

Chemical Analysis Report

NE-DIST-2019-11-13-02

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

Event Description: **ACEPD sample November for FDEP**
Request ID: **RQ-2019-11-04-26**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 03-DEC-2019 10:32

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals 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: Sweetwater Branch - N of SE 4th St

Collection Date/Time: 11/12/2019 11:20

Field ID: G1NE0916

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135709	EPA 8321B	2,4-D	0.0020	U	ug/L	P373857	
		Acesulfame K**	0.10	U	ug/L	P374205	
		AMPA**	0.19	I	ug/L	P374205	
		Sucralose**	0.26		ug/L	P374205	MS
		Acetaminophen**	0.0080	U	ug/L	P373857	
		Acetamiprid**	0.0020	U	ug/L	P373857	
		Endothall**	0.25	U	ug/L	P374205	
		Glufosinate**	0.10	U	ug/L	P374205	
		Glyphosate**	0.20	I	ug/L	P374205	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	0.0027	I	ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	0.0011	I	ug/L	P373857	
		Clothianidin**	0.0020	U	ug/L	P373857	
		Dinotefuran**	0.0047	I	ug/L	P373857	
		Diuron	0.017		ug/L	P373857	
		Fenuron	0.016	U	ug/L	P373857	
		Fluridone**	0.0012	I	ug/L	P373857	
		Imazapyr**	0.028		ug/L	P373857	
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.010		ug/L	P373857	MS
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCPP	0.0020	U	ug/L	P373857	
		Naproxen**	0.0080	U	ug/L	P373857	
		Primidone**	0.0063	I	ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0020	U	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	
2135717	EPA 200.7 Rev. 4.4	Barium	25.1		ug/L	P374233	
		Calcium	93.4		mg/L	P374233	
		Iron	120	I	ug/L	P374233	
		Magnesium	19.5		mg/L	P374233	
		Potassium	2.2		mg/L	P374233	
		Sodium	17.3		mg/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	115		ug/L	P374233	
		Antimony	0.27		ug/L	P374233	
		Arsenic	1.59		ug/L	P374233	
		Boron**	58.3		ug/L	P374233	
		Cadmium	0.037	I	ug/L	P374233	
		Chromium	0.84	I	ug/L	P374233	

Field ID: G1NE0916

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135717	EPA 200.8 Rev. 5.4	Copper	1.85		ug/L	P374233	
		Lead	1.27		ug/L	P374233	
		Nickel	0.74	I	ug/L	P374233	
		Selenium	0.31	I	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Sweetwater Branch - Upstream of SR 331

Collection Date/Time: 11/12/2019 12:00

Field ID: G1NE0905

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135710	EPA 8321B	2,4-D	0.0070	I	ug/L	P373857	
		Acesulfame K**	0.10	U	ug/L	P374205	
		AMPA**	0.10	U	ug/L	P374205	
		Sucralose**	36		ug/L	P374205	MS
		Acetaminophen**	0.0080	U	ug/L	P373857	
		Acetamiprid**	0.029		ug/L	P373857	
		Endothall**	0.25	U	ug/L	P374205	
		Glufosinate**	0.10	U	ug/L	P374205	
		Glyphosate**	0.10	U	ug/L	P374205	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	8.0E-04	U	ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	0.073		ug/L	P373857	
		Clothianidin**	0.0044	I	ug/L	P373857	
		Dinotefuran**	0.022		ug/L	P373857	
		Diuron	0.0076	I	ug/L	P373857	
		Fenuron	0.016	U	ug/L	P373857	
		Fluridone**	8.0E-04	U	ug/L	P373857	
		Imazapyr**	0.011	I	ug/L	P373857	
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.14		ug/L	P373857	MS
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCPP	0.0020	U	ug/L	P373857	
		Naproxen**	0.0080	U	ug/L	P373857	
		Primidone**	0.12		ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0047	I	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	
2135718	EPA 200.7 Rev. 4.4	Barium	8.6		ug/L	P374233	
		Calcium	44.3		mg/L	P374233	
		Iron	48	I	ug/L	P374233	
		Magnesium	17.6		mg/L	P374233	
		Potassium	8.1		mg/L	P374233	
		Sodium	55.9		mg/L	P374233	
		Zinc	25		ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	60		ug/L	P374233	
		Antimony	0.25		ug/L	P374233	
		Arsenic	0.44		ug/L	P374233	
		Boron**	141		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.48	I	ug/L	P374233	

