

Chemical Analysis Report

NE-DIST-2022-03-16-02

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

Event Description: **ICW Boat and Arlington 2022**
Request ID: **RQ-2022-03-14-14**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 07-APR-2022 11:53



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: Open creek 200 meters above mouth

Collection Date/Time: 03/15/2022 10:15

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2312924	EPA 8321B	Acesulfame K	0.10	U	ug/L	P411170	
		2,4-D	0.017		ug/L	P411262	
		AMPA	10	U	ug/L	P411170	
		2,4,5-T	0.0040	U	ug/L	P411262	
		Acetaminophen	0.0080	U	ug/L	P411262	
		Endothall	0.25	U	ug/L	P411170	
		Acetamiprid	0.0020	U	ug/L	P411262	
		Glufosinate	10	U	ug/L	P411170	
		Glyphosate	10	U	ug/L	P411170	
		Afidopyropen	0.0020	U	ug/L	P411262	
		Sucralose	0.50		ug/L	P411170	
		Bentazon	0.031		ug/L	P411262	
		Benzovindiflupyr	0.0020	U	ug/L	P411262	
		Carbamazepine	9.6E-04	I	ug/L	P411262	
		Clothianidin	0.0020	U	ug/L	P411262	
		Dinotefuran	0.0079	I	ug/L	P411262	
		Diuron	0.018		ug/L	P411262	
		Fenuron	0.016	U	ug/L	P411262	
		Fluridone	0.015		ug/L	P411262	
		Imazapyr	0.091		ug/L	P411262	
		Hydrocodone	0.0020	U	ug/L	P411262	
		Ibuprofen	0.020	U	ug/L	P411262	
		Imidacloprid	0.068		ug/L	P411262	MS
		Linuron	0.014	I	ug/L	P411262	
		Mandestrobin	0.0020	U	ug/L	P411262	
		MCPP	0.0020	U	ug/L	P411262	
		Naproxen	0.0080	U	ug/L	P411262	
		Primidone	0.0040	U	ug/L	P411262	
		Pyraclostrobin	0.0020	U	ug/L	P411262	
		Silvex	0.0040	U	ug/L	P411262	
		Thiamethoxam	0.0020	U	ug/L	P411262	MS
		Tolfenpyrad	0.0020	U	ug/L	P411262	
		Triclopyr	0.0040	U	ug/L	P411262	

Ref. Method and Comment:

EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Sample Location: Open creek 0.5mile upstream of Mouth

Collection Date/Time: 03/15/2022 10:30

Field ID: G2NE1186

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2312925	EPA 8321B	Acesulfame K	0.10	U	ug/L	P411170	
		2,4-D	0.015		ug/L	P411262	
		AMPA	10	U	ug/L	P411170	
		2,4,5-T	0.0040	U	ug/L	P411262	
		Acetaminophen	0.0080	U	ug/L	P411262	
		Endothall	0.25	U	ug/L	P411170	
		Acetamiprid	0.0020	U	ug/L	P411262	
		Glufosinate	10	U	ug/L	P411170	
		Glyphosate	10	U	ug/L	P411170	
		Afidopyropen	0.0020	U	ug/L	P411262	
		Sucralose	0.53		ug/L	P411170	
		Bentazon	0.047		ug/L	P411262	
		Benzovindiflupyr	0.0020	U	ug/L	P411262	
		Carbamazepine	8.8E-04	I	ug/L	P411262	
		Clothianidin	0.0033	I	ug/L	P411262	
		Dinotefuran	0.0027	I	ug/L	P411262	
		Diuron	0.013		ug/L	P411262	
		Fenuron	0.016	U	ug/L	P411262	
		Fluridone	0.022		ug/L	P411262	
		Imazapyr	0.13		ug/L	P411262	
		Hydrocodone	0.0020	U	ug/L	P411262	
		Ibuprofen	0.020	U	ug/L	P411262	
		Imidacloprid	0.050		ug/L	P411262	MS
		Linuron	0.0053	I	ug/L	P411262	
		Mandestrobin	0.0020	U	ug/L	P411262	
		MCPP	0.0021	I	ug/L	P411262	
		Naproxen	0.0080	U	ug/L	P411262	
		Primidone	0.0040	U	ug/L	P411262	
		Pyraclostrobin	0.0020	U	ug/L	P411262	
		Silvex	0.0040	U	ug/L	P411262	
		Thiamethoxam	0.0020	U	ug/L	P411262	MS
		Tolfenpyrad	0.0020	U	ug/L	P411262	
		Triclopyr	0.0040	U	ug/L	P411262	

