

Chemical Analysis Report

NW-DIST-2020-12-16-01

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

Event Description: **NW Run**
Request ID: **RQ-2020-12-14-28**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Date Certified: 28-DEC-2020 09:31



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: Sevenmile Creek Upstream of Alderbrook Blvd. Collection Date/Time: 12/15/2020 09:50

Field ID: G4NW0345

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2213931	EPA 8321B	2,4-D	0.0020	U	ug/L	P391404	
		Acesulfame K**	0.10	U	ug/L	P391314	
		AMPA**	0.10	U	ug/L	P391314	
		Sucralose**	0.47		ug/L	P391314	
		Acetaminophen**	0.0080	U	ug/L	P391404	
		Acetamiprid**	0.0020	U	ug/L	P391404	
		Endothall**	0.25	U	ug/L	P391314	
		Glufosinate**	0.10	U	ug/L	P391314	
		Glyphosate**	0.10	U	ug/L	P391314	
		Afidopyropen**	0.0020	U	ug/L	P391404	
		Bentazon	0.0032		ug/L	P391404	
		Benzovindiflupyr**	0.0020	U	ug/L	P391404	
		Carbamazepine**	0.0017	I	ug/L	P391404	
		Clothianidin**	0.0061	I	ug/L	P391404	
		Dinotefuran**	0.0020	U	ug/L	P391404	
		Diuron	0.0020	U	ug/L	P391404	
		Fenuron	0.016	U	ug/L	P391404	
		Fluridone**	8.0E-04	U	ug/L	P391404	
		Imazapyr**	0.0040	U	ug/L	P391404	
		Hydrocodone**	0.0020	U	ug/L	P391404	
		Ibuprofen**	0.020	U	ug/L	P391404	
		Imidacloprid	0.024		ug/L	P391404	
		Linuron	0.0040	U	ug/L	P391404	
		Mandestrobin**	0.0020	U	ug/L	P391404	
		MCPP	0.0020	U	ug/L	P391404	
		Naproxen**	0.0080	U	ug/L	P391404	
		Primidone**	0.0040	U	ug/L	P391404	
		Pyraclostrobin**	0.0020	U	ug/L	P391404	
		Thiamethoxam**	0.0020	U	ug/L	P391404	
		Tolfenpyrad**	0.0020	U	ug/L	P391404	
		Triclopyr**	0.0040	U	ug/L	P391404	

