 - 120
2418460	Zinc	102	103	P/P	80 - 120
2418916	Calcium	109		P	80 - 120
2418916	Iron	108		P	80 - 120
2418916	Magnesium	108		P	80 - 120
2418916	Potassium	101		P	80 - 120
2418916	Sodium	105		P	80 - 120
2418916	Strontium	102		P	80 - 120
2418916	Tin	104		P	80 - 120
2418916	Titanium	96.5		P	80 - 120
2418916	Vanadium	105		P	80 - 120
2418916	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P431650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418460	Aluminum	103	103	P/P	80 - 120
2418460	Antimony	104	106	P/P	80 - 120
2418460	Arsenic	101	102	P/P	80 - 120
2418460	Barium	106	106	P/P	80 - 120
2418460	Beryllium	101	101	P/P	80 - 120
2418460	Boron	104	103	P/P	80 - 120
2418460	Cadmium	101	102	P/P	80 - 120
2418460	Chromium	97.5	97.7	P/P	80 - 120
2418460	Cobalt	98.4	98.0	P/P	80 - 120
2418460	Copper	99.2	98.7	P/P	80 - 120
2418460	Lead	96.8	97.8	P/P	80 - 120
2418460	Manganese	99.1	98.6	P/P	80 - 120
2418460	Molybdenum	101	102	P/P	80 - 120
2418460	Nickel	98.2	97.9	P/P	80 - 120
2418460	Selenium	103	100	P/P	80 - 120
2418460	Silver	104	104	P/P	80 - 120
2418460	Thallium	104	106	P/P	80 - 120
2418916	Aluminum	99.0		P	80 - 120
2418916	Antimony	101		P	80 - 120
2418916	Arsenic	98.7		P	80 - 120
2418916	Barium	105		P	80 - 120
2418916	Beryllium	93.7		P	80 - 120
2418916	Boron	102		P	80 - 120
2418916	Cadmium	101		P	80 - 120
2418916	Chromium	97.3		P	80 - 120
2418916	Cobalt	98.3		P	80 - 120
2418916	Copper	97.0		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418916	Lead	95.2		P	80 - 120
2418916	Manganese	98.7		P	80 - 120
2418916	Molybdenum	96.2		P	80 - 120
2418916	Nickel	97.2		P	80 - 120
2418916	Selenium	96.9		P	80 - 120
2418916	Silver	102		P	80 - 120
2418916	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418455	Chloride	106		P	90 - 110
2418708	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P431832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418455	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2417472	Ammonia-N	103	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418719	Ammonia-N	99.6	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P431839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418711	Ammonia-N	97.0	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418711	Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431750

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418718	Kjeldahl Nitrogen	112	105	F/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418715	NO2NO3-N	108	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418698	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418721	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418715	Total-P	92.6	93.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P431550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418216	2,4,5-T	100	101	P/P	40 - 150
2418216	Acetaminophen	93.1	85.4	P/P	30 - 150
2418216	Acetamiprid	72.7	72.9	P/P	40 - 150
2418216	Afidopyropen	51.3	64.4	P/P	30 - 150
2418216	Benzovindiflupyr	89.4	97.9	P/P	40 - 150
2418216	Carbamazepine	65.7	68.5	P/P	40 - 150
2418216	Clothianidin	98.8	89.3	P/P	40 - 150
2418216	Dinotefuran	75.0	82.9	P/P	40 - 150
2418216	Diuron	54.1	37.6	P/F	40 - 150
2418216	Fenuron	75.3	77.8	P/P	40 - 150
2418216	Fluridone	86.7	96.4	P/P	40 - 150
2418216	Hydrocodone	63.6	62.1	P/P	40 - 150
2418216	Ibuprofen	66.0	58.3	P/P	40 - 150
2418216	Linuron	76.6	71.6	P/P	40 - 150
2418216	Mandestrobin	93.2	97.1	P/P	40 - 150
2418216	MCPP	115	109	P/P	40 - 150
2418216	Naproxen	64.9	86.9	P/P	40 - 150
2418216	Primidone	75.8	82.8	P/P	40 - 150
2418216	Pyraclostrobin	95.6	97.5	P/P	40 - 150
2418216	Silvex	78.9	83.6	P/P	40 - 150
2418216	Thiamethoxam	63.5	68.7	P/P	40 - 150
2418216	Tolfenpyrad	57.0	56.3	P/P	30 - 150
2418216	Triclopyr	101	104	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P431641