Field ID: G1NE0905

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135718	EPA 200.8 Rev. 5.4	Copper	0.87		ug/L	P374233	
		Lead	0.21	I	ug/L	P374233	
		Nickel	0.92	I	ug/L	P374233	
		Selenium	0.20	U	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Tumblin Creek - W of US 441

Collection Date/Time: 11/12/2019 13:25

Field ID: G1NE0902

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135711	EPA 8321B	2,4-D	0.0020	U	ug/L	P373857	
		Acesulfame K**	0.10	U	ug/L	P374205	
		AMPA**	0.42		ug/L	P374205	
		Sucralose**	0.48		ug/L	P374205	MS
		Acetaminophen**	0.0080	U	ug/L	P373857	
		Acetamiprid**	0.0020	U	ug/L	P373857	
		Endothall**	0.25	U	ug/L	P374205	
		Glufosinate**	0.10	U	ug/L	P374205	
		Glyphosate**	1.1		ug/L	P374205	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	8.1E-04	I	ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	9.7E-04	I	ug/L	P373857	
		Clothianidin**	0.0020	U	ug/L	P373857	
		Dinotefuran**	0.0020	U	ug/L	P373857	
		Diuron	0.035		ug/L	P373857	
		Fenuron	0.016	U	ug/L	P373857	
		Fluridone**	8.0E-04	U	ug/L	P373857	
		Imazapyr**	0.011	I	ug/L	P373857	
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.034		ug/L	P373857	MS
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCPP	0.0020	U	ug/L	P373857	
		Naproxen**	0.0080	U	ug/L	P373857	
		Primidone**	0.0040	U	ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0020	U	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	
2135719	EPA 200.7 Rev. 4.4	Barium	19.9		ug/L	P374233	
		Calcium	50.8		mg/L	P374233	
		Iron	57	I	ug/L	P374233	
		Magnesium	7.79		mg/L	P374233	
		Potassium	3.0		mg/L	P374233	
		Sodium	13.1		mg/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	46		ug/L	P374233	
		Antimony	0.26		ug/L	P374233	
		Arsenic	0.70		ug/L	P374233	
		Boron**	55.2		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.40	U	ug/L	P374233	

Field ID: G1NE0902

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135719	EPA 200.8 Rev. 5.4	Copper	1.13		ug/L	P374233	
		Lead	0.20	U	ug/L	P374233	
		Nickel	0.50	U	ug/L	P374233	
		Selenium	0.27	I	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Tumblin Creek - S of SW 5th Ave

Collection Date/Time: 11/12/2019 13:45

Field ID: G1NE0914

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135712	EPA 8321B	2,4-D	0.0020	U	ug/L	P373857	
		Acesulfame K**	0.23	I	ug/L	P374205	
		AMPA**	0.12	I	ug/L	P374205	
		Sucralose**	0.37		ug/L	P374205	MS
		Acetaminophen**	0.25		ug/L	P373857	
		Acetamiprid**	0.0020	U	ug/L	P373857	
		Endothall**	0.25	U	ug/L	P374205	
		Glufosinate**	0.10	U	ug/L	P374205	
		Glyphosate**	0.19	I	ug/L	P374205	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	9.8E-04	I	ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	0.0016	I	ug/L	P373857	
		Clothianidin**	0.0020	U	ug/L	P373857	
		Dinotefuran**	0.0021	I	ug/L	P373857	
		Diuron	0.039		ug/L	P373857	
		Fenuron	0.016	U	ug/L	P373857	
		Fluridone**	8.0E-04	U	ug/L	P373857	
		Imazapyr**	0.013	I	ug/L	P373857	
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.035		ug/L	P373857	MS
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCPP	0.0020	U	ug/L	P373857	
		Naproxen**	0.076		ug/L	P373857	
		Primidone**	0.0040	U	ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0020	U	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	
2135720	EPA 200.7 Rev. 4.4	Barium	23.7		ug/L	P374233	
		Calcium	50.4		mg/L	P374233	
		Iron	79	I	ug/L	P374233	
		Magnesium	8.07		mg/L	P374233	
		Potassium	3.2		mg/L	P374233	
		Sodium	13.5		mg/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	23		ug/L	P374233	
		Antimony	0.28		ug/L	P374233	
		Arsenic	0.69		ug/L	P374233	
		Boron**	62.6		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.40	U	ug/L	P374233	

