

Chemical Analysis Report

SO-DIST-2021-03-26-01

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-2021-03-29-75**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
2295 Victoria Ave. Suite 364
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Date Certified: 13-APR-2021 10:45



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: BillyCreekSeaboard St

Collection Date/Time: 03/25/2021 08:15

Field ID: G3SD0203

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234100	EPA 8321B	2,4-D	0.017		ug/L	P395359	
		Acesulfame K	0.19	I	ug/L	P395638	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	2.1		ug/L	P395638	
		Sucralose	0.42		ug/L	P395638	
		Acetaminophen	0.022	I	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	7.0		ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.011		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	0.0011	I	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	0.0014	I	ug/L	P395359	
		Imazapyr	0.15		ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.012		ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Sample Location: BillyCrk@ShadyOaksBrdwk

Collection Date/Time: 03/25/2021 08:40

Field ID: G3SD0196

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234101	EPA 8321B	2,4-D	0.0032	I	ug/L	P395359	
		Acesulfame K	0.17	I J	ug/L	P395638	MS
		AMPA	1.5		ug/L	P395638	
		2,4,5-T	0.0040	U	ug/L	P395359	
		Sucralose	0.53		ug/L	P395638	
		Acetaminophen	0.012	I	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	15	J	ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.015		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.1E-04	I	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.035		ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.014		ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Ref. Method and Comment:

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: BillyCreek@VSShoemaker

Collection Date/Time: 03/25/2021 09:00

Field ID: G3SD0197

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234102	EPA 8321B	2,4-D	0.0076	I	ug/L	P395359	
		Acesulfame K	0.47		ug/L	P395638	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	3.5		ug/L	P395638	
		Sucralose	0.53		ug/L	P395638	
		Acetaminophen	0.027	I	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	8.3		ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.0086		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	0.0039		ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.037	I	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.14		ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.0045	I	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Sample Location: BillyCreeknearDemeryCir

Collection Date/Time: 03/25/2021 09:20

Field ID: G3SD0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234103	EPA 8321B	2,4-D	0.0098		ug/L	P395359	
		Acesulfame K	0.48		ug/L	P395638	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	3.7		ug/L	P395638	
		Sucralose	0.55		ug/L	P395638	
		Acetaminophen	0.054		ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	8.9		ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.0088		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	0.0046		ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.031	I	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.15		ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.0052	I	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Sample Location: BillyCreekUpstrmofMarsh

Collection Date/Time: 03/25/2021 10:00

Field ID: G3SD0199

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234104	EPA 8321B	2,4-D	0.0044	I	ug/L	P395359	
		Acesulfame K	0.11	I	ug/L	P395638	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	4.6		ug/L	P395638	
		Sucralose	0.10		ug/L	P395638	
		Acetaminophen	0.0082	I	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	3.7		ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.012		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.0E-04	U	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.089		ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.0053	I	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Sample Location: Billy Creek @ Ortiz Ave

Collection Date/Time: 03/25/2021 10:30

Field ID: G3SD0200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234105	EPA 8321B	2,4-D	0.0020	U	ug/L	P395359	
		Acesulfame K	0.31	I	ug/L	P395638	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	4.7		ug/L	P395638	
		Sucralose	0.23		ug/L	P395638	
		Acetaminophen	0.034		ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	7.0		ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	0.074		ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.0E-04	U	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.12		ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.0024	I	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Sample Location: FB

Collection Date/Time: 03/25/2021 10:40

Field ID: FB_03252021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2234106	EPA 8321B	2,4-D	0.0020	U	ug/L	P395359	
		Acesulfame K	0.10	U	ug/L	P395638	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	0.10	U	ug/L	P395638	
		Sucralose	0.010	U	ug/L	P395638	
		Acetaminophen	0.0080	U	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395638	
		Glufosinate	0.10	U	ug/L	P395638	
		Glyphosate	0.10	U	ug/L	P395638	MS
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	8.0E-04	U	ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.0E-04	U	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.0040	U	ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.0020	U	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	
		Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P395359

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	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

