

Chemical Analysis Report

SW-DIST-2019-09-05-01

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

Event Description: **30Mile, McDonald, Alafia (Salt)**
Request ID: **RQ-2019-09-02-37**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 24-SEP-2019 09:11

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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 group are included in this report: 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: THIRTYMILE CREEK @ NICHOLS RD

Collection Date/Time: 09/04/2019 10:15

Field ID: G2SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116708	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P370242	
		2,4-D	0.0020	UJ	ug/L	P370371	MS
		AMPA**	0.17	I	ug/L	P370242	
		Sucralose**	0.052		ug/L	P370242	
		Acetaminophen**	0.0080	U	ug/L	P370371	
		Endothall**	0.25	U	ug/L	P370242	
		Acetamiprid**	0.0020	U	ug/L	P370371	
		Glufosinate**	0.10	U	ug/L	P370242	
		Glyphosate**	0.16	I	ug/L	P370242	
		Afidopyropen**	0.0020	UJ	ug/L	P370371	
		Bentazon	8.0E-04	U	ug/L	P370371	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370371	
		Carbamazepine**	8.0E-04	U	ug/L	P370371	
		Clothianidin**	0.0020	U	ug/L	P370371	
		Dinotefuran**	0.0020	U	ug/L	P370371	
		Diuron	0.0020	U	ug/L	P370371	
		Fenuron	0.016	U	ug/L	P370371	
		Fluridone**	8.0E-04	U	ug/L	P370371	
		Imazapyr**	0.15		ug/L	P370371	
		Hydrocodone**	0.0020	U	ug/L	P370371	
		Ibuprofen**	0.020	U	ug/L	P370371	
		Imidacloprid	0.0020	UJ	ug/L	P370371	MS
		Linuron	0.0040	U	ug/L	P370371	
		Mandestrobin**	0.0020	UJ	ug/L	P370371	
		MCPP	0.0020	UJ	ug/L	P370371	MS
		Naproxen**	0.0080	U	ug/L	P370371	
		Primidone**	0.0040	U	ug/L	P370371	
		Pyraclostrobin**	0.0020	U	ug/L	P370371	
		Thiamethoxam**	0.0020	U	ug/L	P370371	
		Tolfenpyrad**	0.0020	U	ug/L	P370371	
		Triclopyr**	0.0040	U	ug/L	P370371	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

Sample Location: McDONALD BRANCH @ THOMPSON RD

Collection Date/Time: 09/04/2019 10:45

Field ID: G2SW0093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116709	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P370304	
		2,4-D	0.0020	U	ug/L	P370371	MS
		AMPA**	0.10	U	ug/L	P370304	
		Sucralose**	0.14		ug/L	P370304	
		Acetaminophen**	0.0080	U	ug/L	P370371	
		Endothall**	0.25	U	ug/L	P370304	
		Acetamiprid**	0.0020	U	ug/L	P370371	
		Glufosinate**	0.10	U	ug/L	P370304	
		Glyphosate**	0.10	U	ug/L	P370304	
		Afidopyropen**	0.0020	UJ	ug/L	P370371	
		Bentazon	8.0E-04	U	ug/L	P370371	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370371	
		Carbamazepine**	8.0E-04	U	ug/L	P370371	
		Clothianidin**	0.0020	U	ug/L	P370371	
		Dinotefuran**	0.0020	U	ug/L	P370371	
		Diuron	0.0020	U	ug/L	P370371	
		Fenuron	0.016	U	ug/L	P370371	
		Fluridone**	0.0043		ug/L	P370371	
		Imazapyr**	0.0046	I	ug/L	P370371	
		Hydrocodone**	0.0020	U	ug/L	P370371	
		Ibuprofen**	0.020	U	ug/L	P370371	
		Imidacloprid	0.0020	U	ug/L	P370371	MS
		Linuron	0.0040	U	ug/L	P370371	
		Mandestrobin**	0.0020	UJ	ug/L	P370371	
		MCPP	0.0020	U	ug/L	P370371	MS
		Naproxen**	0.0080	U	ug/L	P370371	
		Primidone**	0.0051	I	ug/L	P370371	
		Pyraclostrobin**	0.0020	U	ug/L	P370371	
		Thiamethoxam**	0.0020	U	ug/L	P370371	
		Tolfenpyrad**	0.0020	U	ug/L	P370371	
		Triclopyr**	0.0040	U	ug/L	P370371	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: ALAFIA R. @ BOAT RAMP DOCK

