

Chemical Analysis Report

NE-DIST-2019-03-20-02

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

Event Description: **Alachua County March SMP**
Request ID: **RQ-2019-03-11-13**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 05-APR-2019 12:25

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: Turkey Creek upstream of the bridge on NW 74th Terr

Collection Date/Time: 03/19/2019 11:30

Field ID: G1NE0915

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2071395	EPA 8321B	2,4-D	0.0020	U	ug/L	P360773	
		Acesulfame K**	0.10	U	ug/L	P360764	MS
		AMPA**	0.10	U	ug/L	P360764	
		Sucralose**	0.15		ug/L	P361315	
		Acetaminophen**	0.0080	U	ug/L	P360773	
		Endothall**	0.25	U	ug/L	P360764	
		Glufosinate**	0.10	U	ug/L	P360764	
		Bentazon	0.014		ug/L	P360773	
		Glyphosate**	0.10	U	ug/L	P360764	
		Carbamazepine**	8.0E-04	U	ug/L	P360773	
		Diuron	0.013		ug/L	P360773	
		Fenuron	0.016	U	ug/L	P360773	
		Fluridone**	8.0E-04	U	ug/L	P360773	
		Imazapyr**	0.018		ug/L	P360773	
		Hydrocodone**	0.0020	U	ug/L	P360773	
		Ibuprofen**	0.020	U	ug/L	P360773	
		Imidacloprid	0.0039	I	ug/L	P360773	MS
		Linuron	0.0040	U	ug/L	P360773	
		MCP	0.0020	U	ug/L	P360773	
		Naproxen**	0.0080	U	ug/L	P360773	
		Primidone**	0.0040	U	ug/L	P360773	
		Pyraclostrobin**	0.0020	U	ug/L	P360773	
		Triclopyr**	0.0040	U	ug/L	P360773	
2071396	EPA 200.7 Rev. 4.4	Barium	5.0		ug/L	P360846	
		Calcium	28.9		mg/L	P360846	
		Iron	340		ug/L	P360846	
		Magnesium	8.77		mg/L	P360846	
		Potassium	0.96	I	mg/L	P360846	
		Sodium	12.1		mg/L	P360846	
		Zinc	5.0	U	ug/L	P360846	
	EPA 200.8 Rev. 5.4	Aluminum	103		ug/L	P360846	
		Antimony	0.072	I	ug/L	P360846	
		Arsenic	0.70		ug/L	P360846	
		Boron**	31.2		ug/L	P360846	
		Cadmium	0.020	U	ug/L	P360846	
		Chromium	0.74	I	ug/L	P360846	
		Copper	0.48	I	ug/L	P360846	
		Lead	0.20	U	ug/L	P360846	
		Nickel	2.8		ug/L	P360846	
		Selenium	0.30	I	ug/L	P360846	
		Silver	0.010	U	ug/L	P360846	
		Thallium	0.10	U	ug/L	P360846	

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360846

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: P360846

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: P360764

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

Reference Method: EPA 8321B
Batch ID: P360773

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P360773

Component	Result	Code	Units
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P361315

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	97.3		P	85 - 115
Iron	100		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	98.9		P	85 - 115
Sodium	97.8		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P360846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.1		P	85 - 115
Antimony	94.8		P	85 - 115
Arsenic	100		P	85 - 115
Boron	93.0		P	85 - 115
Cadmium	95.3		P	85 - 115
Chromium	90.6		P	85 - 115
Copper	96.7		P	85 - 115
Lead	92.5		P	85 - 115
Nickel	96.6		P	85 - 115
Selenium	102		P	85 - 115
Silver	101		P	85 - 115
Thallium	97.5		P	85 - 115