Reference Method: EPA 8321B

Batch ID: P395638

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 8321B
Batch ID: P395359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	122		P	30 - 160
2,4,5-T	92.4		P	30 - 160
Acetaminophen	87.9		P	30 - 160
Acetamiprid	108		P	30 - 160
Afidopyropen	81.9		P	30 - 160
Bentazon	59.0		P	30 - 160
Benzovindiflupyr	103		P	30 - 160
Carbamazepine	106		P	30 - 160
Clothianidin	121		P	30 - 160
Dinotefuran	96.3		P	30 - 160
Diuron	80.6		P	30 - 160
Fenuron	102		P	30 - 160
Fluridone	97.4		P	30 - 160
Hydrocodone	114		P	30 - 160
Ibuprofen	77.5		P	30 - 160
Imazapyr	87.4		P	30 - 160
Imidacloprid	118		P	30 - 160
Linuron	80.4		P	30 - 160
Mandestrobin	102		P	30 - 160
MCPP	113		P	30 - 160
Naproxen	68.8		P	30 - 160
Primidone	103		P	30 - 160
Pyraclostrobin	83.7		P	30 - 160
Thiamethoxam	125		P	30 - 160
Tolfenpyrad	52.6		P	30 - 160
Triclopyr	103		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P395638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	117		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	74.0		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	116		P	40 - 140
Sucralose	96.0		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P395359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233518	2,4-D	97.3	97.2	P/P	30 - 160
2233518	2,4,5-T	70.7	69.6	P/P	30 - 160
2233518	Acetaminophen	83.0	94.8	P/P	30 - 160
2233518	Acetamiprid	114	93.5	P/P	30 - 160
2233518	Afidopyropen	76.1	60.5	P/P	30 - 160
2233518	Bentazon	32.3	37.3	P/P	30 - 160
2233518	Benzovindiflupyr	94.4	93.3	P/P	30 - 160
2233518	Carbamazepine	87.3	90.1	P/P	30 - 160
2233518	Clothianidin	123	116	P/P	30 - 160
2233518	Dinotefuran	112	99.9	P/P	30 - 160
2233518	Diuron	53.8	59.2	P/P	30 - 160
2233518	Fenuron	81.8	86.5	P/P	30 - 160
2233518	Fluridone	83.7	82.1	P/P	30 - 160
2233518	Hydrocodone	121	116	P/P	30 - 160
2233518	Ibuprofen	68.8	70.6	P/P	30 - 160
2233518	Imazapyr	82.4	83.7	P/P	30 - 160
2233518	Imidacloprid	169	160	F/F	30 - 160
2233518	Linuron	65.7	65.5	P/P	30 - 160
2233518	Mandestrobin	90.7	89.2	P/P	30 - 160
2233518	MCCP	91.9	92.0	P/P	30 - 160
2233518	Naproxen	55.5	65.4	P/P	30 - 160
2233518	Primidone	95.7	102	P/P	30 - 160
2233518	Pyraclostrobin	87.0	87.9	P/P	30 - 160
2233518	Thiamethoxam	163	153	F/P	30 - 160
2233518	Tolfenpyrad	55.4	63.0	P/P	30 - 160
2233518	Triclopyr	75.5	80.6	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2234101	Acesulfame K	192	203	F/F	40 - 150
2234101	AMPA	108	112	P/P	40 - 150
2234101	Endothall	101	84.7	P/P	40 - 150
2234101	Glufosinate	119	104	P/P	40 - 150
2234101	Glyphosate	64.8	176	P/F	40 - 140
2234101	Sucralose	113	112	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P395359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233518	2,4-D	0.191	Spike	P	0 - 30
2233518	2,4,5-T	1.64	Spike	P	0 - 30
2233518	Acetaminophen	11.5	Spike	P	0 - 30
2233518	Acetamiprid	19.4	Spike	P	0 - 30
2233518	Afidopyropen	22.8	Spike	P	0 - 30
2233518	Bentazon	14.3	Spike	P	0 - 30
2233518	Benzovindiflupyr	1.16	Spike	P	0 - 30
2233518	Carbamazepine	3.20	Spike	P	0 - 30
2233518	Clothianidin	5.50	Spike	P	0 - 30
2233518	Dinotefuran	11.6	Spike	P	0 - 30
2233518	Diuron	9.59	Spike	P	0 - 30
2233518	Fenuron	5.63	Spike	P	0 - 30
2233518	Fluridone	1.94	Spike	P	0 - 30
2233518	Hydrocodone	4.41	Spike	P	0 - 30
2233518	Ibuprofen	2.54	Spike	P	0 - 30
2233518	Imazapyr	1.53	Spike	P	0 - 30
2233518	Imidacloprid	5.22	Spike	P	0 - 30
2233518	Linuron	0.364	Spike	P	0 - 30
2233518	Mandestrobin	1.66	Spike	P	0 - 30
2233518	MCPP	0.161	Spike	P	0 - 30
2233518	Naproxen	16.4	Spike	P	0 - 30
2233518	Primidone	6.09	Spike	P	0 - 30
2233518	Pyraclostrobin	0.979	Spike	P	0 - 30
2233518	Thiamethoxam	6.43	Spike	P	0 - 30
2233518	Tolfenpyrad	12.8	Spike	P	0 - 30
2233518	Triclopyr	6.59	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2234101	Acesulfame K	5.43	Spike	P	0 - 30
2234101	AMPA	2.77	Spike	P	0 - 30
2234101	Endothall	17.9	Spike	P	0 - 30
2234101	Glufosinate	14.3	Spike	P	0 - 30
2234101	Glyphosate	15.7	Spike	P	0 - 30
2234101	Sucralose	1.37	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2234100
Field Sample ID: G3SD0203