Ref. Method and Comment:
EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Sample Location: LITTLE POTTSBURG CREEK AT ATLANTIC BLVD

Collection Date/Time: 03/15/2022 11:55

Field ID: 20030679

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2312912	EPA 180.1 Rev. 2.0	Turbidity	9.3		NTU	P411209	
	SM 2320 B-2011	Total Alkalinity	79		mg CaCO3/L	P411339	
	SM 2540 D-2011	TSS	15		mg/L	P411540	
	SM 4500 F-C-2011	Fluoride	0.21		mg F/L	P411344	
2312914	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P411493	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P411288	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P411279	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P411412	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P411351	
2312926	EPA 200.7 Rev. 4.4	Calcium	68.6		mg/L	P411211	
		Iron	360		ug/L	P411211	
		Magnesium	119		mg/L	P411211	
		Strontium	1.16E+03		ug/L	P411211	
	EPA 200.8 Rev. 5.4	Tin	30	U	ug/L	P411211	
		Vanadium	2.2	I	ug/L	P411211	
		Zinc	5.0	U	ug/L	P411211	
		Aluminum	206		ug/L	P411384	
		Antimony	0.17	I	ug/L	P411211	
		Arsenic	1.56		ug/L	P411211	
		Beryllium	0.028	I	ug/L	P411211	
		Cadmium	0.020	U	ug/L	P411211	
		Chromium	0.51	I	ug/L	P411211	
		Cobalt	0.123		ug/L	P411211	
		Copper	1.71		ug/L	P411211	
		Lead	1.17		ug/L	P411211	
		Manganese	26.7		ug/L	P411211	
		Molybdenum	1.90		ug/L	P411211	
		Nickel	0.62	I	ug/L	P411211	
		Selenium	0.20	U	ug/L	P411211	
		Silver	0.010	U	ug/L	P411211	

Ref. Method and Comment:

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

Sample Location: Arlington River at Carlton oaks

Collection Date/Time: 03/15/2022 12:15

Field ID: G2NE1152

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2312913	EPA 180.1 Rev. 2.0	Turbidity	8.3	A	NTU	P411209	
	SM 2320 B-2011	Total Alkalinity	74		mg CaCO3/L	P411339	
	SM 2540 D-2011	TSS	11		mg/L	P411540	
	SM 4500 F-C-2011	Fluoride	0.21		mg F/L	P411344	
2312915	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P411493	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P411288	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P411280	
	EPA 365.1 Rev. 2.0	Total-P	0.089		mg P/L	P411412	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P411351	
2312927	EPA 200.7 Rev. 4.4	Calcium	71.7		mg/L	P411211	
		Iron	250		ug/L	P411211	
		Magnesium	119		mg/L	P411211	
		Strontium	1.28E+03		ug/L	P411211	
		Tin	30	U	ug/L	P411211	
		Vanadium	2.2	I	ug/L	P411211	
		Zinc	5.0	U	ug/L	P411211	
	EPA 200.8 Rev. 5.4	Aluminum	192		ug/L	P411384	
		Antimony	0.10	I	ug/L	P411211	
		Arsenic	1.32		ug/L	P411211	
		Beryllium	0.028	I	ug/L	P411211	
		Cadmium	0.020	U	ug/L	P411211	
		Chromium	0.49	I	ug/L	P411211	
		Cobalt	0.092		ug/L	P411211	
		Copper	1.15		ug/L	P411211	
		Lead	0.68		ug/L	P411211	
		Manganese	12.6		ug/L	P411211	
		Molybdenum	1.94		ug/L	P411211	
		Nickel	0.53	I	ug/L	P411211	
		Selenium	0.20	U	ug/L	P411211	
		Silver	0.010	U	ug/L	P411211	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P411209

