

Chemical Analysis Report

SO-DIST-2021-01-20-01

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

Event Description: **2021 SMP: Lee Coastal**

Request ID: **RQ-2021-01-18-33**

Customer: **SO-DIST**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 27-JAN-2021 13:20



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: Estero River @ Preserve

Collection Date/Time: 01/19/2021 09:20

Field ID: G1SD0104

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220213	EPA 8321B	2,4-D	0.0060	I	ug/L	P392677	
		Acesulfame K**	0.10	U	ug/L	P392663	
		AMPA**	0.10	UJ	ug/L	P392663	SUR
		Sucralose**	1.0		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Glufosinate**	0.10	UJ	ug/L	P392663	SUR
		Glyphosate**	0.10	UJ	ug/L	P392663	SUR
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.19		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	0.21		ug/L	P392677	
		Imazapyr**	0.50		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0031	I	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0043	I	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

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.

EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Estero River near ramp

Collection Date/Time: 01/19/2021 09:45

Field ID: G1SD0102

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220214	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P392663	
		2,4-D	0.0056	I	ug/L	P392677	
		AMPA**	1.0	U	ug/L	P392662	
		Sucralose**	1.1		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Glufosinate**	1.0	U	ug/L	P392662	
		Glyphosate**	1.0	U	ug/L	P392662	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.22		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	9.2E-04	I	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	0.70		ug/L	P392677	
		Imazapyr**	0.79		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0020	U	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0049	I	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

Ref. Method and Comment:

EPA 8321B: MDLs for some parameters elevated due to matrix interference.

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

Sample Location: Estero River at US41

Collection Date/Time: 01/19/2021 10:40

Field ID: G1SD0103

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220215	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P392663	
		2,4-D	0.0072	I	ug/L	P392677	
		AMPA**	1.0	U	ug/L	P392662	
		Sucralose**	0.81		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Glufosinate**	1.0	U	ug/L	P392662	
		Glyphosate**	1.0	U	ug/L	P392662	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.27		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0023	I	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	1.2		ug/L	P392677	
		Imazapyr**	0.76		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0020	U	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

Ref. Method and Comment:

EPA 8321B: MDLs for some parameters elevated due to matrix interference.

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

Sample Location: Imperial River Near US 41

Collection Date/Time: 01/19/2021 11:15

Field ID: G1SD0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220216	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P392663	
		2,4-D	0.0020	U	ug/L	P392677	
		AMPA**	1.0	U	ug/L	P392662	
		Sucralose**	0.16		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Glufosinate**	1.0	U	ug/L	P392662	
		Glyphosate**	1.0	U	ug/L	P392662	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.091		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	0.0099		ug/L	P392677	
		Imazapyr**	0.25		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0020	U	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

Ref. Method and Comment:

EPA 8321B: MDLs for some parameters elevated due to matrix interference.

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

Sample Location: Imperial @ US 41 ramp

Collection Date/Time: 01/19/2021 11:40

Field ID: G1SD0108

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220217	EPA 8321B	Acesulfame K**	0.10	U	ug/L	P392663	
		2,4-D	0.0020	U	ug/L	P392677	
		AMPA**	1.0	U	ug/L	P392662	
		Sucralose**	0.13		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Glufosinate**	1.0	U	ug/L	P392662	
		Glyphosate**	1.0	U	ug/L	P392662	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.093		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	0.0095		ug/L	P392677	
		Imazapyr**	0.25		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0020	U	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

Ref. Method and Comment:

EPA 8321B: MDLs for some parameters elevated due to matrix interference.

