Chemical Analysis Report

SW-DIST-2019-10-25-01

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

Event Description: **SMP - Alafia, Alafia, 30 Mile, and McDonalds**
Request ID: **RQ-2019-10-28-07**
Customer: **SW-DIST**
Project ID: **SMP**

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Date Certified: 12-NOV-2019 11:27

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: McDonald Branch @ Thompson Rd **Collection Date/Time: 10/24/2019 10:20**

Field ID: G2SW0093 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131788	EPA 8321B	2,4-D	0.0020	U	ug/L	P373120	
		Acesulfame K**	0.10	U	ug/L	P373164	
		AMPA**	0.10	U	ug/L	P373164	
		Sucralose**	0.13		ug/L	P373164	
		Acetaminophen**	0.0080	U	ug/L	P373120	
		Acetamiprid**	0.0020	U	ug/L	P373120	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	0.10	U	ug/L	P373164	
		Glyphosate**	0.10	U	ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373120	
		Bentazon	8.0E-04	U	ug/L	P373120	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373120	
		Carbamazepine**	8.0E-04	U	ug/L	P373120	
		Clothianidin**	0.27		ug/L	P373120	
		Dinotefuran**	0.0020	U	ug/L	P373120	
		Diuron	0.0020	U	ug/L	P373120	
		Fenuron	0.016	U	ug/L	P373120	
		Fluridone**	8.0E-04	U	ug/L	P373120	
		Imazapyr**	0.0061	I	ug/L	P373120	
		Hydrocodone**	0.0020	U	ug/L	P373120	
		Ibuprofen**	0.020	U	ug/L	P373120	
		Imidacloprid	0.59		ug/L	P373120	MS
		Linuron	0.0040	U	ug/L	P373120	
		Mandestrobin**	0.0020	UJ	ug/L	P373120	
		MCPP	0.0020	U	ug/L	P373120	
		Naproxen**	0.0080	U	ug/L	P373120	
		Primidone**	0.0040	U	ug/L	P373120	
		Pyraclostrobin**	0.0020	U	ug/L	P373120	
		Thiamethoxam**	0.19		ug/L	P373120	
		Tolfenpyrad**	0.0020	U	ug/L	P373120	
		Triclopyr**	0.0040	U	ug/L	P373120	

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

Sample Location: Alafia R. @ Center Ave. **Collection Date/Time: 10/24/2019 11:00**

Field ID: G2SW0045 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131789	EPA 8321B	2,4-D	0.012		ug/L	P373120	
		Acesulfame K**	0.10	U	ug/L	P373164	
		AMPA**	1.3		ug/L	P373164	
		Sucralose**	0.81		ug/L	P373164	
		Acetaminophen**	0.0080	U	ug/L	P373120	
		Acetamiprid**	0.0020	U	ug/L	P373120	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	0.10	U	ug/L	P373164	
		Glyphosate**	1.3		ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373120	
		Bentazon	0.015		ug/L	P373120	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373120	
		Carbamazepine**	0.0028	I	ug/L	P373120	
		Clothianidin**	0.0049	I	ug/L	P373120	
		Dinotefuran**	0.0029	I	ug/L	P373120	
		Diuron	0.0039	I	ug/L	P373120	
		Fenuron	0.016	U	ug/L	P373120	
		Fluridone**	0.0080		ug/L	P373120	
		Imazapyr**	0.068		ug/L	P373120	
		Hydrocodone**	0.0020	U	ug/L	P373120	
		Ibuprofen**	0.020	U	ug/L	P373120	
		Imidacloprid	0.033		ug/L	P373120	MS
		Linuron	0.0040	U	ug/L	P373120	
		Mandestrobin**	0.0020	UJ	ug/L	P373120	
		MCPP	0.0020	U	ug/L	P373120	
		Naproxen**	0.0080	U	ug/L	P373120	
		Primidone**	0.0051	I	ug/L	P373120	
		Pyraclostrobin**	0.0020	U	ug/L	P373120	
		Thiamethoxam**	0.010		ug/L	P373120	
		Tolfenpyrad**	0.0020	U	ug/L	P373120	
		Triclopyr**	0.0040	U	ug/L	P373120	