Collection Date/Time: 09/04/2019 11:24

Field ID: G2SW0091

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116710	EPA 8321B	2,4-D	0.022		ug/L	P370371	MS
		Acesulfame K**	0.10	UJ	ug/L	P370304	SUR
		AMPA**	1.0	I	ug/L	P370304	
		Sucralose**	2.0		ug/L	P370304	
		Acetaminophen**	0.0080	U	ug/L	P370371	
		Endothall**	0.25	UJ	ug/L	P370304	SUR
		Acetamiprid**	0.0020	U	ug/L	P370371	
		Glufosinate**	1.0	U	ug/L	P370304	
		Glyphosate**	1.0	I	ug/L	P370304	
		Afidopyropen**	0.0020	UJ	ug/L	P370371	
		Bentazon	0.028		ug/L	P370371	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370371	
		Carbamazepine**	0.0032	I	ug/L	P370371	
		Clothianidin**	0.0054	I	ug/L	P370371	
		Dinotefuran**	0.0041	I	ug/L	P370371	
		Diuron	0.0096		ug/L	P370371	
		Fenuron	0.016	U	ug/L	P370371	
		Fluridone**	0.0067		ug/L	P370371	
		Imazapyr**	0.12		ug/L	P370371	
		Hydrocodone**	0.0020	U	ug/L	P370371	
		Ibuprofen**	0.020	U	ug/L	P370371	
		Imidacloprid	0.034		ug/L	P370371	MS
		Linuron	0.0040	U	ug/L	P370371	
		Mandestrobin**	0.0020	UJ	ug/L	P370371	
		MCPP	0.0020	U	ug/L	P370371	MS
		Naproxen**	0.0080	U	ug/L	P370371	
		Primidone**	0.0058	I	ug/L	P370371	
		Pyraclostrobin**	0.0020	U	ug/L	P370371	
		Thiamethoxam**	0.0051	I	ug/L	P370371	
		Tolfenpyrad**	0.0020	U	ug/L	P370371	
		Triclopyr**	0.0040	U	ug/L	P370371	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Refer to the narrative for an explanation of QC Codes. Surrogate spike recovery exceeding the control limits. Results confirmed in sample duplicate.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P370242

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

Reference Method: EPA 8321B
Batch ID: P370304

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

Reference Method: EPA 8321B
Batch ID: P370371

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
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P370242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	91.8		P	40 - 150
AMPA	58.2		P	40 - 150
Endothall	107		P	40 - 150
Glufosinate	113		P	40 - 150
Glyphosate	109		P	40 - 140
Sucralose	125		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P370304