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

Sample Location: Oak Creek@PennsylvaniaAv

Collection Date/Time: 01/19/2021 12:15

Field ID: G1SD0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220218	EPA 8321B	2,4-D	0.0035	I	ug/L	P392677	
		Acesulfame K**	0.10	U	ug/L	P392663	
		AMPA**	0.10	U	ug/L	P392663	
		Sucralose**	0.061		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Glufosinate**	0.10	U	ug/L	P392663	
		Glyphosate**	0.11	I	ug/L	P392663	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.15		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	0.035		ug/L	P392677	
		Imazapyr**	0.11		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0084		ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

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: LeitnerCreek@GoodwinSt

Collection Date/Time: 01/19/2021 12:35

Field ID: G1SD0106

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220219	EPA 8321B	2,4-D	0.0020	U	ug/L	P392677	
		Acesulfame K**	0.10	U	ug/L	P392663	
		AMPA**	0.10	U	ug/L	P392663	
		Sucralose**	0.53		ug/L	P392663	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Endothall**	0.25	U	ug/L	P392663	
		Glufosinate**	0.10	U	ug/L	P392663	
		Glyphosate**	0.10	U	ug/L	P392663	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	0.010		ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	0.0016	I	ug/L	P392677	
		Imazapyr**	0.096		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0021	I	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0025	I	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	

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.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P392662

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Reference Method: EPA 8321B

Batch ID: P392663

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: P392677

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: P392662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	108		P	40 - 150
Glufosinate	92.8		P	40 - 150
Glyphosate	121		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P392663

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.1		P	40 - 150
AMPA	102		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	133		P	40 - 140
Sucralose	131		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P392677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	128		P	30 - 160
Acetaminophen	85.3		P	30 - 160
Acetamiprid	101		P	30 - 160
Afidopyropen	85.4		P	30 - 160
Bentazon	91.3		P	30 - 160
Benzovindiflupyr	80.9		P	30 - 160
Carbamazepine	84.3		P	30 - 160
Clothianidin	83.3		P	30 - 160
Dinotefuran	91.9		P	30 - 160
Diuron	71.1		P	30 - 160
Fenuron	104		P	30 - 160
Fluridone	80.5		P	30 - 160
Hydrocodone	105		P	30 - 160
Ibuprofen	85.2		P	30 - 160
Imazapyr	92.5		P	30 - 160
Imidacloprid	107		P	30 - 160
Linuron	71.3		P	30 - 160
Mandestrobin	96.6		P	30 - 160
MCPP	105		P	30 - 160
Naproxen	61.3		P	30 - 160
Primidone	87.2		P	30 - 160
Pyraclostrobin	78.0		P	30 - 160
Thiamethoxam	93.5		P	30 - 160
Tolfenpyrad	51.1		P	30 - 160
Triclopyr	91.7		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P392662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220513	AMPA	89.0	110	P/P	40 - 150
2220513	Glufosinate	90.3	87.6	P/P	40 - 150
2220513	Glyphosate	75.7	55.0	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P392663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219980	Acesulfame K	81.7	84.4	P/P	40 - 150
2219980	AMPA	116	107	P/P	40 - 150
2219980	Endothall	101	103	P/P	40 - 150
2219980	Glufosinate	91.6	104	P/P	40 - 150
2219980	Glyphosate	119	135	P/P	40 - 140
2219980	Sucralose	128	134	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P392677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220213	2,4-D	102	95.7	P/P	30 - 160
2220213	Acetaminophen	91.4	88.0	P/P	30 - 160
2220213	Acetamiprid	86.5	83.6	P/P	30 - 160
2220213	Afidopyropen	90.2	82.0	P/P	30 - 160
2220213	Benzovindiflupyr	85.8	76.2	P/P	30 - 160
2220213	Carbamazepine	67.7	64.1	P/P	30 - 160
2220213	Clothianidin	77.2	87.2	P/P	30 - 160
2220213	Dinotefuran	102	101	P/P	30 - 160
2220213	Diuron	49.9	50.4	P/P	30 - 160
2220213	Fenuron	65.6	67.4	P/P	30 - 160
2220213	Hydrocodone	93.2	93.1	P/P	30 - 160
2220213	Ibuprofen	64.0	78.2	P/P	30 - 160
2220213	Imidacloprid	130	124	P/P	30 - 160
2220213	Linuron	65.6	59.5	P/P	30 - 160
2220213	Mandestrobin	88.8	82.4	P/P	30 - 160
2220213	MCP	101	89.8	P/P	30 - 160
2220213	Naproxen	67.9	76.4	P/P	30 - 160
2220213	Primidone	76.9	78.4	P/P	30 - 160
2220213	Pyraclostrobin	83.5	78.3	P/P	30 - 160
2220213	Thiamethoxam	101	106	P/P	30 - 160
2220213	Tolfenpyrad	55.7	50.9	P/P	30 - 160
2220213	Triclopyr	106	89.8	P/P	30 - 160