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P411211

Component	Result	Code	Units
Calcium	0.11	I	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	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: P411211

Component	Result	Code	Units
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411384

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P411493

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P411288

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: P411279

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411280

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411412

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

Reference Method: EPA 8321B
Batch ID: P411170

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: P411262

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P411262

Component	Result	Code	Units
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: P411339

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

Reference Method: SM 2540 D-2011
Batch ID: P411540

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P411344

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P411351

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P411209

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.2		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P411211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	109		P	85 - 115
Magnesium	111		P	85 - 115
Strontium	109		P	85 - 115
Tin	106		P	85 - 115
Vanadium	98.2		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	99.9		P	85 - 115
Arsenic	99.4		P	85 - 115
Beryllium	97.3		P	85 - 115
Cadmium	99.8		P	85 - 115
Chromium	97.6		P	85 - 115
Cobalt	98.5		P	85 - 115
Copper	97.2		P	85 - 115
Lead	97.1		P	85 - 115
Manganese	98.6		P	85 - 115
Molybdenum	98.1		P	85 - 115
Nickel	98.8		P	85 - 115
Selenium	99.8		P	85 - 115
Silver	98.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411384

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P411493

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P411288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	91.2		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P411279

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P411280

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: P411412

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

Reference Method: EPA 8321B

Batch ID: P411170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.1		P	40 - 150
AMPA	95.4		P	40 - 150
Endothall	93.2		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	95.1		P	40 - 150
Sucralose	86.4		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P411262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	56.3		P	30 - 160
2,4,5-T	44.5		P	30 - 160
Acetaminophen	82.9		P	30 - 150
Acetamiprid	73.6		P	30 - 160
Afidopyropen	51.3		P	30 - 160
Bentazon	85.2		P	30 - 150
Benzovindiflupyr	72.0		P	30 - 160
Carbamazepine	67.7		P	30 - 160
Clothianidin	96.1		P	30 - 160
Dinotefuran	93.7		P	30 - 160
Diuron	54.3		P	30 - 160
Fenuron	106		P	30 - 160
Fluridone	69.7		P	30 - 160
Hydrocodone	92.4		P	30 - 160
Ibuprofen	56.8		P	30 - 160
Imazapyr	88.3		P	30 - 160
Imidacloprid	80.1		P	30 - 160
Linuron	70.3		P	30 - 160
Mandestrobin	53.1		P	30 - 160
MCPP	59.3		P	30 - 160
Naproxen	67.5		P	30 - 160
Primidone	76.6		P	30 - 160
Pyraclostrobin	64.8		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P411262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silvex	37.0		P	30 - 160
Thiamethoxam	93.0		P	30 - 160
Tolfenpyrad	37.9		P	30 - 160
Triclopyr	43.7		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P411339

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P411344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.1		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P411351

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P411211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312488	Calcium	104		P	80 - 120
2312488	Iron	106		P	80 - 120
2312488	Magnesium	106		P	80 - 120
2312488	Strontium	108		P	80 - 120
2312488	Tin	106		P	80 - 120
2312488	Vanadium	100		P	80 - 120
2312488	Zinc	108		P	80 - 120
2312489	Calcium	103		P	80 - 120
2312489	Iron	99.2	102	P/P	80 - 120
2312489	Magnesium	102	105	P/P	80 - 120
2312489	Strontium	103	105	P/P	80 - 120
2312489	Tin	102	103	P/P	80 - 120
2312489	Vanadium	95.5	97.6	P/P	80 - 120
2312489	Zinc	103	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312488	Antimony	102		P	80 - 120
2312488	Arsenic	103		P	80 - 120
2312488	Beryllium	101		P	80 - 120
2312488	Cadmium	101		P	80 - 120
2312488	Chromium	102		P	80 - 120
2312488	Cobalt	102		P	80 - 120
2312488	Copper	102		P	80 - 120
2312488	Lead	99.0		P	80 - 120
2312488	Manganese	105		P	80 - 120
2312488	Molybdenum	101		P	80 - 120
2312488	Nickel	103		P	80 - 120
2312488	Selenium	103		P	80 - 120
2312488	Silver	99.1		P	80 - 120
2312489	Antimony	98.6	98.1	P/P	80 - 120
2312489	Arsenic	98.9	99.0	P/P	80 - 120
2312489	Beryllium	97.2	98.6	P/P	80 - 120
2312489	Cadmium	99.6	102	P/P	80 - 120
2312489	Chromium	98.7	102	P/P	80 - 120
2312489	Cobalt	99.8	100	P/P	80 - 120
2312489	Copper	97.9	99.3	P/P	80 - 120
2312489	Lead	97.0	98.1	P/P	80 - 120
2312489	Manganese	100	105	P/P	80 - 120
2312489	Molybdenum	98.3	99.2	P/P	80 - 120
2312489	Nickel	99.6	101	P/P	80 - 120
2312489	Selenium	97.2	98.5	P/P	80 - 120
2312489	Silver	96.4	98.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2313385	Aluminum	99.5	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411493

