

Chemical Analysis Report

SW-DIST-2023-11-02-01

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

Event Description: **Run 7**
Request ID: **RQ-2023-10-30-21**
Customer: **SW-DIST**
Project ID: **SMP**

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13051 N. Telecom Parkway
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Date Certified: 20-NOV-2023 16:14



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: Livingstone Creek at Old Avon Park Rd

Collection Date/Time: 11/01/2023 10:10

Field ID: G4SW0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448379	DEP SOP: NU-094-1	Color (true)	230		PCU	P437295	
	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P437289	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P437825	
		Sulfate	9.2		mg SO4/L	P437829	
	SM 2320 B-2011	Total Alkalinity	14		mg CaCO3/L	P437666	
	SM 2540 C-2015	TDS	117		mg/L	P437680	
	SM 2540 D-2015	TSS	2	I	mg/L	P437569	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P437402	
2448381	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P437346	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P437412	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P437605	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P437306	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P437451	

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: Unnamed Ditches

Collection Date/Time: 11/01/2023 10:50

Field ID: G3SW0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448380	DEP SOP: NU-094-1	Color (true)	200		PCU	P437295	
	EPA 180.1 Rev. 2.0	Turbidity	9.9		NTU	P437289	
	EPA 300.0 Rev. 2.1	Chloride	29		mg Cl/L	P437825	
		Sulfate	21		mg SO4/L	P437829	
	SM 2320 B-2011	Total Alkalinity	80		mg CaCO3/L	P437666	
	SM 2540 C-2015	TDS	233		mg/L	P437680	
	SM 2540 D-2015	TSS	4	I	mg/L	P437569	
	SM 4500-F- C-2011	Fluoride	0.34		mg F/L	P437402	
2448382	EPA 350.1 Rev. 2.0	Ammonia-N	0.069		mg N/L	P437346	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.2		mg N/L	P437412	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.2		mg N/L	P437605	
	EPA 365.1 Rev. 2.0	Total-P	1.1		mg P/L	P437306	
	SM 5310 B-2011	Organic Carbon	26		mg C/L	P437451	

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: Payne Creek in State Park

Collection Date/Time: 11/01/2023 11:55

Field ID: G3SW0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448387	DEP SOP: NU-094-1	Color (true)	39		PCU	P437296	
	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P437289	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P437825	
		Sulfate	42		mg SO4/L	P437829	
	SM 2320 B-2011	Total Alkalinity	147		mg CaCO3/L	P437541	
	SM 2540 C-2015	TDS	250		mg/L	P437680	
	SM 2540 D-2015	TSS	4	I	mg/L	P437569	
2448388	SM 4500-F- C-2011	Fluoride	1.3		mg F/L	P437402	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P437346	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P437412	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.59		mg N/L	P437605	
	EPA 365.1 Rev. 2.0	Total-P	0.62		mg P/L	P437306	
2448402	SM 5310 B-2011	Organic Carbon	12		mg C/L	P437451	
	EPA 200.7 Rev. 4.4	Calcium	38.0		mg/L	P437336	
		Iron	190		ug/L	P437336	
		Magnesium	24.5		mg/L	P437336	
		Potassium	2.4		mg/L	P437336	
		Sodium	20.5		mg/L	P437336	
		Strontium	188		ug/L	P437336	
		Tin	3.0	U	ug/L	P437336	
		Titanium	0.75	U	ug/L	P437336	
		Vanadium	3.0	I	ug/L	P437336	
		Zinc	15	I	ug/L	P437336	
	EPA 200.8 Rev. 5.4	Aluminum	110		ug/L	P437336	
		Antimony	0.21		ug/L	P437336	
		Arsenic	2.09		ug/L	P437336	
		Barium	4.68		ug/L	P437336	
		Beryllium	0.010	U	ug/L	P437336	
		Boron	60.7		ug/L	P437336	
		Cadmium	0.034	I	ug/L	P437336	
		Chromium	0.40	U	ug/L	P437336	
		Cobalt	0.126		ug/L	P437336	
		Copper	0.40	U	ug/L	P437336	
		Lead	0.20	U	ug/L	P437336	
		Manganese	12.1		ug/L	P437336	
		Molybdenum	6.40		ug/L	P437336	
		Nickel	0.50	U	ug/L	P437336	
		Selenium	0.45	I	ug/L	P437336	
		Silver	0.010	U	ug/L	P437336	
		Thallium	0.10	U	ug/L	P437336	
	SM 2340 B-2011	Hardness	196		mg/L	P437336	

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: Paynes Creek at Hobbs Rd

Collection Date/Time: 11/01/2023 12:30

Field ID: G3SW0118

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448385	DEP SOP: NU-094-1	Color (true)	39	A	PCU	P437296	
	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P437289	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P437825	
		Sulfate	25		mg SO4/L	P437829	
	SM 2320 B-2011	Total Alkalinity	148		mg CaCO3/L	P437541	
	SM 2540 C-2015	TDS	224		mg/L	P437680	
	SM 2540 D-2015	TSS	3	I	mg/L	P437569	
	SM 4500-F- C-2011	Fluoride	1.3		mg F/L	P437402	
2448386	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P437346	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P437412	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.49		mg N/L	P437605	
	EPA 365.1 Rev. 2.0	Total-P	0.39		mg P/L	P437306	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P437451	
2448400	EPA 8321B	2,4-D	0.0033	I	ug/L	P437434	
		Acesulfame K	0.10	U	ug/L	P437333	
		2,4,5-T	0.0040	U	ug/L	P437434	
		AMPA	0.14	I	ug/L	P437333	
		Acetaminophen	0.0080	U	ug/L	P437434	
		Acetamiprid	0.0020	U	ug/L	P437434	
		Endothall	0.25	U	ug/L	P437333	
		Glufosinate	0.10	U	ug/L	P437333	
		Glyphosate	0.10	U	ug/L	P437333	
		Afidopyropen	0.0020	U	ug/L	P437434	
		Sucralose	0.76		ug/L	P437333	
		Bentazon	8.0E-04	UJ	ug/L	P437434	MS
		Benzovindiflupyr	0.0020	U	ug/L	P437434	
		Carbamazepine	8.0E-04	U	ug/L	P437434	
		Clothianidin	0.0020	U	ug/L	P437434	
		Dinotefuran	0.0020	U	ug/L	P437434	
		Diuron	0.0020	U	ug/L	P437434	
		Fenuron	0.032	U	ug/L	P437434	
		Fluridone	8.0E-04	U	ug/L	P437434	
		Imazapyr	0.048		ug/L	P437434	
		Hydrocodone	0.0020	U	ug/L	P437434	
		Ibuprofen	0.080	UJ	ug/L	P437434	MS
		Imidacloprid	0.0060	I	ug/L	P437434	
		Linuron	0.0040	U	ug/L	P437434	
		Mandestrobin	0.0020	U	ug/L	P437434	
		MCP	0.0020	U	ug/L	P437434	
		Naproxen	0.0080	U	ug/L	P437434	
		Primidone	0.0040	U	ug/L	P437434	
		Pyraclostrobin	0.0020	U	ug/L	P437434	
		Silvex	0.0040	U	ug/L	P437434	
		Thiamethoxam	0.0033	I	ug/L	P437434	