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

Reference Method: EPA 8321B
Batch ID: P431641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418283	Acesulfame K	92.4	94.6	P/P	40 - 150
2418283	AMPA	81.3	75.7	P/P	40 - 150
2418283	Endothall	117	122	P/P	40 - 150
2418283	Glufosinate	86.7	82.7	P/P	40 - 150
2418283	Glyphosate	96.1	99.6	P/P	40 - 150
2418283	Sucralose	95.7	89.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P431773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418428	Fluoride	105	107	P/F	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P431809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2415436	Fluoride	100	103	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P431708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418854	Organic Carbon	93.1	95.0	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P431709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2418629	Organic Carbon	90.3	90.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P431604

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418504	Color (true)	3.17	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P431606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418709	Color (true)	2.41	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P431607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418714	Color (true)	14.6	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P431593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418474	Turbidity	19.7	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418460	Calcium	0.0610	Spike	P	0 - 20
2418460	Iron	0.715	Spike	P	0 - 20
2418460	Magnesium	0.502	Spike	P	0 - 20
2418460	Potassium	0.0725	Spike	P	0 - 20
2418460	Sodium	0.618	Spike	P	0 - 20
2418460	Strontium	0.387	Spike	P	0 - 20
2418460	Tin	3.97	Spike	P	0 - 20
2418460	Titanium	0.0837	Spike	P	0 - 20
2418460	Vanadium	0.108	Spike	P	0 - 20
2418460	Zinc	0.0786	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418460	Aluminum	0.204	Spike	P	0 - 20
2418460	Antimony	1.27	Spike	P	0 - 20
2418460	Arsenic	0.374	Spike	P	0 - 20
2418460	Barium	0.0980	Spike	P	0 - 20
2418460	Beryllium	0.211	Spike	P	0 - 20
2418460	Boron	0.308	Spike	P	0 - 20
2418460	Cadmium	1.20	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P431650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418460	Chromium	0.174	Spike	P	0 - 20
2418460	Cobalt	0.391	Spike	P	0 - 20
2418460	Copper	0.527	Spike	P	0 - 20
2418460	Lead	1.07	Spike	P	0 - 20
2418460	Manganese	0.398	Spike	P	0 - 20
2418460	Molybdenum	0.495	Spike	P	0 - 20
2418460	Nickel	0.344	Spike	P	0 - 20
2418460	Selenium	2.93	Spike	P	0 - 20
2418460	Silver	0.197	Spike	P	0 - 20
2418460	Thallium	1.28	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P431829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418455	Chloride	5.09	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P431832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418455	Sulfate	5.19	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P431661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2417472	Ammonia-N	2.41	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P431801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418719	Ammonia-N	0.735	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P431839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418711	Ammonia-N	0.306	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P431704

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: P431704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418711	Kjeldahl Nitrogen	0.648	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431748

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418513	Kjeldahl Nitrogen	8.87	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P431750