Field ID: G1NE0914

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135720	EPA 200.8 Rev. 5.4	Copper	0.77	I	ug/L	P374233	
		Lead	0.20	U	ug/L	P374233	
		Nickel	0.50	U	ug/L	P374233	
		Selenium	0.26	I	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

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

Sample Location: Bivens Arm Lake - West of US 441, and South of SW 16th Street

Collection Date/Time: 11/12/2019 14:30

Field ID: G1NE0904

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135713	EPA 8321B	2,4-D	0.095		ug/L	P373857	
		Acesulfame K**	0.10	U	ug/L	P374205	
		AMPA**	0.10	U	ug/L	P374205	
		Sucralose**	0.23		ug/L	P374205	MS
		Acetaminophen**	0.0080	U	ug/L	P373857	
		Acetamiprid**	0.0020	U	ug/L	P373857	
		Endothall**	0.25	U	ug/L	P374205	
		Glufosinate**	0.10	U	ug/L	P374205	
		Glyphosate**	0.10	U	ug/L	P374205	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	8.0E-04	U	ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	8.0E-04	U	ug/L	P373857	
		Clothianidin**	0.0020	U	ug/L	P373857	
		Dinotefuran**	0.0020	U	ug/L	P373857	
		Diuron	0.038		ug/L	P373857	
		Fenuron	0.044	I	ug/L	P373857	
		Fluridone**	0.0020	I	ug/L	P373857	
		Imazapyr**	0.042		ug/L	P373857	
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.0069	I	ug/L	P373857	MS
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCP	0.0020	U	ug/L	P373857	
		Naproxen**	0.0080	U	ug/L	P373857	
		Primidone**	0.0040	U	ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0020	U	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	
2135721	EPA 200.7 Rev. 4.4	Barium	11.8		ug/L	P374233	
		Calcium	32.5		mg/L	P374233	
		Iron	74	I	ug/L	P374233	
		Magnesium	3.83		mg/L	P374233	
		Potassium	1.4		mg/L	P374233	
		Sodium	6.6		mg/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	390		ug/L	P374233	
		Antimony	0.87		ug/L	P374233	
		Arsenic	1.70		ug/L	P374233	
		Boron**	15.2		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	

Field ID: G1NE0904

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135721	EPA 200.8 Rev. 5.4	Chromium	0.83	I	ug/L	P374233	
		Copper	0.84		ug/L	P374233	
		Lead	2.83		ug/L	P374233	
		Nickel	0.50	U	ug/L	P374233	
		Selenium	0.20	U	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Component	Result	Code	Units
Barium	1.0	U	ug/L
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
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	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 8321B
Batch ID: P373857

Component	Result	Code	Units
2,4-D	0.0020	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
Thiamethoxam	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P373857

Component	Result	Code	Units
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P374205

