

Chemical Analysis Report

SW-DIST-2018-07-18-01

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

Event Description: **Rattlesnake, Braden, Cedar**
Request ID: **RQ-2018-07-16-04**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 08-AUG-2018 16:21

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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: CEDAR CREEK @ SADDLEHORN

Collection Date/Time: 07/17/2018 10:40

Field ID: G2SW0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008558	EPA 8321B	2,4-D	0.11		ug/L	P348626	
		Bentazon	0.011		ug/L	P348626	
		MCP	0.0053	I	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.10		ug/L	P348626	
		Diuron	0.0027	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.21		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	0.27		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.010	U	ug/L	P348751	

Sample Location: CEDAR CREEK NEAR END OF WBID

Collection Date/Time: 07/17/2018 10:25

Field ID: G2SW0042

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008559	EPA 8321B	2,4-D	0.15		ug/L	P348626	
		Bentazon	0.022		ug/L	P348626	
		MCP	0.0052	I	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.14		ug/L	P348626	
		Diuron	0.0022	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.26		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	0.25		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.010	U	ug/L	P348754	

Sample Location: RATTLESNAKE SLOUGH @ LINDEN

Collection Date/Time: 07/17/2018 11:10

Field ID: G2SW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008560	EPA 8321B	2,4-D	0.0022	I	ug/L	P348626	
		Bentazon	0.0082		ug/L	P348626	
		MCP	0.0020	U	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.039		ug/L	P348626	
		Diuron	0.0026	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.45		ug/L	P348626	
		Carbamazepine**	6.1E-04	I	ug/L	P348626	
		Fluridone**	0.016		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.57		ug/L	P348754	

Sample Location: RATTLESNAKE SLOUGH @ LOCKWOOD

Collection Date/Time: 07/17/2018 10:55

Field ID: G2SW0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008561	EPA 8321B	2,4-D	0.0060	I	ug/L	P348626	
		Bentazon	0.026		ug/L	P348626	
		MCP	0.0077	I	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.12		ug/L	P348626	
		Diuron	0.0025	I	ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0040	U	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	1.6		ug/L	P348626	
		Carbamazepine**	4.0E-04	U	ug/L	P348626	
		Fluridone**	0.027		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	0.26		ug/L	P348754	

Sample Location: BRADEN RIVER @ LINKER LODGE

Collection Date/Time: 07/17/2018 09:35

Field ID: G2SW0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008562	EPA 8321B	2,4-D	0.011		ug/L	P348626	
		Bentazon	0.026		ug/L	P348626	
		MCP	0.0020	U	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.048		ug/L	P348626	
		Diuron	0.012		ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0068	I	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.092		ug/L	P348626	
		Carbamazepine**	0.0019		ug/L	P348626	
		Fluridone**	0.061		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	1.8		ug/L	P348754	

Sample Location: BRADEN RIVER @ CYPRESS BEND

Collection Date/Time: 07/17/2018 09:54

Field ID: G2SW0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008563	EPA 8321B	2,4-D	0.015		ug/L	P348626	
		Bentazon	0.022		ug/L	P348626	
		MCP	0.0024	I	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.051		ug/L	P348626	
		Diuron	0.015		ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0045	I	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.089		ug/L	P348626	
		Carbamazepine**	0.0013	I	ug/L	P348626	
		Fluridone**	0.065		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	1.3		ug/L	P348754	

Sample Location: BRADEN RIVER @ CYPRESS BEND

Collection Date/Time: 07/17/2018 09:40

Field ID: G2SW0016_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2008564	EPA 8321B	2,4-D	0.011		ug/L	P348626	
		Bentazon	0.028		ug/L	P348626	
		MCP	0.0020	U	ug/L	P348626	MS
		Triclopyr**	0.0040	U	ug/L	P348626	MS
		Imidacloprid	0.045		ug/L	P348626	
		Diuron	0.011		ug/L	P348626	
		Pyraclostrobin**	0.0020	U	ug/L	P348626	
		Primidone**	0.0061	I	ug/L	P348626	
		Linuron	0.0040	U	ug/L	P348626	
		Acetaminophen**	0.0080	U	ug/L	P348626	
		Fenuron	0.016	U	ug/L	P348626	
		Imazapyr**	0.085		ug/L	P348626	
		Carbamazepine**	0.0020		ug/L	P348626	
		Fluridone**	0.059		ug/L	P348626	
		Hydrocodone**	8.0E-04	U	ug/L	P348626	
		Naproxen**	0.0080	U	ug/L	P348626	
		Ibuprofen**	0.020	U	ug/L	P348626	
		Sucralose**	1.9		ug/L	P348754	

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P348626

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	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P348751

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P348754

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P348626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	117		P	40 - 150
Acetaminophen	86.6		P	30 - 150
Bentazon	98.1		P	30 - 150
Carbamazepine	80.4		P	40 - 150
Diuron	76.3		P	40 - 150
Fenuron	97.7		P	40 - 150
Fluridone	80.9		P	40 - 150
Hydrocodone	92.2		P	40 - 150
Ibuprofen	101		P	40 - 150
Imazapyr	90.3		P	40 - 150
Imidacloprid	91.8		P	40 - 160
Linuron	84.3		P	40 - 150
MCPP	139		P	40 - 150
Naproxen	116		P	40 - 150
Primidone	94.8		P	40 - 150
Pyraclostrobin	85.1		P	40 - 150
Triclopyr	136		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P348751

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	92.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P348754