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418718	Kjeldahl Nitrogen	5.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418715	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P431815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418698	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418721	Total-P	0.873	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P431733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418715	Total-P	1.03	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P431550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418216	2,4-D	0.743	Spike	P	0 - 30
2418216	2,4,5-T	0.391	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P431550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418216	Acetaminophen	8.58	Spike	P	0 - 30
2418216	Acetamiprid	0.230	Spike	P	0 - 30
2418216	Afidopyropen	22.6	Spike	P	0 - 30
2418216	Bentazon	1.12	Spike	P	0 - 30
2418216	Benzovindiflupyr	9.04	Spike	P	0 - 30
2418216	Carbamazepine	4.24	Spike	P	0 - 30
2418216	Clothianidin	10.1	Spike	P	0 - 30
2418216	Dinotefuran	10.0	Spike	P	0 - 30
2418216	Diuron	28.5	Spike	P	0 - 30
2418216	Fenuron	3.25	Spike	P	0 - 30
2418216	Fluridone	7.68	Spike	P	0 - 30
2418216	Hydrocodone	2.40	Spike	P	0 - 30
2418216	Ibuprofen	12.4	Spike	P	0 - 30
2418216	Imazapyr	2.11	Spike	P	0 - 30
2418216	Imidacloprid	1.56	Spike	P	0 - 30
2418216	Linuron	6.73	Spike	P	0 - 30
2418216	Mandestrobin	4.08	Spike	P	0 - 30
2418216	MCPP	4.84	Spike	P	0 - 30
2418216	Naproxen	29.0	Spike	P	0 - 30
2418216	Primidone	8.84	Spike	P	0 - 30
2418216	Pyraclostrobin	2.04	Spike	P	0 - 30
2418216	Silvex	5.76	Spike	P	0 - 30
2418216	Thiamethoxam	7.92	Spike	P	0 - 30
2418216	Tolfenpyrad	1.28	Spike	P	0 - 30
2418216	Triclopyr	2.66	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P431641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418283	Acesulfame K	2.35	Spike	P	0 - 30
2418283	AMPA	7.09	Spike	P	0 - 30
2418283	Endothall	4.22	Spike	P	0 - 30
2418283	Glufosinate	4.79	Spike	P	0 - 30
2418283	Glyphosate	3.60	Spike	P	0 - 30
2418283	Sucralose	2.90	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P431770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418428	Total Alkalinity	1.03	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P431796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419627	Total Alkalinity	0.138	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P431797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419512	Total Alkalinity	1.59	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P431954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419268	Total Alkalinity	0.244	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P432043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418552	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P432044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2419404	TDS	4.51	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P431773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418428	Fluoride	0.979	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P431774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418853	Fluoride	1.45	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P431809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2415436	Fluoride	1.91	Spike	F	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P431708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418854	Organic Carbon	0.966	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P431709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2418629	Organic Carbon	0.163	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2418759

Field Sample ID: G1SW0139

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.3	P	30 - 160
EPA 8321B	Diuron-d6	44.0	P	30 - 160
EPA 8321B	Endothall-d6	75.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	59.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.6	P	30 - 160
EPA 8321B	Primidone-d5	78.3	P	30 - 160
EPA 8321B	Sucralose-d6	73.2	P	30 - 160

Lab Sample ID: 2418760

Field Sample ID: G1SW0140

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	76.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	48.9	P	30 - 160
EPA 8321B	Diuron-d6	38.7	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.9	P	30 - 160
EPA 8321B	Primidone-d5	89.2	P	30 - 160
EPA 8321B	Sucralose-d6	91.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: 119977

Included Lab Sample IDs: 2418715, 2418718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	97.6	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119947

Included Lab Sample IDs: 2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720

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

Reference Method: DEP SOP: NU-094-1

Run ID: A119950

Included Lab Sample IDs: 2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.4	98.5	P/P	90 - 110
Color (true)	97.4	97.4	P/P	90 - 110
Color (true)	99.3	98.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A119988

Included Lab Sample IDs: 2418714, 2418716

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

Reference Method: SM 5310 B-2011

Run ID: A119991

Included Lab Sample IDs: 2418711, 2418712, 2418713, 2418715, 2418718, 2418719, 2418721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	95.8	P/P	90 - 110
Organic Carbon	96.2	96.2	P/P	90 - 110
Organic Carbon	96.6	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120004