Reference Method: EPA 8321B
Batch ID: P360764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	110		P	40 - 150
AMPA	99.0		P	40 - 150
Endothall	119		P	40 - 150
Glufosinate	91.7		P	40 - 150
Glyphosate	87.7		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P360773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	84.1		P	40 - 150
Acetaminophen	106		P	30 - 150
Bentazon	113		P	30 - 150
Carbamazepine	87.3		P	40 - 150
Diuron	103		P	40 - 150
Fenuron	148		P	40 - 150
Fluridone	114		P	40 - 150
Hydrocodone	122		P	40 - 150
Ibuprofen	63.6		P	40 - 150
Imazapyr	104		P	40 - 150
Imidacloprid	134		P	40 - 150
Linuron	80.6		P	40 - 150
MCPP	112		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P360773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Naproxen	71.0		P	40 - 150
Primidone	114		P	40 - 150
Pyraclostrobin	72.3		P	40 - 150
Triclopyr	62.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P361315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	108		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2071118	Barium	97.5		P	80 - 120
2071118	Calcium	98.3		P	80 - 120
2071118	Iron	97.7		P	80 - 120
2071118	Magnesium	96.6		P	80 - 120
2071118	Potassium	97.9		P	80 - 120
2071118	Sodium	96.9		P	80 - 120
2071118	Zinc	98.1		P	80 - 120
2071273	Barium	100	96.4	P/P	80 - 120
2071273	Calcium	97.3		P	80 - 120
2071273	Iron	100	98.2	P/P	80 - 120
2071273	Magnesium	102	97.8	P/P	80 - 120
2071273	Potassium	99.4	97.6	P/P	80 - 120
2071273	Sodium	95.7		P	80 - 120
2071273	Zinc	104	99.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P360846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2071118	Aluminum	95.2		P	80 - 120
2071118	Antimony	97.7		P	80 - 120
2071118	Arsenic	99.1		P	80 - 120
2071118	Boron	96.7		P	80 - 120
2071118	Cadmium	98.9		P	80 - 120
2071118	Chromium	90.8		P	80 - 120
2071118	Copper	91.5		P	80 - 120
2071118	Lead	95.4		P	80 - 120
2071118	Nickel	92.0		P	80 - 120
2071118	Selenium	97.9		P	80 - 120
2071118	Silver	100		P	80 - 120
2071118	Thallium	102		P	80 - 120
2071273	Aluminum	95.5	93.3	P/P	80 - 120
2071273	Antimony	97.7	94.4	P/P	80 - 120
2071273	Arsenic	99.3	95.9	P/P	80 - 120
2071273	Boron	97.1	94.9	P/P	80 - 120
2071273	Cadmium	99.0	95.9	P/P	80 - 120
2071273	Chromium	92.3	90.0	P/P	80 - 120
2071273	Copper	94.8	91.7	P/P	80 - 120
2071273	Lead	97.0	94.3	P/P	80 - 120
2071273	Nickel	96.3	94.7	P/P	80 - 120
2071273	Selenium	99.4	92.8	P/P	80 - 120
2071273	Silver	101	103	P/P	80 - 120
2071273	Thallium	102	100	P/P	80 - 120

