

Chemical Analysis Report

SO-DIST-2021-02-05-02

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

Event Description: **2021 SMP: Billy Creek**
Request ID: **RQ-2021-02-01-63**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
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Date Certified: 15-FEB-2021 10:34



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: Billy Creek Site 1

Collection Date/Time: 02/04/2021 09:20

Field ID: G3SD0196

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223844	EPA 8321B	2,4-D	0.0093		ug/L	P393502	
		Acesulfame K	0.10	U	ug/L	P393478	
		AMPA	0.72		ug/L	P393478	
		Sucralose	0.34		ug/L	P393478	
		Acetaminophen**	0.054		ug/L	P393502	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Glufosinate	0.10	U	ug/L	P393478	
		Glyphosate	1.7		ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.034		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0020	I	ug/L	P393502	
		Fenuron	0.016	U	ug/L	P393502	
		Fluridone**	8.0E-04	U	ug/L	P393502	
		Imazapyr**	0.032		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.065		ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCPP	0.0020	U	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	
		Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	

Sample Location: Billy Creek Site 2

Collection Date/Time: 02/04/2021 09:45

Field ID: G3SD0197

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223845	EPA 8321B	2,4-D	0.019		ug/L	P393502	
		Acesulfame K	0.10	U	ug/L	P393478	
		AMPA	1.8		ug/L	P393478	
		Sucralose	0.28		ug/L	P393478	
		Acetaminophen**	0.018	I	ug/L	P393502	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Glufosinate	0.10	U	ug/L	P393478	
		Glyphosate	6.9		ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.019		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0020	U	ug/L	P393502	
		Fenuron	0.032	I	ug/L	P393502	
		Fluridone**	8.0E-04	U	ug/L	P393502	
		Imazapyr**	1.2		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.012		ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCPP	0.0023	I	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	
		Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	

Sample Location: Billy Creek Site 3

Collection Date/Time: 02/04/2021 10:05

Field ID: G3SD0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223846	EPA 8321B	2,4-D	0.017		ug/L	P393502	
		Acesulfame K	0.13	I	ug/L	P393478	
		AMPA	1.9		ug/L	P393478	
		Sucralose	0.26		ug/L	P393478	
		Acetaminophen**	0.0080	U	ug/L	P393502	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Glufosinate	0.10	U	ug/L	P393478	
		Glyphosate	4.8		ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.015		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0020	U	ug/L	P393502	
		Fenuron	0.025	I	ug/L	P393502	
		Fluridone**	8.0E-04	U	ug/L	P393502	
		Imazapyr**	0.72		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.0059	I	ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCPP	0.0020	U	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	
		Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	

Sample Location: Billy Creek Site 4

Collection Date/Time: 02/04/2021 10:40

Field ID: G3SD0199

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223847	EPA 8321B	2,4-D	0.020		ug/L	P393502	
		Acesulfame K	0.27	I	ug/L	P393478	
		AMPA	6.8		ug/L	P393478	
		Sucralose	0.19		ug/L	P393478	
		Acetaminophen**	0.0080	U	ug/L	P393502	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Glufosinate	0.10	U	ug/L	P393478	
		Glyphosate	32		ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.020		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0020	U	ug/L	P393502	
		Fenuron	0.016	U	ug/L	P393502	
		Fluridone**	8.0E-04	U	ug/L	P393502	
		Imazapyr**	0.89		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.075		ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCPP	0.0020	U	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	
		Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	

Sample Location: Billy Creek Site 5

Collection Date/Time: 02/04/2021 11:05

Field ID: G3SD0200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223848	EPA 8321B	2,4-D	0.0020	U	ug/L	P393502	
		Acesulfame K	0.37	I	ug/L	P393478	
		AMPA	7.4		ug/L	P393478	
		Sucralose	0.23		ug/L	P393478	
		Acetaminophen**	5.0		ug/L	P393502	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Glufosinate	0.10	U	ug/L	P393478	
		Glyphosate	32		ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.031		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0020	U	ug/L	P393502	
		Fenuron	0.016	U	ug/L	P393502	
		Fluridone**	8.0E-04	U	ug/L	P393502	
		Imazapyr**	1.2		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.0029	I	ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCPP	0.0020	U	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	
		Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	