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: P374233

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	91.8		P	85 - 115
Iron	94.3		P	85 - 115
Magnesium	93.1		P	85 - 115
Potassium	97.8		P	85 - 115
Sodium	90.4		P	85 - 115
Zinc	98.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.7		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	98.8		P	85 - 115
Boron	96.0		P	85 - 115
Cadmium	97.1		P	85 - 115
Chromium	99.0		P	85 - 115
Copper	99.6		P	85 - 115
Lead	93.3		P	85 - 115
Nickel	99.2		P	85 - 115
Selenium	95.5		P	85 - 115
Silver	97.9		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 8321B
Batch ID: P373857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	100		P	30 - 160
Acetamiprid	81.3		P	40 - 160
Afidopyropen	81.8		P	40 - 160
Bentazon	83.5		P	30 - 160
Benzovindiflupyr	92.3		P	40 - 160
Carbamazepine	110		P	40 - 160
Clothianidin	95.4		P	40 - 160
Dinotefuran	84.5		P	40 - 160
Diuron	87.1		P	40 - 160
Fenuron	98.6		P	40 - 160
Fluridone	92.5		P	40 - 160
Hydrocodone	103		P	40 - 160
Ibuprofen	84.0		P	30 - 160
Imazapyr	80.7		P	40 - 160
Imidacloprid	93.4		P	40 - 160
Linuron	88.8		P	40 - 160
Mandestrobin	92.2		P	40 - 160
MCPP	135		P	40 - 160
Naproxen	69.0		P	40 - 160
Primidone	91.3		P	40 - 160
Pyraclostrobin	79.4		P	30 - 160
Thiamethoxam	101		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P373857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	51.2		P	40 - 160
Triclopyr	99.9		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P374205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	95.5		P	40 - 150
AMPA	141		P	40 - 150
Endothall	68.0		P	40 - 150
Glufosinate	111		P	40 - 150
Glyphosate	129		P	40 - 140
Sucralose	82.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135411	Barium	100		P	80 - 120
2135411	Iron	93.8		P	80 - 120
2135411	Magnesium	95.0		P	80 - 120
2135411	Potassium	107		P	80 - 120
2135411	Sodium	96.4		P	80 - 120
2135411	Zinc	98.9		P	80 - 120
2135719	Barium	99.1	97.4	P/P	80 - 120
2135719	Calcium	91.5		P	80 - 120
2135719	Iron	93.9	96.1	P/P	80 - 120
2135719	Magnesium	93.9		P	80 - 120
2135719	Potassium	93.6	94.2	P/P	80 - 120
2135719	Sodium	91.2		P	80 - 120
2135719	Zinc	97.6	95.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135411	Aluminum	92.8		P	80 - 120
2135411	Antimony	102		P	80 - 120
2135411	Arsenic	98.1		P	80 - 120
2135411	Boron	94.7		P	80 - 120
2135411	Cadmium	97.9		P	80 - 120
2135411	Chromium	95.9		P	80 - 120
2135411	Copper	95.6		P	80 - 120
2135411	Lead	92.9		P	80 - 120
2135411	Nickel	94.6		P	80 - 120
2135411	Selenium	93.3		P	80 - 120
2135411	Silver	97.2		P	80 - 120
2135411	Thallium	101		P	80 - 120
2135719	Aluminum	96.1	97.6	P/P	80 - 120
2135719	Antimony	102	103	P/P	80 - 120
2135719	Arsenic	101	103	P/P	80 - 120
2135719	Boron	98.1	100	P/P	80 - 120
2135719	Cadmium	99.3	99.8	P/P	80 - 120
2135719	Chromium	98.6	100	P/P	80 - 120
2135719	Copper	95.6	98.0	P/P	80 - 120
2135719	Lead	94.1	95.6	P/P	80 - 120
2135719	Nickel	97.8	98.6	P/P	80 - 120
2135719	Selenium	92.9	97.1	P/P	80 - 120
2135719	Silver	96.1	98.6	P/P	80 - 120
2135719	Thallium	112	106	P/P	80 - 120