Field ID: G3SW0118

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448400	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P437434	
		Triclopyr	0.0040	U	ug/L	P437434	

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

Sample Location: Horse Creek

Collection Date/Time: 11/01/2023 13:15

Field ID: G3SW0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448383	DEP SOP: NU-094-1	Color (true)	140		PCU	P437296	
	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P437289	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P437825	
		Sulfate	74		mg SO4/L	P437829	
	SM 2320 B-2011	Total Alkalinity	97	A	mg CaCO3/L	P437541	
	SM 2540 C-2015	TDS	262		mg/L	P437680	
	SM 2540 D-2015	TSS	2	I	mg/L	P437569	
	SM 4500-F- C-2011	Fluoride	0.54		mg F/L	P437402	
2448384	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P437346	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P437412	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P437605	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P437306	
	SM 5310 B-2011	Organic Carbon	26		mg C/L	P437451	
2448399	EPA 8321B	2,4-D	0.0020	U	ug/L	P437260	
		Acesulfame K	0.10	U	ug/L	P437132	
		2,4,5-T	0.0040	U	ug/L	P437260	
		AMPA	0.49		ug/L	P437132	
		Acetaminophen	0.0080	U	ug/L	P437260	
		Acetamiprid	0.0020	U	ug/L	P437260	
		Endothall	0.25	U	ug/L	P437132	
		Glufosinate	0.10	U	ug/L	P437132	
		Glyphosate	0.10	U	ug/L	P437132	
		Afidopyropen	0.0020	U	ug/L	P437260	
		Bentazon	8.0E-04	U	ug/L	P437260	
		Sucralose	0.019	I	ug/L	P437132	
		Benzovindiflupyr	0.0020	U	ug/L	P437260	
		Carbamazepine	8.0E-04	U	ug/L	P437260	
		Clothianidin	0.0020	U	ug/L	P437260	
		Dinotefuran	0.0056	I	ug/L	P437260	
		Diuron	0.0020	U	ug/L	P437260	
		Fenuron	0.032	U	ug/L	P437260	
		Fluridone	8.0E-04	U	ug/L	P437260	
		Imazapyr	0.033		ug/L	P437260	
		Hydrocodone	0.0020	U	ug/L	P437260	
		Ibuprofen	0.080	U	ug/L	P437260	
		Imidacloprid	0.0024	I	ug/L	P437260	
		Linuron	0.0040	U	ug/L	P437260	
		Mandestrobin	0.0020	U	ug/L	P437260	
		MCPP	0.0020	U	ug/L	P437260	
		Naproxen	0.0080	U	ug/L	P437260	
		Primidone	0.0040	U	ug/L	P437260	
		Pyraclostrobin	0.0020	U	ug/L	P437260	
		Silvex	0.0040	U	ug/L	P437260	
		Thiamethoxam	0.0020	U	ug/L	P437260	

Field ID: G3SW0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2448399	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P437260	
		Triclopyr	0.0040	U	ug/L	P437260	
2448401	EPA 200.7 Rev. 4.4	Calcium	37.0		mg/L	P437336	
		Iron	250		ug/L	P437336	
		Magnesium	19.2		mg/L	P437336	
		Potassium	2.5		mg/L	P437336	
		Sodium	20.4		mg/L	P437336	
		Strontium	223		ug/L	P437336	
		Tin	3.0	U	ug/L	P437336	
		Titanium	0.96	I	ug/L	P437336	
		Vanadium	2.0	U	ug/L	P437336	
		Zinc	5.0	U	ug/L	P437336	
	EPA 200.8 Rev. 5.4	Aluminum	59		ug/L	P437336	
		Antimony	0.080	I	ug/L	P437336	
		Arsenic	0.88		ug/L	P437336	
		Barium	10.2		ug/L	P437336	
		Beryllium	0.010	U	ug/L	P437336	
		Boron	26.5		ug/L	P437336	
		Cadmium	0.020	U	ug/L	P437336	
		Chromium	0.62	I	ug/L	P437336	
		Cobalt	0.092		ug/L	P437336	
		Copper	0.40	U	ug/L	P437336	
		Lead	0.20	U	ug/L	P437336	
		Manganese	7.45		ug/L	P437336	
		Molybdenum	1.48		ug/L	P437336	
		Nickel	0.50	U	ug/L	P437336	
		Selenium	0.24	I	ug/L	P437336	
		Silver	0.010	U	ug/L	P437336	
		Thallium	0.10	U	ug/L	P437336	
	SM 2340 B-2011	Hardness	171		mg/L	P437336	

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.

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: P437295

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P437296

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437289

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437336

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: P437336

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	0.16	I	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: P437825

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437829

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437346

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437412

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437605

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437306

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

Reference Method: EPA 8321B
Batch ID: P437132

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

Reference Method: EPA 8321B
Batch ID: P437260

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P437260

Component	Result	Code	Units
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

Reference Method: EPA 8321B

Batch ID: P437333

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

Reference Method: EPA 8321B

Batch ID: P437434

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P437434

Component	Result	Code	Units
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
MCPPP	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

Reference Method: SM 2320 B-2011

Batch ID: P437541

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

Reference Method: SM 2320 B-2011

Batch ID: P437666

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

Reference Method: SM 2540 C-2015

Batch ID: P437680

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P437569

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P437402

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P437451

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: P437295

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: P437296

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437289

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	110		P	85 - 115
Magnesium	111		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Strontium	97.8		P	85 - 115
Tin	97.2		P	85 - 115
Titanium	99.9		P	85 - 115
Vanadium	98.9		P	85 - 115
Zinc	97.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.6		P	85 - 115
Antimony	99.6		P	85 - 115
Arsenic	101		P	85 - 115
Barium	102		P	85 - 115
Beryllium	95.2		P	85 - 115
Boron	105		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	99.7		P	85 - 115
Cobalt	98.8		P	85 - 115
Copper	98.6		P	85 - 115
Lead	96.0		P	85 - 115
Manganese	99.9		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	98.0		P	85 - 115
Selenium	100		P	85 - 115
Silver	106		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: P437825