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	70.7		P	40 - 150
AMPA	126		P	40 - 150
Endothall	112		P	40 - 150
Glufosinate	131		P	40 - 150
Glyphosate	137		P	40 - 140
Sucralose	122		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P370371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	139		P	40 - 160
Acetaminophen	85.8		P	30 - 160
Acetamiprid	105		P	40 - 160
Afidopyropen	103		P	40 - 160
Bentazon	136		P	30 - 160
Benzovindiflupyr	88.9		P	40 - 160
Carbamazepine	108		P	40 - 160
Clothianidin	94.8		P	40 - 160
Dinotefuran	96.7		P	40 - 160
Diuron	128		P	40 - 160
Fenuron	110		P	40 - 160
Fluridone	98.9		P	40 - 160
Hydrocodone	101		P	40 - 160
Ibuprofen	85.5		P	30 - 160
Imazapyr	98.6		P	40 - 160
Imidacloprid	97.9		P	40 - 160
Linuron	74.8		P	40 - 160
Mandestrobin	90.4		P	40 - 160
MCPP	158		P	40 - 160
Naproxen	110		P	40 - 160
Primidone	82.0		P	40 - 160
Pyraclostrobin	84.2		P	30 - 160
Thiamethoxam	110		P	40 - 160
Tolfenpyrad	65.9		P	40 - 160
Triclopyr	116		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P370242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116330	Acesulfame K	116	110	P/P	40 - 150
2116330	AMPA	55.2	58.3	P/P	40 - 150
2116330	Endothall	79.7	92.8	P/P	40 - 150
2116330	Glufosinate	84.8	77.0	P/P	40 - 150
2116330	Glyphosate	75.3	77.9	P/P	40 - 140
2116330	Sucralose	115	129	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P370304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116709	Acesulfame K	107	141	P/P	40 - 150
2116709	AMPA	70.0	71.4	P/P	40 - 150
2116709	Endothall	79.1	75.0	P/P	40 - 150
2116709	Glufosinate	98.4	87.7	P/P	40 - 150
2116709	Glyphosate	127	122	P/P	40 - 140
2116709	Sucralose	126	128	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P370371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116708	2,4-D	151	163	P/F	40 - 160
2116708	Acetaminophen	79.5	85.1	P/P	30 - 160
2116708	Acetamiprid	117	123	P/P	40 - 160
2116708	Afidopyropen	117	128	P/P	40 - 160
2116708	Bentazon	76.0	82.0	P/P	30 - 160
2116708	Benzovindiflupyr	92.3	97.9	P/P	40 - 160
2116708	Carbamazepine	94.9	102	P/P	40 - 160
2116708	Clothianidin	92.9	104	P/P	40 - 160
2116708	Dinotefuran	111	116	P/P	40 - 160
2116708	Diuron	109	113	P/P	40 - 160
2116708	Fenuron	88.4	95.6	P/P	40 - 160
2116708	Fluridone	91.8	96.6	P/P	40 - 160
2116708	Hydrocodone	83.2	105	P/P	40 - 160
2116708	Ibuprofen	82.8	82.2	P/P	30 - 160
2116708	Imidacloprid	186	196	F/F	40 - 160
2116708	Linuron	68.5	70.5	P/P	40 - 160
2116708	Mandestrobin	88.4	93.9	P/P	40 - 160
2116708	MCP	163	174	F/F	40 - 160
2116708	Naproxen	89.8	106	P/P	40 - 160
2116708	Primidone	89.4	94.4	P/P	40 - 160
2116708	Pyraclostrobin	91.7	90.9	P/P	30 - 160
2116708	Thiamethoxam	149	156	P/P	40 - 160
2116708	Tolfenpyrad	68.1	71.4	P/P	40 - 160
2116708	Triclopyr	137	125	P/P	30 - 160

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P370242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116330	Acesulfame K	4.94	Spike	P	0 - 30
2116330	AMPA	4.46	Spike	P	0 - 30
2116330	Endothall	15.2	Spike	P	0 - 30
2116330	Glufosinate	9.59	Spike	P	0 - 30
2116330	Glyphosate	2.98	Spike	P	0 - 30
2116330	Sucralose	11.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116709	Acesulfame K	27.2	Spike	P	0 - 30
2116709	AMPA	2.00	Spike	P	0 - 30
2116709	Endothall	5.33	Spike	P	0 - 30
2116709	Glufosinate	11.4	Spike	P	0 - 30
2116709	Glyphosate	3.77	Spike	P	0 - 30
2116709	Sucralose	1.07	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116708	2,4-D	7.67	Spike	P	0 - 30
2116708	Acetaminophen	6.71	Spike	P	0 - 30
2116708	Acetamiprid	5.24	Spike	P	0 - 30
2116708	Afidopyropen	8.78	Spike	P	0 - 30
2116708	Bentazon	7.64	Spike	P	0 - 30
2116708	Benzovindiflupyr	5.89	Spike	P	0 - 30
2116708	Carbamazepine	7.28	Spike	P	0 - 30
2116708	Clothianidin	10.9	Spike	P	0 - 30
2116708	Dinotefuran	4.47	Spike	P	0 - 30
2116708	Diuron	3.20	Spike	P	0 - 30
2116708	Fenuron	7.91	Spike	P	0 - 30
2116708	Fluridone	5.07	Spike	P	0 - 30
2116708	Hydrocodone	23.2	Spike	P	0 - 30
2116708	Ibuprofen	0.724	Spike	P	0 - 30
2116708	Imazapyr	0.420	Spike	P	0 - 30
2116708	Imidacloprid	5.37	Spike	P	0 - 30
2116708	Linuron	2.87	Spike	P	0 - 30
2116708	Mandestrobin	6.03	Spike	P	0 - 30
2116708	MCPP	6.14	Spike	P	0 - 30
2116708	Naproxen	16.6	Spike	P	0 - 30
2116708	Primidone	5.41	Spike	P	0 - 30
2116708	Pyraclostrobin	0.861	Spike	P	0 - 30
2116708	Thiamethoxam	4.78	Spike	P	0 - 30
2116708	Tolfenpyrad	4.83	Spike	P	0 - 30
2116708	Triclopyr	9.51	Spike	P	0 - 30

