Chemical Analysis Report

SO-DIST-2020-07-21-01

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

Event Description: **2020 SMP : Hatchee Cricks**
Request ID: **RQ-2020-03-16-53**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
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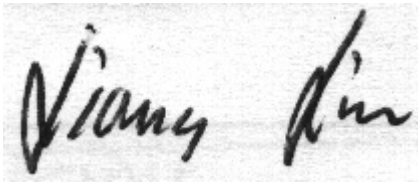
Date Certified: 31-JUL-2020 13:16



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: YellowFever@LittletonRd **Collection Date/Time: 07/20/2020 08:40**

Field ID: G3SD0149 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184388	EPA 8321B	2,4-D	0.0020	U	ug/L	P384835	
		Acesulfame K**	0.10	U	ug/L	P384932	
		AMPA**	0.10	U	ug/L	P384932	
		Sucralose**	0.35		ug/L	P384932	
		Acetaminophen**	0.0080	U	ug/L	P384835	
		Acetamiprid**	0.0020	U	ug/L	P384835	
		Endothall**	0.25	U	ug/L	P384932	
		Glufosinate**	0.10	U	ug/L	P384932	
		Glyphosate**	0.10	U	ug/L	P384932	
		Afidopyropen**	0.0020	U	ug/L	P384835	
		Bentazon	0.026		ug/L	P384835	
		Benzovindiflupyr**	0.0020	U	ug/L	P384835	
		Carbamazepine**	8.0E-04	U	ug/L	P384835	
		Clothianidin**	0.0020	U	ug/L	P384835	
		Dinotefuran**	0.0020	U	ug/L	P384835	
		Diuron	0.0020	U	ug/L	P384835	
		Fenuron	0.016	U	ug/L	P384835	
		Fluridone**	0.016		ug/L	P384835	
		Imazapyr**	0.28		ug/L	P384835	
		Hydrocodone**	0.0020	U	ug/L	P384835	
		Ibuprofen**	0.020	U	ug/L	P384835	
		Imidacloprid	0.0020	U	ug/L	P384835	
		Linuron	0.0040	U	ug/L	P384835	
		Mandestrobin**	0.0020	U	ug/L	P384835	
		MCPP	0.0020	U	ug/L	P384835	
		Naproxen**	0.0080	U	ug/L	P384835	
		Primidone**	0.0040	U	ug/L	P384835	
		Pyraclostrobin**	0.0020	U	ug/L	P384835	
		Thiamethoxam**	0.0020	U	ug/L	P384835	
		Tolfenpyrad**	0.0020	U	ug/L	P384835	
		Triclopyr**	0.0040	U	ug/L	P384835	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: PowellCreek@Bayshore **Collection Date/Time: 07/20/2020 09:00**

Field ID: G3SD0165 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184389	EPA 8321B	2,4-D	0.0020	U	ug/L	P384835	
		Acesulfame K**	0.10	U	ug/L	P384932	
		AMPA**	0.25	I	ug/L	P384932	
		Sucralose**	0.93		ug/L	P384932	
		Acetaminophen**	0.0080	U	ug/L	P384835	
		Acetamiprid**	0.0020	U	ug/L	P384835	
		Endothall**	0.25	U	ug/L	P384932	
		Glufosinate**	0.10	U	ug/L	P384932	
		Glyphosate**	0.31	I	ug/L	P384932	
		Afidopyropen**	0.0020	U	ug/L	P384835	
		Bentazon	0.0019	I	ug/L	P384835	
		Benzovindiflupyr**	0.0020	U	ug/L	P384835	
		Carbamazepine**	0.011		ug/L	P384835	
		Clothianidin**	0.0020	U	ug/L	P384835	
		Dinotefuran**	0.0020	U	ug/L	P384835	
		Diuron	0.0020	U	ug/L	P384835	
		Fenuron	0.016	U	ug/L	P384835	
		Fluridone**	0.017		ug/L	P384835	
		Imazapyr**	0.11		ug/L	P384835	
		Hydrocodone**	0.0020	U	ug/L	P384835	
		Ibuprofen**	0.020	U	ug/L	P384835	
		Imidacloprid	0.0020	U	ug/L	P384835	
		Linuron	0.0040	U	ug/L	P384835	
		Mandestrobin**	0.0020	U	ug/L	P384835	
		MCPP	0.0020	U	ug/L	P384835	
		Naproxen**	0.0080	U	ug/L	P384835	
		Primidone**	0.0040	U	ug/L	P384835	
		Pyraclostrobin**	0.0020	U	ug/L	P384835	
		Thiamethoxam**	0.0020	U	ug/L	P384835	
		Tolfenpyrad**	0.0020	U	ug/L	P384835	
		Triclopyr**	0.0040	U	ug/L	P384835	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: DaughtreyCreek@Bayshore **Collection Date/Time: 07/20/2020 09:20**