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: P391314

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: P391404

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: P391314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	93.5		P	40 - 150
Endothall	90.9		P	40 - 150
Glufosinate	96.9		P	40 - 150
Glyphosate	92.3		P	40 - 140
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P391404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	81.4		P	30 - 160
Acetaminophen	70.0		P	30 - 150
Acetamiprid	78.5		P	30 - 160
Afidopyropen	44.7		P	30 - 160
Bentazon	39.2		P	30 - 150
Benzovindiflupyr	68.5		P	30 - 160
Carbamazepine	78.0		P	30 - 160
Clothianidin	85.6		P	30 - 160
Dinotefuran	78.3		P	30 - 160
Diuron	64.8		P	30 - 160
Fenuron	90.8		P	30 - 160
Fluridone	72.5		P	30 - 160
Hydrocodone	84.7		P	30 - 160
Ibuprofen	54.2		P	30 - 160
Imazapyr	76.0		P	30 - 160
Imidacloprid	89.5		P	30 - 160
Linuron	56.5		P	30 - 160
Mandestrobin	69.7		P	30 - 160
MCPP	81.0		P	30 - 160
Naproxen	43.7		P	30 - 160
Primidone	78.6		P	30 - 160
Pyraclostrobin	70.0		P	30 - 160
Thiamethoxam	88.2		P	30 - 160
Tolfenpyrad	43.9		P	30 - 160
Triclopyr	71.7		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P391314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2213076	Acesulfame K	110	109	P/P	40 - 150
2213076	AMPA	130	144	P/P	40 - 150
2213076	Endothall	106	117	P/P	40 - 150
2213076	Glufosinate	95.1	110	P/P	40 - 150
2213076	Glyphosate	72.1	89.2	P/P	40 - 140
2213076	Sucralose	104	109	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P391404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214862	Acetaminophen	64.6	72.4	P/P	30 - 150
2214862	Acetamiprid	86.3	89.0	P/P	30 - 160
2214862	Afidopyropen	66.3	70.8	P/P	30 - 160
2214862	Benzovindiflupyr	74.0	76.6	P/P	30 - 160
2214862	Carbamazepine	69.1	74.8	P/P	30 - 160
2214862	Clothianidin	68.4	71.5	P/P	30 - 160
2214862	Dinotefuran	70.4	75.6	P/P	30 - 160
2214862	Diuron	51.3	52.2	P/P	30 - 160
2214862	Fenuron	63.5	64.0	P/P	30 - 160
2214862	Hydrocodone	66.0	67.8	P/P	30 - 160
2214862	Ibuprofen	52.4	46.0	P/P	30 - 160
2214862	Imazapyr	99.7	97.5	P/P	30 - 160
2214862	Imidacloprid	117	122	P/P	30 - 160
2214862	Linuron	53.3	58.4	P/P	30 - 160
2214862	Mandestrobin	69.9	78.7	P/P	30 - 160
2214862	MCPP	68.9	65.2	P/P	30 - 160
2214862	Naproxen	45.5	57.0	P/P	30 - 160
2214862	Primidone	66.9	67.2	P/P	30 - 160
2214862	Pyraclostrobin	75.4	82.9	P/P	30 - 160
2214862	Thiamethoxam	88.0	89.8	P/P	30 - 160
2214862	Tolfenpyrad	44.9	47.9	P/P	30 - 160
2214862	Triclopyr	68.9	67.5	P/P	30 - 160

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P391314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2213076	Acesulfame K	0.833	Spike	P	0 - 30
2213076	AMPA	10.4	Spike	P	0 - 30
2213076	Endothall	9.97	Spike	P	0 - 30
2213076	Glufosinate	14.9	Spike	P	0 - 30
2213076	Glyphosate	21.3	Spike	P	0 - 30
2213076	Sucralose	3.89	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P391404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214862	2,4-D	0.511	Spike	P	0 - 30
2214862	Acetaminophen	11.5	Spike	P	0 - 30
2214862	Acetamiprid	3.09	Spike	P	0 - 30
2214862	Afidopyropen	6.70	Spike	P	0 - 30
2214862	Bentazon	2.10	Spike	P	0 - 30
2214862	Benzovindiflupyr	3.52	Spike	P	0 - 30
2214862	Carbamazepine	7.84	Spike	P	0 - 30
2214862	Clothianidin	4.46	Spike	P	0 - 30
2214862	Dinotefuran	7.05	Spike	P	0 - 30
2214862	Diuron	1.77	Spike	P	0 - 30
2214862	Fenuron	0.698	Spike	P	0 - 30
2214862	Fluridone	8.85	Spike	P	0 - 30
2214862	Hydrocodone	2.68	Spike	P	0 - 30
2214862	Ibuprofen	13.0	Spike	P	0 - 30
2214862	Imazapyr	1.52	Spike	P	0 - 30
2214862	Imidacloprid	4.07	Spike	P	0 - 30
2214862	Linuron	9.02	Spike	P	0 - 30
2214862	Mandestrobin	11.9	Spike	P	0 - 30
2214862	MCP	5.46	Spike	P	0 - 30
2214862	Naproxen	22.4	Spike	P	0 - 30
2214862	Primidone	0.433	Spike	P	0 - 30
2214862	Pyraclostrobin	9.57	Spike	P	0 - 30
2214862	Thiamethoxam	2.05	Spike	P	0 - 30
2214862	Tolfenpyrad	6.35	Spike	P	0 - 30
2214862	Triclopyr	2.05	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2213931

Field Sample ID: G4NW0345

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	77.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.9	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	113	P	40 - 160
EPA 8321B	Endothall-d6	113	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	40 - 160
EPA 8321B	Ibuprofen-d3	50.4	P	30 - 160
EPA 8321B	Primidone-d5	83.2	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A102674
 Included Lab Sample IDs: 2213931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	104	P/P	60 - 160