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437829

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437346

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437412

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437605

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437306

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

Reference Method: EPA 8321B
Batch ID: P437132

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	108		P	40 - 150
AMPA	84.3		P	40 - 150
Endothall	98.2		P	40 - 150
Glufosinate	99.9		P	40 - 150
Glyphosate	93.3		P	40 - 150
Sucralose	96.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P437260

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	69.7		P	40 - 150
2,4,5-T	77.3		P	40 - 150
Acetaminophen	86.5		P	30 - 150
Acetamiprid	77.3		P	40 - 150
Afidopyropen	59.1		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P437260

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	74.8		P	30 - 150
Benzovindiflupyr	80.4		P	40 - 150
Carbamazepine	75.1		P	40 - 150
Clothianidin	87.6		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	85.6		P	40 - 150
Fenuron	89.2		P	40 - 150
Fluridone	78.4		P	40 - 150
Hydrocodone	89.3		P	40 - 150
Ibuprofen	65.4		P	40 - 150
Imazapyr	75.3		P	40 - 150
Imidacloprid	81.6		P	40 - 150
Linuron	81.3		P	40 - 150
Mandestrobin	79.3		P	40 - 150
MCPP	73.4		P	40 - 150
Naproxen	61.0		P	40 - 150
Primidone	84.3		P	40 - 150
Pyraclostrobin	75.6		P	40 - 150
Silvex	68.8		P	40 - 150
Thiamethoxam	86.8		P	40 - 150
Tolfenpyrad	51.7		P	30 - 150
Triclopyr	82.8		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P437333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	86.3		P	40 - 150
AMPA	91.4		P	40 - 160
Endothall	91.7		P	40 - 160
Glufosinate	99.4		P	40 - 160
Glyphosate	94.5		P	40 - 160
Sucralose	82.4		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P437434

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	66.8		P	40 - 150
2,4,5-T	50.3		P	40 - 150
Acetaminophen	94.2		P	30 - 150
Acetamiprid	93.2		P	40 - 150
Afidopyropen	59.6		P	30 - 150
Bentazon	64.7		P	30 - 150
Benzovindiflupyr	87.2		P	40 - 150
Carbamazepine	94.1		P	40 - 150
Clothianidin	97.5		P	40 - 150
Dinotefuran	95.8		P	40 - 150
Diuron	85.4		P	40 - 150
Fenuron	102		P	40 - 150
Fluridone	87.8		P	40 - 150
Hydrocodone	103		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P437434

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ibuprofen	47.9		P	40 - 150
Imazapyr	61.0		P	40 - 150
Imidacloprid	87.1		P	40 - 150
Linuron	75.7		P	40 - 150
Mandestrobin	88.0		P	40 - 150
MCPP	61.5		P	40 - 150
Naproxen	41.3		P	40 - 150
Primidone	89.3		P	40 - 150
Pyraclostrobin	83.5		P	40 - 150
Silvex	54.1		P	40 - 150
Thiamethoxam	96.5		P	40 - 150
Tolfenpyrad	49.2		P	30 - 150
Triclopyr	58.2		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P437541

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P437666

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.2		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P437680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	107		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P437569

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.0		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P437402

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

Reference Method: SM 5310 B-2011
Batch ID: P437451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P437336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448294	Calcium	103		P	80 - 120
2448294	Iron	112	113	P/P	80 - 120
2448294	Magnesium	113	114	P/P	80 - 120
2448294	Potassium	103	104	P/P	80 - 120
2448294	Sodium	101		P	80 - 120
2448294	Strontium	98.9	99.6	P/P	80 - 120
2448294	Tin	97.3	97.6	P/P	80 - 120
2448294	Titanium	97.7	100	P/P	80 - 120
2448294	Vanadium	99.8	100	P/P	80 - 120
2448294	Zinc	97.5	98.1	P/P	80 - 120
2448511	Calcium	102		P	80 - 120
2448511	Iron	107		P	80 - 120
2448511	Magnesium	106		P	80 - 120
2448511	Potassium	99.3		P	80 - 120
2448511	Sodium	101		P	80 - 120
2448511	Strontium	96.6		P	80 - 120
2448511	Tin	96.2		P	80 - 120
2448511	Titanium	99.3		P	80 - 120
2448511	Vanadium	97.2		P	80 - 120
2448511	Zinc	94.8		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P437336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448294	Aluminum	101	99.4	P/P	80 - 120
2448294	Antimony	100	99.6	P/P	80 - 120
2448294	Arsenic	99.6	99.2	P/P	80 - 120
2448294	Barium	104	102	P/P	80 - 120
2448294	Beryllium	97.2	95.4	P/P	80 - 120
2448294	Boron	109	106	P/P	80 - 120
2448294	Cadmium	102	103	P/P	80 - 120
2448294	Chromium	102	102	P/P	80 - 120
2448294	Cobalt	97.6	96.8	P/P	80 - 120
2448294	Copper	98.5	97.7	P/P	80 - 120
2448294	Lead	97.5	97.1	P/P	80 - 120
2448294	Manganese	102	99.9	P/P	80 - 120
2448294	Molybdenum	102	101	P/P	80 - 120
2448294	Nickel	96.7	96.2	P/P	80 - 120
2448294	Selenium	97.9	97.4	P/P	80 - 120
2448294	Silver	105	105	P/P	80 - 120
2448294	Thallium	103	103	P/P	80 - 120
2448511	Aluminum	98.4		P	80 - 120
2448511	Antimony	101		P	80 - 120
2448511	Arsenic	98.9		P	80 - 120
2448511	Barium	102		P	80 - 120
2448511	Beryllium	95.2		P	80 - 120
2448511	Boron	110		P	80 - 120
2448511	Cadmium	102		P	80 - 120
2448511	Chromium	101		P	80 - 120
2448511	Cobalt	95.4		P	80 - 120
2448511	Copper	95.8		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P437336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448511	Lead	97.3		P	80 - 120
2448511	Manganese	101		P	80 - 120
2448511	Molybdenum	101		P	80 - 120
2448511	Nickel	94.7		P	80 - 120
2448511	Selenium	96.4		P	80 - 120
2448511	Silver	105		P	80 - 120
2448511	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P437825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448119	Chloride	102		P	90 - 110
2448383	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P437829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448119	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P437346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448272	Ammonia-N	98.0	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P437412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448431	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P437605

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448374	NO2NO3-N	96.5	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P437306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448386	Total-P	97.8	101	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P437132

