

Chemical Analysis Report

NE-DIST-2022-04-27-01

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

Event Description: **LSJR North Boat 2022**
Request ID: **RQ-2022-04-18-14**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 11-MAY-2022 15:52

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: Metals 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: Ribault River at US-1

Collection Date/Time: 04/26/2022 10:20

Field ID: 20030133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322229	EPA 8321B	2,4-D	0.016		ug/L	P412965	
		Acesulfame K	0.29	I	ug/L	P412970	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.24	I	ug/L	P412970	
		Acetaminophen	0.040		ug/L	P412965	
		Endothall	0.25	U	ug/L	P412970	
		Acetamiprid	0.020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412970	
		Glyphosate	0.29	I	ug/L	P412970	
		Afidopyropen	0.020	U	ug/L	P412965	
		Bentazon	0.0014	I	ug/L	P412965	
		Sucralose	0.40		ug/L	P412970	
		Benzovindiflupyr	0.020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.020	U	ug/L	P412965	
		Dinotefuran	0.020	U	ug/L	P412965	
		Diuron	0.020	I	ug/L	P412965	
		Fenuron	0.32	U	ug/L	P412965	
		Fluridone	0.013	I	ug/L	P412965	
		Imazapyr	0.13		ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.020	U	ug/L	P412965	
		Linuron	0.040	U	ug/L	P412965	
		Mandestrobin	0.020	U	ug/L	P412965	
		MCPP	0.0053	I	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.020	U	ug/L	P412965	
		Tolfenpyrad	0.020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322234	EPA 200.7 Rev. 4.4	Calcium	43.3		mg/L	P413013	
		Iron	790		ug/L	P413013	
		Magnesium	9.47		mg/L	P413013	
		Strontium	361		ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	2.5	I	ug/L	P413013	
		Vanadium	2.6	I	ug/L	P413013	
		Zinc	7.7	I	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Aluminum	125		ug/L	P413385	
		Antimony	0.21		ug/L	P413013	
		Arsenic	0.85		ug/L	P413013	

Field ID: 20030133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322234	EPA 200.8 Rev. 5.4	Beryllium	0.010	U	ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.43	I	ug/L	P413013	
		Cobalt	0.124		ug/L	P413013	
		Copper	1.41		ug/L	P413013	
		Lead	1.27		ug/L	P413013	
		Manganese	44.7		ug/L	P413013	
		Molybdenum	0.80		ug/L	P413013	
		Nickel	0.70	I	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	

Ref. Method and Comment:
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Cedar CR Blanding Blvd BR RT 21

Collection Date/Time: 04/26/2022 11:35

Field ID: 20030083

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322232	EPA 200.7 Rev. 4.4	Calcium	48.9		mg/L	P413013	
		Iron	280		ug/L	P413013	
		Magnesium	38.7		mg/L	P413013	
		Strontium	525		ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	2.9	I	ug/L	P413013	
		Vanadium	2.5	I	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Zinc	10	I	ug/L	P413013	
		Aluminum	204		ug/L	P413385	
		Antimony	0.28		ug/L	P413013	
		Arsenic	2.16		ug/L	P413013	
		Beryllium	0.010	U	ug/L	P413013	
		Cadmium	0.021	I	ug/L	P413013	
		Chromium	0.55	I	ug/L	P413013	
		Cobalt	0.149		ug/L	P413013	
		Copper	2.39		ug/L	P413013	
		Lead	3.09		ug/L	P413013	
		Manganese	26.6		ug/L	P413013	
		Molybdenum	1.26		ug/L	P413013	
		Nickel	0.70	I	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	

Sample Location: Cedar R @ San Juan Ave

Collection Date/Time: 04/26/2022 11:50

Field ID: 20030876

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322233	EPA 200.7 Rev. 4.4	Calcium	42.5		mg/L	P413013	
		Iron	270		ug/L	P413013	
		Magnesium	13.0		mg/L	P413013	
		Strontium	323		ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	1.6	I	ug/L	P413013	
		Vanadium	2.0	U	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Zinc	6.7	I	ug/L	P413013	
		Aluminum	102		ug/L	P413385	
		Antimony	0.24		ug/L	P413013	
		Arsenic	1.51		ug/L	P413013	
		Beryllium	0.010	U	ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.40	U	ug/L	P413013	
		Cobalt	0.099		ug/L	P413013	
		Copper	1.51		ug/L	P413013	
		Lead	1.36		ug/L	P413013	
		Manganese	26.4		ug/L	P413013	
		Molybdenum	1.07		ug/L	P413013	
		Nickel	0.66	I	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	