Included Lab Sample IDs: 2418711, 2418712, 2418713, 2418721

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A120013

Included Lab Sample IDs: 2418761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	102	P/P	90 - 110
Antimony	102	101	P/P	90 - 110
Arsenic	99.8	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A120013

Included Lab Sample IDs: 2418761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	102	P/P	90 - 110
Beryllium	99.4	101	P/P	90 - 110
Boron	101	99.5	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	98.9	99.8	P/P	90 - 110
Cobalt	96.9	97.7	P/P	90 - 110
Copper	95.8	96.2	P/P	90 - 110
Lead	93.5	95.0	P/P	90 - 110
Manganese	98.9	101	P/P	90 - 110
Molybdenum	100	99.9	P/P	90 - 110
Nickel	97.0	97.6	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Thallium	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120022

Included Lab Sample IDs: 2418715, 2418718, 2418719

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120028

Included Lab Sample IDs: 2418715, 2418718, 2418719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	100	P/P	90 - 110
Total-P	99.4	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120032

Included Lab Sample IDs: 2418711, 2418712, 2418713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.6	99.3	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A120036

Included Lab Sample IDs: 2418708, 2418709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.6	94.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120036

Included Lab Sample IDs: 2418708, 2418709, 2418710, 2418720

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A120036

Included Lab Sample IDs: 2418708, 2418709, 2418710, 2418720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	106	107	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A120040

Included Lab Sample IDs: 2418714, 2418716, 2418717

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	92.1	95.2	P/P	90 - 110
Total Alkalinity	95.2	92.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120040

Included Lab Sample IDs: 2418717

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120041

Included Lab Sample IDs: 2418719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	97.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120043

Included Lab Sample IDs: 2418711, 2418712, 2418713, 2418721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A120044

Included Lab Sample IDs: 2418759, 2418760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.4	102	P/P	60 - 160
Sucralose	97.3	91.5	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120045

Included Lab Sample IDs: 2418711, 2418712, 2418713, 2418721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A120048

Included Lab Sample IDs: 2418759, 2418760

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

Reference Method: EPA 8321B

Run ID: A120048

Included Lab Sample IDs: 2418759, 2418760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.8	85.4	P/P	60 - 160
AMPA	88.6	87.0	P/P	60 - 160
Endothall	85.0	80.3	P/P	60 - 160
Glufosinate	89.4	89.8	P/P	60 - 160
Glufosinate	93.2	90.5	P/P	60 - 160
Glyphosate	102	89.0	P/P	60 - 160
Glyphosate	92.9	90.0	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120051

Included Lab Sample IDs: 2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	103	P/P	90 - 110
Sulfate	101	103	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120053

Included Lab Sample IDs: 2418715, 2418718, 2418719, 2418721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.1	93.1	P/P	90 - 110
Kjeldahl Nitrogen	96.1	94.5	P/P	90 - 110
Kjeldahl Nitrogen	96.4	94.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A120107

Included Lab Sample IDs: 2418759, 2418760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.3	77.1	P/P	50 - 150
2,4,5-T	87.7	86.2	P/P	50 - 150
Acetaminophen	107	92.9	P/P	60 - 160
Acetamiprid	120	115	P/P	50 - 150
Afidopyropen	92.8	95.0	P/P	50 - 150
Benzovindiflupyr	121	124	P/P	50 - 150
Carbamazepine	119	117	P/P	60 - 150
Clothianidin	122	112	P/P	60 - 150
Dinotefuran	106	101	P/P	50 - 150
Diuron	123	119	P/P	60 - 160
Fenuron	120	117	P/P	60 - 150
Hydrocodone	109	108	P/P	60 - 150
Ibuprofen	78.5	94.6	P/P	50 - 160
Imazapyr	111	108	P/P	50 - 150
Imidacloprid	83.4	74.7	P/P	60 - 150
Linuron	118	143	P/P	60 - 150
Mandestrobin	120	117	P/P	50 - 150
MCPP	79.1	80.0	P/P	50 - 150
Naproxen	73.7	99.1	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A120107