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312725	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312653	Kjeldahl Nitrogen	88.0	88.5	F/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312722	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312936	NO2NO3-N	95.1	94.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2313059	Total-P	95.1	94.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P411170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312858	Acesulfame K	82.9	83.1	P/P	40 - 150
2312858	AMPA	95.4	102	P/P	40 - 150
2312858	Endothall	102	106	P/P	40 - 150
2312858	Glufosinate	84.3	93.3	P/P	40 - 150
2312858	Glyphosate	84.4	88.7	P/P	40 - 150
2312858	Sucralose	80.9	95.0	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P411262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312452	2,4-D	69.0	59.8	P/P	30 - 160
2312452	2,4,5-T	58.5	65.2	P/P	30 - 160
2312452	Acetaminophen	103	105	P/P	30 - 150
2312452	Acetamiprid	98.6	87.1	P/P	30 - 160
2312452	Afidopyrophen	57.9	55.4	P/P	30 - 160
2312452	Bentazon	92.4	103	P/P	30 - 150
2312452	Benzovindiflupyr	76.1	78.1	P/P	30 - 160
2312452	Carbamazepine	80.4	77.8	P/P	30 - 160
2312452	Clothianidin	128	126	P/P	30 - 160
2312452	Dinotefuran	124	119	P/P	30 - 160
2312452	Diuron	52.2	45.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P411262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312452	Fenuron	132	152	P/P	30 - 160
2312452	Fluridone	65.8	68.2	P/P	30 - 160
2312452	Hydrocodone	103	112	P/P	30 - 160
2312452	Ibuprofen	51.3	56.8	P/P	30 - 160
2312452	Imazapyr	130	111	P/P	30 - 160
2312452	Imidacloprid	212	203	F/F	30 - 160
2312452	Linuron	84.9	79.7	P/P	30 - 160
2312452	Mandestrobin	64.3	60.9	P/P	30 - 160
2312452	MCP	86.8	79.1	P/P	30 - 160
2312452	Naproxen	74.6	74.8	P/P	30 - 160
2312452	Primidone	124	92.4	P/P	30 - 160
2312452	Pyraclostrobin	80.0	80.3	P/P	30 - 160
2312452	Silvex	59.9	58.3	P/P	30 - 160
2312452	Thiamethoxam	174	175	F/F	30 - 160
2312452	Tolfenpyrad	55.2	46.1	P/P	30 - 160
2312452	Triclopyr	60.0	53.8	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P411344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2313019	Fluoride	99.5	99.0	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P411351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2312914	Organic Carbon	95.3	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P411209

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312913	Turbidity	4.59	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P411211

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312489	Calcium	1.01	Spike	P	0 - 20
2312489	Iron	1.99	Spike	P	0 - 20
2312489	Magnesium	2.21	Spike	P	0 - 20
2312489	Strontium	1.85	Spike	P	0 - 20
2312489	Tin	0.843	Spike	P	0 - 20
2312489	Vanadium	2.12	Spike	P	0 - 20
2312489	Zinc	2.11	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411211