Reference Method: EPA 8321B
Batch ID: P360764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2071307	Acesulfame K	185	193	F/F	40 - 150
2071307	AMPA	108	102	P/P	40 - 150
2071307	Endothall	149	145	P/P	40 - 150
2071307	Glufosinate	108	103	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P360764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2071307	Glyphosate	92.1	81.8	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P360773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2071546	2,4-D	68.7	89.6	P/P	40 - 150
2071546	Acetaminophen	137	128	P/P	30 - 150
2071546	Bentazon	100	94.2	P/P	30 - 150
2071546	Carbamazepine	114	103	P/P	40 - 150
2071546	Diuron	99.9	102	P/P	40 - 150
2071546	Fenuron	144	138	P/P	40 - 150
2071546	Fluridone	118	114	P/P	40 - 150
2071546	Hydrocodone	102	109	P/P	40 - 150
2071546	Ibuprofen	65.8	65.5	P/P	40 - 150
2071546	Imazapyr	113	98.6	P/P	40 - 150
2071546	Imidacloprid	184	174	F/F	40 - 150
2071546	Linuron	90.5	85.2	P/P	40 - 150
2071546	MCP	114	105	P/P	40 - 150
2071546	Naproxen	99.4	87.0	P/P	40 - 150
2071546	Primidone	122	94.3	P/P	40 - 150
2071546	Pyraclostrobin	107	108	P/P	40 - 150
2071546	Triclopyr	62.1	58.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P361315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070592	Sucralose	99.2	63.5	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2071273	Barium	3.89	Spike	P	0 - 20
2071273	Calcium	2.55	Spike	P	0 - 20
2071273	Iron	1.63	Spike	P	0 - 20
2071273	Magnesium	2.39	Spike	P	0 - 20
2071273	Potassium	1.45	Spike	P	0 - 20
2071273	Sodium	1.50	Spike	P	0 - 20
2071273	Zinc	4.45	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P360846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2071273	Aluminum	2.15	Spike	P	0 - 20
2071273	Antimony	3.45	Spike	P	0 - 20
2071273	Arsenic	3.41	Spike	P	0 - 20
2071273	Boron	1.73	Spike	P	0 - 20
2071273	Cadmium	3.18	Spike	P	0 - 20
2071273	Chromium	2.58	Spike	P	0 - 20
2071273	Copper	2.47	Spike	P	0 - 20
2071273	Lead	2.78	Spike	P	0 - 20
2071273	Nickel	1.70	Spike	P	0 - 20
2071273	Selenium	6.86	Spike	P	0 - 20
2071273	Silver	2.23	Spike	P	0 - 20
2071273	Thallium	1.76	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P360764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2071307	Acesulfame K	4.12	Spike	P	0 - 30
2071307	AMPA	4.39	Spike	P	0 - 30
2071307	Endothall	2.63	Spike	P	0 - 30
2071307	Glufosinate	5.06	Spike	P	0 - 30
2071307	Glyphosate	10.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P360773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2071546	2,4-D	26.4	Spike	P	0 - 30
2071546	Acetaminophen	6.76	Spike	P	0 - 30
2071546	Bentazon	5.99	Spike	P	0 - 30
2071546	Carbamazepine	10.1	Spike	P	0 - 30
2071546	Diuron	1.87	Spike	P	0 - 30
2071546	Fenuron	3.97	Spike	P	0 - 30
2071546	Fluridone	2.86	Spike	P	0 - 30
2071546	Hydrocodone	5.95	Spike	P	0 - 30
2071546	Ibuprofen	0.352	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P360773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2071546	Imazapyr	13.9	Spike	P	0 - 30
2071546	Imidacloprid	5.26	Spike	P	0 - 30
2071546	Linuron	5.94	Spike	P	0 - 30
2071546	MCP	7.83	Spike	P	0 - 30
2071546	Naproxen	13.3	Spike	P	0 - 30
2071546	Primidone	25.9	Spike	P	0 - 30
2071546	Pyraclostrobin	0.860	Spike	P	0 - 30
2071546	Triclopyr	5.22	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P361315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070592	Sucralose	22.1	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2071395

Field Sample ID: G1NE0915

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.0	P	30 - 160
EPA 8321B	Diuron-d6	68.2	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	30 - 160
EPA 8321B	Ibuprofen-d3	56.6	P	30 - 160
EPA 8321B	Primidone-d5	58.1	P	30 - 160
EPA 8321B	Sucralose-d6	53.8	P	30 - 160
EPA 8321B	Sucralose-d6	53.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A90161

Included Lab Sample IDs: 2071395

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	115	119	P/P	60 - 160
Glufosinate	106	95.4	P/P	60 - 160
Glyphosate	79.5	82.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A90203

Included Lab Sample IDs: 2071395

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	126	120	P/P	60 - 160
Endothall	117	115	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A90208

Included Lab Sample IDs: 2071396

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.3	98.9	P/P	90 - 110
Calcium	99.3	98.0	P/P	90 - 110
Iron	98.2	98.6	P/P	90 - 110
Magnesium	98.6	99.1	P/P	90 - 110
Potassium	95.9	96.1	P/P	90 - 110
Sodium	98.0	98.0	P/P	90 - 110
Zinc	100	99.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A90254

Included Lab Sample IDs: 2071396

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.3	98.3	P/P	90 - 110
Antimony	96.7	97.7	P/P	90 - 110
Arsenic	96.7	97.6	P/P	90 - 110
Boron	99.3	101	P/P	90 - 110
Cadmium	97.6	98.0	P/P	90 - 110
Chromium	98.3	97.8	P/P	90 - 110
Copper	96.2	97.2	P/P	90 - 110
Lead	97.5	98.1	P/P	90 - 110
Nickel	96.4	96.8	P/P	90 - 110
Selenium	97.8	97.1	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	95.7	94.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A90274

Included Lab Sample IDs: 2071395

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	90.9	P/P	50 - 150
Acetaminophen	109	92.7	P/P	60 - 160
Bentazon	86.4	91.8	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A90274