Sample Location: Billy Creek @ Seaboardst

Collection Date/Time: 02/04/2021 11:30

Field ID: G3SD0203

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223849	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393478	
		2,4-D	0.016		ug/L	P393502	
		AMPA	1.0	I	ug/L	P393478	
		Sucralose	0.36		ug/L	P393478	
		Acetaminophen**	0.016	I	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Glufosinate	1.0	U	ug/L	P393478	
		Glyphosate	5.7		ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.016		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0020	U	ug/L	P393502	
		Fenuron	0.016	U	ug/L	P393502	
		Fluridone**	0.0011	I	ug/L	P393502	
		Imazapyr**	0.48		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.032		ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCPP	0.0020	U	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	
		Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P393478

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: P393502

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: P393478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	118		P	40 - 150
AMPA	96.6		P	40 - 150
Endothall	104		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	105		P	40 - 150
Sucralose	108		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P393502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	30 - 160
Acetaminophen	91.0		P	30 - 160
Acetamiprid	91.7		P	30 - 160
Afidopyropen	62.5		P	30 - 160
Bentazon	90.7		P	30 - 160
Benzovindiflupyr	75.6		P	30 - 160
Carbamazepine	98.7		P	30 - 160
Clothianidin	99.0		P	30 - 160
Dinotefuran	83.9		P	30 - 160
Diuron	62.7		P	30 - 160
Fenuron	95.6		P	30 - 160
Fluridone	87.5		P	30 - 160
Hydrocodone	94.0		P	30 - 160
Ibuprofen	86.1		P	30 - 160
Imazapyr	98.0		P	30 - 160
Imidacloprid	99.7		P	30 - 160
Linuron	69.5		P	30 - 160
Mandestrobin	81.1		P	30 - 160
MCPP	102		P	30 - 160
Naproxen	46.8		P	30 - 160
Primidone	90.7		P	30 - 160
Pyraclostrobin	74.3		P	30 - 160
Thiamethoxam	86.2		P	30 - 160
Tolfenpyrad	36.9		P	30 - 160
Triclopyr	90.0		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P393478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223674	Acesulfame K	109	126	P/P	40 - 150
2223674	AMPA	141	148	P/P	40 - 150
2223674	Endothall	84.8	102	P/P	40 - 150
2223674	Glufosinate	96.4	112	P/P	40 - 150
2223674	Glyphosate	82.1	86.1	P/P	40 - 150
2223674	Sucralose	111	113	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P393502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223260	2,4-D	79.3	87.2	P/P	30 - 160
2223260	Acetaminophen	107	108	P/P	30 - 160
2223260	Acetamiprid	98.5	94.0	P/P	30 - 160
2223260	Afidopyropen	74.0	80.1	P/P	30 - 160
2223260	Bentazon	44.0	41.8	P/P	30 - 160
2223260	Benzovindiflupyr	72.0	77.3	P/P	30 - 160
2223260	Carbamazepine	74.2	77.7	P/P	30 - 160
2223260	Clothianidin	88.7	97.4	P/P	30 - 160
2223260	Dinotefuran	103	96.4	P/P	30 - 160
2223260	Diuron	51.0	51.7	P/P	30 - 160
2223260	Fenuron	70.3	67.8	P/P	30 - 160
2223260	Fluridone	95.6	59.7	P/P	30 - 160
2223260	Hydrocodone	87.7	87.8	P/P	30 - 160
2223260	Ibuprofen	67.4	76.8	P/P	30 - 160
2223260	Imazapyr	101	91.1	P/P	30 - 160
2223260	Imidacloprid	123	130	P/P	30 - 160
2223260	Linuron	62.5	64.1	P/P	30 - 160
2223260	Mandestrobin	77.6	80.4	P/P	30 - 160
2223260	MCP	78.3	82.7	P/P	30 - 160
2223260	Naproxen	76.3	74.4	P/P	30 - 160
2223260	Primidone	86.9	97.9	P/P	30 - 160
2223260	Pyraclostrobin	80.2	78.0	P/P	30 - 160
2223260	Thiamethoxam	111	110	P/P	30 - 160
2223260	Tolfenpyrad	42.3	45.9	P/P	30 - 160
2223260	Triclopyr	75.1	83.5	P/P	30 - 160