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P392662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220513	AMPA	12.7	Spike	P	0 - 30
2220513	Glufosinate	3.00	Spike	P	0 - 30
2220513	Glyphosate	6.12	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P392663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219980	Acesulfame K	3.29	Spike	P	0 - 30
2219980	AMPA	8.42	Spike	P	0 - 30
2219980	Endothall	1.87	Spike	P	0 - 30
2219980	Glufosinate	13.0	Spike	P	0 - 30
2219980	Glyphosate	12.5	Spike	P	0 - 30
2219980	Sucralose	4.53	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P392677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220213	2,4-D	5.80	Spike	P	0 - 30
2220213	Acetaminophen	3.82	Spike	P	0 - 30
2220213	Acetamiprid	3.46	Spike	P	0 - 30
2220213	Afidopyropen	9.49	Spike	P	0 - 30
2220213	Bentazon	3.35	Spike	P	0 - 30
2220213	Benzovindiflupyr	11.8	Spike	P	0 - 30
2220213	Carbamazepine	5.35	Spike	P	0 - 30
2220213	Clothianidin	12.2	Spike	P	0 - 30
2220213	Dinotefuran	0.802	Spike	P	0 - 30
2220213	Diuron	0.932	Spike	P	0 - 30
2220213	Fenuron	2.71	Spike	P	0 - 30
2220213	Fluridone	16.3	Spike	P	0 - 30
2220213	Hydrocodone	0.132	Spike	P	0 - 30
2220213	Ibuprofen	20.0	Spike	P	0 - 30
2220213	Imazapyr	7.82	Spike	P	0 - 30
2220213	Imidacloprid	4.43	Spike	P	0 - 30
2220213	Linuron	9.66	Spike	P	0 - 30
2220213	Mandestrobin	7.47	Spike	P	0 - 30
2220213	MCPP	11.5	Spike	P	0 - 30
2220213	Naproxen	11.7	Spike	P	0 - 30
2220213	Primidone	1.79	Spike	P	0 - 30
2220213	Pyraclostrobin	6.47	Spike	P	0 - 30
2220213	Thiamethoxam	5.33	Spike	P	0 - 30
2220213	Tolfenpyrad	9.08	Spike	P	0 - 30
2220213	Triclopyr	16.1	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2220213
Field Sample ID: G1SD0104

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.3	P	30 - 160
EPA 8321B	Diuron-d6	53.3	P	30 - 160
EPA 8321B	Endothall-d6	65.9	P	40 - 160
EPA 8321B	Endothall-d6	65.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	269	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	269	F	40 - 160
EPA 8321B	Ibuprofen-d3	67.9	P	30 - 160
EPA 8321B	Primidone-d5	74.6	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	30 - 160

Lab Sample ID: 2220214
Field Sample ID: G1SD0102

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.2	P	30 - 160
EPA 8321B	Diuron-d6	63.9	P	30 - 160
EPA 8321B	Endothall-d6	83.2	P	40 - 160
EPA 8321B	Endothall-d6	83.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	65.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	65.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	91.6	P	30 - 160
EPA 8321B	Primidone-d5	84.4	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	30 - 160

Lab Sample ID: 2220215
Field Sample ID: G1SD0103

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.0	P	30 - 160
EPA 8321B	Diuron-d6	60.4	P	30 - 160
EPA 8321B	Endothall-d6	98.7	P	40 - 160
EPA 8321B	Endothall-d6	98.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	82.9	P	30 - 160
EPA 8321B	Primidone-d5	87.7	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	30 - 160

Lab Sample ID: 2220216
Field Sample ID: G1SD0057

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.7	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2220216