Field ID: G3SD0164 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184390	EPA 8321B	2,4-D	0.015		ug/L	P385007	
		Acesulfame K**	0.10	U	ug/L	P384932	
		AMPA**	0.17	I	ug/L	P384932	
		Sucralose**	0.37		ug/L	P384932	
		Acetaminophen**	0.037		ug/L	P385007	
		Acetamiprid**	0.0020	U	ug/L	P385007	
		Endothall**	0.25	U	ug/L	P384932	
		Glufosinate**	0.10	U	ug/L	P384932	
		Glyphosate**	0.10	U	ug/L	P384932	
		Afidopyropen**	0.0020	U	ug/L	P385007	
		Bentazon	0.0017	I	ug/L	P385007	
		Benzovindiflupyr**	0.0020	U	ug/L	P385007	
		Carbamazepine**	0.0016	I	ug/L	P385007	
		Clothianidin**	0.0020	U	ug/L	P385007	
		Dinotefuran**	0.0020	U	ug/L	P385007	
		Diuron	0.0020	U	ug/L	P385007	
		Fenuron	0.016	U	ug/L	P385007	
		Fluridone**	0.0030	I	ug/L	P385007	
		Imazapyr**	0.068		ug/L	P385007	
		Hydrocodone**	0.0020	U	ug/L	P385007	
		Ibuprofen**	0.020	U	ug/L	P385007	
		Imidacloprid	0.0020	U	ug/L	P385007	
		Linuron	0.0040	U	ug/L	P385007	
		Mandestrobin**	0.0020	U	ug/L	P385007	
		MCPP	0.0020	U	ug/L	P385007	
		Naproxen**	0.0080	U	ug/L	P385007	
		Primidone**	0.0040	I	ug/L	P385007	
		Pyraclostrobin**	0.0020	U	ug/L	P385007	
		Thiamethoxam**	0.0020	U	ug/L	P385007	
		Tolfenpyrad**	0.0020	U	ug/L	P385007	
		Triclopyr**	0.0040	U	ug/L	P385007	

Sample Location: PopashCreek@Pritchett **Collection Date/Time: 07/20/2020 09:40**

Field ID: G3SD0079 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184391	EPA 8321B	2,4-D	0.0087		ug/L	P385007	
		Acesulfame K**	0.22	I	ug/L	P384932	
		AMPA**	0.12	I	ug/L	P384932	
		Sucralose**	1.5		ug/L	P384932	
		Acetaminophen**	0.0080	U	ug/L	P385007	
		Acetamiprid**	0.0020	U	ug/L	P385007	
		Endothall**	0.25	U	ug/L	P384932	
		Glufosinate**	0.10	U	ug/L	P384932	
		Glyphosate**	0.10	I	ug/L	P384932	
		Afidopyropen**	0.0020	U	ug/L	P385007	
		Bentazon	8.0E-04	U	ug/L	P385007	
		Benzovindiflupyr**	0.0020	U	ug/L	P385007	
		Carbamazepine**	0.0023	I	ug/L	P385007	
		Clothianidin**	0.0020	U	ug/L	P385007	
		Dinotefuran**	0.0020	U	ug/L	P385007	
		Diuron	0.0037	I	ug/L	P385007	
		Fenuron	0.016	U	ug/L	P385007	
		Fluridone**	0.0031	I	ug/L	P385007	
		Imazapyr**	0.083		ug/L	P385007	
		Hydrocodone**	0.0020	U	ug/L	P385007	
		Ibuprofen**	0.020	U	ug/L	P385007	
		Imidacloprid	0.0020	U	ug/L	P385007	
		Linuron	0.0040	U	ug/L	P385007	
		Mandestrobin**	0.0020	U	ug/L	P385007	
		MCPP	0.0020	U	ug/L	P385007	
		Naproxen**	0.0080	U	ug/L	P385007	
		Primidone**	0.013	I	ug/L	P385007	
		Pyraclostrobin**	0.0020	U	ug/L	P385007	
		Thiamethoxam**	0.0020	U	ug/L	P385007	
		Tolfenpyrad**	0.0020	U	ug/L	P385007	
		Triclopyr**	0.0040	U	ug/L	P385007	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P384835