Included Lab Sample IDs: 2418759, 2418760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	92.4	96.6	P/P	60 - 150
Pyraclostrobin	125	125	P/P	60 - 150
Silvex	80.1	63.8	P/P	50 - 150
Thiamethoxam	94.2	92.5	P/P	50 - 150
Tolfenpyrad	91.0	107	P/P	60 - 150
Triclopyr	86.8	80.9	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A120108

Included Lab Sample IDs: 2418759, 2418760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	123	127	P/P	50 - 160
Fluridone	105	107	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A120110

Included Lab Sample IDs: 2418710, 2418720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.0	97.4	P/P	90 - 110
Total Alkalinity	95.6	94.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A120209

Included Lab Sample IDs: 2418761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	103	P/P	90 - 110
Iron	103	105	P/P	90 - 110
Magnesium	102	105	P/P	90 - 110
Potassium	100	102	P/P	90 - 110
Sodium	99.1	101	P/P	90 - 110
Strontium	102	99.9	P/P	90 - 110
Tin	104	101	P/P	90 - 110
Titanium	101	98.4	P/P	90 - 110
Vanadium	102	99.1	P/P	90 - 110
Zinc	103	102	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
DEP SOP: NU-094-1	Color (true)	98.4				3.17	
	Color (true)	98.0				2.41	
	Color (true)	98.2				14.6	
EPA 180.1 Rev. 2.0	Turbidity	100				19.7	
EPA 200.7 Rev. 4.4	Calcium	105	107	107	109		0.0610
	Iron	105	109	108	108		0.715
	Magnesium	105	106	105	108		0.502
	Potassium	101	103	103	101		0.0725
	Sodium	101	99.3	105			0.618
	Strontium	99.5	102	101	102		0.387
	Tin	101	105	101	104		3.97
	Titanium	100	103	103	96.5		0.0837
	Vanadium	100	104	104	105		0.108
	Zinc	99.2	102	103	104		0.0786
EPA 200.8 Rev. 5.4	Aluminum	103	103	103	99.0		0.204
	Antimony	103	104	106	101		1.27
	Arsenic	102	101	102	98.7		0.374
	Barium	106	106	106	105		0.0980
	Beryllium	99.8	101	101	93.7		0.211
	Boron	103	104	103	102		0.308
	Cadmium	101	101	102	101		1.20
	Chromium	98.9	97.5	97.7	97.3		0.174
	Cobalt	98.8	98.4	98.0	98.3		0.391
	Copper	98.2	99.2	98.7	97.0		0.527
	Lead	96.0	96.8	97.8	95.2		1.07
	Manganese	98.8	99.1	98.6	98.7		0.398
	Molybdenum	101	101	102	96.2		0.495
	Nickel	99.2	98.2	97.9	97.2		0.344