Field Sample ID: G1SD0057

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	81.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.8	P	30 - 160
EPA 8321B	Diuron-d6	47.5	P	30 - 160
EPA 8321B	Endothall-d6	89.8	P	40 - 160
EPA 8321B	Endothall-d6	89.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	80.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	80.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	74.0	P	30 - 160
EPA 8321B	Primidone-d5	73.2	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	30 - 160

Lab Sample ID: 2220217

Field Sample ID: G1SD0108

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.9	P	30 - 160
EPA 8321B	Diuron-d6	47.3	P	30 - 160
EPA 8321B	Endothall-d6	90.3	P	40 - 160
EPA 8321B	Endothall-d6	90.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	78.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	78.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	76.7	P	30 - 160
EPA 8321B	Primidone-d5	73.2	P	30 - 160
EPA 8321B	Sucralose-d6	124	P	30 - 160
EPA 8321B	Sucralose-d6	124	P	30 - 160

Lab Sample ID: 2220218

Field Sample ID: G1SD0107

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.1	P	30 - 160
EPA 8321B	Diuron-d6	55.7	P	30 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	86.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	86.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	69.4	P	30 - 160
EPA 8321B	Primidone-d5	76.5	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	30 - 160

Lab Sample ID: 2220219

Field Sample ID: G1SD0106

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.2	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2220219

Field Sample ID: G1SD0106

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	56.0	P	30 - 160
EPA 8321B	Diuron-d6	49.4	P	30 - 160
EPA 8321B	Endothall-d6	77.9	P	40 - 160
EPA 8321B	Endothall-d6	77.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	57.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	57.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	64.7	P	30 - 160
EPA 8321B	Primidone-d5	74.9	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103192

Included Lab Sample IDs: 2220213, 2220214, 2220215, 2220216, 2220217, 2220218, 2220219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	116	118	P/P	60 - 160
Sucralose	116	116	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103215

Included Lab Sample IDs: 2220213, 2220214, 2220215, 2220216, 2220217, 2220218, 2220219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.1	99.4	P/P	60 - 160
Acesulfame K	99.6	98.1	P/P	60 - 160
AMPA	102	103	P/P	60 - 160
AMPA	108	102	P/P	60 - 160
AMPA	66.1	96.3	P/P	60 - 160
Endothall	96.0	91.7	P/P	60 - 160
Endothall	96.4	96.0	P/P	60 - 160
Glufosinate	108	91.7	P/P	60 - 160
Glufosinate	84.3	99.7	P/P	60 - 160
Glufosinate	95.4	84.3	P/P	60 - 160
Glyphosate	117	112	P/P	60 - 160
Glyphosate	120	96.4	P/P	60 - 160
Glyphosate	128	117	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103235

Included Lab Sample IDs: 2220213, 2220214, 2220215, 2220216, 2220217, 2220218, 2220219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	91.1	P/P	50 - 150
2,4-D	91.1	95.4	P/P	50 - 150
Acetaminophen	98.2	99.8	P/P	60 - 160
Acetaminophen	99.8	103	P/P	60 - 160
Acetamiprid	105	109	P/P	50 - 150
Acetamiprid	107	105	P/P	50 - 150
Afidopyropen	110	111	P/P	50 - 150
Afidopyropen	111	120	P/P	50 - 150
Bentazon	111	117	P/P	50 - 160
Bentazon	124	121	P/P	50 - 160
Benzovindiflupyr	120	120	P/P	50 - 160
Benzovindiflupyr	120	122	P/P	50 - 160
Carbamazepine	102	105	P/P	60 - 150
Carbamazepine	105	103	P/P	60 - 150
Clothianidin	114	85.6	P/P	60 - 150
Clothianidin	85.6	92.2	P/P	60 - 150
Dinotefuran	105	101	P/P	50 - 150
Dinotefuran	122	105	P/P	50 - 150
Diuron	117	113	P/P	60 - 160
Diuron	119	117	P/P	60 - 160
Fenuron	110	111	P/P	60 - 150
Fenuron	111	106	P/P	60 - 150
Fluridone	119	123	P/P	60 - 160
Fluridone	123	122	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103235