Reference Method: EPA 8321B
 Run ID: A102710
 Included Lab Sample IDs: 2213931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	97.9	103	P/P	60 - 160
AMPA	87.6	95.4	P/P	60 - 160
Endothall	99.2	105	P/P	60 - 160
Glufosinate	89.3	99.2	P/P	60 - 160
Glyphosate	103	89.1	P/P	60 - 160

Reference Method: EPA 8321B
 Run ID: A102765
 Included Lab Sample IDs: 2213931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	86.6	P/P	50 - 150
Acetaminophen	125	139	P/P	60 - 160
Acetamiprid	113	121	P/P	50 - 150
Afidopyropen	104	108	P/P	50 - 150
Bentazon	123	150	P/P	50 - 160
Benzovindiflupyr	113	115	P/P	50 - 150
Carbamazepine	112	119	P/P	60 - 150
Clothianidin	128	121	P/P	60 - 150
Dinotefuran	116	118	P/P	50 - 150
Diuron	123	128	P/P	60 - 160
Fenuron	109	114	P/P	60 - 150
Fluridone	87.3	105	P/P	60 - 160
Hydrocodone	117	113	P/P	60 - 150
Ibuprofen	80.7	74.6	P/P	50 - 160
Imazapyr	105	93.8	P/P	50 - 150
Imidacloprid	113	102	P/P	60 - 150
Linuron	103	117	P/P	60 - 150
Mandestrobin	108	114	P/P	50 - 150
MCPP	92.7	92.2	P/P	50 - 150
Naproxen	109	145	P/P	50 - 160
Primidone	108	113	P/P	60 - 150
Pyraclostrobin	110	114	P/P	60 - 150
Thiamethoxam	124	112	P/P	50 - 150
Tolfenpyrad	101	94.1	P/P	60 - 150
Triclopyr	95.8	93.5	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
EPA 8321B	2,4-D	81.4				0.511
	Acesulfame K	106	110	109		0.833
	Acetaminophen	70.0	72.4	64.6		11.5
	Acetamiprid	78.5	89.0	86.3		3.09
	Afidopyropen	44.7	70.8	66.3		6.70
	AMPA	93.5	130	144		10.4
	Bentazon	39.2				2.10
	Benzovindiflupyr	68.5	76.6	74.0		3.52
	Carbamazepine	78.0	74.8	69.1		7.84
	Clothianidin	85.6	71.5	68.4		4.46
	Dinotefuran	78.3	75.6	70.4		7.05
	Diuron	64.8	52.2	51.3		1.77
	Endothall	90.9	106	117		9.97
	Fenuron	90.8	64.0	63.5		0.698
	Fluridone	72.5				8.85
	Glufosinate	96.9	95.1	110		14.9
	Glyphosate	92.3	72.1	89.2		21.3
	Hydrocodone	84.7	67.8	66.0		2.68
	Ibuprofen	54.2	52.4	46.0		13.0
	Imazapyr	76.0	97.5	99.7		1.52
	Imidacloprid	89.5	122	117		4.07
	Linuron	56.5	58.4	53.3		9.02
	Mandestrobin	69.7	78.7	69.9		11.9
	MCPP	81.0	68.9	65.2		5.46
	Naproxen	43.7	45.5	57.0		22.4
	Primidone	78.6	67.2	66.9		0.433
	Pyraclostrobin	70.0	82.9	75.4		9.57
	Sucralose	105	104	109		3.89
	Thiamethoxam	88.2	89.8	88.0		2.05
	Tolfenpyrad	43.9	47.9	44.9		6.35
	Triclopyr	71.7	68.9	67.5		2.05

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2213931
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2213931

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	12/16/2020	12/17/2020 11:00	Rebecca Ware	12/17/2020 16:33	Rebecca Ware	2213931
	12/16/2020	12/17/2020 11:00	Rebecca Ware	12/19/2020 00:40	Rebecca Ware	2213931
	12/16/2020	12/21/2020 12:00	Hoor Shaik	12/23/2020 02:18	Juyoung Kim	2213931