

Chemical Analysis Report

SW-DIST-2018-01-25-01

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

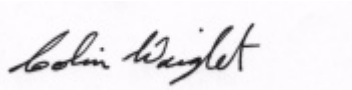
Event Description: **Pinellas LR5- Joe's & PP Ditch#5**
Request ID: **RQ-2018-01-22-34**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Temple Terrace, FL 33637-0926
Attn: Judy Ashton

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Certified by: Colin Wright, Program Administrator

Date Certified: 02-FEB-2018 11:44

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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 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: JOE'S CREEK @ 62ND & 42ND

Collection Date/Time: 01/24/2018 14:30

Field ID: G5SW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962142	EPA 8321B	Sucralose**	0.36		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.086		ug/L	P338801	
		Diuron	0.0070	I	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.032		ug/L	P338801	MS
		Bentazon	0.024		ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.0080	U	ug/L	P338801	
		MCP	0.0068	I	ug/L	P338801	
		Carbamazepine**	5.8E-04	I	ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	0.028		ug/L	P338801	

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P338739

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P338801

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P338739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	111		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P338801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.4		P	40 - 150
Acetaminophen	105		P	30 - 150
Bentazon	82.7		P	30 - 150
Carbamazepine	99.9		P	40 - 150
Diuron	88.8		P	40 - 150
Fenuron	117		P	40 - 150
Fluridone	117		P	40 - 150
Imidacloprid	112		P	40 - 160
Linuron	103		P	40 - 150
MCP	84.1		P	40 - 150
Primidone	119		P	40 - 150
Triclopyr	81.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P338739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961510	Sucralose	100	119	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P338801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962120	2,4-D	102	90.3	P/P	40 - 150
1962120	Acetaminophen	142	146	P/P	30 - 150
1962120	Bentazon	40.2	37.0	P/P	30 - 150
1962120	Carbamazepine	101	101	P/P	40 - 150
1962120	Diuron	95.8	94.0	P/P	40 - 150
1962120	Fenuron	80.3	81.3	P/P	40 - 150
1962120	Fluridone	89.6	92.1	P/P	40 - 150
1962120	Imidacloprid	189	200	F/F	40 - 160
1962120	Linuron	105	103	P/P	40 - 150
1962120	MCP	86.7	78.8	P/P	40 - 150
1962120	Primidone	79.6	95.7	P/P	40 - 150
1962120	Triclopyr	91.8	82.1	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P338739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961510	Sucralose	14.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P338801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962120	2,4-D	11.8	Spike	P	0 - 30
1962120	Acetaminophen	2.18	Spike	P	0 - 30
1962120	Bentazon	8.16	Spike	P	0 - 30
1962120	Carbamazepine	0.0981	Spike	P	0 - 30
1962120	Diuron	1.98	Spike	P	0 - 30
1962120	Fenuron	1.27	Spike	P	0 - 30
1962120	Fluridone	2.84	Spike	P	0 - 30
1962120	Imidacloprid	5.81	Spike	P	0 - 30
1962120	Linuron	1.54	Spike	P	0 - 30
1962120	MCP	9.53	Spike	P	0 - 30
1962120	Primidone	18.4	Spike	P	0 - 30
1962120	Triclopyr	11.1	Spike	P	0 - 30

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

Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1962142
Field Sample ID: G5SW0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.0	P	30 - 160
EPA 8321B	Diuron-d6	84.9	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	129	P	40 - 160
USGS O-2060-01	2,4-D-d3	78.4	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	108	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	89.0	P	30 - 160
USGS O-2060-01	Diuron-d6	84.9	P	30 - 160
USGS O-2060-01	Primidone-d5	110	P	30 - 160
USGS O-2060-01	Sucralose-d6	129	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A81671
Included Lab Sample IDs: 1962142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.3	88.5	P/P	50 - 150
Acetaminophen	109	106	P/P	60 - 150
Bentazon	94.8	102	P/P	50 - 150
Carbamazepine	107	108	P/P	60 - 150
Diuron	113	107	P/P	60 - 150
Fenuron	112	107	P/P	60 - 150
Fluridone	119	121	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A81671

Included Lab Sample IDs: 1962142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imidacloprid	102	105	P/P	60 - 150
Linuron	106	107	P/P	60 - 150
MCP	93.6	96.9	P/P	50 - 150
Primidone	96.5	108	P/P	60 - 150
Triclopyr	84.4	91.4	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A81727

Included Lab Sample IDs: 1962142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	124	P/P	60 - 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
					LCS	MS
EPA 8321B	Sucralose	111	100	119		14.1
USGS O-2060-01	2,4-D	90.4	90.3	102		11.8
	Acetaminophen	105	142	146		2.18
	Bentazon	82.7	37.0	40.2		8.16
	Carbamazepine	99.9	101	101		0.0981
	Diuron	88.8	95.8	94.0		1.98
	Fenuron	117	80.3	81.3		1.27
	Fluridone	117	89.6	92.1		2.84
	Imidacloprid	112	189	200		5.81
	Linuron	103	105	103		1.54
	MCP	84.1	78.8	86.7		9.53
	Primidone	119	79.6	95.7		18.4
	Triclopyr	81.2	82.1	91.8		11.1

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1962142
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1962142
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1962142

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/25/2018	01/26/2018	Juyoung Kim	01/27/2018	Juyoung Kim	1962142
USGS O-2060-01	01/25/2018	01/26/2018	Hoor Shaik	01/28/2018	Julie Michelle Frank	1962142