Included Lab Sample IDs: 2220213, 2220214, 2220215, 2220216, 2220217, 2220218, 2220219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	92.6	79.0	P/P	60 - 160
Hydrocodone	117	119	P/P	60 - 150
Hydrocodone	119	117	P/P	60 - 150
Ibuprofen	109	75.7	P/P	50 - 160
Ibuprofen	124	109	P/P	50 - 160
Imazapyr	100	97.3	P/P	50 - 160
Imazapyr	109	100	P/P	50 - 160
Imidacloprid	91.5	98.1	P/P	60 - 150
Imidacloprid	98.1	103	P/P	60 - 150
Linuron	108	108	P/P	60 - 150
Linuron	108	104	P/P	60 - 150
Mandestrobin	109	107	P/P	50 - 150
Mandestrobin	115	109	P/P	50 - 150
MCP	100	98.3	P/P	50 - 150
MCP	107	100	P/P	50 - 150
Naproxen	151	76.4	P/P	50 - 160
Naproxen	76.4	74.8	P/P	50 - 160
Primidone	92.8	93.8	P/P	60 - 150
Primidone	93.8	87.2	P/P	60 - 150
Pyraclostrobin	102	111	P/P	60 - 150
Pyraclostrobin	117	102	P/P	60 - 150
Thiamethoxam	107	110	P/P	50 - 150
Thiamethoxam	110	105	P/P	50 - 150
Tolfenpyrad	111	107	P/P	60 - 150
Tolfenpyrad	117	111	P/P	60 - 150
Triclopyr	107	90.2	P/P	50 - 150
Triclopyr	99.6	107	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 SMP	MS
			LCS			
EPA 8321B	2,4-D	128	102	95.7		5.80
	Acesulfame K	97.1	81.7	84.4		3.29
	Acetaminophen	85.3	91.4	88.0		3.82
	Acetamiprid	101	86.5	83.6		3.46
	Afidopyropen	85.4	90.2	82.0		9.49
	AMPA	108	89.0	110		12.7
	AMPA	102	116	107		8.42
	Bentazon	91.3				3.35
	Benzovindiflupyr	80.9	85.8	76.2		11.8
	Carbamazepine	84.3	67.7	64.1		5.35
	Clothianidin	83.3	77.2	87.2		12.2
	Dinotefuran	91.9	102	101		0.802
	Diuron	71.1	49.9	50.4		0.932
	Endothall	102	101	103		1.87
	Fenuron	104	65.6	67.4		2.71
	Fluridone	80.5				16.3
	Glufosinate	92.8	90.3	87.6		3.00
	Glufosinate	100	91.6	104		13.0
	Glyphosate	121	75.7	55.0		6.12
	Glyphosate	133	119	135		12.5
	Hydrocodone	105	93.2	93.1		0.132
	Ibuprofen	85.2	64.0	78.2		20.0
	Imazapyr	92.5				7.82
	Imidacloprid	107	130	124		4.43
	Linuron	71.3	65.6	59.5		9.66
	Mandestrobin	96.6	88.8	82.4		7.47
	MCPP	105	101	89.8		11.5
	Naproxen	61.3	67.9	76.4		11.7
	Primidone	87.2	76.9	78.4		1.79
	Pyraclostrobin	78.0	83.5	78.3		6.47
	Sucralose	131	128	134		4.53
	Thiamethoxam	93.5	101	106		5.33
	Tolfenpyrad	51.1	55.7	50.9		9.08
	Triclopyr	91.7	106	89.8		16.1

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2220213, 2220214, 2220215, 2220216, 2220217, 2220218, 2220219
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2220213, 2220214, 2220215, 2220216, 2220217, 2220218, 2220219

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 01:35	Rebecca Ware	2220213
	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 01:47	Rebecca Ware	2220214
	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 01:59	Rebecca Ware	2220215
	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 02:11	Rebecca Ware	2220216
	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 02:22	Rebecca Ware	2220217
	01/20/2021	01/21/2021 15:15	Rebecca Ware	01/22/2021 02:34	Rebecca Ware	2220218
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