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.4	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	103	P	40 - 160
EPA 8321B	Endothall-d6	103	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	40 - 160
EPA 8321B	Ibuprofen-d3	65.0	P	30 - 160
EPA 8321B	Primidone-d5	92.5	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Lab Sample ID: 2234101
Field Sample ID: G3SD0196

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.2	P	30 - 160
EPA 8321B	Diuron-d6	67.9	P	30 - 160
EPA 8321B	Endothall-d6	96.0	P	40 - 160
EPA 8321B	Endothall-d6	96.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	151	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	151	P	40 - 160
EPA 8321B	Ibuprofen-d3	68.2	P	30 - 160
EPA 8321B	Primidone-d5	95.7	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160

Lab Sample ID: 2234102
Field Sample ID: G3SD0197

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.1	P	30 - 160
EPA 8321B	Diuron-d6	58.0	P	30 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	147	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	147	P	40 - 160
EPA 8321B	Ibuprofen-d3	66.4	P	30 - 160
EPA 8321B	Primidone-d5	95.1	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	30 - 160

Lab Sample ID: 2234103
Field Sample ID: G3SD0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.8	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2234103

Field Sample ID: G3SD0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.6	P	30 - 160
EPA 8321B	Diuron-d6	62.6	P	30 - 160
EPA 8321B	Endothall-d6	98.8	P	40 - 160
EPA 8321B	Endothall-d6	98.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	153	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	153	P	40 - 160
EPA 8321B	Ibuprofen-d3	74.5	P	30 - 160
EPA 8321B	Primidone-d5	93.8	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Lab Sample ID: 2234104

Field Sample ID: G3SD0199

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.5	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	95.3	P	40 - 160
EPA 8321B	Endothall-d6	95.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	97.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	97.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	65.6	P	30 - 160
EPA 8321B	Primidone-d5	98.2	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Lab Sample ID: 2234105

Field Sample ID: G3SD0200

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.0	P	30 - 160
EPA 8321B	Diuron-d6	60.9	P	30 - 160
EPA 8321B	Endothall-d6	106	P	40 - 160
EPA 8321B	Endothall-d6	106	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	64.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	64.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	63.0	P	30 - 160
EPA 8321B	Primidone-d5	93.9	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2234106