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

Reference Method: EPA 8321B
Batch ID: P384932

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: P385007

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385007

Component	Result	Code	Units
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: P384835

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	115		P	30 - 160
Acetaminophen	79.1		P	30 - 160
Acetamiprid	78.6		P	30 - 160
Afidopyropen	65.2		P	30 - 160
Bentazon	62.6		P	30 - 160
Benzovindiflupyr	69.9		P	30 - 160
Carbamazepine	66.9		P	30 - 160
Clothianidin	76.8		P	30 - 160
Dinotefuran	86.6		P	30 - 160
Diuron	58.2		P	30 - 160
Fenuron	101		P	30 - 160
Fluridone	90.5		P	30 - 160
Hydrocodone	82.3		P	30 - 160
Ibuprofen	79.6		P	30 - 160
Imazapyr	100		P	30 - 160
Imidacloprid	97.6		P	30 - 160
Linuron	67.0		P	30 - 160
Mandestrobin	75.5		P	30 - 160
MCPP	129		P	30 - 160
Naproxen	69.1		P	30 - 160
Primidone	77.2		P	30 - 160
Pyraclostrobin	74.1		P	30 - 160
Thiamethoxam	93.7		P	30 - 160
Tolfenpyrad	54.2		P	30 - 160
Triclopyr	95.7		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P384932

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	76.1		P	40 - 150
AMPA	83.8		P	40 - 150
Endothall	101		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	92.3		P	40 - 140
Sucralose	93.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P385007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	30 - 160
Acetaminophen	74.5		P	30 - 160
Acetamiprid	83.9		P	30 - 160
Afidopyropen	73.0		P	30 - 160
Bentazon	59.3		P	30 - 160
Benzovindiflupyr	82.3		P	30 - 160
Carbamazepine	73.2		P	30 - 160
Clothianidin	86.0		P	30 - 160
Dinotefuran	90.6		P	30 - 160
Diuron	68.4		P	30 - 160
Fenuron	99.8		P	30 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P385007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluridone	109		P	30 - 160
Hydrocodone	82.2		P	30 - 160
Ibuprofen	87.7		P	30 - 160
Imazapyr	86.9		P	30 - 160
Imidacloprid	93.9		P	30 - 160
Linuron	75.5		P	30 - 160
Mandestrobin	90.5		P	30 - 160
MCPP	131		P	30 - 160
Naproxen	74.7		P	30 - 160
Primidone	78.8		P	30 - 160
Pyraclostrobin	95.6		P	30 - 160
Thiamethoxam	96.7		P	30 - 160
Tolfenpyrad	66.0		P	30 - 160
Triclopyr	99.8		P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P384835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183089	Acetaminophen	93.3	85.9	P/P	30 - 160
2183089	Acetamiprid	73.3	69.5	P/P	30 - 160
2183089	Afidopyropen	63.4	57.7	P/P	30 - 160
2183089	Benzovindiflupyr	58.9	56.6	P/P	30 - 160
2183089	Carbamazepine	50.1	50.3	P/P	30 - 160
2183089	Clothianidin	76.7	74.8	P/P	30 - 160
2183089	Dinotefuran	96.0	91.4	P/P	30 - 160
2183089	Diuron	38.5	36.6	P/P	30 - 160
2183089	Fenuron	82.7	80.5	P/P	30 - 160
2183089	Fluridone	88.1	80.1	P/P	30 - 160
2183089	Hydrocodone	71.3	66.3	P/P	30 - 160
2183089	Ibuprofen	65.5	62.7	P/P	30 - 160
2183089	Imidacloprid	127	127	P/P	30 - 160
2183089	Linuron	50.4	52.2	P/P	30 - 160
2183089	Mandestrobin	70.9	66.5	P/P	30 - 160
2183089	MCPP	122	122	P/P	30 - 160
2183089	Naproxen	76.0	61.5	P/P	30 - 160
2183089	Primidone	88.2	79.7	P/P	30 - 160
2183089	Pyraclostrobin	70.6	70.4	P/P	30 - 160
2183089	Thiamethoxam	101	103	P/P	30 - 160
2183089	Tolfenpyrad	47.2	44.5	P/P	30 - 160
2183089	Triclopyr	97.1	97.1	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P384932