Sample Location: Ribault R MONCRIEF RD BR

Collection Date/Time: 04/26/2022 10:00

Field ID: 20030129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322230	EPA 8321B	2,4-D	0.017		ug/L	P412965	
		Acesulfame K	0.27	I	ug/L	P412970	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.10	U	ug/L	P412970	
		Acetaminophen	0.0080	U	ug/L	P412965	
		Endothall	0.25	U	ug/L	P412970	
		Acetamiprid	0.0020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412970	
		Glyphosate	0.10	U	ug/L	P412970	
		Afidopyropen	0.0020	U	ug/L	P412965	
		Bentazon	0.0025	I	ug/L	P412965	
		Sucralose	0.43		ug/L	P412970	
		Benzovindiflupyr	0.0020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.0020	U	ug/L	P412965	
		Dinotefuran	0.0020	U	ug/L	P412965	
		Diuron	0.012		ug/L	P412965	
		Fenuron	0.032	U	ug/L	P412965	
		Fluridone	0.0064		ug/L	P412965	
		Imazapyr	0.13		ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.0036	I	ug/L	P412965	
		Linuron	0.0040	U	ug/L	P412965	
		Mandestrobin	0.0020	U	ug/L	P412965	
		MCPP	0.0045	I	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.0020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.0020	U	ug/L	P412965	
		Tolfenpyrad	0.0020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322235	EPA 200.7 Rev. 4.4	Calcium	56.1		mg/L	P413013	
		Iron	550		ug/L	P413013	
		Magnesium	53.0		mg/L	P413013	
		Strontium	605		ug/L	P413013	
		Tin	6.0	U	ug/L	P413013	
		Titanium	2.5	I	ug/L	P413013	
		Vanadium	2.1	I	ug/L	P413013	
		Zinc	6.5	I	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Aluminum	129		ug/L	P413385	
		Antimony	0.27		ug/L	P413013	
		Arsenic	1.04		ug/L	P413013	

Field ID: 20030129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322235	EPA 200.8 Rev. 5.4	Beryllium	0.010	U	ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.43	I	ug/L	P413013	
		Cobalt	0.129		ug/L	P413013	
		Copper	1.73		ug/L	P413013	
		Lead	1.76		ug/L	P413013	
		Manganese	40.1		ug/L	P413013	
		Molybdenum	1.47		ug/L	P413013	
		Nickel	0.74	I	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	

Sample Location: FB04262022

Collection Date/Time: 04/26/2022 10:25

Field ID: FB04262022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322231	EPA 8321B	2,4-D	0.0020	U	ug/L	P412965	
		Acesulfame K	0.10	U	ug/L	P412970	
		2,4,5-T	0.0040	U	ug/L	P412965	
		AMPA	0.10	U	ug/L	P412970	
		Acetaminophen	0.0080	U	ug/L	P412965	
		Endothall	0.25	U	ug/L	P412970	
		Acetamiprid	0.0020	U	ug/L	P412965	MS
		Glufosinate	0.10	U	ug/L	P412970	
		Glyphosate	0.10	U	ug/L	P412970	
		Afidopyropen	0.0020	U	ug/L	P412965	
		Bentazon	8.0E-04	U	ug/L	P412965	
		Sucralose	0.010	U	ug/L	P412970	
		Benzovindiflupyr	0.0020	U	ug/L	P412965	
		Carbamazepine	8.0E-04	U	ug/L	P412965	
		Clothianidin	0.0020	U	ug/L	P412965	
		Dinotefuran	0.0020	U	ug/L	P412965	
		Diuron	0.0020	U	ug/L	P412965	
		Fenuron	0.032	U	ug/L	P412965	
		Fluridone	8.0E-04	U	ug/L	P412965	
		Imazapyr	0.0040	U	ug/L	P412965	
		Hydrocodone	0.0020	U	ug/L	P412965	
		Ibuprofen	0.020	U	ug/L	P412965	
		Imidacloprid	0.0020	U	ug/L	P412965	
		Linuron	0.0040	U	ug/L	P412965	
		Mandestrobin	0.0020	U	ug/L	P412965	
		MCPP	0.0040	U	ug/L	P412965	
		Naproxen	0.0080	U	ug/L	P412965	
		Primidone	0.0040	U	ug/L	P412965	
		Pyraclostrobin	0.0020	U	ug/L	P412965	
		Silvex	0.0040	U	ug/L	P412965	
		Thiamethoxam	0.0020	U	ug/L	P412965	
		Tolfenpyrad	0.0020	U	ug/L	P412965	
		Triclopyr	0.0040	U	ug/L	P412965	
2322236	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P413013	
		Iron	30	U	ug/L	P413013	
		Magnesium	0.040	U	mg/L	P413013	
		Strontium	2.0	U	ug/L	P413013	
		Tin	3.0	U	ug/L	P413013	
		Titanium	0.75	U	ug/L	P413013	
		Vanadium	2.0	U	ug/L	P413013	
		Zinc	5.0	U	ug/L	P413013	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P413385	
		Antimony	0.050	U	ug/L	P413013	
		Arsenic	0.050	U	ug/L	P413013	