Reference Method: EPA 8321B
Batch ID: P373857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134998	2,4-D	128	133	P/P	40 - 160
2134998	Acetaminophen	104	97.0	P/P	30 - 160
2134998	Acetamiprid	89.7	88.1	P/P	40 - 160
2134998	Afidopyropen	96.6	92.1	P/P	40 - 160
2134998	Bentazon	71.9	77.1	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P373857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134998	Benzovindiflupyr	99.1	89.9	P/P	40 - 160
2134998	Carbamazepine	102	93.3	P/P	40 - 160
2134998	Clothianidin	95.0	87.9	P/P	40 - 160
2134998	Dinotefuran	99.5	101	P/P	40 - 160
2134998	Diuron	79.8	80.0	P/P	40 - 160
2134998	Fenuron	102	98.8	P/P	40 - 160
2134998	Fluridone	93.0	96.4	P/P	40 - 160
2134998	Hydrocodone	111	111	P/P	40 - 160
2134998	Ibuprofen	84.8	82.7	P/P	30 - 160
2134998	Imazapyr	125	100	P/P	40 - 160
2134998	Imidacloprid	164	137	F/P	40 - 160
2134998	Linuron	85.9	86.9	P/P	40 - 160
2134998	Mandestrobin	92.4	91.8	P/P	40 - 160
2134998	MCP	134	138	P/P	40 - 160
2134998	Naproxen	67.3	59.1	P/P	40 - 160
2134998	Primidone	97.4	107	P/P	40 - 160
2134998	Pyraclostrobin	79.2	75.9	P/P	30 - 160
2134998	Thiamethoxam	140	128	P/P	40 - 160
2134998	Tolfenpyrad	53.2	62.7	P/P	40 - 160
2134998	Triclopyr	106	113	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P374205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135449	Acesulfame K	111	116	P/P	40 - 150
2135449	AMPA	86.8	96.6	P/P	40 - 150
2135449	Endothall	117	122	P/P	40 - 150
2135449	Glufosinate	81.1	81.8	P/P	40 - 150
2135449	Glyphosate	63.2	64.0	P/P	40 - 140
2135449	Sucralose	27.3	28.2	F/F	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135719	Barium	1.57	Spike	P	0 - 20
2135719	Calcium	0.176	Spike	P	0 - 20
2135719	Iron	2.29	Spike	P	0 - 20
2135719	Magnesium	1.59	Spike	P	0 - 20
2135719	Potassium	0.343	Spike	P	0 - 20
2135719	Sodium	0.511	Spike	P	0 - 20
2135719	Zinc	2.39	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135719	Aluminum	1.47	Spike	P	0 - 20
2135719	Antimony	0.406	Spike	P	0 - 20
2135719	Arsenic	2.15	Spike	P	0 - 20
2135719	Boron	1.50	Spike	P	0 - 20
2135719	Cadmium	0.450	Spike	P	0 - 20
2135719	Chromium	1.41	Spike	P	0 - 20
2135719	Copper	2.32	Spike	P	0 - 20
2135719	Lead	1.60	Spike	P	0 - 20
2135719	Nickel	0.818	Spike	P	0 - 20
2135719	Selenium	4.48	Spike	P	0 - 20
2135719	Silver	2.53	Spike	P	0 - 20
2135719	Thallium	5.92	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P373857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134998	2,4-D	3.68	Spike	P	0 - 30
2134998	Acetaminophen	7.22	Spike	P	0 - 30
2134998	Acetamiprid	1.82	Spike	P	0 - 30
2134998	Afidopyropen	4.77	Spike	P	0 - 30
2134998	Bentazon	5.65	Spike	P	0 - 30
2134998	Benzovindiflupyr	9.78	Spike	P	0 - 30
2134998	Carbamazepine	8.53	Spike	P	0 - 30
2134998	Clothianidin	7.46	Spike	P	0 - 30
2134998	Dinotefuran	1.87	Spike	P	0 - 30
2134998	Diuron	0.273	Spike	P	0 - 30
2134998	Fenuron	3.09	Spike	P	0 - 30
2134998	Fluridone	3.52	Spike	P	0 - 30
2134998	Hydrocodone	0.456	Spike	P	0 - 30
2134998	Ibuprofen	2.51	Spike	P	0 - 30
2134998	Imazapyr	22.3	Spike	P	0 - 30
2134998	Imidacloprid	18.0	Spike	P	0 - 30
2134998	Linuron	1.17	Spike	P	0 - 30
2134998	Mandestrobin	0.630	Spike	P	0 - 30
2134998	MCP	3.28	Spike	P	0 - 30
2134998	Naproxen	13.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P373857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134998	Primidone	9.72	Spike	P	0 - 30
2134998	Pyraclostrobin	4.33	Spike	P	0 - 30
2134998	Thiamethoxam	9.00	Spike	P	0 - 30
2134998	Tolfenpyrad	16.3	Spike	P	0 - 30
2134998	Triclopyr	5.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135449	Acesulfame K	4.65	Spike	P	0 - 30
2135449	AMPA	6.06	Spike	P	0 - 30
2135449	Endothall	4.23	Spike	P	0 - 30
2135449	Glufosinate	0.872	Spike	P	0 - 30
2135449	Glyphosate	0.602	Spike	P	0 - 30
2135449	Sucralose	3.18	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2135709
Field Sample ID: G1NE0916