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

Sample Location: Alafia R. @ Boat Ramp Dock **Collection Date/Time: 10/24/2019 11:30**

Field ID: G2SW0091 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131790	EPA 8321B	2,4-D	0.012		ug/L	P373120	
		Acesulfame K**	0.10	U	ug/L	P373164	
		AMPA**	1.0	U	ug/L	P373164	
		Sucralose**	0.028	I J	ug/L	P373164	SUR
		Acetaminophen**	0.0080	U	ug/L	P373120	
		Acetamiprid**	0.0020	U	ug/L	P373120	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	1.0	U	ug/L	P373164	
		Glyphosate**	1.4	I	ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373120	
		Bentazon	0.014		ug/L	P373120	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373120	
		Carbamazepine**	0.0016	I	ug/L	P373120	
		Clothianidin**	0.0044	I	ug/L	P373120	
		Dinotefuran**	0.0025	I	ug/L	P373120	
		Diuron	0.0050	I	ug/L	P373120	
		Fenuron	0.016	U	ug/L	P373120	
		Fluridone**	0.0097		ug/L	P373120	
		Imazapyr**	0.063		ug/L	P373120	
		Hydrocodone**	0.0020	U	ug/L	P373120	
		Ibuprofen**	0.020	U	ug/L	P373120	
		Imidacloprid	0.031		ug/L	P373120	MS
		Linuron	0.0040	U	ug/L	P373120	
		Mandestrobin**	0.0020	UJ	ug/L	P373120	
		MCPP	0.0020	U	ug/L	P373120	
		Naproxen**	0.0080	U	ug/L	P373120	
		Primidone**	0.0043	I	ug/L	P373120	
		Pyraclostrobin**	0.0020	U	ug/L	P373120	
		Thiamethoxam**	0.0076	I	ug/L	P373120	
		Tolfenpyrad**	0.0020	U	ug/L	P373120	
		Triclopyr**	0.0040	U	ug/L	P373120	

Ref. Method and Comment:
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for some analytes 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.
EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Thirtymile Creek @ Nichols Rd. **Collection Date/Time: 10/24/2019 10:00**

Field ID: G2SW0046 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131792	EPA 8321B	2,4-D	0.0020	U	ug/L	P373120	
		Acesulfame K**	0.10	U	ug/L	P373164	
		AMPA**	0.17	I	ug/L	P373164	
		Sucralose**	0.046		ug/L	P373164	
		Acetaminophen**	0.0080	U	ug/L	P373120	
		Acetamiprid**	0.0020	U	ug/L	P373120	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	0.10	U	ug/L	P373164	
		Glyphosate**	0.18	I	ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373120	
		Bentazon	8.0E-04	U	ug/L	P373120	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373120	
		Carbamazepine**	8.0E-04	U	ug/L	P373120	
		Clothianidin**	0.0020	U	ug/L	P373120	
		Dinotefuran**	0.0020	U	ug/L	P373120	
		Diuron	0.0020	U	ug/L	P373120	
		Fenuron	0.016	U	ug/L	P373120	
		Fluridone**	8.0E-04	U	ug/L	P373120	
		Imazapyr**	0.14		ug/L	P373120	
		Hydrocodone**	0.0020	U	ug/L	P373120	
		Ibuprofen**	0.020	U	ug/L	P373120	
		Imidacloprid	0.0022	I	ug/L	P373120	MS
		Linuron	0.0040	U	ug/L	P373120	
		Mandestrobin**	0.0020	UJ	ug/L	P373120	
		MCPP	0.0020	U	ug/L	P373120	
		Naproxen**	0.0080	U	ug/L	P373120	
		Primidone**	0.0040	U	ug/L	P373120	
		Pyraclostrobin**	0.0020	U	ug/L	P373120	
		Thiamethoxam**	0.0020	U	ug/L	P373120	
		Tolfenpyrad**	0.0020	U	ug/L	P373120	
		Triclopyr**	0.0040	U	ug/L	P373120	