Field ID: FB04262022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2322236	EPA 200.8 Rev. 5.4	Beryllium	0.010	U	ug/L	P413013	
		Cadmium	0.020	U	ug/L	P413013	
		Chromium	0.40	U	ug/L	P413013	
		Cobalt	0.020	U	ug/L	P413013	
		Copper	0.40	U	ug/L	P413013	
		Lead	0.20	U	ug/L	P413013	
		Manganese	0.10	U	ug/L	P413013	
		Molybdenum	0.15	U	ug/L	P413013	
		Nickel	0.50	U	ug/L	P413013	
		Selenium	0.20	U	ug/L	P413013	
		Silver	0.010	U	ug/L	P413013	
		Thallium	0.10	U	ug/L	P413013	

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413013

Component	Result	Code	Units
Calcium	0.075	U	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
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: P413013

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
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Reference Method: EPA 8321B

Batch ID: P412965

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: P412965

Component	Result	Code	Units
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P412970

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	104		P	85 - 115
Magnesium	103		P	85 - 115
Strontium	101		P	85 - 115
Tin	102		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	95.9		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	97.3		P	85 - 115
Arsenic	98.9		P	85 - 115
Beryllium	91.3		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	98.5		P	85 - 115
Cobalt	98.9		P	85 - 115
Copper	94.7		P	85 - 115
Lead	96.5		P	85 - 115
Manganese	99.4		P	85 - 115
Molybdenum	96.1		P	85 - 115
Nickel	97.7		P	85 - 115
Selenium	96.3		P	85 - 115
Silver	99.5		P	85 - 115
Thallium	97.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.1		P	85 - 115