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	117	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.6	P	30 - 160
EPA 8321B	Diuron-d6	60.0	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	146	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	146	P	30 - 160
EPA 8321B	Ibuprofen-d3	78.5	P	30 - 160
EPA 8321B	Primidone-d5	94.0	P	30 - 160
EPA 8321B	Sucralose-d6	87.5	P	30 - 160
EPA 8321B	Sucralose-d6	87.5	P	30 - 160

Lab Sample ID: 2135710
Field Sample ID: G1NE0905

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.3	P	30 - 160
EPA 8321B	Diuron-d6	64.5	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.9	P	30 - 160
EPA 8321B	Primidone-d5	68.6	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160

Lab Sample ID: 2135711
Field Sample ID: G1NE0902

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.8	P	30 - 160
EPA 8321B	Diuron-d6	76.0	P	30 - 160
EPA 8321B	Endothall-d6	94.6	P	30 - 160
EPA 8321B	Endothall-d6	94.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	30 - 160
EPA 8321B	Ibuprofen-d3	107	P	30 - 160
EPA 8321B	Primidone-d5	92.1	P	30 - 160
EPA 8321B	Sucralose-d6	53.3	P	30 - 160
EPA 8321B	Sucralose-d6	53.3	P	30 - 160

Lab Sample ID: 2135712
Field Sample ID: G1NE0914

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2135712
Field Sample ID: G1NE0914

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	92.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.6	P	30 - 160
EPA 8321B	Diuron-d6	74.3	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	136	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	136	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.9	P	30 - 160
EPA 8321B	Primidone-d5	82.2	P	30 - 160
EPA 8321B	Sucralose-d6	41.9	P	30 - 160
EPA 8321B	Sucralose-d6	41.9	P	30 - 160

Lab Sample ID: 2135713
Field Sample ID: G1NE0904

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.5	P	30 - 160
EPA 8321B	Diuron-d6	60.0	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.9	P	30 - 160
EPA 8321B	Primidone-d5	88.9	P	30 - 160
EPA 8321B	Sucralose-d6	88.8	P	30 - 160
EPA 8321B	Sucralose-d6	88.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95779

Included Lab Sample IDs: 2135709, 2135710, 2135711, 2135712, 2135713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	100	P/P	50 - 150
Acetaminophen	109	110	P/P	60 - 160
Acetamiprid	106	110	P/P	50 - 150
Afidopyropen	99.7	111	P/P	50 - 150
Bentazon	109	108	P/P	50 - 160
Benzovindiflupyr	122	103	P/P	50 - 150
Carbamazepine	87.0	84.8	P/P	60 - 150
Clothianidin	99.0	92.6	P/P	60 - 150
Dinotefuran	95.5	88.8	P/P	50 - 150
Diuron	100	98.9	P/P	60 - 150
Fenuron	113	113	P/P	60 - 150
Fluridone	113	110	P/P	60 - 160
Hydrocodone	113	109	P/P	60 - 150
Ibuprofen	94.5	108	P/P	50 - 160
Imazapyr	111	107	P/P	50 - 150
Imidacloprid	101	107	P/P	60 - 150
Linuron	115	109	P/P	60 - 150
Mandestrobin	113	112	P/P	50 - 150
MCPP	100	97.8	P/P	50 - 150
Naproxen	84.9	78.2	P/P	50 - 160
Primidone	93.6	99.8	P/P	60 - 150
Pyraclostrobin	88.6	90.4	P/P	60 - 150
Thiamethoxam	99.7	96.3	P/P	50 - 150
Tolfenpyrad	87.9	115	P/P	60 - 150
Triclopyr	90.1	104	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95796