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2447822	Acesulfame K	118	123	P/P	40 - 150
2447822	AMPA	79.5	90.2	P/P	40 - 150
2447822	Endothall	102	103	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P437132

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2447822	Glufosinate	92.1	87.3	P/P	40 - 150
2447822	Glyphosate	67.0	64.8	P/P	40 - 150
2447822	Sucralose	90.6	93.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P437260

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2447822	2,4-D	80.4	79.2	P/P	40 - 150
2447822	2,4,5-T	76.0	74.6	P/P	40 - 150
2447822	Acetaminophen	85.2	82.1	P/P	30 - 150
2447822	Acetamiprid	54.7	58.5	P/P	40 - 150
2447822	Afidopyropen	63.0	59.6	P/P	30 - 150
2447822	Bentazon	46.5	43.8	P/P	30 - 150
2447822	Benzovindiflupyr	82.9	78.2	P/P	40 - 150
2447822	Carbamazepine	56.9	54.8	P/P	40 - 150
2447822	Clothianidin	67.5	65.9	P/P	40 - 150
2447822	Dinotefuran	60.2	58.5	P/P	40 - 150
2447822	Fluridone	65.4	57.5	P/P	40 - 150
2447822	Hydrocodone	54.4	53.2	P/P	40 - 150
2447822	Ibuprofen	48.7	57.7	P/P	40 - 150
2447822	Imazapyr	87.4	82.6	P/P	40 - 150
2447822	Imidacloprid	89.8	91.7	P/P	40 - 150
2447822	Linuron	66.4	60.4	P/P	40 - 150
2447822	Mandestrobin	73.6	73.3	P/P	40 - 150
2447822	MCPP	84.4	80.4	P/P	40 - 150
2447822	Naproxen	65.2	77.9	P/P	40 - 150
2447822	Primidone	72.9	71.5	P/P	40 - 150
2447822	Pyraclostrobin	77.6	79.2	P/P	40 - 150
2447822	Silvex	74.6	69.9	P/P	40 - 150
2447822	Thiamethoxam	61.3	61.9	P/P	40 - 150
2447822	Tolfenpyrad	57.4	53.2	P/P	30 - 150
2447822	Triclopyr	77.2	80.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P437333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448400	Acesulfame K	132	104	P/P	40 - 150
2448400	AMPA	85.8	90.3	P/P	40 - 160
2448400	Endothall	101	97.0	P/P	40 - 160
2448400	Glufosinate	96.2	101	P/P	40 - 160
2448400	Glyphosate	99.5	101	P/P	40 - 160
2448400	Sucralose	96.2	78.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P437434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448400	2,4-D	62.5	58.8	P/P	40 - 150
2448400	2,4,5-T	58.0	57.3	P/P	40 - 150
2448400	Acetaminophen	57.5	56.3	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P437434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448400	Acetamiprid	48.6	49.1	P/P	40 - 150
2448400	Afidopyropen	65.2	63.2	P/P	30 - 150
2448400	Bentazon	26.7	25.1	F/F	30 - 150
2448400	Benzovindiflupyr	78.2	79.5	P/P	40 - 150
2448400	Carbamazepine	60.9	58.9	P/P	40 - 150
2448400	Clothianidin	55.9	54.8	P/P	40 - 150
2448400	Dinotefuran	48.1	47.9	P/P	40 - 150
2448400	Diuron	53.9	52.0	P/P	40 - 150
2448400	Fenuron	41.1	40.2	P/P	40 - 150
2448400	Fluridone	52.7	53.3	P/P	40 - 150
2448400	Hydrocodone	55.9	54.4	P/P	40 - 150
2448400	Ibuprofen	38.4	43.2	F/P	40 - 150
2448400	Imazapyr	58.4	54.4	P/P	40 - 150
2448400	Imidacloprid	74.2	72.4	P/P	40 - 150
2448400	Linuron	54.8	54.9	P/P	40 - 150
2448400	Mandestrobin	81.7	74.7	P/P	40 - 150
2448400	MCCP	64.8	61.0	P/P	40 - 150
2448400	Naproxen	43.7	46.5	P/P	40 - 150
2448400	Primidone	58.1	59.3	P/P	40 - 150
2448400	Pyraclostrobin	76.0	78.5	P/P	40 - 150
2448400	Silvex	65.0	57.2	P/P	40 - 150
2448400	Thiamethoxam	56.2	56.9	P/P	40 - 150
2448400	Tolfenpyrad	50.1	49.4	P/P	30 - 150
2448400	Triclopyr	63.3	57.8	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P437402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448639	Fluoride	102	100	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P437451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2448409	Organic Carbon	93.7	94.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P437295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448251	Color (true)	3.32	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P437296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448385	Color (true)	0.442	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437289

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448267	Turbidity	1.50	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448294	Calcium	0.568	Spike	P	0 - 20
2448294	Iron	0.938	Spike	P	0 - 20
2448294	Magnesium	0.705	Spike	P	0 - 20
2448294	Potassium	1.17	Spike	P	0 - 20
2448294	Sodium	0.299	Spike	P	0 - 20
2448294	Strontium	0.702	Spike	P	0 - 20
2448294	Tin	0.229	Spike	P	0 - 20
2448294	Titanium	2.23	Spike	P	0 - 20
2448294	Vanadium	0.669	Spike	P	0 - 20
2448294	Zinc	0.576	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448294	Aluminum	1.22	Spike	P	0 - 20
2448294	Antimony	0.631	Spike	P	0 - 20
2448294	Arsenic	0.440	Spike	P	0 - 20
2448294	Barium	1.79	Spike	P	0 - 20
2448294	Beryllium	1.81	Spike	P	0 - 20
2448294	Boron	2.78	Spike	P	0 - 20
2448294	Cadmium	0.965	Spike	P	0 - 20
2448294	Chromium	0.385	Spike	P	0 - 20
2448294	Cobalt	0.808	Spike	P	0 - 20
2448294	Copper	0.764	Spike	P	0 - 20
2448294	Lead	0.367	Spike	P	0 - 20
2448294	Manganese	1.02	Spike	P	0 - 20
2448294	Molybdenum	0.894	Spike	P	0 - 20
2448294	Nickel	0.515	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P437336

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448294	Selenium	0.560	Spike	P	0 - 20
2448294	Silver	0.136	Spike	P	0 - 20
2448294	Thallium	0.746	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P437825

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448119	Chloride	1.84	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P437829

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448119	Sulfate	2.69	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P437346

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448272	Ammonia-N	0.955	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P437412

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448431	Kjeldahl Nitrogen	0.966	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P437605