Reference Method: EPA 8321B

Batch ID: P412965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	70.4		P	40 - 150
2,4,5-T	65.2		P	40 - 150
Acetaminophen	86.4		P	30 - 150
Acetamiprid	68.5		P	40 - 150
Afidopyropen	45.9		P	40 - 150
Bentazon	77.9		P	30 - 150
Benzovindiflupyr	70.4		P	40 - 150
Carbamazepine	62.7		P	40 - 150
Clothianidin	76.3		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	74.9		P	40 - 150
Fenuron	89.4		P	40 - 150
Fluridone	68.7		P	40 - 150
Hydrocodone	90.7		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P412965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ibuprofen	66.1		P	40 - 150
Imazapyr	78.3		P	40 - 150
Imidacloprid	65.2		P	40 - 150
Linuron	65.1		P	40 - 150
Mandestrobin	64.5		P	40 - 150
MCPP	83.0		P	40 - 150
Naproxen	47.6		P	40 - 150
Primidone	79.5		P	40 - 150
Pyraclostrobin	62.4		P	40 - 150
Silvex	75.2		P	40 - 150
Thiamethoxam	76.9		P	40 - 150
Tolfenpyrad	30.4		P	30 - 150
Triclopyr	68.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P412970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	100		P	40 - 150
Endothall	99.1		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	91.1		P	40 - 150
Sucralose	98.4		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322145	Calcium	98.4		P	80 - 120
2322145	Iron	101	105	P/P	80 - 120
2322145	Magnesium	101	105	P/P	80 - 120
2322145	Strontium	102	104	P/P	80 - 120
2322145	Tin	102	104	P/P	80 - 120
2322145	Titanium	93.8	94.6	P/P	80 - 120
2322145	Vanadium	97.5	99.5	P/P	80 - 120
2322145	Zinc	101	103	P/P	80 - 120
2322146	Calcium	97.9		P	80 - 120
2322146	Iron	102		P	80 - 120
2322146	Magnesium	102		P	80 - 120
2322146	Strontium	101		P	80 - 120
2322146	Tin	101		P	80 - 120
2322146	Titanium	94.7		P	80 - 120
2322146	Vanadium	97.8		P	80 - 120
2322146	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322145	Antimony	95.4	99.3	P/P	80 - 120
2322145	Arsenic	98.6	101	P/P	80 - 120
2322145	Beryllium	94.9	93.1	P/P	80 - 120
2322145	Cadmium	99.5	103	P/P	80 - 120
2322145	Chromium	99.8	102	P/P	80 - 120
2322145	Cobalt	100	103	P/P	80 - 120
2322145	Copper	98.4	100	P/P	80 - 120
2322145	Lead	97.8	98.6	P/P	80 - 120
2322145	Manganese	99.1	104	P/P	80 - 120
2322145	Molybdenum	95.3	98.2	P/P	80 - 120
2322145	Nickel	100	103	P/P	80 - 120
2322145	Selenium	96.0	98.1	P/P	80 - 120
2322145	Silver	99.5	101	P/P	80 - 120
2322145	Thallium	101	103	P/P	80 - 120
2322146	Antimony	100		P	80 - 120
2322146	Arsenic	99.2		P	80 - 120
2322146	Beryllium	91.2		P	80 - 120
2322146	Cadmium	103		P	80 - 120
2322146	Chromium	101		P	80 - 120
2322146	Cobalt	99.0		P	80 - 120
2322146	Copper	96.4		P	80 - 120
2322146	Lead	98.7		P	80 - 120
2322146	Manganese	103		P	80 - 120
2322146	Molybdenum	98.4		P	80 - 120
2322146	Nickel	98.7		P	80 - 120
2322146	Selenium	94.6		P	80 - 120
2322146	Silver	101		P	80 - 120
2322146	Thallium	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322072	Aluminum	96.6	97.2	P/P	80 - 120
2322183	Aluminum	97.0		P	80 - 120

Reference Method: EPA 8321B

Batch ID: P412965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322065	2,4-D	78.8	69.2	P/P	40 - 150
2322065	2,4,5-T	93.2	92.0	P/P	40 - 150
2322065	Acetaminophen	127	125	P/P	30 - 150
2322065	Acetamiprid	40.8	38.6	P/F	40 - 150
2322065	Afidopyropen	44.2	44.3	P/P	40 - 150
2322065	Bentazon	40.4	47.2	P/P	30 - 150
2322065	Benzovindiflupyr	58.7	57.7	P/P	40 - 150
2322065	Carbamazepine	44.2	43.0	P/P	40 - 150
2322065	Clothianidin	41.5	41.7	P/P	40 - 150
2322065	Dinotefuran	104	105	P/P	40 - 150
2322065	Diuron	50.5	49.2	P/P	40 - 150
2322065	Fenuron	58.5	57.9	P/P	40 - 150
2322065	Fluridone	72.4	70.5	P/P	40 - 150
2322065	Hydrocodone	52.4	52.5	P/P	40 - 150
2322065	Ibuprofen	54.9	55.4	P/P	40 - 150
2322065	Imazapyr	74.5	69.8	P/P	40 - 150
2322065	Imidacloprid	51.4	53.5	P/P	40 - 150
2322065	Linuron	51.5	53.5	P/P	40 - 150
2322065	Mandestrobin	58.9	59.5	P/P	40 - 150
2322065	MCPP	118	118	P/P	40 - 150
2322065	Naproxen	51.5	49.8	P/P	40 - 150
2322065	Primidone	64.5	65.9	P/P	40 - 150
2322065	Pyraclostrobin	67.9	66.0	P/P	40 - 150
2322065	Silvex	96.7	116	P/P	40 - 150
2322065	Thiamethoxam	48.9	48.7	P/P	40 - 150
2322065	Tolfenpyrad	37.6	36.5	P/P	30 - 150
2322065	Triclopyr	86.4	89.6	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P412970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322221	Acesulfame K	94.5	94.0	P/P	40 - 150
2322221	AMPA	77.8	77.7	P/P	40 - 150
2322221	Endothall	95.5	94.7	P/P	40 - 150
2322221	Glufosinate	91.2	97.9	P/P	40 - 150
2322221	Glyphosate	128	128	P/P	40 - 150
2322221	Sucralose	103	105	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413013