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312489	Antimony	0.482	Spike	P	0 - 20
2312489	Arsenic	0.0390	Spike	P	0 - 20
2312489	Beryllium	1.19	Spike	P	0 - 20
2312489	Cadmium	2.02	Spike	P	0 - 20
2312489	Chromium	3.64	Spike	P	0 - 20
2312489	Cobalt	0.585	Spike	P	0 - 20
2312489	Copper	1.42	Spike	P	0 - 20
2312489	Lead	1.08	Spike	P	0 - 20
2312489	Manganese	2.23	Spike	P	0 - 20
2312489	Molybdenum	0.924	Spike	P	0 - 20
2312489	Nickel	1.25	Spike	P	0 - 20
2312489	Selenium	1.32	Spike	P	0 - 20
2312489	Silver	1.94	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P411384

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2313385	Aluminum	1.05	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P411493

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312725	Ammonia-N	0.841	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P411288

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312653	Kjeldahl Nitrogen	0.478	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P411279

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312722	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P411280

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312936	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P411412

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2313059	Total-P	0.925	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P411170

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312858	Acesulfame K	0.268	Spike	P	0 - 30
2312858	AMPA	6.92	Spike	P	0 - 30
2312858	Endothall	3.00	Spike	P	0 - 30
2312858	Glufosinate	10.1	Spike	P	0 - 30
2312858	Glyphosate	5.02	Spike	P	0 - 30
2312858	Sucralose	15.9	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P411262

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312452	2,4-D	10.1	Spike	P	0 - 30
2312452	2,4,5-T	10.9	Spike	P	0 - 30
2312452	Acetaminophen	1.44	Spike	P	0 - 30
2312452	Acetamiprid	12.4	Spike	P	0 - 30
2312452	Afidopyropen	4.29	Spike	P	0 - 30
2312452	Bentazon	6.68	Spike	P	0 - 30
2312452	Benzovindiflupyr	2.67	Spike	P	0 - 30
2312452	Carbamazepine	3.30	Spike	P	0 - 30
2312452	Clothianidin	1.75	Spike	P	0 - 30
2312452	Dinotefuran	3.15	Spike	P	0 - 30
2312452	Diuron	9.63	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P411262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312452	Fenuron	11.5	Spike	P	0 - 30
2312452	Fluridone	3.71	Spike	P	0 - 30
2312452	Hydrocodone	8.85	Spike	P	0 - 30
2312452	Ibuprofen	10.2	Spike	P	0 - 30
2312452	Imazapyr	10.7	Spike	P	0 - 30
2312452	Imidacloprid	4.20	Spike	P	0 - 30
2312452	Linuron	6.27	Spike	P	0 - 30
2312452	Mandestrobin	5.53	Spike	P	0 - 30
2312452	MCCPP	9.29	Spike	P	0 - 30
2312452	Naproxen	0.262	Spike	P	0 - 30
2312452	Primidone	28.8	Spike	P	0 - 30
2312452	Pyraclostrobin	0.361	Spike	P	0 - 30
2312452	Silvex	2.71	Spike	P	0 - 30
2312452	Thiamethoxam	0.767	Spike	P	0 - 30
2312452	Tolfenpyrad	17.8	Spike	P	0 - 30
2312452	Triclopyr	10.9	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P411339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2313019	Total Alkalinity	0.853	Sample	P	0 - 5.2

Reference Method: SM 4500 F-C-2011
Batch ID: P411344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2313019	Fluoride	0.495	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P411351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2312914	Organic Carbon	2.09	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2312924

Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.9	P	30 - 160
EPA 8321B	Diuron-d6	65.6	P	30 - 160
EPA 8321B	Endothall-d6	86.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.7	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	78.0	P	30 - 160

Lab Sample ID: 2312925

Field Sample ID: G2NE1186

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.7	P	30 - 160
EPA 8321B	Diuron-d6	63.0	P	30 - 160
EPA 8321B	Endothall-d6	88.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.9	P	30 - 160
EPA 8321B	Primidone-d5	139	P	30 - 160
EPA 8321B	Sucralose-d6	84.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110981