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448374	NO2NO3-N	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P437306

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448386	Total-P	1.49	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P437132

Replicated

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

Reference Method: EPA 8321B
Batch ID: P437132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447822	Acesulfame K	4.01	Spike	P	0 - 30
2447822	AMPA	12.6	Spike	P	0 - 30
2447822	Endothall	1.38	Spike	P	0 - 30
2447822	Glufosinate	5.37	Spike	P	0 - 30
2447822	Glyphosate	3.37	Spike	P	0 - 30
2447822	Sucralose	2.83	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P437260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447822	2,4-D	1.47	Spike	P	0 - 30
2447822	2,4,5-T	1.94	Spike	P	0 - 30
2447822	Acetaminophen	3.64	Spike	P	0 - 30
2447822	Acetamiprid	6.62	Spike	P	0 - 30
2447822	Afidopyropen	5.67	Spike	P	0 - 30
2447822	Bentazon	5.99	Spike	P	0 - 30
2447822	Benzovindiflupyr	5.87	Spike	P	0 - 30
2447822	Carbamazepine	3.64	Spike	P	0 - 30
2447822	Clothianidin	2.46	Spike	P	0 - 30
2447822	Dinotefuran	2.81	Spike	P	0 - 30
2447822	Diuron	1.55	Spike	P	0 - 30
2447822	Fenuron	2.49	Spike	P	0 - 30
2447822	Fluridone	7.99	Spike	P	0 - 30
2447822	Hydrocodone	2.06	Spike	P	0 - 30
2447822	Ibuprofen	16.9	Spike	P	0 - 30
2447822	Imazapyr	5.74	Spike	P	0 - 30
2447822	Imidacloprid	2.05	Spike	P	0 - 30
2447822	Linuron	9.57	Spike	P	0 - 30
2447822	Mandestrobin	0.371	Spike	P	0 - 30
2447822	MCPP	4.90	Spike	P	0 - 30
2447822	Naproxen	17.8	Spike	P	0 - 30
2447822	Primidone	1.96	Spike	P	0 - 30
2447822	Pyraclostrobin	2.01	Spike	P	0 - 30
2447822	Silvex	6.55	Spike	P	0 - 30
2447822	Thiamethoxam	0.921	Spike	P	0 - 30
2447822	Tolfenpyrad	7.48	Spike	P	0 - 30
2447822	Triclopyr	4.06	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P437333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448400	Acesulfame K	23.3	Spike	P	0 - 30
2448400	AMPA	4.90	Spike	P	0 - 30
2448400	Endothall	3.71	Spike	P	0 - 30
2448400	Glufosinate	4.72	Spike	P	0 - 30
2448400	Glyphosate	1.63	Spike	P	0 - 30
2448400	Sucralose	15.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P437434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448400	2,4-D	5.71	Spike	P	0 - 30
2448400	2,4,5-T	1.13	Spike	P	0 - 30
2448400	Acetaminophen	2.20	Spike	P	0 - 30
2448400	Acetamiprid	0.954	Spike	P	0 - 30
2448400	Afidopyropen	3.09	Spike	P	0 - 30
2448400	Bentazon	6.14	Spike	P	0 - 30
2448400	Benzovindiflupyr	1.57	Spike	P	0 - 30
2448400	Carbamazepine	3.43	Spike	P	0 - 30
2448400	Clothianidin	1.99	Spike	P	0 - 30
2448400	Dinotefuran	0.340	Spike	P	0 - 30
2448400	Diuron	3.52	Spike	P	0 - 30
2448400	Fenuron	2.17	Spike	P	0 - 30
2448400	Fluridone	1.25	Spike	P	0 - 30
2448400	Hydrocodone	2.68	Spike	P	0 - 30
2448400	Ibuprofen	11.8	Spike	P	0 - 30
2448400	Imazapyr	3.40	Spike	P	0 - 30
2448400	Imidacloprid	2.26	Spike	P	0 - 30
2448400	Linuron	0.170	Spike	P	0 - 30
2448400	Mandestrobin	9.01	Spike	P	0 - 30
2448400	MCP	6.03	Spike	P	0 - 30
2448400	Naproxen	6.04	Spike	P	0 - 30
2448400	Primidone	1.95	Spike	P	0 - 30
2448400	Pyraclostrobin	3.32	Spike	P	0 - 30
2448400	Silvex	12.9	Spike	P	0 - 30
2448400	Thiamethoxam	1.20	Spike	P	0 - 30
2448400	Tolfenpyrad	1.37	Spike	P	0 - 30
2448400	Triclopyr	9.08	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P437541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448383	Total Alkalinity	0.179	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P437666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448305	Total Alkalinity	0.0855	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P437680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447881	TDS	5.45	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P437402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448639	Fluoride	1.47	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P437451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2448409	Organic Carbon	0.996	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2448399

Field Sample ID: G3SW0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	60.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	55.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.4	P	30 - 160
EPA 8321B	Diuron-d6	36.8	P	30 - 160
EPA 8321B	Endothall-d6	129	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.4	P	30 - 160
EPA 8321B	Primidone-d5	38.6	P	30 - 160
EPA 8321B	Sucralose-d6	83.0	P	30 - 160

Lab Sample ID: 2448400

Field Sample ID: G3SW0118

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	47.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.8	P	30 - 160
EPA 8321B	Diuron-d6	50.7	P	30 - 160
EPA 8321B	Endothall-d6	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	30 - 160
EPA 8321B	Ibuprofen-d3	41.7	P	30 - 160
EPA 8321B	Primidone-d5	55.9	P	30 - 160
EPA 8321B	Sucralose-d6	95.6	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122520

Included Lab Sample IDs: 2448379, 2448380, 2448383, 2448385, 2448387

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

Reference Method: DEP SOP: NU-094-1

Run ID: A122524

Included Lab Sample IDs: 2448379, 2448380, 2448383, 2448385, 2448387

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 110
Color (true)	98.3	99.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122535

Included Lab Sample IDs: 2448399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	119	130	P/P	60 - 160
Sucralose	94.1	96.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A122542

Included Lab Sample IDs: 2448399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	97.9	P/P	60 - 160
Endothall	84.8	80.7	P/P	60 - 160
Glufosinate	92.0	106	P/P	60 - 160
Glyphosate	99.0	88.6	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122551

Included Lab Sample IDs: 2448381, 2448382, 2448384, 2448386, 2448388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A122565

Included Lab Sample IDs: 2448379, 2448380, 2448383, 2448385, 2448387

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122579

Included Lab Sample IDs: 2448381, 2448382, 2448384, 2448386, 2448388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.4	96.6	P/P	90 - 110
Total-P	98.5	97.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122579