	Selenium	102	103	100	96.9		2.93
	Silver	104	104	104	102		0.197
	Thallium	102	104	106	104		1.28
EPA 300.0 Rev. 2.1	Chloride	103	106	105		5.09	
	Sulfate	102	101			5.19	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	103	99.2			2.41
	Ammonia-N	94.4	99.6	101			0.735
	Ammonia-N	98.2	97.0	97.4			0.306
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.6	101	100			0.648
	Kjeldahl Nitrogen	106					8.87
	Kjeldahl Nitrogen	101	112	105			5.06
EPA 353.2 Rev. 2.0	NO2NO3-N	107	108	108			0.0
	NO2NO3-N	104	104	104			0.480
EPA 365.1 Rev. 2.0	Total-P	101	102	101			0.873
	Total-P	97.6	92.6	93.8			1.03
EPA 8321B	2,4-D	105					0.743
	2,4,5-T	86.1	100	101			0.391
	Acesulfame K	79.4	92.4	94.6			2.35
	Acetaminophen	95.0	93.1	85.4			8.58
	Acetamiprid	84.4	72.7	72.9			0.230
	Afidopyropen	64.2	51.3	64.4			22.6
	AMPA	95.6	81.3	75.7			7.09
	Bentazon	114					1.12
	Benzovindiflupyr	93.4	89.4	97.9			9.04
	Carbamazepine	77.8	65.7	68.5			4.24
	Clothianidin	97.9	98.8	89.3			10.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Dinotefuran	102	75.0	82.9		10.0
	Diuron	82.4	54.1	37.6		28.5
	Endothall	97.5	117	122		4.22
	Fenuron	95.0	75.3	77.8		3.25
	Fluridone	94.0	86.7	96.4		7.68
	Glufosinate	100	86.7	82.7		4.79
	Glyphosate	95.9	96.1	99.6		3.60
	Hydrocodone	86.9	63.6	62.1		2.40
	Ibuprofen	82.3	66.0	58.3		12.4
	Imazapyr	95.4				2.11
	Imidacloprid	74.0				1.56
	Linuron	82.7	76.6	71.6		6.73
	Mandestrobin	98.7	93.2	97.1		4.08
	MCPP	101	115	109		4.84
	Naproxen	68.7	64.9	86.9		29.0
	Primidone	75.6	75.8	82.8		8.84
	Pyraclostrobin	88.1	95.6	97.5		2.04
	Silvex	78.9	78.9	83.6		5.76
	Sucralose	112	95.7	89.2		2.90
	Thiamethoxam	78.7	63.5	68.7		7.92
	Tolfenpyrad	53.0	57.0	56.3		1.28
	Triclopyr	93.6	101	104		2.66
SM 2320 B-2011	Total Alkalinity	95.1			1.03	
	Total Alkalinity	95.9			0.138	
	Total Alkalinity	94.3			1.59	
	Total Alkalinity	95.8			0.244	
SM 2540 C-2015	TDS	102			3.92	
	TDS	96.3			4.51	
SM 2540 D-2015	TSS	98.4				
	TSS	95.3				
SM 4500-F- C-2011	Fluoride	103				
	Fluoride	105	105	107		0.979
	Fluoride	105				1.45
	Fluoride	100	100	103		1.91
SM 5310 B-2011	Organic Carbon	95.0	93.1	95.0		0.966
	Organic Carbon	95.6	90.3	90.1		0.163