Field Sample ID: FB_03252021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	99.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.0	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2234106

Field Sample ID: FB_03252021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	100	P	30 - 160
EPA 8321B	Diuron-d6	91.8	P	30 - 160
EPA 8321B	Endothall-d6	99.3	P	40 - 160
EPA 8321B	Endothall-d6	99.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	143	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	143	P	40 - 160
EPA 8321B	Ibuprofen-d3	81.1	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	92.2	P	30 - 160
EPA 8321B	Sucralose-d6	92.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2234100, 2234101, 2234102, 2234103, 2234104, 2234105, 2234106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.2	82.2	P/P	50 - 150
2,4-D	93.0	89.2	P/P	50 - 150
2,4,5-T	71.3	77.4	P/P	50 - 150
2,4,5-T	88.6	71.3	P/P	50 - 150
Acetaminophen	87.9	93.0	P/P	60 - 160
Acetaminophen	93.0	92.1	P/P	60 - 160
Acetamiprid	104	107	P/P	50 - 150
Acetamiprid	107	108	P/P	50 - 150
Afidopyropen	94.9	96.6	P/P	50 - 150
Afidopyropen	96.6	97.0	P/P	50 - 150
Bentazon	67.2	64.4	P/P	50 - 160
Bentazon	71.9	67.2	P/P	50 - 160
Benzovindiflupyr	112	117	P/P	50 - 160
Benzovindiflupyr	117	117	P/P	50 - 160
Carbamazepine	104	107	P/P	60 - 150
Carbamazepine	107	103	P/P	60 - 150
Clothianidin	105	109	P/P	60 - 150
Clothianidin	109	115	P/P	60 - 150
Dinotefuran	93.4	99.6	P/P	50 - 150
Dinotefuran	99.6	96.3	P/P	50 - 150
Diuron	103	105	P/P	60 - 160
Diuron	106	103	P/P	60 - 160
Fenuron	96.8	98.1	P/P	60 - 150
Fenuron	98.1	100	P/P	60 - 150
Fluridone	111	112	P/P	60 - 160
Fluridone	112	115	P/P	60 - 160
Hydrocodone	109	124	P/P	60 - 150
Hydrocodone	124	123	P/P	60 - 150
Ibuprofen	71.5	92.9	P/P	50 - 160
Ibuprofen	92.9	82.8	P/P	50 - 160
Imazapyr	66.5	73.8	P/P	50 - 160
Imazapyr	73.8	74.3	P/P	50 - 160
Imidacloprid	105	96.8	P/P	60 - 150
Imidacloprid	99.9	105	P/P	60 - 150
Linuron	95.8	99.5	P/P	60 - 150
Linuron	99.5	95.6	P/P	60 - 150
Mandestrobin	105	115	P/P	50 - 150
Mandestrobin	115	111	P/P	50 - 150
MCP	91.2	91.1	P/P	50 - 150
MCP	92.8	91.2	P/P	50 - 150
Naproxen	114	75.6	P/P	50 - 160
Naproxen	75.6	69.1	P/P	50 - 160
Primidone	95.8	89.8	P/P	60 - 150
Primidone	99.5	95.8	P/P	60 - 150
Pyraclostrobin	110	111	P/P	60 - 150
Pyraclostrobin	111	113	P/P	60 - 150
Thiamethoxam	109	120	P/P	50 - 150
Thiamethoxam	120	116	P/P	50 - 150
Tolfenpyrad	109	114	P/P	60 - 150
Tolfenpyrad	114	111	P/P	60 - 150
Triclopyr	81.6	88.0	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2234100, 2234101, 2234102, 2234103, 2234104, 2234105, 2234106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	88.0	85.0	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A104387