Included Lab Sample IDs: 2448381, 2448382, 2448384, 2448386, 2448388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122584

Included Lab Sample IDs: 2448401, 2448402

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	101	P/P	90 - 110
Antimony	99.5	98.5	P/P	90 - 110
Arsenic	99.3	98.0	P/P	90 - 110
Barium	100	99.2	P/P	90 - 110
Beryllium	97.6	96.0	P/P	90 - 110
Boron	103	105	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Chromium	101	102	P/P	90 - 110
Cobalt	96.6	96.4	P/P	90 - 110
Copper	95.7	94.8	P/P	90 - 110
Lead	96.6	95.9	P/P	90 - 110
Manganese	102	103	P/P	90 - 110
Molybdenum	99.8	100	P/P	90 - 110
Nickel	95.6	95.7	P/P	90 - 110
Selenium	99.8	101	P/P	90 - 110
Silver	99.1	99.9	P/P	90 - 110
Thallium	101	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A122586

Included Lab Sample IDs: 2448381, 2448382, 2448384, 2448386, 2448388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.8	P/P	90 - 110
Organic Carbon	96.9	96.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122596

Included Lab Sample IDs: 2448399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.3	85.4	P/P	50 - 150
2,4,5-T	95.6	96.7	P/P	50 - 150
Acetaminophen	111	108	P/P	60 - 160
Acetamiprid	105	107	P/P	50 - 150
Afidopyropen	102	94.7	P/P	50 - 150
Bentazon	96.5	96.9	P/P	50 - 160
Benzovindiflupyr	102	107	P/P	50 - 150
Carbamazepine	101	104	P/P	60 - 150
Clothianidin	108	110	P/P	60 - 150
Dinotefuran	112	117	P/P	50 - 150
Diuron	115	116	P/P	60 - 160
Fenuron	106	108	P/P	60 - 150
Fluridone	109	108	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A122596
Included Lab Sample IDs: 2448399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	113	114	P/P	60 - 150
Ibuprofen	88.1	101	P/P	50 - 160
Imazapyr	89.4	94.1	P/P	50 - 150
Imidacloprid	96.7	96.3	P/P	60 - 150
Linuron	98.4	104	P/P	60 - 150
Mandestrobin	98.3	103	P/P	50 - 150
MCPP	85.6	88.2	P/P	50 - 150
Naproxen	109	65.4	P/P	50 - 160
Primidone	101	106	P/P	60 - 150
Pyraclostrobin	103	101	P/P	60 - 150
Silvex	98.0	90.2	P/P	50 - 150
Thiamethoxam	113	114	P/P	50 - 150
Tolfenpyrad	100	97.5	P/P	60 - 150
Triclopyr	84.1	99.0	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A122601
Included Lab Sample IDs: 2448381, 2448382, 2448384, 2448386, 2448388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	98.4	P/P	90 - 110
Kjeldahl Nitrogen	98.4	91.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A122607
Included Lab Sample IDs: 2448400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	102	P/P	60 - 160
Endothall	98.3	97.0	P/P	60 - 160
Glufosinate	95.5	93.5	P/P	60 - 160
Glyphosate	97.2	99.1	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A122608
Included Lab Sample IDs: 2448400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	90.7	110	P/P	60 - 160
Sucralose	92.3	93.5	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A122610
Included Lab Sample IDs: 2448379, 2448380, 2448383, 2448385, 2448387

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A122617

Included Lab Sample IDs: 2448383, 2448385, 2448387

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.0	97.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122638

Included Lab Sample IDs: 2448381, 2448382, 2448384, 2448386, 2448388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	98.0	P/P	90 - 110
NO2NO3-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A122677

Included Lab Sample IDs: 2448401, 2448402

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	100	P/P	90 - 110
Iron	102	99.4	P/P	90 - 110
Magnesium	102	99.6	P/P	90 - 110
Potassium	101	98.3	P/P	90 - 110
Sodium	101	99.1	P/P	90 - 110
Strontium	101	101	P/P	90 - 110
Tin	102	101	P/P	90 - 110
Titanium	99.9	99.8	P/P	90 - 110
Vanadium	99.1	98.7	P/P	90 - 110
Zinc	98.9	98.1	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A122678

Included Lab Sample IDs: 2448379, 2448380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.5	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122692

Included Lab Sample IDs: 2448400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	63.7	62.6	P/P	50 - 150
2,4,5-T	73.5	68.8	P/P	50 - 150
Acetaminophen	110	102	P/P	60 - 160
Acetamiprid	112	112	P/P	50 - 150
Afidopyropen	115	109	P/P	50 - 150
Bentazon	76.6	66.4	P/P	50 - 160
Benzovindiflupyr	99.2	103	P/P	50 - 150
Carbamazepine	113	118	P/P	60 - 150
Clothianidin	114	111	P/P	60 - 150
Dinotefuran	109	106	P/P	50 - 150
Diuron	116	114	P/P	60 - 160
Fenuron	111	110	P/P	60 - 150
Fluridone	114	97.7	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A122692
Included Lab Sample IDs: 2448400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	117	120	P/P	60 - 150
Ibuprofen	99.7	89.2	P/P	50 - 160
Imazapyr	71.1	64.1	P/P	50 - 150
Imidacloprid	97.0	95.8	P/P	60 - 150
Linuron	99.7	90.6	P/P	60 - 150
Mandestrobin	107	98.9	P/P	50 - 150
MCPP	77.2	67.1	P/P	50 - 150
Naproxen	74.3	69.3	P/P	50 - 160
Primidone	97.6	101	P/P	60 - 150
Pyraclostrobin	107	106	P/P	60 - 150
Silvex	79.2	73.1	P/P	50 - 150
Thiamethoxam	118	112	P/P	50 - 150
Tolfenpyrad	93.2	91.2	P/P	60 - 150
Triclopyr	68.6	64.4	P/P	50 - 150