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322145	Calcium	0.761	Spike	P	0 - 20
2322145	Iron	3.50	Spike	P	0 - 20
2322145	Magnesium	2.30	Spike	P	0 - 20
2322145	Strontium	1.44	Spike	P	0 - 20
2322145	Tin	1.56	Spike	P	0 - 20
2322145	Titanium	0.814	Spike	P	0 - 20
2322145	Vanadium	2.06	Spike	P	0 - 20
2322145	Zinc	1.64	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413013

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322145	Antimony	3.99	Spike	P	0 - 20
2322145	Arsenic	2.34	Spike	P	0 - 20
2322145	Beryllium	1.88	Spike	P	0 - 20
2322145	Cadmium	3.19	Spike	P	0 - 20
2322145	Chromium	1.75	Spike	P	0 - 20
2322145	Cobalt	2.59	Spike	P	0 - 20
2322145	Copper	1.72	Spike	P	0 - 20
2322145	Lead	0.766	Spike	P	0 - 20
2322145	Manganese	2.27	Spike	P	0 - 20
2322145	Molybdenum	2.95	Spike	P	0 - 20
2322145	Nickel	2.49	Spike	P	0 - 20
2322145	Selenium	2.14	Spike	P	0 - 20
2322145	Silver	1.69	Spike	P	0 - 20
2322145	Thallium	1.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413385

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322072	Aluminum	0.571	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P412965

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322065	2,4-D	9.47	Spike	P	0 - 30
2322065	2,4,5-T	1.30	Spike	P	0 - 30
2322065	Acetaminophen	1.95	Spike	P	0 - 30
2322065	Acetamiprid	5.51	Spike	P	0 - 30
2322065	Afidopyropen	0.375	Spike	P	0 - 30
2322065	Bentazon	9.58	Spike	P	0 - 30
2322065	Benzovindiflupyr	1.69	Spike	P	0 - 30
2322065	Carbamazepine	2.77	Spike	P	0 - 30
2322065	Clothianidin	0.436	Spike	P	0 - 30
2322065	Dinotefuran	0.497	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P412965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322065	Diuron	1.61	Spike	P	0 - 30
2322065	Fenuron	1.11	Spike	P	0 - 30
2322065	Fluridone	2.62	Spike	P	0 - 30
2322065	Hydrocodone	0.237	Spike	P	0 - 30
2322065	Ibuprofen	0.822	Spike	P	0 - 30
2322065	Imazapyr	5.94	Spike	P	0 - 30
2322065	Imidacloprid	3.86	Spike	P	0 - 30
2322065	Linuron	3.80	Spike	P	0 - 30
2322065	Mandestrobin	1.00	Spike	P	0 - 30
2322065	MCPPP	0.359	Spike	P	0 - 30
2322065	Naproxen	3.34	Spike	P	0 - 30
2322065	Primidone	2.12	Spike	P	0 - 30
2322065	Pyraclostrobin	2.93	Spike	P	0 - 30
2322065	Silvex	18.1	Spike	P	0 - 30
2322065	Thiamethoxam	0.261	Spike	P	0 - 30
2322065	Tolfenpyrad	3.03	Spike	P	0 - 30
2322065	Triclopyr	3.61	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P412970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322221	Acesulfame K	0.568	Spike	P	0 - 30
2322221	AMPA	0.111	Spike	P	0 - 30
2322221	Endothall	0.834	Spike	P	0 - 30
2322221	Glufosinate	7.13	Spike	P	0 - 30
2322221	Glyphosate	0.135	Spike	P	0 - 30
2322221	Sucralose	1.36	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2322229

Field Sample ID: 20030133

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	34.3	P	30 - 160
EPA 8321B	Diuron-d6	68.3	P	30 - 160
EPA 8321B	Endothall-d6	94.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	49.7	P	30 - 160
EPA 8321B	Primidone-d5	52.6	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2322230