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

Sample Location: Thirtymile Creek @ Train Tracks Mosiac **Collection Date/Time: 10/24/2019 09:30**

Field ID: G2SW0047 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2131793	EPA 8321B	2,4-D	0.0020	U	ug/L	P373120	
		Acesulfame K**	0.10	U	ug/L	P373164	
		AMPA**	0.38	I	ug/L	P373164	
		Sucralose**	0.079		ug/L	P373164	
		Acetaminophen**	0.0080	U	ug/L	P373120	
		Acetamiprid**	0.0020	U	ug/L	P373120	
		Endothall**	0.25	U	ug/L	P373164	
		Glufosinate**	0.10	U	ug/L	P373164	
		Glyphosate**	0.41		ug/L	P373164	
		Afidopyropen**	0.0020	UJ	ug/L	P373120	
		Bentazon	8.0E-04	U	ug/L	P373120	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373120	
		Carbamazepine**	8.0E-04	U	ug/L	P373120	
		Clothianidin**	0.0020	U	ug/L	P373120	
		Dinotefuran**	0.0020	U	ug/L	P373120	
		Diuron	0.0020	U	ug/L	P373120	
		Fenuron	0.016	U	ug/L	P373120	
		Fluridone**	8.0E-04	U	ug/L	P373120	
		Imazapyr**	0.084		ug/L	P373120	
		Hydrocodone**	0.0020	U	ug/L	P373120	
		Ibuprofen**	0.020	U	ug/L	P373120	
		Imidacloprid	0.0050	I	ug/L	P373120	MS
		Linuron	0.0040	U	ug/L	P373120	
		Mandestrobin**	0.0020	UJ	ug/L	P373120	
		MCPP	0.0020	U	ug/L	P373120	
		Naproxen**	0.0080	U	ug/L	P373120	
		Primidone**	0.0040	U	ug/L	P373120	
		Pyraclostrobin**	0.0020	U	ug/L	P373120	
		Thiamethoxam**	0.0020	U	ug/L	P373120	
		Tolfenpyrad**	0.0020	U	ug/L	P373120	
		Triclopyr**	0.0040	U	ug/L	P373120	

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P373120

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: P373164

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: P373120

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	123		P	40 - 160
Acetaminophen	82.4		P	30 - 160
Acetamiprid	102		P	40 - 160
Afidopyropen	93.8		P	40 - 160
Bentazon	97.4		P	30 - 160
Benzovindiflupyr	94.8		P	40 - 160
Carbamazepine	103		P	40 - 160
Clothianidin	85.5		P	40 - 160
Dinotefuran	90.1		P	40 - 160
Diuron	103		P	40 - 160
Fenuron	103		P	40 - 160
Fluridone	92.8		P	40 - 160
Hydrocodone	89.0		P	40 - 160
Ibuprofen	84.4		P	30 - 160
Imazapyr	86.5		P	40 - 160
Imidacloprid	105		P	40 - 160
Linuron	78.4		P	40 - 160
Mandestrobin	94.6		P	40 - 160
MCPP	114		P	40 - 160
Naproxen	103		P	40 - 160
Primidone	90.3		P	40 - 160
Pyraclostrobin	83.4		P	30 - 160
Thiamethoxam	106		P	40 - 160
Tolfenpyrad	60.5		P	40 - 160
Triclopyr	87.5		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P373164

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	116		P	40 - 150
AMPA	141		P	40 - 150
Endothall	89.2		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	119		P	40 - 140
Sucralose	117		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P373120