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184190	Acesulfame K	88.9	92.0	P/P	40 - 150
2184190	AMPA	81.0	84.2	P/P	40 - 150
2184190	Endothall	100	102	P/P	40 - 150
2184190	Glufosinate	93.4	95.4	P/P	40 - 150
2184190	Glyphosate	77.5	76.4	P/P	40 - 140
2184190	Sucralose	97.4	97.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P385007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184390	2,4-D	133	127	P/P	30 - 160
2184390	Acetaminophen	79.6	80.1	P/P	30 - 160
2184390	Acetamiprid	73.9	72.5	P/P	30 - 160
2184390	Afidopyropen	73.1	68.5	P/P	30 - 160
2184390	Bentazon	46.4	43.9	P/P	30 - 160
2184390	Benzovindiflupyr	77.5	72.2	P/P	30 - 160
2184390	Carbamazepine	58.0	59.1	P/P	30 - 160
2184390	Clothianidin	72.1	70.1	P/P	30 - 160
2184390	Dinotefuran	93.6	91.4	P/P	30 - 160
2184390	Diuron	53.1	53.6	P/P	30 - 160
2184390	Fenuron	84.0	82.8	P/P	30 - 160
2184390	Fluridone	102	94.7	P/P	30 - 160
2184390	Hydrocodone	68.9	70.0	P/P	30 - 160
2184390	Ibuprofen	82.2	69.8	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P385007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184390	Imazapyr	95.1	101	P/P	30 - 160
2184390	Imidacloprid	132	134	P/P	30 - 160
2184390	Linuron	67.0	61.2	P/P	30 - 160
2184390	Mandestrobin	79.6	79.0	P/P	30 - 160
2184390	MCPP	137	138	P/P	30 - 160
2184390	Naproxen	60.0	64.4	P/P	30 - 160
2184390	Primidone	82.5	87.8	P/P	30 - 160
2184390	Pyraclostrobin	75.3	74.7	P/P	30 - 160
2184390	Thiamethoxam	104	101	P/P	30 - 160
2184390	Tolfenpyrad	52.4	57.4	P/P	30 - 160
2184390	Triclopyr	113	115	P/P	30 - 160

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P384835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183089	2,4-D	1.80	Spike	P	0 - 30
2183089	Acetaminophen	8.22	Spike	P	0 - 30
2183089	Acetamiprid	5.27	Spike	P	0 - 30
2183089	Afidopyropen	9.29	Spike	P	0 - 30
2183089	Bentazon	0.870	Spike	P	0 - 30
2183089	Benzovindiflupyr	4.00	Spike	P	0 - 30
2183089	Carbamazepine	0.389	Spike	P	0 - 30
2183089	Clothianidin	2.55	Spike	P	0 - 30
2183089	Dinotefuran	4.88	Spike	P	0 - 30
2183089	Diuron	4.00	Spike	P	0 - 30
2183089	Fenuron	2.69	Spike	P	0 - 30
2183089	Fluridone	7.74	Spike	P	0 - 30
2183089	Hydrocodone	7.24	Spike	P	0 - 30
2183089	Ibuprofen	4.32	Spike	P	0 - 30
2183089	Imazapyr	5.38	Spike	P	0 - 30
2183089	Imidacloprid	0.128	Spike	P	0 - 30
2183089	Linuron	3.57	Spike	P	0 - 30
2183089	Mandestrobin	6.38	Spike	P	0 - 30
2183089	MCPP	0.692	Spike	P	0 - 30
2183089	Naproxen	21.1	Spike	P	0 - 30
2183089	Primidone	10.1	Spike	P	0 - 30
2183089	Pyraclostrobin	0.318	Spike	P	0 - 30
2183089	Thiamethoxam	1.10	Spike	P	0 - 30
2183089	Tolfenpyrad	5.84	Spike	P	0 - 30
2183089	Triclopyr	0.00865	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P384932