Included Lab Sample IDs: 2312912, 2312913

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111021

Included Lab Sample IDs: 2312914, 2312915

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111050

Included Lab Sample IDs: 2312926, 2312927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	95.7	96.7	P/P	90 - 110
Arsenic	98.3	98.6	P/P	90 - 110
Beryllium	97.5	99.0	P/P	90 - 110
Cadmium	98.5	98.8	P/P	90 - 110
Chromium	98.1	97.8	P/P	90 - 110
Cobalt	98.6	100	P/P	90 - 110
Copper	98.7	100	P/P	90 - 110
Lead	95.1	94.9	P/P	90 - 110
Manganese	99.3	99.9	P/P	90 - 110
Molybdenum	98.0	97.9	P/P	90 - 110
Nickel	99.5	101	P/P	90 - 110
Selenium	98.3	99.1	P/P	90 - 110
Silver	95.1	94.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A111051

Included Lab Sample IDs: 2312912, 2312913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.9	96.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A111051

Included Lab Sample IDs: 2312912, 2312913

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

Reference Method: SM 5310 B-2011

Run ID: A111056

Included Lab Sample IDs: 2312914, 2312915

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A111076

Included Lab Sample IDs: 2312924, 2312925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.5	95.7	P/P	60 - 160
Endothall	99.1	97.4	P/P	60 - 160
Glufosinate	98.0	95.0	P/P	60 - 160
Glyphosate	96.9	97.9	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111077

Included Lab Sample IDs: 2312924, 2312925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	103	101	P/P	60 - 160
Sucralose	91.0	96.1	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111092

Included Lab Sample IDs: 2312926, 2312927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.2	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111094

Included Lab Sample IDs: 2312926, 2312927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	103	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Iron	99.6	101	P/P	90 - 110
Magnesium	101	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Strontium	100	101	P/P	90 - 110
Strontium	101	100	P/P	90 - 110
Tin	97.3	102	P/P	90 - 110
Tin	97.5	97.3	P/P	90 - 110
Vanadium	97.1	97.4	P/P	90 - 110
Vanadium	97.4	99.3	P/P	90 - 110
Zinc	100	104	P/P	90 - 110
Zinc	101	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111115

Included Lab Sample IDs: 2312914, 2312915

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111116

Included Lab Sample IDs: 2312914, 2312915

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111135

Included Lab Sample IDs: 2312914

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111137

Included Lab Sample IDs: 2312915

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

Reference Method: EPA 8321B

Run ID: A111189

Included Lab Sample IDs: 2312924, 2312925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.0	67.3	P/P	50 - 150
2,4,5-T	85.3	75.0	P/P	50 - 150
Acetaminophen	103	122	P/P	60 - 160
Acetamiprid	95.2	99.8	P/P	50 - 150
Afidopyropen	69.8	80.5	P/P	50 - 150
Bentazon	60.5	74.8	P/P	50 - 160
Benzovindiflupyr	104	98.3	P/P	50 - 160
Carbamazepine	82.2	74.2	P/P	60 - 150
Clothianidin	97.0	118	P/P	60 - 150
Dinotefuran	113	110	P/P	50 - 150
Diuron	69.3	74.7	P/P	60 - 160
Fenuron	93.0	103	P/P	60 - 150
Fluridone	78.2	81.7	P/P	60 - 160
Hydrocodone	103	107	P/P	60 - 150
Ibuprofen	63.7	144	P/P	50 - 160
Imazapyr	120	108	P/P	50 - 150
Imidacloprid	91.8	104	P/P	60 - 150
Linuron	130	110	P/P	60 - 150
Mandestrobin	97.4	67.8	P/P	50 - 150
MCPP	83.5	78.3	P/P	50 - 150
Naproxen	83.2	125	P/P	50 - 160
Primidone	91.7	110	P/P	60 - 150
Pyraclostrobin	118	94.1	P/P	60 - 150
Silvex	98.7	83.5	P/P	50 - 150
Thiamethoxam	107	110	P/P	50 - 150
Tolfenpyrad	118	94.7	P/P	60 - 150
Triclopyr	75.0	68.8	P/P	50 - 150