* 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)	98.4				3.32	
	Color (true)	100				0.442	
EPA 180.1 Rev. 2.0	Turbidity	104				1.50	
EPA 200.7 Rev. 4.4	Calcium	104	103	102			0.568
	Iron	110	112	113	107		0.938
	Magnesium	111	113	114	106		0.705
	Potassium	102	103	104	99.3		1.17
	Sodium	102	101	101			0.299
	Strontium	97.8	98.9	99.6	96.6		0.702
	Tin	97.2	97.3	97.6	96.2		0.229
	Titanium	99.9	97.7	100	99.3		2.23
	Vanadium	98.9	99.8	100	97.2		0.669
	Zinc	97.3	97.5	98.1	94.8		0.576
EPA 200.8 Rev. 5.4	Aluminum	99.6	101	99.4	98.4		1.22
	Antimony	99.6	100	99.6	101		0.631
	Arsenic	101	99.6	99.2	98.9		0.440
	Barium	102	104	102	102		1.79
	Beryllium	95.2	97.2	95.4	95.2		1.81
	Boron	105	109	106	110		2.78
	Cadmium	102	102	103	102		0.965
	Chromium	99.7	102	102	101		0.385
	Cobalt	98.8	97.6	96.8	95.4		0.808
	Copper	98.6	98.5	97.7	95.8		0.764
	Lead	96.0	97.5	97.1	97.3		0.367
	Manganese	99.9	102	99.9	101		1.02
	Molybdenum	101	102	101	101		0.894
	Nickel	98.0	96.7	96.2	94.7		0.515
	Selenium	100	97.9	97.4	96.4		0.560
	Silver	106	105	105	105		0.136
	Thallium	101	103	103	103		0.746
EPA 300.0 Rev. 2.1	Chloride	105	102	99.1		1.84	
	Sulfate	105	103			2.69	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	98.0	99.8			0.955
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	103	102			0.966
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	96.5	97.5			1.03
EPA 365.1 Rev. 2.0	Total-P	104	97.8	101			1.49
EPA 8321B	2,4-D	69.7	80.4	79.2			1.47
	2,4-D	66.8	62.5	58.8			5.71
	2,4,5-T	77.3	76.0	74.6			1.94
	2,4,5-T	50.3	58.0	57.3			1.13
	Acesulfame K	108	118	123			4.01
	Acesulfame K	86.3	132	104			23.3
	Acetaminophen	86.5	85.2	82.1			3.64
	Acetaminophen	94.2	56.3	57.5			2.20
	Acetamiprid	77.3	54.7	58.5			6.62
	Acetamiprid	93.2	49.1	48.6			0.954
	Afidopyropen	59.1	63.0	59.6			5.67
	Afidopyropen	59.6	63.2	65.2			3.09
	AMPA	84.3	79.5	90.2			12.6
	AMPA	91.4	85.8	90.3			4.90
	Bentazon	74.8	46.5	43.8			5.99
	Bentazon	64.7	25.1	26.7			6.14
	Benzovindiflupyr	80.4	82.9	78.2			5.87
	Benzovindiflupyr	87.2	79.5	78.2			1.57

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Carbamazepine	75.1	56.9	54.8			3.64
	Carbamazepine	94.1	58.9	60.9			3.43
	Clothianidin	87.6	67.5	65.9			2.46
	Clothianidin	97.5	54.8	55.9			1.99
	Dinotefuran	102	60.2	58.5			2.81
	Dinotefuran	95.8	47.9	48.1			0.340
	Diuron	85.6					1.55
	Diuron	85.4	52.0	53.9			3.52
	Endothall	98.2	102	103			1.38
	Endothall	91.7	101	97.0			3.71
	Fenuron	89.2					2.49
	Fenuron	102	40.2	41.1			2.17
	Fluridone	78.4	65.4	57.5			7.99
	Fluridone	87.8	53.3	52.7			1.25
	Glufosinate	99.9	92.1	87.3			5.37
	Glufosinate	99.4	96.2	101			4.72
	Glyphosate	93.3	67.0	64.8			3.37
	Glyphosate	94.5	99.5	101			1.63
	Hydrocodone	89.3	54.4	53.2			2.06
	Hydrocodone	103	54.4	55.9			2.68
	Ibuprofen	65.4	48.7	57.7			16.9
	Ibuprofen	47.9	38.4	43.2			11.8
	Imazapyr	75.3	87.4	82.6			5.74
	Imazapyr	61.0	54.4	58.4			3.40
	Imidacloprid	81.6	89.8	91.7			2.05
	Imidacloprid	87.1	72.4	74.2			2.26
	Linuron	81.3	66.4	60.4			9.57
	Linuron	75.7	54.9	54.8			0.170
	Mandestrobin	79.3	73.6	73.3			0.371
	Mandestrobin	88.0	74.7	81.7			9.01
	MCPP	73.4	84.4	80.4			4.90
	MCPP	61.5	64.8	61.0			6.03
	Naproxen	61.0	65.2	77.9			17.8
	Naproxen	41.3	43.7	46.5			6.04
	Primidone	84.3	72.9	71.5			1.96
	Primidone	89.3	59.3	58.1			1.95
	Pyraclostrobin	75.6	77.6	79.2			2.01
	Pyraclostrobin	83.5	78.5	76.0			3.32
	Silvex	68.8	74.6	69.9			6.55
	Silvex	54.1	65.0	57.2			12.9
	Sucralose	96.4	90.6	93.3			2.83
	Sucralose	82.4	96.2	78.5			15.0
	Thiamethoxam	86.8	61.3	61.9			0.921
	Thiamethoxam	96.5	56.9	56.2			1.20
	Tolfenpyrad	51.7	57.4	53.2			7.48
	Tolfenpyrad	49.2	49.4	50.1			1.37
	Triclopyr	82.8	77.2	80.4			4.06
	Triclopyr	58.2	63.3	57.8			9.08
SM 2320 B-2011	Total Alkalinity	98.9				0.179	
	Total Alkalinity	99.2				0.0855	
SM 2540 C-2015	TDS	107				5.45	
SM 2540 D-2015	TSS	96.0					
SM 4500-F- C-2011	Fluoride	103	102	100			1.47
SM 5310 B-2011	Organic Carbon	95.3	93.7	94.7			0.996

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2448379, 2448380, 2448383, 2448385, 2448387
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2448379, 2448380, 2448383, 2448385, 2448387
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2448401, 2448402
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2448401, 2448402
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2448379, 2448380, 2448383, 2448385, 2448387
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2448379, 2448380, 2448383, 2448385, 2448387
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2448381, 2448382, 2448384, 2448386, 2448388
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2448381, 2448382, 2448384, 2448386, 2448388
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2448381, 2448382, 2448384, 2448386, 2448388
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2448381, 2448382, 2448384, 2448386, 2448388
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2448399, 2448400
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2448379, 2448380, 2448383, 2448385, 2448387
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2448401, 2448402
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2448379, 2448380, 2448383, 2448385, 2448387
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2448379, 2448380, 2448383, 2448385, 2448387
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2448379, 2448380, 2448383, 2448385, 2448387
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2448381, 2448382, 2448384, 2448386, 2448388