Field Sample ID: 20030129

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	60.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	37.4	P	30 - 160
EPA 8321B	Diuron-d6	30.2	P	30 - 160
EPA 8321B	Endothall-d6	93.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	50.0	P	30 - 160
EPA 8321B	Primidone-d5	65.8	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Lab Sample ID: 2322231

Field Sample ID: FB04262022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	58.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.2	P	30 - 160
EPA 8321B	Diuron-d6	83.9	P	30 - 160
EPA 8321B	Endothall-d6	92.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.7	P	30 - 160
EPA 8321B	Primidone-d5	89.5	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111858

Included Lab Sample IDs: 2322232, 2322233, 2322234, 2322235, 2322236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	98.9	99.6	P/P	90 - 110
Antimony	99.4	103	P/P	90 - 110
Arsenic	100	101	P/P	90 - 110
Arsenic	96.5	98.8	P/P	90 - 110
Beryllium	91.1	94.1	P/P	90 - 110
Beryllium	93.3	94.3	P/P	90 - 110
Cadmium	100	102	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	98.3	102	P/P	90 - 110
Chromium	98.6	100	P/P	90 - 110
Cobalt	96.1	99.3	P/P	90 - 110
Cobalt	98.6	101	P/P	90 - 110
Copper	92.8	96.5	P/P	90 - 110
Copper	96.0	98.8	P/P	90 - 110
Lead	97.9	99.6	P/P	90 - 110
Lead	99.2	99.8	P/P	90 - 110
Manganese	98.2	101	P/P	90 - 110
Manganese	98.3	103	P/P	90 - 110
Molybdenum	93.7	95.9	P/P	90 - 110
Molybdenum	97.4	96.8	P/P	90 - 110
Nickel	95.0	98.1	P/P	90 - 110
Nickel	98.3	101	P/P	90 - 110
Selenium	96.8	98.4	P/P	90 - 110
Selenium	98.3	99.0	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	95.0	93.9	P/P	90 - 110
Thallium	95.2	96.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111859

Included Lab Sample IDs: 2322229, 2322230, 2322231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	110	154	P/P	60 - 160
Sucralose	81.4	120	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111868

Included Lab Sample IDs: 2322229, 2322230, 2322231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	113	109	P/P	60 - 160
Endothall	89.7	92.0	P/P	60 - 160
Glufosinate	105	106	P/P	60 - 160
Glyphosate	91.9	96.7	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A111876

Included Lab Sample IDs: 2322229, 2322230, 2322231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	68.5	69.5	P/P	50 - 150
2,4-D	71.5	68.8	P/P	50 - 150
2,4,5-T	75.1	89.5	P/P	50 - 150
2,4,5-T	80.7	77.0	P/P	50 - 150
Acetaminophen	91.1	91.1	P/P	60 - 160
Acetaminophen	91.9	91.8	P/P	60 - 160
Acetamiprid	105	111	P/P	50 - 150
Acetamiprid	109	110	P/P	50 - 150
Acetamiprid	110	111	P/P	50 - 150
Afidopyropen	73.5	79.5	P/P	50 - 150
Afidopyropen	88.0	90.1	P/P	50 - 150
Afidopyropen	97.0	72.1	P/P	50 - 150
Bentazon	107	111	P/P	50 - 160
Bentazon	111	104	P/P	50 - 160
Benzovindiflupyr	101	104	P/P	50 - 150
Benzovindiflupyr	103	106	P/P	50 - 150
Benzovindiflupyr	105	105	P/P	50 - 150
Carbamazepine	100	101	P/P	60 - 150
Carbamazepine	101	100	P/P	60 - 150
Clothianidin	89.0	89.8	P/P	60 - 150
Clothianidin	90.6	93.6	P/P	60 - 150
Clothianidin	94.3	95.0	P/P	60 - 150
Dinotefuran	103	109	P/P	50 - 150
Dinotefuran	103	102	P/P	50 - 150
Dinotefuran	107	104	P/P	50 - 150
Diuron	101	103	P/P	60 - 160
Diuron	107	109	P/P	60 - 160
Diuron	110	106	P/P	60 - 160
Fenuron	102	105	P/P	60 - 150
Fenuron	106	105	P/P	60 - 150
Fenuron	106	106	P/P	60 - 150
Fluridone	101	101	P/P	60 - 160
Fluridone	105	105	P/P	60 - 160
Fluridone	108	104	P/P	60 - 160
Hydrocodone	105	105	P/P	60 - 150
Hydrocodone	105	101	P/P	60 - 150
Ibuprofen	90.5	87.3	P/P	50 - 160
Ibuprofen	94.6	93.1	P/P	50 - 160
Imazapyr	97.2	92.9	P/P	50 - 150
Imazapyr	99.5	106	P/P	50 - 150
Imidacloprid	101	96.2	P/P	60 - 150
Imidacloprid	94.6	100	P/P	60 - 150
Imidacloprid	98.5	96.4	P/P	60 - 150
Linuron	102	98.8	P/P	60 - 150
Linuron	109	104	P/P	60 - 150
Linuron	99.8	105	P/P	60 - 150
Mandestrobin	101	101	P/P	50 - 150
Mandestrobin	103	106	P/P	50 - 150
Mandestrobin	106	104	P/P	50 - 150
MCPP	79.7	83.1	P/P	50 - 150
MCPP	83.3	82.4	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A111876