Quality Assurance Report

Calibration Verification

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity	97.2					4.59	
EPA 200.7 Rev. 4.4	Calcium	104	104	103				1.01
	Iron	109	106	99.2	102			1.99
	Magnesium	111	106	102	105			2.21
	Strontium	109	108	103	105			1.85
	Tin	106	106	102	103			0.843
	Vanadium	98.2	100	95.5	97.6			2.12
	Zinc	106	108	103	105			2.11
EPA 200.8 Rev. 5.4	Aluminum	101	99.5	101				1.05
	Antimony	99.9	98.6	98.1	102			0.482
	Arsenic	99.4	98.9	99.0	103			0.0390
	Beryllium	97.3	97.2	98.6	101			1.19
	Cadmium	99.8	99.6	102	101			2.02
	Chromium	97.6	98.7	102	102			3.64
	Cobalt	98.5	99.8	100	102			0.585
	Copper	97.2	97.9	99.3	102			1.42
	Lead	97.1	97.0	98.1	99.0			1.08
	Manganese	98.6	100	105	105			2.23
	Molybdenum	98.1	98.3	99.2	101			0.924
	Nickel	98.8	99.6	101	103			1.25
	Selenium	99.8	97.2	98.5	103			1.32
	Silver	98.4	96.4	98.3	99.1			1.94
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	102	103				0.841
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	91.2	88.0	88.5				0.478
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	100	100				0.499
	NO2NO3-N	98.5	95.1	94.6				0.504
EPA 365.1 Rev. 2.0	Total-P	101	95.1	94.1				0.925
EPA 8321B	2,4-D	56.3	69.0	59.8				10.1
	2,4,5-T	44.5	58.5	65.2				10.9
	Acesulfame K	94.1	82.9	83.1				0.268
	Acetaminophen	82.9	103	105				1.44
	Acetamiprid	73.6	98.6	87.1				12.4
	Afidopyropen	51.3	57.9	55.4				4.29
	AMPA	95.4	95.4	102				6.92
	Bentazon	85.2	92.4	103				6.68
	Benzovindiflupyr	72.0	76.1	78.1				2.67
	Carbamazepine	67.7	80.4	77.8				3.30
	Clothianidin	96.1	128	126				1.75
	Dinotefuran	93.7	124	119				3.15
	Diuron	54.3	52.2	45.3				9.63
	Endothall	93.2	102	106				3.00
	Fenuron	106	132	152				11.5
	Fluridone	69.7	65.8	68.2				3.71
	Glufosinate	101	84.3	93.3				10.1
	Glyphosate	95.1	84.4	88.7				5.02
	Hydrocodone	92.4	103	112				8.85
	Ibuprofen	56.8	51.3	56.8				10.2
	Imazapyr	88.3	130	111				10.7
	Imidacloprid	80.1	212	203				4.20
	Linuron	70.3	84.9	79.7				6.27
	Mandestrobin	53.1	64.3	60.9				5.53
	MCPP	59.3	86.8	79.1				9.29
	Naproxen	67.5	74.6	74.8				0.262
	Primidone	76.6	124	92.4				28.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
					LCS	
EPA 8321B	Pyraclostrobin	64.8	80.0	80.3		0.361
	Silvex	37.0	59.9	58.3		2.71
	Sucralose	86.4	80.9	95.0		15.9
	Thiamethoxam	93.0	174	175		0.767
	Tolfenpyrad	37.9	55.2	46.1		17.8
	Triclopyr	43.7	60.0	53.8		10.9
SM 2320 B-2011	Total Alkalinity	99.1			0.853	
SM 4500 F-C-2011	Fluoride	99.1	99.5	99.0		0.495
SM 5310 B-2011	Organic Carbon	93.1	95.3	98.6		2.09

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2312912, 2312913
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2312926, 2312927
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2312926, 2312927
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2312914, 2312915
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2312914, 2312915
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2312914, 2312915
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2312914, 2312915
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2312924, 2312925
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2312912, 2312913
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2312912, 2312913
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2312912, 2312913
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2312914, 2312915