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2418761
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2418761
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2418711, 2418712, 2418713, 2418715, 2418718, 2418719, 2418721

Reference Method Descriptions

Method	Description	Associated Samples
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2418711, 2418712, 2418713, 2418715, 2418718, 2418719, 2418721
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2418711, 2418712, 2418713, 2418715, 2418718, 2418719, 2418721
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2418711, 2418712, 2418713, 2418715, 2418718, 2418719, 2418721
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2418759, 2418760
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2418761
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2418711, 2418712, 2418713, 2418715, 2418718, 2418719, 2418721

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	06/21/2023			06/21/2023 15:17	Anna M. Plaviak	2418708
	06/21/2023			06/21/2023 15:32	Anna M. Plaviak	2418709
	06/21/2023			06/21/2023 15:33	Anna M. Plaviak	2418710
	06/21/2023			06/21/2023 15:43	Anna M. Plaviak	2418714
	06/21/2023			06/21/2023 15:44	Anna M. Plaviak	2418716
	06/21/2023			06/21/2023 15:45	Anna M. Plaviak	2418717, 2418720
	06/21/2023			06/21/2023 13:14	Alexis Price	2418708
EPA 180.1 Rev. 2.0	06/21/2023			06/21/2023 13:16	Alexis Price	2418710
	06/21/2023			06/21/2023 13:17	Alexis Price	2418714
	06/21/2023			06/21/2023 13:18	Alexis Price	2418716
	06/21/2023			06/21/2023 13:20	Alexis Price	2418717
	06/21/2023			06/21/2023 13:21	Alexis Price	2418720
	06/21/2023			06/21/2023 13:34	Alexis Price	2418709
	06/21/2023			07/06/2023 15:17	Samatha Luckman	2418761
EPA 200.7 Rev. 4.4	06/21/2023	06/22/2023 12:45	George D Taylor	06/23/2023 15:53	Emily M Philpot	2418761
EPA 200.8 Rev. 5.4	06/21/2023	06/22/2023 12:45	George D Taylor	06/26/2023 19:44	James L Waggeberby	2418708
EPA 300.0 Rev. 2.1	06/21/2023			06/26/2023 23:15	James L Waggeberby	2418709
	06/21/2023			06/26/2023 23:30	James L Waggeberby	2418710
	06/21/2023			06/26/2023 23:45	James L Waggeberby	2418714
	06/21/2023			06/27/2023 00:00	James L Waggeberby	2418716
	06/21/2023			06/27/2023 00:15	James L Waggeberby	2418717
	06/21/2023			06/27/2023 00:30	James L Waggeberby	2418720
	06/21/2023			06/22/2023 14:02	Ping Hua	2418715
EPA 350.1 Rev. 2.0	06/21/2023			06/22/2023 14:03	Ping Hua	2418718
	06/21/2023			06/26/2023 11:45	Khloe J Berg	2418719
	06/21/2023			06/27/2023 13:40	Khloe J Berg	2418711
	06/21/2023			06/27/2023 13:48	Khloe J Berg	2418712
	06/21/2023			06/27/2023 13:50	Khloe J Berg	2418713
	06/21/2023			06/27/2023 13:51	Khloe J Berg	2418721
	06/21/2023			06/26/2023 12:07	Samantha L Bates	2418711
EPA 351.2 Rev. 2.0	06/21/2023	06/23/2023 13:15	Dana G. Hughes	06/26/2023 12:12	Samantha L Bates	2418712
	06/21/2023	06/23/2023 13:15	Dana G. Hughes	06/26/2023 12:14	Samantha L Bates	2418713
	06/21/2023	06/23/2023 13:15	Dana G. Hughes	06/27/2023 11:51	Ping Hua	2418721
	06/21/2023	06/26/2023 14:39	Dana G. Hughes	06/27/2023 12:34	Ping Hua	2418715
	06/21/2023	06/26/2023 14:39	Dana G. Hughes	06/27/2023 12:36	Ping Hua	2418718
	06/21/2023	06/26/2023 14:39	Dana G. Hughes	06/27/2023 12:44	Ping Hua	2418719
	06/21/2023			06/26/2023 10:42	Beverly Y. Sanders	2418715
EPA 353.2 Rev. 2.0	06/21/2023			06/26/2023 10:52	Beverly Y. Sanders	2418718
	06/21/2023			06/26/2023 10:53	Beverly Y. Sanders	2418719
	06/21/2023			06/27/2023 11:25	Beverly Y. Sanders	2418711
	06/21/2023					