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131538	2,4-D	116	104	P/P	40 - 160
2131538	Acetaminophen	76.9	77.5	P/P	30 - 160
2131538	Acetamiprid	104	104	P/P	40 - 160
2131538	Afidopyropen	94.5	95.7	P/P	40 - 160
2131538	Benzovindiflupyr	92.3	93.4	P/P	40 - 160
2131538	Carbamazepine	85.1	85.5	P/P	40 - 160
2131538	Clothianidin	95.2	88.4	P/P	40 - 160
2131538	Dinotefuran	108	105	P/P	40 - 160
2131538	Diuron	84.7	85.1	P/P	40 - 160
2131538	Fenuron	94.7	93.3	P/P	40 - 160
2131538	Hydrocodone	89.7	89.0	P/P	40 - 160
2131538	Ibuprofen	77.5	73.4	P/P	30 - 160
2131538	Imidacloprid	172	168	F/F	40 - 160
2131538	Linuron	68.8	69.3	P/P	40 - 160
2131538	Mandestrobin	89.2	86.9	P/P	40 - 160
2131538	MCPP	109	98.3	P/P	40 - 160
2131538	Naproxen	76.8	62.1	P/P	40 - 160
2131538	Primidone	103	97.2	P/P	40 - 160
2131538	Pyraclostrobin	85.2	83.4	P/P	30 - 160
2131538	Thiamethoxam	140	139	P/P	40 - 160
2131538	Tolfenpyrad	60.7	55.2	P/P	40 - 160
2131538	Triclopyr	91.8	82.3	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P373164

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131107	Acesulfame K	81.0	80.1	P/P	40 - 150
2131107	AMPA	85.3	84.8	P/P	40 - 150
2131107	Endothall	84.3	87.1	P/P	40 - 150
2131107	Glufosinate	85.5	87.8	P/P	40 - 150
2131107	Glyphosate	77.6	79.4	P/P	40 - 140
2131107	Sucralose	97.8	81.9	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P373120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131538	2,4-D	8.47	Spike	P	0 - 30
2131538	Acetaminophen	0.749	Spike	P	0 - 30
2131538	Acetamiprid	0.151	Spike	P	0 - 30
2131538	Afidopyropen	1.18	Spike	P	0 - 30
2131538	Bentazon	0.997	Spike	P	0 - 30
2131538	Benzovindiflupyr	1.16	Spike	P	0 - 30
2131538	Carbamazepine	0.468	Spike	P	0 - 30
2131538	Clothianidin	7.04	Spike	P	0 - 30
2131538	Dinotefuran	2.16	Spike	P	0 - 30
2131538	Diuron	0.415	Spike	P	0 - 30
2131538	Fenuron	1.52	Spike	P	0 - 30
2131538	Fluridone	0.743	Spike	P	0 - 30
2131538	Hydrocodone	0.830	Spike	P	0 - 30
2131538	Ibuprofen	5.44	Spike	P	0 - 30
2131538	Imazapyr	4.79	Spike	P	0 - 30
2131538	Imidacloprid	2.36	Spike	P	0 - 30
2131538	Linuron	0.662	Spike	P	0 - 30
2131538	Mandestrobin	2.57	Spike	P	0 - 30
2131538	MCPP	10.5	Spike	P	0 - 30
2131538	Naproxen	21.2	Spike	P	0 - 30
2131538	Primidone	6.05	Spike	P	0 - 30
2131538	Pyraclostrobin	2.12	Spike	P	0 - 30
2131538	Thiamethoxam	0.719	Spike	P	0 - 30
2131538	Tolfenpyrad	9.44	Spike	P	0 - 30
2131538	Triclopyr	10.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P373164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131107	Acesulfame K	1.11	Spike	P	0 - 30
2131107	AMPA	0.606	Spike	P	0 - 30
2131107	Endothall	3.27	Spike	P	0 - 30
2131107	Glufosinate	2.71	Spike	P	0 - 30
2131107	Glyphosate	2.27	Spike	P	0 - 30
2131107	Sucralose	17.8	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2131788
Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	85.7	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.5	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	76.2	P	30 - 160
EPA 8321B	Sucralose-d6	76.2	P	30 - 160