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184190	Acesulfame K	3.50	Spike	P	0 - 30
2184190	AMPA	3.95	Spike	P	0 - 30
2184190	Endothall	1.38	Spike	P	0 - 30
2184190	Glufosinate	2.11	Spike	P	0 - 30
2184190	Glyphosate	1.44	Spike	P	0 - 30
2184190	Sucralose	0.0632	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184390	2,4-D	3.65	Spike	P	0 - 30
2184390	Acetaminophen	0.388	Spike	P	0 - 30
2184390	Acetamiprid	1.84	Spike	P	0 - 30
2184390	Afidopyropen	6.42	Spike	P	0 - 30
2184390	Bentazon	3.81	Spike	P	0 - 30
2184390	Benzovindiflupyr	7.15	Spike	P	0 - 30
2184390	Carbamazepine	1.73	Spike	P	0 - 30
2184390	Clothianidin	2.84	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P385007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184390	Dinotefuran	2.44	Spike	P	0 - 30
2184390	Diuron	1.04	Spike	P	0 - 30
2184390	Fenuron	1.55	Spike	P	0 - 30
2184390	Fluridone	6.64	Spike	P	0 - 30
2184390	Hydrocodone	1.62	Spike	P	0 - 30
2184390	Ibuprofen	16.3	Spike	P	0 - 30
2184390	Imazapyr	3.41	Spike	P	0 - 30
2184390	Imidacloprid	1.59	Spike	P	0 - 30
2184390	Linuron	9.00	Spike	P	0 - 30
2184390	Mandestrobin	0.848	Spike	P	0 - 30
2184390	MCPP	0.627	Spike	P	0 - 30
2184390	Naproxen	7.14	Spike	P	0 - 30
2184390	Primidone	5.96	Spike	P	0 - 30
2184390	Pyraclostrobin	0.825	Spike	P	0 - 30
2184390	Thiamethoxam	3.31	Spike	P	0 - 30
2184390	Tolfenpyrad	9.00	Spike	P	0 - 30
2184390	Triclopyr	2.34	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2184388
Field Sample ID: G3SD0149

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.4	P	30 - 160
EPA 8321B	Diuron-d6	57.1	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.3	P	30 - 160
EPA 8321B	Primidone-d5	87.1	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Lab Sample ID: 2184389
Field Sample ID: G3SD0165

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.6	P	30 - 160
EPA 8321B	Diuron-d6	56.6	P	30 - 160
EPA 8321B	Endothall-d6	99.7	P	30 - 160
EPA 8321B	Endothall-d6	99.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	70.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	70.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	63.7	P	30 - 160
EPA 8321B	Primidone-d5	80.2	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Lab Sample ID: 2184390
Field Sample ID: G3SD0164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.9	P	30 - 160
EPA 8321B	Diuron-d6	60.1	P	30 - 160
EPA 8321B	Endothall-d6	99.6	P	30 - 160
EPA 8321B	Endothall-d6	99.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	64.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	64.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.1	P	30 - 160
EPA 8321B	Primidone-d5	80.4	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2184391
Field Sample ID: G3SD0079

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.2	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2184391
Field Sample ID: G3SD0079