Included Lab Sample IDs: 2234100, 2234101, 2234102, 2234103, 2234104, 2234105, 2234106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	114	125	P/P	40 - 160
Acesulfame K	122	114	P/P	40 - 160
AMPA	120	119	P/P	40 - 160
AMPA	134	120	P/P	40 - 160
Endothall	63.6	72.4	P/P	40 - 160
Endothall	77.7	63.6	P/P	40 - 160
Glufosinate	101	100	P/P	40 - 160
Glufosinate	106	101	P/P	40 - 160
Glyphosate	157	159	P/P	40 - 160
Glyphosate	159	119	P/P	40 - 160

Reference Method: EPA 8321B

Run ID: A104508

Included Lab Sample IDs: 2234100, 2234101, 2234102, 2234103, 2234104, 2234105, 2234106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	92.5	96.4	P/P	60 - 160
Sucralose	96.5	92.5	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		LCS	Precision	MS
						SMP	
EPA 8321B	2,4-D	122	97.3	97.2			0.191
	2,4,5-T	92.4	70.7	69.6			1.64
	Acesulfame K	117	192	203			5.43
	Acetaminophen	87.9	83.0	94.8			11.5
	Acetamiprid	108	114	93.5			19.4
	Afidopyropen	81.9	76.1	60.5			22.8
	AMPA	96.4	108	112			2.77
	Bentazon	59.0	32.3	37.3			14.3
	Benzovindiflupyr	103	94.4	93.3			1.16
	Carbamazepine	106	87.3	90.1			3.20
	Clothianidin	121	123	116			5.50
	Dinotefuran	96.3	112	99.9			11.6
	Diuron	80.6	53.8	59.2			9.59
	Endothall	74.0	101	84.7			17.9
	Fenuron	102	81.8	86.5			5.63
	Fluridone	97.4	83.7	82.1			1.94
	Glufosinate	100	119	104			14.3
	Glyphosate	116	64.8	176			15.7
	Hydrocodone	114	121	116			4.41
	Ibuprofen	77.5	68.8	70.6			2.54
	Imazapyr	87.4	82.4	83.7			1.53
	Imidacloprid	118	169	160			5.22
	Linuron	80.4	65.7	65.5			0.364
	Mandestrobin	102	90.7	89.2			1.66
	MCPP	113	91.9	92.0			0.161
	Naproxen	68.8	55.5	65.4			16.4
	Primidone	103	95.7	102			6.09
	Pyraclostrobin	83.7	87.0	87.9			0.979
	Sucralose	96.0	113	112			1.37
	Thiamethoxam	125	163	153			6.43
	Tolfenpyrad	52.6	55.4	63.0			12.8
	Triclopyr	103	75.5	80.6			6.59

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2234100, 2234101, 2234102, 2234103, 2234104, 2234105, 2234106
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2234100, 2234101, 2234102, 2234103, 2234104, 2234105, 2234106

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 04:00	Juyoung Kim	2234100
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 05:10	Juyoung Kim	2234101
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 05:44	Juyoung Kim	2234102
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 06:19	Juyoung Kim	2234103
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 06:54	Juyoung Kim	2234104
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 07:28	Juyoung Kim	2234105
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 08:03	Juyoung Kim	2234106
	03/26/2021	03/29/2021 10:00	Hoor Shaik	03/30/2021 09:12	Juyoung Kim	2234105
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 13:01	Rebecca Ware	2234101
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 13:15	Rebecca Ware	2234100
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 13:29	Rebecca Ware	2234102
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 13:43	Rebecca Ware	2234103
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 14:14	Rebecca Ware	2234104
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 14:28	Rebecca Ware	2234105
	03/26/2021	03/30/2021 11:30	Rebecca Ware	03/30/2021 14:42	Rebecca Ware	2234106
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 19:01	Rebecca Ware	2234106
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 19:59	Rebecca Ware	2234101
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 20:11	Rebecca Ware	2234100
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 20:23	Rebecca Ware	2234102
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 20:34	Rebecca Ware	2234103
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 20:58	Rebecca Ware	2234104
	03/26/2021	03/30/2021 11:30	Rebecca Ware	04/05/2021 21:10	Rebecca Ware	2234105