Lab Sample ID: 2131789
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.1	P	30 - 160
EPA 8321B	Diuron-d6	74.5	P	30 - 160
EPA 8321B	Endothall-d6	94.9	P	30 - 160
EPA 8321B	Endothall-d6	94.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.2	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	87.1	P	30 - 160
EPA 8321B	Sucralose-d6	87.1	P	30 - 160

Lab Sample ID: 2131790
Field Sample ID: G2SW0091

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.7	P	30 - 160
EPA 8321B	Diuron-d6	68.9	P	30 - 160
EPA 8321B	Endothall-d6	94.1	P	30 - 160
EPA 8321B	Endothall-d6	94.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	144	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	144	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.9	P	30 - 160
EPA 8321B	Primidone-d5	93.2	P	30 - 160
EPA 8321B	Sucralose-d6	2.91	F	30 - 160
EPA 8321B	Sucralose-d6	2.91	F	30 - 160

Lab Sample ID: 2131792
Field Sample ID: G2SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.1	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2131792
Field Sample ID: G2SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	78.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.1	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	92.0	P	30 - 160
EPA 8321B	Endothall-d6	92.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.2	P	30 - 160
EPA 8321B	Primidone-d5	87.5	P	30 - 160
EPA 8321B	Sucralose-d6	99.6	P	30 - 160
EPA 8321B	Sucralose-d6	99.6	P	30 - 160