Included Lab Sample IDs: 2322229, 2322230, 2322231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Naproxen	76.6	70.5	P/P	50 - 160
Naproxen	88.6	75.9	P/P	50 - 160
Primidone	82.0	87.8	P/P	60 - 150
Primidone	88.1	90.0	P/P	60 - 150
Pyraclostrobin	103	103	P/P	60 - 150
Pyraclostrobin	104	97.4	P/P	60 - 150
Pyraclostrobin	96.5	95.8	P/P	60 - 150
Silvex	78.6	74.0	P/P	50 - 150
Silvex	83.0	81.8	P/P	50 - 150
Thiamethoxam	102	105	P/P	50 - 150
Thiamethoxam	103	100	P/P	50 - 150
Thiamethoxam	98.6	102	P/P	50 - 150
Tolfenpyrad	72.7	69.2	P/P	60 - 150
Tolfenpyrad	75.2	77.5	P/P	60 - 150
Tolfenpyrad	79.4	73.1	P/P	60 - 150
Triclopyr	73.8	76.3	P/P	50 - 150
Triclopyr	79.5	79.5	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111897

Included Lab Sample IDs: 2322232, 2322233, 2322234, 2322235, 2322236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.9	98.1	P/P	90 - 110
Calcium	98.7	96.7	P/P	95 - 105
Iron	100	101	P/P	90 - 110
Iron	102	99.6	P/P	95 - 105
Magnesium	100	101	P/P	90 - 110
Magnesium	101	99.0	P/P	95 - 105
Strontium	102	99.2	P/P	90 - 110
Strontium	99.2	98.9	P/P	95 - 105
Tin	100	99.8	P/P	90 - 110
Tin	99.3	99.5	P/P	95 - 105
Titanium	101	100	P/P	95 - 105
Titanium	102	100	P/P	90 - 110
Vanadium	100	99.5	P/P	95 - 105
Vanadium	102	100	P/P	90 - 110
Zinc	101	101	P/P	90 - 110
Zinc	101	101	P/P	95 - 105

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111919

Included Lab Sample IDs: 2322235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tin	98.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111948

Included Lab Sample IDs: 2322234, 2322236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.6	100	P/P	90 - 110
Aluminum	99.6	98.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112014

Included Lab Sample IDs: 2322232, 2322233, 2322235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.1	100	P/P	90 - 110