Included Lab Sample IDs: 2135717, 2135718, 2135719, 2135720, 2135721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	99.4	P/P	90 - 110
Barium	99.4	101	P/P	90 - 110
Calcium	100	99.0	P/P	90 - 110
Calcium	99.0	99.4	P/P	90 - 110
Iron	102	99.6	P/P	90 - 110
Iron	99.6	99.2	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Magnesium	105	102	P/P	90 - 110
Potassium	95.6	95.6	P/P	90 - 110
Potassium	97.7	95.6	P/P	90 - 110
Sodium	99.3	99.8	P/P	90 - 110
Sodium	100	99.3	P/P	90 - 110
Zinc	98.7	100	P/P	90 - 110
Zinc	99.9	98.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95814

Included Lab Sample IDs: 2135709, 2135710, 2135711, 2135712, 2135713

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

Reference Method: EPA 8321B

Run ID: A95814

Included Lab Sample IDs: 2135709, 2135710, 2135711, 2135712, 2135713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	114	101	P/P	60 - 160
Endothall	68.4	111	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95818

Included Lab Sample IDs: 2135709, 2135710, 2135711, 2135712, 2135713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.4	71.2	P/P	60 - 160
Glufosinate	99.3	109	P/P	60 - 160
Glyphosate	106	102	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95849

Included Lab Sample IDs: 2135709, 2135711, 2135712, 2135713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	108	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95873

Included Lab Sample IDs: 2135717, 2135718, 2135719, 2135720, 2135721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	99.7	P/P	90 - 110
Antimony	101	99.6	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	99.9	102	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Copper	104	104	P/P	90 - 110
Lead	96.2	95.4	P/P	90 - 110
Nickel	104	103	P/P	90 - 110
Selenium	101	99.3	P/P	90 - 110
Silver	100	99.1	P/P	90 - 110
Thallium	98.4	96.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95924

Included Lab Sample IDs: 2135717, 2135718, 2135719, 2135720, 2135721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.7	97.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95972

Included Lab Sample IDs: 2135710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	112	117	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95998

Included Lab Sample IDs: 2135720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	95.7	95.0	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery			MS % Recovery			Precision SMP	MS
EPA 200.7 Rev. 4.4	Barium	101	100	99.1	97.4				1.57
	Calcium	91.8	91.5						0.176
	Iron	94.3	93.8	93.9	96.1				2.29
	Magnesium	93.1	95.0	93.9					1.59
	Potassium	97.8	107	93.6	94.2				0.343
	Sodium	90.4	96.4	91.2					0.511
	Zinc	98.7	98.9	97.6	95.3				2.39
EPA 200.8 Rev. 5.4	Aluminum	96.7	92.8	96.1	97.6				1.47
	Antimony	101	102	102	103				0.406
	Arsenic	98.8	98.1	101	103				2.15
	Boron	96.0	94.7	98.1	100				1.50
	Cadmium	97.1	97.9	99.3	99.8				0.450
	Chromium	99.0	95.9	98.6	100				1.41
	Copper	99.6	95.6	95.6	98.0				2.32
	Lead	93.3	92.9	94.1	95.6				1.60
	Nickel	99.2	94.6	97.8	98.6				0.818
	Selenium	95.5	93.3	92.9	97.1				4.48
	Silver	97.9	97.2	96.1	98.6				2.53
	Thallium	100	101	112	106				5.92
	2,4-D	133	128	133					3.68
	Acesulfame K	95.5	111	116					4.65
EPA 8321B	Acetaminophen	100	104	97.0					7.22
	Acetamiprid	81.3	89.7	88.1					1.82
	Afidopyropen	81.8	96.6	92.1					4.77
	AMPA	141	86.8	96.6					6.06
	Bentazon	83.5	71.9	77.1					5.65
	Benzovindiflupyr	92.3	99.1	89.9					9.78
	Carbamazepine	110	102	93.3					8.53
	Clothianidin	95.4	95.0	87.9					7.46
	Dinotefuran	84.5	99.5	101					1.87
	Diuron	87.1	79.8	80.0					0.273
	Endothall	68.0	117	122					4.23
	Fenuron	98.6	102	98.8					3.09
	Fluridone	92.5	93.0	96.4					3.52
	Glufosinate	111	81.1	81.8					0.872
	Glyphosate	129	63.2	64.0					0.602
	Hydrocodone	103	111	111					0.456
	Ibuprofen	84.0	84.8	82.7					2.51
	Imazapyr	80.7	125	100					22.3
	Imidacloprid	93.4	164	137					18.0
	Linuron	88.8	85.9	86.9					1.17
	Mandestrobin	92.2	92.4	91.8					0.630
	MCPP	135	134	138					3.28
	Naproxen	69.0	67.3	59.1					13.0
	Primidone	91.3	97.4	107					9.72
	Pyraclostrobin	79.4	79.2	75.9					4.33
	Sucralose	82.8	27.3	28.2					3.18
	Thiamethoxam	101	140	128					9.00
	Tolfenpyrad	51.2	53.2	62.7					16.3
	Triclopyr	99.9	106	113					5.99