Lab Sample ID: 2131793
Field Sample ID: G2SW0047

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	85.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	71.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.4	P	30 - 160
EPA 8321B	Diuron-d6	64.5	P	30 - 160
EPA 8321B	Endothall-d6	95.8	P	30 - 160
EPA 8321B	Endothall-d6	95.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.9	P	30 - 160
EPA 8321B	Primidone-d5	85.6	P	30 - 160
EPA 8321B	Sucralose-d6	93.8	P	30 - 160
EPA 8321B	Sucralose-d6	93.8	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A95323
Included Lab Sample IDs: 2131788, 2131789, 2131790, 2131792, 2131793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	103	P/P	60 - 160
Endothall	94.6	100	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A95334
Included Lab Sample IDs: 2131788, 2131789, 2131790, 2131792, 2131793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	126	120	P/P	60 - 160
AMPA	85.9	68.1	P/P	60 - 160
Glufosinate	114	105	P/P	60 - 160
Glufosinate	82.2	68.4	P/P	60 - 160
Glyphosate	111	127	P/P	60 - 160
Glyphosate	86.1	80.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A95380
Included Lab Sample IDs: 2131788, 2131789, 2131790, 2131792, 2131793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	95.0	99.9	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A95576
Included Lab Sample IDs: 2131788, 2131789, 2131790, 2131792, 2131793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.9	89.8	P/P	50 - 150
Acetaminophen	100	98.5	P/P	60 - 160
Acetamiprid	110	110	P/P	50 - 150
Afidopyropen	88.1	94.0	P/P	50 - 150
Bentazon	94.2	91.1	P/P	50 - 160
Benzovindiflupyr	108	112	P/P	50 - 150
Carbamazepine	108	107	P/P	60 - 150
Clothianidin	89.8	94.7	P/P	60 - 150
Dinotefuran	94.4	95.1	P/P	50 - 150
Diuron	112	109	P/P	60 - 150
Fenuron	109	109	P/P	60 - 150
Fluridone	112	115	P/P	60 - 160
Hydrocodone	104	102	P/P	60 - 150
Ibuprofen	105	88.8	P/P	50 - 160
Imazapyr	92.4	89.4	P/P	50 - 150
Imidacloprid	97.9	97.4	P/P	60 - 150
Linuron	102	104	P/P	60 - 150
Mandestrobin	108	110	P/P	50 - 150
MCPP	101	98.3	P/P	50 - 150
Naproxen	93.6	78.7	P/P	50 - 160
Primidone	102	103	P/P	60 - 150
Pyraclostrobin	99.7	101	P/P	60 - 150
Thiamethoxam	104	106	P/P	50 - 150
Tolfenpyrad	104	98.8	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A95576
Included Lab Sample IDs: 2131788, 2131789, 2131790, 2131792, 2131793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	89.5	80.6	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	123	116	104			8.47
	Acesulfame K	116	81.0	80.1			1.11
	Acetaminophen	82.4	76.9	77.5			0.749
	Acetamiprid	102	104	104			0.151
	Afidopyropen	93.8	94.5	95.7			1.18
	AMPA	141	85.3	84.8			0.606
	Bentazon	97.4					0.997
	Benzovindiflupyr	94.8	92.3	93.4			1.16
	Carbamazepine	103	85.1	85.5			0.468
	Clothianidin	85.5	95.2	88.4			7.04
	Dinotefuran	90.1	108	105			2.16
	Diuron	103	84.7	85.1			0.415
	Endothall	89.2	84.3	87.1			3.27
	Fenuron	103	94.7	93.3			1.52
	Fluridone	92.8					0.743
	Glufosinate	104	85.5	87.8			2.71
	Glyphosate	119	77.6	79.4			2.27
	Hydrocodone	89.0	89.7	89.0			0.830
	Ibuprofen	84.4	77.5	73.4			5.44
	Imazapyr	86.5					4.79
	Imidacloprid	105	172	168			2.36
	Linuron	78.4	68.8	69.3			0.662
	Mandestrobin	94.6	89.2	86.9			2.57
	MCPP	114	109	98.3			10.5
	Naproxen	103	76.8	62.1			21.2
	Primidone	90.3	103	97.2			6.05
	Pyraclostrobin	83.4	85.2	83.4			2.12
	Sucralose	117	97.8	81.9			17.8
	Thiamethoxam	106	140	139			0.719
	Tolfenpyrad	60.5	60.7	55.2			9.44
	Triclopyr	87.5	91.8	82.3			10.8

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2131788, 2131789, 2131790, 2131792, 2131793
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2131788, 2131789, 2131790, 2131792, 2131793

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 14:12	Rebecca Ware	2131788
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 14:22	Rebecca Ware	2131789
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 14:44	Rebecca Ware	2131792
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 14:55	Rebecca Ware	2131793
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/28/2019 18:11	Rebecca Ware	2131790
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 13:53	Rebecca Ware	2131788
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 14:07	Rebecca Ware	2131789
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 14:20	Rebecca Ware	2131790
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 14:34	Rebecca Ware	2131792
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/29/2019 14:48	Rebecca Ware	2131793
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 17:25	Rebecca Ware	2131788
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 17:37	Rebecca Ware	2131789
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 17:49	Rebecca Ware	2131790
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 18:00	Rebecca Ware	2131792
	10/25/2019	10/28/2019 11:00	Rebecca Ware	10/30/2019 18:12	Rebecca Ware	2131793
	10/25/2019	10/30/2019 09:00	Hoor Shaik	11/07/2019 03:19	Juyoung Kim	2131788
	10/25/2019	10/30/2019 09:00	Hoor Shaik	11/07/2019 03:54	Juyoung Kim	2131789
	10/25/2019	10/30/2019 09:00	Hoor Shaik	11/07/2019 04:29	Juyoung Kim	2131790
	10/25/2019	10/30/2019 09:00	Hoor Shaik	11/07/2019 05:03	Juyoung Kim	2131792
	10/25/2019	10/30/2019 09:00	Hoor Shaik	11/07/2019 05:38	Juyoung Kim	2131793