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/16/2022			03/16/2022 14:54	Anna M. Plaviak	2312913
	03/16/2022			03/16/2022 14:57	Anna M. Plaviak	2312912
EPA 200.7 Rev. 4.4	03/16/2022	03/17/2022 10:40	Megan Whitefoot	03/22/2022 18:28	Josef B Mick	2312926
	03/16/2022	03/17/2022 10:40	Megan Whitefoot	03/22/2022 18:36	Josef B Mick	2312926
	03/16/2022	03/17/2022 10:40	Megan Whitefoot	03/22/2022 19:16	Josef B Mick	2312927
	03/16/2022	03/17/2022 10:40	Megan Whitefoot	03/22/2022 19:24	Josef B Mick	2312927
EPA 200.8 Rev. 5.4	03/16/2022	03/17/2022 10:40	Megan Whitefoot	03/18/2022 16:20	Alexander Thompson	2312926
	03/16/2022	03/17/2022 10:40	Megan Whitefoot	03/18/2022 16:30	Alexander Thompson	2312927
	03/16/2022	03/22/2022 10:52	Megan Whitefoot	03/22/2022 22:23	Emily M Philpot	2312926
	03/16/2022	03/22/2022 10:52	Megan Whitefoot	03/22/2022 22:33	Emily M Philpot	2312927
EPA 350.1 Rev. 2.0	03/16/2022			03/23/2022 12:14	Ping Hua	2312914
	03/16/2022			03/23/2022 12:16	Ping Hua	2312915
EPA 351.2 Rev. 2.0	03/16/2022	03/22/2022 15:22	Alexandra J Mattheus	03/23/2022 12:23	Alexandra J Mattheus	2312914
	03/16/2022	03/22/2022 15:22	Alexandra J Mattheus	03/23/2022 12:25	Alexandra J Mattheus	2312915
EPA 353.2 Rev. 2.0	03/16/2022			03/18/2022 10:44	Beverly Y. Sanders	2312914
	03/16/2022			03/18/2022 10:57	Beverly Y. Sanders	2312915
EPA 365.1 Rev. 2.0	03/16/2022	03/22/2022 15:55	Simonne.V. Calhoun	03/24/2022 11:46	Sarah A Nixon	2312914
	03/16/2022	03/22/2022 15:55	Simonne.V. Calhoun	03/24/2022 15:19	James L Waggeberby	2312915
EPA 8321B	03/16/2022	03/18/2022 12:00	June Rhew	03/26/2022 17:20	Juyoung Kim	2312924
	03/16/2022	03/18/2022 12:00	June Rhew	03/26/2022 17:54	Juyoung Kim	2312925
	03/16/2022	03/21/2022 12:00	Manjita Shrestha	03/21/2022 17:00	Manjita Shrestha	2312924
	03/16/2022	03/21/2022 12:00	Manjita Shrestha	03/21/2022 17:13	Manjita Shrestha	2312925
	03/16/2022	03/21/2022 12:00	Manjita Shrestha	03/21/2022 19:03	Manjita Shrestha	2312924
	03/16/2022	03/21/2022 12:00	Manjita Shrestha	03/21/2022 19:18	Manjita Shrestha	2312925
	03/16/2022	03/21/2022 12:00	Manjita Shrestha	03/21/2022 21:29	Manjita Shrestha	2312924
	03/16/2022	03/21/2022 12:00	Manjita Shrestha	03/21/2022 21:42	Manjita Shrestha	2312925
SM 2320 B-2011	03/16/2022			03/18/2022 00:14	Dale L. Simmons	2312912
	03/16/2022			03/18/2022 00:28	Dale L. Simmons	2312913
SM 2540 D-2011	03/16/2022			03/18/2022 15:46	Yijie Li	2312912, 2312913
SM 4500 F-C-2011	03/16/2022			03/18/2022 00:14	Dale L. Simmons	2312912
	03/16/2022			03/18/2022 00:28	Dale L. Simmons	2312913
SM 5310 B-2011	03/16/2022			03/18/2022 17:49	Khloe J Berg	2312914
	03/16/2022			03/18/2022 19:02	Khloe J Berg	2312915