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2135717, 2135718, 2135719, 2135720, 2135721
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2135717, 2135718, 2135719, 2135720, 2135721
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2135709, 2135710, 2135711, 2135712, 2135713
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2135709, 2135710, 2135711, 2135712, 2135713

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	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:16	Betina Topolski	2135717
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:22	Betina Topolski	2135718
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:28	Betina Topolski	2135719
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:48	Betina Topolski	2135720
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 15:13	Betina Topolski	2135721
EPA 200.8 Rev. 5.4	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 05:56	Justin Cutchin	2135717
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 06:06	Justin Cutchin	2135718
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 06:16	Justin Cutchin	2135719
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 06:45	Justin Cutchin	2135720
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 06:55	Justin Cutchin	2135721
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 17:06	Robert K Palmer	2135717
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 17:12	Robert K Palmer	2135718
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 17:18	Robert K Palmer	2135719
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 17:36	Robert K Palmer	2135720
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 17:42	Robert K Palmer	2135721
EPA 8321B	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/26/2019 17:47	Robert K Palmer	2135720
	11/13/2019	11/13/2019 14:00	Hoor Shaik	11/15/2019 11:00	Juyoung Kim	2135709
	11/13/2019	11/13/2019 14:00	Hoor Shaik	11/15/2019 11:35	Juyoung Kim	2135710
	11/13/2019	11/13/2019 14:00	Hoor Shaik	11/15/2019 12:09	Juyoung Kim	2135711
	11/13/2019	11/13/2019 14:00	Hoor Shaik	11/15/2019 12:44	Juyoung Kim	2135712
	11/13/2019	11/13/2019 14:00	Hoor Shaik	11/15/2019 13:18	Juyoung Kim	2135713
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/15/2019 12:44	Rebecca Ware	2135709
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/15/2019 12:58	Rebecca Ware	2135710
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/15/2019 13:11	Rebecca Ware	2135711
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/15/2019 13:25	Rebecca Ware	2135712
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/15/2019 13:39	Rebecca Ware	2135713
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/18/2019 13:31	Rebecca Ware	2135709
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/18/2019 13:42	Rebecca Ware	2135710
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/18/2019 13:53	Rebecca Ware	2135711
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/18/2019 14:03	Rebecca Ware	2135712
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/18/2019 14:14	Rebecca Ware	2135713
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/19/2019 16:31	Rebecca Ware	2135709
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/19/2019 16:54	Rebecca Ware	2135711
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/19/2019 17:06	Rebecca Ware	2135712
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/19/2019 17:18	Rebecca Ware	2135713
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/25/2019 13:53	Rebecca Ware	2135710