Quality Assurance Report

Precision

* 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: 2116708
Field Sample ID: G2SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	148	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.4	P	30 - 160
EPA 8321B	Diuron-d6	95.3	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.3	P	30 - 160
EPA 8321B	Primidone-d5	82.7	P	30 - 160
EPA 8321B	Sucralose-d6	92.0	P	30 - 160
EPA 8321B	Sucralose-d6	92.0	P	30 - 160

Lab Sample ID: 2116709
Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.3	P	30 - 160
EPA 8321B	Diuron-d6	111	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.4	P	30 - 160
EPA 8321B	Primidone-d5	88.1	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2116710
Field Sample ID: G2SW0091

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.7	P	30 - 160
EPA 8321B	Diuron-d6	118	P	30 - 160
EPA 8321B	Endothall-d6	260	F	30 - 160
EPA 8321B	Endothall-d6	260	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.9	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94082

Included Lab Sample IDs: 2116708, 2116709, 2116710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	72.7	80.1	P/P	60 - 160
AMPA	83.3	72.7	P/P	60 - 160
AMPA	85.1	83.3	P/P	60 - 160
Glufosinate	108	120	P/P	60 - 160
Glufosinate	121	130	P/P	60 - 160
Glufosinate	130	108	P/P	60 - 160
Glyphosate	126	137	P/P	60 - 160
Glyphosate	130	126	P/P	60 - 160
Glyphosate	137	144	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94086

Included Lab Sample IDs: 2116708

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	128	121	P/P	60 - 160
Endothall	117	121	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94125

Included Lab Sample IDs: 2116709, 2116710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	138	117	P/P	60 - 160
Endothall	99.2	111	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94127

Included Lab Sample IDs: 2116708, 2116709, 2116710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	115	123	P/P	60 - 160
Sucralose	121	115	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94400

Included Lab Sample IDs: 2116708, 2116709, 2116710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	127	104	P/P	50 - 150
Acetaminophen	103	101	P/P	60 - 160
Acetamiprid	113	110	P/P	50 - 150
Afidopyropen	122	125	P/P	50 - 150
Bentazon	100	105	P/P	50 - 160
Benzovindiflupyr	99.7	100	P/P	50 - 150
Carbamazepine	107	108	P/P	60 - 150
Clothianidin	103	101	P/P	60 - 150
Dinotefuran	97.8	91.8	P/P	50 - 150
Diuron	130	133	P/P	60 - 150
Fenuron	111	115	P/P	60 - 150
Fluridone	101	107	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94400

Included Lab Sample IDs: 2116708, 2116709, 2116710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	106	107	P/P	60 - 150
Ibuprofen	82.1	76.7	P/P	50 - 160
Imazapyr	109	90.1	P/P	50 - 150
Imidacloprid	88.8	100	P/P	60 - 150
Linuron	95.6	102	P/P	60 - 150
Mandestrobin	109	113	P/P	50 - 150
MCPP	105	99.1	P/P	50 - 150
Naproxen	92.9	82.3	P/P	50 - 160
Primidone	89.0	94.7	P/P	60 - 150
Pyraclostrobin	105	104	P/P	60 - 150
Thiamethoxam	108	107	P/P	50 - 150
Tolfenpyrad	106	106	P/P	60 - 150
Triclopyr	87.4	100	P/P	50 - 150