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	06/21/2023			06/27/2023 11:26	Beverly Y. Sanders	2418712
	06/21/2023			06/27/2023 11:27	Beverly Y. Sanders	2418713
	06/21/2023			06/27/2023 11:28	Beverly Y. Sanders	2418721
EPA 365.1 Rev. 2.0	06/21/2023	06/22/2023 13:08	Alexis Price	06/23/2023 14:23	James L Waggeberby	2418721
	06/21/2023	06/22/2023 13:08	Alexis Price	06/23/2023 14:29	James L Waggeberby	2418711
	06/21/2023	06/22/2023 13:08	Alexis Price	06/23/2023 14:30	James L Waggeberby	2418712
	06/21/2023	06/22/2023 13:08	Alexis Price	06/23/2023 14:33	James L Waggeberby	2418713
	06/21/2023	06/23/2023 15:29	Adam P Silver	06/26/2023 11:31	Simonne.V. Calhoun	2418715
	06/21/2023	06/23/2023 15:29	Adam P Silver	06/26/2023 11:37	Simonne.V. Calhoun	2418718
	06/21/2023	06/23/2023 15:29	Adam P Silver	06/26/2023 11:38	Simonne.V. Calhoun	2418719
EPA 8321B	06/21/2023	06/22/2023 09:00	Hoor Shaik	06/26/2023 19:13	Juyoung Kim	2418759
	06/21/2023	06/22/2023 09:00	Hoor Shaik	06/26/2023 19:32	Juyoung Kim	2418760
	06/21/2023	06/22/2023 09:00	Hoor Shaik	06/28/2023 19:26	Juyoung Kim	2418759
	06/21/2023	06/22/2023 09:00	Hoor Shaik	06/28/2023 19:45	Juyoung Kim	2418760
	06/21/2023	06/23/2023 16:00	Hana Lee	06/24/2023 04:04	Tae K Lee	2418759
	06/21/2023	06/23/2023 16:00	Hana Lee	06/24/2023 04:18	Tae K Lee	2418760
	06/21/2023	06/23/2023 16:00	Hana Lee	06/24/2023 16:14	Tae K Lee	2418759
	06/21/2023	06/23/2023 16:00	Hana Lee	06/24/2023 16:27	Tae K Lee	2418760
SM 2320 B-2011	06/21/2023	06/23/2023 16:00	Hana Lee	06/24/2023 21:15	Tae K Lee	2418759
	06/21/2023			06/24/2023 04:20	Dale L. Simmons	2418708
	06/21/2023			06/24/2023 04:34	Dale L. Simmons	2418709
	06/21/2023			06/26/2023 23:21	Adam P Silver	2418714
	06/21/2023			06/26/2023 23:32	Adam P Silver	2418716
	06/21/2023			06/27/2023 02:14	Adam P Silver	2418717
	06/21/2023			06/28/2023 19:36	Dale L. Simmons	2418720
	06/21/2023			06/28/2023 22:14	Dale L. Simmons	2418710
SM 2340 B-2011	06/21/2023			07/06/2023 15:17	Samatha Luckman	2418761
SM 2540 C-2015	06/21/2023			06/23/2023 15:19	Yijie Li	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
SM 2540 D-2015	06/21/2023			06/23/2023 15:19	Yijie Li	2418708, 2418709, 2418710, 2418714, 2418716, 2418717, 2418720
SM 4500-F- C-2011	06/21/2023			06/23/2023 02:24	Adam P Silver	2418714
	06/21/2023			06/23/2023 02:29	Adam P Silver	2418716
	06/21/2023			06/24/2023 04:20	Dale L. Simmons	2418708
	06/21/2023			06/24/2023 04:34	Dale L. Simmons	2418709
	06/21/2023			06/24/2023 07:33	Dale L. Simmons	2418720
	06/21/2023			06/24/2023 11:40	Dale L. Simmons	2418710
	06/21/2023			06/27/2023 00:42	Adam P Silver	2418717
SM 5310 B-2011	06/21/2023			06/22/2023 21:01	Khloe J Berg	2418711
	06/21/2023			06/22/2023 21:15	Khloe J Berg	2418712

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	06/21/2023			06/22/2023 21:29	Khloe J Berg	2418713
	06/21/2023			06/22/2023 21:43	Khloe J Berg	2418721
	06/21/2023			06/23/2023 03:28	Khloe J Berg	2418715
	06/21/2023			06/23/2023 04:31	Khloe J Berg	2418718
	06/21/2023			06/23/2023 04:49	Khloe J Berg	2418719