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P393478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223674	Acesulfame K	13.7	Spike	P	0 - 30
2223674	AMPA	5.09	Spike	P	0 - 30
2223674	Endothall	18.2	Spike	P	0 - 30
2223674	Glufosinate	14.8	Spike	P	0 - 30
2223674	Glyphosate	4.22	Spike	P	0 - 30
2223674	Sucralose	1.65	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P393502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223260	2,4-D	9.44	Spike	P	0 - 30
2223260	Acetaminophen	0.594	Spike	P	0 - 30
2223260	Acetamiprid	4.67	Spike	P	0 - 30
2223260	Afidopyropen	7.92	Spike	P	0 - 30
2223260	Bentazon	2.35	Spike	P	0 - 30
2223260	Benzovindiflupyr	7.09	Spike	P	0 - 30
2223260	Carbamazepine	4.12	Spike	P	0 - 30
2223260	Clothianidin	9.36	Spike	P	0 - 30
2223260	Dinotefuran	5.19	Spike	P	0 - 30
2223260	Diuron	1.41	Spike	P	0 - 30
2223260	Fenuron	3.56	Spike	P	0 - 30
2223260	Fluridone	24.4	Spike	P	0 - 30
2223260	Hydrocodone	0.0536	Spike	P	0 - 30
2223260	Ibuprofen	13.1	Spike	P	0 - 30
2223260	Imazapyr	7.94	Spike	P	0 - 30
2223260	Imidacloprid	4.72	Spike	P	0 - 30
2223260	Linuron	2.50	Spike	P	0 - 30
2223260	Mandestrobin	3.59	Spike	P	0 - 30
2223260	MCPP	5.47	Spike	P	0 - 30
2223260	Naproxen	2.55	Spike	P	0 - 30
2223260	Primidone	11.9	Spike	P	0 - 30
2223260	Pyraclostrobin	2.84	Spike	P	0 - 30
2223260	Thiamethoxam	0.649	Spike	P	0 - 30
2223260	Tolfenpyrad	8.21	Spike	P	0 - 30
2223260	Triclopyr	10.6	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2223844
 Field Sample ID: G3SD0196

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.3	P	30 - 160
EPA 8321B	Diuron-d6	50.1	P	30 - 160
EPA 8321B	Endothall-d6	85.7	P	30 - 160
EPA 8321B	Endothall-d6	85.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.5	P	30 - 160
EPA 8321B	Primidone-d5	82.6	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Lab Sample ID: 2223845
 Field Sample ID: G3SD0197

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.2	P	30 - 160
EPA 8321B	Diuron-d6	50.8	P	30 - 160
EPA 8321B	Endothall-d6	95.3	P	30 - 160
EPA 8321B	Endothall-d6	95.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.6	P	30 - 160
EPA 8321B	Primidone-d5	87.6	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Lab Sample ID: 2223846
 Field Sample ID: G3SD0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.9	P	30 - 160
EPA 8321B	Diuron-d6	47.3	P	30 - 160
EPA 8321B	Endothall-d6	98.3	P	30 - 160
EPA 8321B	Endothall-d6	98.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.5	P	30 - 160
EPA 8321B	Primidone-d5	76.2	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2223847
 Field Sample ID: G3SD0199

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	78.3	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2223847

Field Sample ID: G3SD0199

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.8	P	30 - 160
EPA 8321B	Diuron-d6	50.4	P	30 - 160
EPA 8321B	Endothall-d6	99.8	P	30 - 160
EPA 8321B	Endothall-d6	99.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.8	P	30 - 160
EPA 8321B	Primidone-d5	75.3	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2223848

Field Sample ID: G3SD0200

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.1	P	30 - 160
EPA 8321B	Diuron-d6	48.6	P	30 - 160
EPA 8321B	Endothall-d6	99.0	P	30 - 160
EPA 8321B	Endothall-d6	99.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.4	P	30 - 160
EPA 8321B	Primidone-d5	74.6	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Lab Sample ID: 2223849

Field Sample ID: G3SD0203

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.3	P	30 - 160
EPA 8321B	Diuron-d6	54.6	P	30 - 160
EPA 8321B	Endothall-d6	78.6	P	30 - 160
EPA 8321B	Endothall-d6	78.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.6	P	30 - 160
EPA 8321B	Primidone-d5	87.4	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103494

Included Lab Sample IDs: 2223844, 2223845, 2223846, 2223847, 2223848, 2223849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	113	P/P	60 - 160
AMPA	115	116	P/P	60 - 160
AMPA	116	115	P/P	60 - 160
Endothall	104	93.2	P/P	60 - 160
Glufosinate	92.3	91.8	P/P	60 - 160
Glufosinate	94.9	92.3	P/P	60 - 160
Glyphosate	105	95.5	P/P	60 - 160
Glyphosate	106	99.4	P/P	60 - 160
Glyphosate	95.5	93.0	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103516

Included Lab Sample IDs: 2223844, 2223845, 2223846, 2223847, 2223848, 2223849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	107	105	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103561