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 200.7 Rev. 4.4	Calcium	100	98.4	97.9				0.761
	Iron	104	101	105	102			3.50
	Magnesium	103	101	105	102			2.30
	Strontium	101	102	104	101			1.44
	Tin	102	102	104	101			1.56
	Titanium	102	94.7	93.8	94.6			0.814
	Vanadium	95.9	97.5	99.5	97.8			2.06
	Zinc	101	101	103	102			1.64
EPA 200.8 Rev. 5.4	Aluminum	98.1	96.6	97.2	97.0			0.571
	Antimony	97.3	95.4	99.3	100			3.99
	Arsenic	98.9	98.6	101	99.2			2.34
	Beryllium	91.3	94.9	93.1	91.2			1.88
	Cadmium	98.6	99.5	103	103			3.19
	Chromium	98.5	99.8	102	101			1.75
	Cobalt	98.9	100	103	99.0			2.59
	Copper	94.7	98.4	100	96.4			1.72
	Lead	96.5	97.8	98.6	98.7			0.766
	Manganese	99.4	99.1	104	103			2.27
	Molybdenum	96.1	95.3	98.2	98.4			2.95
	Nickel	97.7	100	103	98.7			2.49
	Selenium	96.3	96.0	98.1	94.6			2.14
	Silver	99.5	99.5	101	101			1.69
	Thallium	97.5	101	103	101			1.47
	2,4-D	70.4	78.8	69.2				9.47
	2,4,5-T	65.2	93.2	92.0				1.30
EPA 8321B	Acesulfame K	104	94.5	94.0				0.568
	Acetaminophen	86.4	127	125				1.95
	Acetamiprid	68.5	40.8	38.6				5.51
	Afidopyropen	45.9	44.2	44.3				0.375
	AMPA	100	77.8	77.7				0.111
	Bentazon	77.9	40.4	47.2				9.58
	Benzovindiflupyr	70.4	58.7	57.7				1.69
	Carbamazepine	62.7	44.2	43.0				2.77
	Clothianidin	76.3	41.5	41.7				0.436
	Dinotefuran	102	104	105				0.497
	Diuron	74.9	50.5	49.2				1.61
	Endothall	99.1	95.5	94.7				0.834
	Fenuron	89.4	58.5	57.9				1.11
	Fluridone	68.7	72.4	70.5				2.62
	Glufosinate	108	91.2	97.9				7.13
	Glyphosate	91.1	128	128				0.135
	Hydrocodone	90.7	52.4	52.5				0.237
	Ibuprofen	66.1	54.9	55.4				0.822
	Imazapyr	78.3	74.5	69.8				5.94
	Imidacloprid	65.2	51.4	53.5				3.86
	Linuron	65.1	51.5	53.5				3.80
	Mandestrobin	64.5	58.9	59.5				1.00
	MCPP	83.0	118	118				0.359
	Naproxen	47.6	51.5	49.8				3.34
	Primidone	79.5	64.5	65.9				2.12
	Pyraclostrobin	62.4	67.9	66.0				2.93
	Silvex	75.2	96.7	116				18.1
	Sucralose	98.4	103	105				1.36
	Thiamethoxam	76.9	48.9	48.7				0.261

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Tolfenpyrad	30.4	37.6	36.5		3.03
	Triclopyr	68.9	86.4	89.6		3.61

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2322232, 2322233, 2322234, 2322235, 2322236
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2322232, 2322233, 2322234, 2322235, 2322236
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2322229, 2322230, 2322231

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.7 Rev. 4.4	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 13:08	Josef B Mick	2322236
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 17:32	Josef B Mick	2322232
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 17:48	Josef B Mick	2322233
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 17:55	Josef B Mick	2322234
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/03/2022 18:03	Josef B Mick	2322235
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/04/2022 19:29	Josef B Mick	2322235
EPA 200.8 Rev. 5.4	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 16:47	Emily M Philpot	2322236
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 20:42	Emily M Philpot	2322232
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 20:51	Emily M Philpot	2322233
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 21:00	Emily M Philpot	2322234
	04/27/2022	04/28/2022 10:10	Megan Whitefoot	05/02/2022 21:09	Emily M Philpot	2322235
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/05/2022 15:03	Emily M Philpot	2322236
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/05/2022 17:48	Emily M Philpot	2322234
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/09/2022 13:56	Alexander Thompson	2322232
	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/09/2022 14:05	Alexander Thompson	2322233
EPA 8321B	04/27/2022	05/05/2022 10:00	Megan Whitefoot	05/09/2022 14:15	Alexander Thompson	2322235
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/27/2022 21:26	Manjita Shrestha	2322229
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/27/2022 21:39	Manjita Shrestha	2322230
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/27/2022 21:52	Manjita Shrestha	2322231
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/29/2022 08:30	Manjita Shrestha	2322229
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/29/2022 08:45	Manjita Shrestha	2322230
	04/27/2022	04/27/2022 15:00	Manjita Shrestha	04/29/2022 09:00	Manjita Shrestha	2322231
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/28/2022 22:38	Juyoung Kim	2322229
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/28/2022 22:56	Juyoung Kim	2322230
	04/27/2022	04/28/2022 09:00	Hoor Shaik	04/29/2022 13:11	Juyoung Kim	2322231
	04/27/2022	04/28/2022 09:00	Hoor Shaik	05/02/2022 21:19	Juyoung Kim	2322229