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	95.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.7	P	30 - 160
EPA 8321B	Diuron-d6	59.1	P	30 - 160
EPA 8321B	Endothall-d6	99.9	P	30 - 160
EPA 8321B	Endothall-d6	99.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.3	P	30 - 160
EPA 8321B	Primidone-d5	83.8	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A100012
Included Lab Sample IDs: 2184388, 2184389, 2184390, 2184391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	90.0	84.9	P/P	60 - 160
Glufosinate	109	105	P/P	60 - 160
Glyphosate	97.0	98.2	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A100025
Included Lab Sample IDs: 2184388, 2184389, 2184390, 2184391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	79.0	79.3	P/P	60 - 160
Endothall	106	106	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A100125
Included Lab Sample IDs: 2184390, 2184391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.2	131	P/P	50 - 150
Acetaminophen	104	111	P/P	60 - 160
Acetamiprid	123	127	P/P	50 - 150
Afidopyropen	108	121	P/P	50 - 150
Bentazon	102	133	P/P	50 - 160
Benzovindiflupyr	115	127	P/P	50 - 150
Carbamazepine	117	119	P/P	60 - 150
Clothianidin	111	117	P/P	60 - 150
Dinotefuran	107	94.3	P/P	50 - 150
Diuron	112	133	P/P	60 - 160
Fenuron	127	136	P/P	60 - 150
Fluridone	142	133	P/P	60 - 160
Hydrocodone	113	110	P/P	60 - 150
Ibuprofen	102	110	P/P	50 - 160
Imazapyr	103	122	P/P	50 - 150
Imidacloprid	94.3	96.6	P/P	60 - 150
Linuron	116	130	P/P	60 - 150
Mandestrobin	126	134	P/P	50 - 150
MCPP	104	138	P/P	50 - 150
Naproxen	96.8	121	P/P	50 - 160
Primidone	88.9	99.4	P/P	60 - 150
Pyraclostrobin	132	131	P/P	60 - 150
Thiamethoxam	111	107	P/P	50 - 150
Tolfenpyrad	134	135	P/P	60 - 150
Triclopyr	82.9	127	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A100141
Included Lab Sample IDs: 2184388, 2184389, 2184390, 2184391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.1	89.9	P/P	60 - 160
Sucralose	89.9	91.1	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A99981
Included Lab Sample IDs: 2184388, 2184389