Included Lab Sample IDs: 2223844, 2223845, 2223846, 2223847, 2223848, 2223849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	106	P/P	50 - 150
Acetaminophen	110	114	P/P	60 - 160
Acetaminophen	114	107	P/P	60 - 160
Acetamiprid	109	106	P/P	50 - 150
Afidopyropen	101	102	P/P	50 - 150
Bentazon	137	140	P/P	50 - 160
Benzovindiflupyr	106	109	P/P	50 - 160
Carbamazepine	106	107	P/P	60 - 150
Clothianidin	93.6	106	P/P	60 - 150
Dinotefuran	106	94.0	P/P	50 - 150
Diuron	109	111	P/P	60 - 160
Fenuron	112	102	P/P	60 - 150
Fluridone	120	123	P/P	60 - 160
Hydrocodone	101	107	P/P	60 - 150
Ibuprofen	88.3	93.7	P/P	50 - 160
Imazapyr	101	108	P/P	50 - 160
Imazapyr	108	114	P/P	50 - 160
Imidacloprid	99.9	94.0	P/P	60 - 150
Linuron	119	111	P/P	60 - 150
Mandestrobin	109	110	P/P	50 - 150
MCPP	102	102	P/P	50 - 150
Naproxen	65.4	98.8	P/P	50 - 160
Primidone	110	114	P/P	60 - 150
Pyraclostrobin	109	106	P/P	60 - 150
Thiamethoxam	98.9	101	P/P	50 - 150
Tolfenpyrad	110	99.9	P/P	60 - 150
Triclopyr	109	96.7	P/P	50 - 150

Quality Assurance Report

Calibration Verification

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	2,4-D	105	79.3	87.2		9.44
	Acesulfame K	118	109	126		13.7
	Acetaminophen	91.0	107	108		0.594
	Acetamiprid	91.7	98.5	94.0		4.67
	Afidopyropen	62.5	74.0	80.1		7.92
	AMPA	96.6	141	148		5.09
	Bentazon	90.7	44.0	41.8		2.35
	Benzovindiflupyr	75.6	72.0	77.3		7.09
	Carbamazepine	98.7	74.2	77.7		4.12
	Clothianidin	99.0	88.7	97.4		9.36
	Dinotefuran	83.9	103	96.4		5.19
	Diuron	62.7	51.0	51.7		1.41
	Endothall	104	84.8	102		18.2
	Fenuron	95.6	70.3	67.8		3.56
	Fluridone	87.5	95.6	59.7		24.4
	Glufosinate	108	96.4	112		14.8
	Glyphosate	105	82.1	86.1		4.22
	Hydrocodone	94.0	87.7	87.8		0.0536
	Ibuprofen	86.1	67.4	76.8		13.1
	Imazapyr	98.0	101	91.1		7.94
	Imidacloprid	99.7	123	130		4.72
	Linuron	69.5	62.5	64.1		2.50
	Mandestrobin	81.1	77.6	80.4		3.59
	MCPP	102	78.3	82.7		5.47
	Naproxen	46.8	76.3	74.4		2.55
	Primidone	90.7	86.9	97.9		11.9
	Pyraclostrobin	74.3	80.2	78.0		2.84
	Sucralose	108	111	113		1.65
	Thiamethoxam	86.2	111	110		0.649
	Tolfenpyrad	36.9	42.3	45.9		8.21
	Triclopyr	90.0	75.1	83.5		10.6

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2223844, 2223845, 2223846, 2223847, 2223848, 2223849
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2223844, 2223845, 2223846, 2223847, 2223848, 2223849

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 13:29	Rebecca Ware	2223844
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 13:42	Rebecca Ware	2223845
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 13:56	Rebecca Ware	2223846
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 14:10	Rebecca Ware	2223847
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 14:24	Rebecca Ware	2223848
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 14:37	Rebecca Ware	2223849
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 15:49	Rebecca Ware	2223849
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/09/2021 11:06	Rebecca Ware	2223847
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/09/2021 11:20	Rebecca Ware	2223848
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 05:02	Rebecca Ware	2223844
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 05:14	Rebecca Ware	2223845
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 05:26	Rebecca Ware	2223846
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 05:38	Rebecca Ware	2223847
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 05:49	Rebecca Ware	2223848
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 06:01	Rebecca Ware	2223849
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 02:51	Juyoung Kim	2223844
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 03:26	Juyoung Kim	2223845
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 04:00	Juyoung Kim	2223846
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 04:35	Juyoung Kim	2223847
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 05:10	Juyoung Kim	2223848
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 05:44	Juyoung Kim	2223849
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 12:06	Juyoung Kim	2223848
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 12:40	Juyoung Kim	2223845