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

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	2,4-D	139	151	163			7.67
	Acesulfame K	91.8	116	110			4.94
	Acesulfame K	70.7	107	141			27.2
	Acetaminophen	85.8	79.5	85.1			6.71
	Acetamiprid	105	117	123			5.24
	Afidopyropen	103	117	128			8.78
	AMPA	58.2	55.2	58.3			4.46
	AMPA	126	70.0	71.4			2.00
	Bentazon	136	76.0	82.0			7.64
	Benzovindiflupyr	88.9	92.3	97.9			5.89
	Carbamazepine	108	94.9	102			7.28
	Clothianidin	94.8	92.9	104			10.9
	Dinotefuran	96.7	111	116			4.47
	Diuron	128	109	113			3.20
	Endothall	107	79.7	92.8			15.2
	Endothall	112	79.1	75.0			5.33
	Fenuron	110	88.4	95.6			7.91
	Fluridone	98.9	91.8	96.6			5.07
	Glufosinate	113	84.8	77.0			9.59
	Glufosinate	131	98.4	87.7			11.4
	Glyphosate	109	75.3	77.9			2.98
	Glyphosate	137	127	122			3.77
	Hydrocodone	101	83.2	105			23.2
	Ibuprofen	85.5	82.8	82.2			0.724
	Imazapyr	98.6					0.420
	Imidacloprid	97.9	186	196			5.37
	Linuron	74.8	68.5	70.5			2.87
	Mandestrobin	90.4	88.4	93.9			6.03
	MCPP	158	163	174			6.14
	Naproxen	110	89.8	106			16.6
	Primidone	82.0	89.4	94.4			5.41
	Pyraclostrobin	84.2	91.7	90.9			0.861
	Sucralose	125	115	129			11.0
	Sucralose	122	126	128			1.07
	Thiamethoxam	110	149	156			4.78
	Tolfenpyrad	65.9	68.1	71.4			4.83
	Triclopyr	116	137	125			9.51

Reference Method Descriptions

Method / DoH Cert

EPA 8321B / E31780

EPA 8321B / E31780

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Water soluble organic compounds by HPLC/MS/MS

Associated Samples

2116708, 2116709, 2116710

2116708, 2116709, 2116710

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	09/05/2019	09/06/2019 10:30	Rebecca Ware	09/06/2019 19:03	Rebecca Ware	2116708
	09/05/2019	09/06/2019 10:30	Rebecca Ware	09/09/2019 15:54	Rebecca Ware	2116708
	09/05/2019	09/06/2019 10:30	Rebecca Ware	09/10/2019 18:42	Rebecca Ware	2116708
	09/05/2019	09/09/2019 11:00	Rebecca Ware	09/09/2019 16:58	Rebecca Ware	2116709
	09/05/2019	09/09/2019 11:00	Rebecca Ware	09/09/2019 18:13	Rebecca Ware	2116710
	09/05/2019	09/09/2019 11:00	Rebecca Ware	09/10/2019 10:29	Rebecca Ware	2116709
	09/05/2019	09/09/2019 11:00	Rebecca Ware	09/10/2019 10:43	Rebecca Ware	2116710
	09/05/2019	09/09/2019 11:00	Rebecca Ware	09/10/2019 19:52	Rebecca Ware	2116709
	09/05/2019	09/09/2019 11:00	Rebecca Ware	09/10/2019 20:04	Rebecca Ware	2116710
	09/05/2019	09/11/2019 09:00	Hoor Shaik	09/13/2019 05:03	Juyoung Kim	2116708
	09/05/2019	09/11/2019 09:00	Hoor Shaik	09/13/2019 05:37	Juyoung Kim	2116709
	09/05/2019	09/11/2019 09:00	Hoor Shaik	09/13/2019 06:12	Juyoung Kim	2116710