Included Lab Sample IDs: 2071395

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	106	91.9	P/P	60 - 150
Diuron	94.9	108	P/P	60 - 150
Fenuron	108	109	P/P	60 - 150
Fluridone	124	93.4	P/P	60 - 160
Hydrocodone	105	99.1	P/P	60 - 150
Ibuprofen	113	108	P/P	50 - 160
Imazapyr	98.4	83.8	P/P	50 - 150
Imidacloprid	103	106	P/P	60 - 150
Linuron	88.8	104	P/P	60 - 150
MCPP	87.5	96.6	P/P	50 - 150
Naproxen	97.8	125	P/P	50 - 160
Primidone	121	135	P/P	60 - 150
Pyraclostrobin	87.2	87.3	P/P	60 - 150
Triclopyr	104	101	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A90425

Included Lab Sample IDs: 2071395

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	122	122	P/P	60 - 160

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 200.7 Rev. 4.4	Barium	101	97.5	100	96.4		3.89
	Calcium	97.3	98.3	97.3			2.55
	Iron	100	97.7	100	98.2		1.63
	Magnesium	105	96.6	102	97.8		2.39
	Potassium	98.9	97.9	99.4	97.6		1.45
	Sodium	97.8	96.9	95.7			1.50
	Zinc	101	98.1	104	99.8		4.45
EPA 200.8 Rev. 5.4	Aluminum	95.1	95.2	95.5	93.3		2.15
	Antimony	94.8	97.7	97.7	94.4		3.45
	Arsenic	100	99.1	99.3	95.9		3.41
	Boron	93.0	96.7	97.1	94.9		1.73
	Cadmium	95.3	98.9	99.0	95.9		3.18
	Chromium	90.6	90.8	92.3	90.0		2.58
	Copper	96.7	91.5	94.8	91.7		2.47
	Lead	92.5	95.4	97.0	94.3		2.78
	Nickel	96.6	92.0	96.3	94.7		1.70
	Selenium	102	97.9	99.4	92.8		6.86
	Silver	101	100	101	103		2.23
	Thallium	97.5	102	102	100		1.76
EPA 8321B	2,4-D	84.1	68.7	89.6			26.4
	Acesulfame K	110	185	193			4.12
	Acetaminophen	106	137	128			6.76
	AMPA	99.0	108	102			4.39
	Bentazon	113	100	94.2			5.99
	Carbamazepine	87.3	114	103			10.1
	Diuron	103	99.9	102			1.87
	Endothall	119	149	145			2.63
	Fenuron	148	144	138			3.97
	Fluridone	114	118	114			2.86
	Glufosinate	91.7	108	103			5.06
	Glyphosate	87.7	92.1	81.8			10.6
	Hydrocodone	122	102	109			5.95
	Ibuprofen	63.6	65.8	65.5			0.352
	Imazapyr	104	113	98.6			13.9
	Imidacloprid	134	184	174			5.26
	Linuron	80.6	90.5	85.2			5.94
	MCPP	112	114	105			7.83
	Naproxen	71.0	99.4	87.0			13.3
	Primidone	114	122	94.3			25.9
	Pyraclostrobin	72.3	107	108			0.860
	Sucralose	108	99.2	63.5			22.1
	Triclopyr	62.3	62.1	58.9			5.22

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	2071396
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2071396
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2071395
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2071395

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	03/20/2019	03/21/2019 15:15	Elliott D. Healy	03/22/2019 18:27	Betina Topolski	2071396
EPA 200.8 Rev. 5.4	03/20/2019	03/21/2019 15:15	Elliott D. Healy	03/26/2019 22:25	Robert K Palmer	2071396
EPA 8321B	03/20/2019	03/20/2019 17:40	Hoor Shaik	03/20/2019 18:00	Juyoung Kim	2071395
	03/20/2019	03/20/2019 17:40	Hoor Shaik	03/21/2019 07:25	Juyoung Kim	2071395
	03/20/2019	03/26/2019 09:00	Hoor Shaik	03/27/2019 20:46	Juyoung Kim	2071395
	03/20/2019	04/01/2019 15:45	Rebecca Ware	04/02/2019 13:41	Rebecca Ware	2071395