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	112	112	P/P	50 - 150
Acetaminophen	117	101	P/P	60 - 160
Acetamiprid	117	115	P/P	50 - 150
Afidopyropen	120	116	P/P	50 - 150
Bentazon	125	127	P/P	50 - 160
Benzovindiflupyr	118	117	P/P	50 - 150
Carbamazepine	112	109	P/P	60 - 150
Clothianidin	97.2	101	P/P	60 - 150
Dinotefuran	89.9	94.9	P/P	50 - 150
Diuron	114	115	P/P	60 - 160
Fenuron	111	110	P/P	60 - 150
Fluridone	126	125	P/P	60 - 160
Hydrocodone	105	111	P/P	60 - 150
Ibuprofen	115	80.1	P/P	50 - 160
Imazapyr	126	108	P/P	50 - 150
Imidacloprid	89.6	87.2	P/P	60 - 150
Linuron	121	133	P/P	60 - 150
Mandestrobin	123	118	P/P	50 - 150
MCPP	110	112	P/P	50 - 150
Naproxen	111	96.5	P/P	50 - 160
Primidone	93.9	94.6	P/P	60 - 150
Pyraclostrobin	123	124	P/P	60 - 150
Thiamethoxam	89.0	74.7	P/P	50 - 150
Tolfenpyrad	116	118	P/P	60 - 150
Triclopyr	103	102	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	115					1.80
	2,4-D	109	133	127			3.65
	Acesulfame K	76.1	88.9	92.0			3.50
	Acetaminophen	79.1	93.3	85.9			8.22
	Acetaminophen	74.5	79.6	80.1			0.388
	Acetamiprid	78.6	73.3	69.5			5.27
	Acetamiprid	83.9	73.9	72.5			1.84
	Afidopyropen	65.2	63.4	57.7			9.29
	Afidopyropen	73.0	73.1	68.5			6.42
	AMPA	83.8	81.0	84.2			3.95
	Bentazon	62.6					0.870
	Bentazon	59.3	46.4	43.9			3.81
	Benzovindiflupyr	69.9	58.9	56.6			4.00
	Benzovindiflupyr	82.3	77.5	72.2			7.15
	Carbamazepine	66.9	50.1	50.3			0.389
	Carbamazepine	73.2	58.0	59.1			1.73
	Clothianidin	76.8	76.7	74.8			2.55
	Clothianidin	86.0	72.1	70.1			2.84
	Dinotefuran	86.6	96.0	91.4			4.88
	Dinotefuran	90.6	93.6	91.4			2.44
	Diuron	58.2	38.5	36.6			4.00
	Diuron	68.4	53.1	53.6			1.04
	Endothall	101	100	102			1.38
	Fenuron	101	82.7	80.5			2.69
	Fenuron	99.8	84.0	82.8			1.55
	Fluridone	90.5	88.1	80.1			7.74
	Fluridone	109	102	94.7			6.64
	Glufosinate	105	93.4	95.4			2.11
	Glyphosate	92.3	77.5	76.4			1.44
	Hydrocodone	82.3	71.3	66.3			7.24
	Hydrocodone	82.2	68.9	70.0			1.62
	Ibuprofen	79.6	65.5	62.7			4.32
	Ibuprofen	87.7	82.2	69.8			16.3
	Imazapyr	100					5.38
	Imazapyr	86.9	95.1	101			3.41
	Imidacloprid	97.6	127	127			0.128
	Imidacloprid	93.9	132	134			1.59
	Linuron	67.0	50.4	52.2			3.57
	Linuron	75.5	67.0	61.2			9.00
	Mandestrobin	75.5	70.9	66.5			6.38
	Mandestrobin	90.5	79.6	79.0			0.848
	MCPP	129	122	122			0.692
	MCPP	131	137	138			0.627
	Naproxen	69.1	76.0	61.5			21.1
	Naproxen	74.7	60.0	64.4			7.14
	Primidone	77.2	88.2	79.7			10.1
	Primidone	78.8	82.5	87.8			5.96
	Pyraclostrobin	74.1	70.6	70.4			0.318
	Pyraclostrobin	95.6	75.3	74.7			0.825
	Sucralose	93.6	97.4	97.4			0.0632
	Thiamethoxam	93.7	101	103			1.10
	Thiamethoxam	96.7	104	101			3.31
	Tolfenpyrad	54.2	47.2	44.5			5.84
	Tolfenpyrad	66.0	52.4	57.4			9.00

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Triclopyr	95.7	97.1	97.1			0.0086
	Triclopyr	99.8	113	115			2.34

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2184388, 2184389, 2184390, 2184391
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2184388, 2184389, 2184390, 2184391

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/21/2020 15:33	Rebecca Ware	2184388
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/21/2020 15:44	Rebecca Ware	2184389
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/21/2020 15:55	Rebecca Ware	2184390
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/21/2020 16:06	Rebecca Ware	2184391
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/22/2020 13:04	Rebecca Ware	2184388
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/22/2020 13:17	Rebecca Ware	2184389
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/22/2020 13:31	Rebecca Ware	2184390
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/22/2020 13:45	Rebecca Ware	2184391
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/29/2020 05:01	Mohammad Ghaffari	2184388
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/29/2020 05:13	Mohammad Ghaffari	2184389
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/29/2020 05:25	Mohammad Ghaffari	2184390
	07/21/2020	07/21/2020 13:30	Rebecca Ware	07/29/2020 05:49	Mohammad Ghaffari	2184391
	07/21/2020	07/21/2020 14:00	Hoor Shaik	07/22/2020 05:26	Juyoung Kim	2184388
	07/21/2020	07/21/2020 14:00	Hoor Shaik	07/22/2020 06:01	Juyoung Kim	2184389
	07/21/2020	07/24/2020 09:00	Hoor Shaik	07/27/2020 19:49	Juyoung Kim	2184390
	07/21/2020	07/24/2020 09:00	Hoor Shaik	07/27/2020 20:24	Juyoung Kim	2184391