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	11/02/2023			11/02/2023 15:22	Anna M. Plaviak	2448383
	11/02/2023			11/02/2023 15:23	Anna M. Plaviak	2448385
	11/02/2023			11/02/2023 15:24	Anna M. Plaviak	2448387
	11/02/2023			11/02/2023 15:57	Anna M. Plaviak	2448379
	11/02/2023			11/02/2023 15:58	Anna M. Plaviak	2448380
EPA 180.1 Rev. 2.0	11/02/2023			11/02/2023 13:51	Khloe J Berg	2448379
	11/02/2023			11/02/2023 13:52	Khloe J Berg	2448380, 2448383
	11/02/2023			11/02/2023 13:53	Khloe J Berg	2448385
	11/02/2023			11/02/2023 13:55	Khloe J Berg	2448387
EPA 200.7 Rev. 4.4	11/02/2023	11/03/2023 11:55	George D Taylor	11/09/2023 16:34	Chase Roberts	2448401
	11/02/2023	11/03/2023 11:55	George D Taylor	11/09/2023 16:42	Chase Roberts	2448402
EPA 200.8 Rev. 5.4	11/02/2023	11/03/2023 11:55	George D Taylor	11/06/2023 16:27	Conrad Hartmann	2448401
	11/02/2023	11/03/2023 11:55	George D Taylor	11/06/2023 16:37	Conrad Hartmann	2448402
EPA 300.0 Rev. 2.1	11/02/2023			11/08/2023 21:34	James L Waggeberby	2448383
	11/02/2023			11/09/2023 01:05	James L Waggeberby	2448379
	11/02/2023			11/09/2023 01:20	James L Waggeberby	2448380
	11/02/2023			11/09/2023 01:35	James L Waggeberby	2448385
	11/02/2023			11/09/2023 01:50	James L Waggeberby	2448387
EPA 350.1 Rev. 2.0	11/02/2023			11/03/2023 13:12	Khloe J Berg	2448381
	11/02/2023			11/03/2023 13:13	Khloe J Berg	2448382
	11/02/2023			11/03/2023 13:14	Khloe J Berg	2448384
	11/02/2023			11/03/2023 13:16	Khloe J Berg	2448386
	11/02/2023			11/03/2023 13:17	Khloe J Berg	2448388
EPA 351.2 Rev. 2.0	11/02/2023	11/06/2023 13:00	Simonne.V. Calhoun	11/07/2023 14:35	Samantha L Bates	2448381
	11/02/2023	11/06/2023 13:00	Simonne.V. Calhoun	11/07/2023 14:37	Samantha L Bates	2448382
	11/02/2023	11/06/2023 13:00	Simonne.V. Calhoun	11/07/2023 14:42	Samantha L Bates	2448384
	11/02/2023	11/06/2023 13:00	Simonne.V. Calhoun	11/07/2023 14:43	Samantha L Bates	2448386
	11/02/2023	11/06/2023 13:00	Simonne.V. Calhoun	11/07/2023 14:45	Samantha L Bates	2448388
EPA 353.2 Rev. 2.0	11/02/2023			11/08/2023 13:48	Fadila Guebre	2448381
	11/02/2023			11/08/2023 13:52	Fadila Guebre	2448386
	11/02/2023			11/08/2023 13:53	Fadila Guebre	2448388
	11/02/2023			11/08/2023 15:20	Fadila Guebre	2448382
	11/02/2023			11/08/2023 15:21	Fadila Guebre	2448384
EPA 365.1 Rev. 2.0	11/02/2023	11/03/2023 14:23	Adam P Silver	11/06/2023 13:46	Chandler E Cox	2448386
	11/02/2023	11/03/2023 14:23	Adam P Silver	11/06/2023 13:50	Chandler E Cox	2448381
	11/02/2023	11/03/2023 14:23	Adam P Silver	11/06/2023 13:54	Chandler E Cox	2448384
	11/02/2023	11/03/2023 14:23	Adam P Silver	11/06/2023 13:55	Chandler E Cox	2448388
	11/02/2023	11/03/2023 14:23	Adam P Silver	11/06/2023 14:22	Chandler E Cox	2448382
EPA 8321B	11/02/2023	11/02/2023 14:00	Tae K Lee	11/03/2023 00:39	Hana Lee	2448399
	11/02/2023	11/02/2023 14:00	Tae K Lee	11/03/2023 10:18	Hana Lee	2448399

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	11/02/2023	11/03/2023 14:30	Hoor Shaik	11/03/2023 21:30	Juyoung Kim	2448399
	11/02/2023	11/07/2023 08:00	Hana Lee	11/07/2023 11:25	Tae K Lee	2448400
	11/02/2023	11/07/2023 08:00	Hana Lee	11/07/2023 15:25	Tae K Lee	2448400
	11/02/2023	11/08/2023 09:00	Hoor Shaik	11/09/2023 02:04	Juyoung Kim	2448400
SM 2320 B-2011	11/02/2023			11/07/2023 18:42	Chandler E Cox	2448383
	11/02/2023			11/07/2023 18:54	Chandler E Cox	2448385
	11/02/2023			11/07/2023 19:05	Chandler E Cox	2448387
	11/02/2023			11/09/2023 22:16	Chandler E Cox	2448379
	11/02/2023			11/09/2023 22:26	Chandler E Cox	2448380
SM 2340 B-2011	11/02/2023			11/09/2023 16:34	Chase Roberts	2448401
	11/02/2023			11/09/2023 16:42	Chase Roberts	2448402
SM 2540 C-2015	11/02/2023			11/03/2023 15:32	Yijie Li	2448379, 2448380, 2448383, 2448385, 2448387
SM 2540 D-2015	11/02/2023			11/03/2023 15:32	Yijie Li	2448379, 2448380, 2448383, 2448385, 2448387
SM 4500-F- C-2011	11/02/2023			11/04/2023 06:38	Chandler E Cox	2448379
	11/02/2023			11/04/2023 06:52	Chandler E Cox	2448380
	11/02/2023			11/04/2023 07:05	Chandler E Cox	2448383
	11/02/2023			11/04/2023 07:53	Chandler E Cox	2448385
	11/02/2023			11/04/2023 08:07	Chandler E Cox	2448387
SM 5310 B-2011	11/02/2023			11/03/2023 22:58	Elise M. Gillis	2448381
	11/02/2023			11/03/2023 23:12	Elise M. Gillis	2448382
	11/02/2023			11/03/2023 23:25	Elise M. Gillis	2448384
	11/02/2023			11/04/2023 00:07	Elise M. Gillis	2448386
	11/02/2023			11/04/2023 00:20	Elise M. Gillis	2448388