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	77.3		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P348626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2009013	2,4-D	139	139	P/P	40 - 150
2009013	Acetaminophen	106	109	P/P	30 - 150
2009013	Bentazon	52.6	54.5	P/P	30 - 150
2009013	Carbamazepine	75.6	81.3	P/P	40 - 150
2009013	Diuron	73.1	78.4	P/P	40 - 150
2009013	Fenuron	77.7	87.3	P/P	40 - 150
2009013	Fluridone	83.2	89.3	P/P	40 - 150
2009013	Hydrocodone	87.3	97.3	P/P	40 - 150
2009013	Ibuprofen	94.3	102	P/P	40 - 150
2009013	Imazapyr	91.8	106	P/P	40 - 150
2009013	Imidacloprid	142	153	P/P	40 - 160
2009013	Linuron	89.6	94.1	P/P	40 - 150
2009013	MCPP	162	165	F/F	40 - 150
2009013	Naproxen	103	114	P/P	40 - 150
2009013	Primidone	109	121	P/P	40 - 150
2009013	Pyraclostrobin	86.7	101	P/P	40 - 150
2009013	Triclopyr	162	162	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P348751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2008140	Sucralose	81.0	81.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P348754

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2008562	Sucralose	75.6	96.9	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P348626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2009013	2,4-D	0.511	Spike	P	0 - 30
2009013	Acetaminophen	2.89	Spike	P	0 - 30
2009013	Bentazon	3.14	Spike	P	0 - 30
2009013	Carbamazepine	7.06	Spike	P	0 - 30
2009013	Diuron	7.10	Spike	P	0 - 30
2009013	Fenuron	11.5	Spike	P	0 - 30
2009013	Fluridone	7.03	Spike	P	0 - 30
2009013	Hydrocodone	10.9	Spike	P	0 - 30
2009013	Ibuprofen	7.50	Spike	P	0 - 30
2009013	Imazapyr	12.9	Spike	P	0 - 30
2009013	Imidacloprid	4.97	Spike	P	0 - 30
2009013	Linuron	4.99	Spike	P	0 - 30
2009013	MCP	1.75	Spike	P	0 - 30
2009013	Naproxen	10.1	Spike	P	0 - 30
2009013	Primidone	9.41	Spike	P	0 - 30
2009013	Pyraclostrobin	15.7	Spike	P	0 - 30
2009013	Triclopyr	0.178	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P348751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008140	Sucralose	1.05	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P348754

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2008562	Sucralose	13.5	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: 2008558
Field Sample ID: G2SW0018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	133	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.4	P	30 - 160
EPA 8321B	Diuron-d6	61.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.5	P	40 - 160
EPA 8321B	Primidone-d5	82.4	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	40 - 160

Lab Sample ID: 2008559
Field Sample ID: G2SW0042

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	145	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.6	P	30 - 160
EPA 8321B	Diuron-d6	62.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	109	P	40 - 160
EPA 8321B	Primidone-d5	88.4	P	30 - 160
EPA 8321B	Sucralose-d6	96.2	P	40 - 160

Lab Sample ID: 2008560
Field Sample ID: G2SW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	137	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.2	P	30 - 160
EPA 8321B	Diuron-d6	59.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	94.2	P	40 - 160
EPA 8321B	Primidone-d5	81.8	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	40 - 160

Lab Sample ID: 2008561
Field Sample ID: G2SW0043

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	137	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.7	P	30 - 160
EPA 8321B	Diuron-d6	56.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.2	P	40 - 160
EPA 8321B	Primidone-d5	84.0	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	40 - 160

Lab Sample ID: 2008562
Field Sample ID: G2SW0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	158	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.7	P	30 - 160
EPA 8321B	Diuron-d6	58.0	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2008562
Field Sample ID: G2SW0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Ibuprofen-d3	92.7	P	40 - 160
EPA 8321B	Primidone-d5	77.1	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	40 - 160

Lab Sample ID: 2008563
Field Sample ID: G2SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	149	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.5	P	30 - 160
EPA 8321B	Diuron-d6	53.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	103	P	40 - 160
EPA 8321B	Primidone-d5	75.2	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	40 - 160

Lab Sample ID: 2008564
Field Sample ID: G2SW0016_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	148	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.8	P	30 - 160
EPA 8321B	Diuron-d6	51.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	104	P	40 - 160
EPA 8321B	Primidone-d5	76.4	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A85393

Included Lab Sample IDs: 2008558, 2008559, 2008560, 2008561, 2008562, 2008563, 2008564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	87.1	93.6	P/P	60 - 150
Sucralose	89.9	104	P/P	60 - 150
Sucralose	93.6	91.4	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A85613

Included Lab Sample IDs: 2008558, 2008559, 2008560, 2008561, 2008562, 2008563, 2008564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	124	117	P/P	50 - 150
Bentazon	114	118	P/P	50 - 150
Ibuprofen	83.8	150	P/P	50 - 150
MCP	132	144	P/P	50 - 150
Naproxen	103	83.6	P/P	60 - 150
Triclopyr	133	150	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A85626

Included Lab Sample IDs: 2008558, 2008559, 2008560, 2008561, 2008562, 2008563, 2008564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	100	98.2	P/P	60 - 150
Acetaminophen	98.2	95.0	P/P	60 - 150
Carbamazepine	115	122	P/P	60 - 150
Carbamazepine	122	115	P/P	60 - 150
Diuron	107	120	P/P	60 - 150
Diuron	118	107	P/P	60 - 150
Fenuron	102	98.7	P/P	60 - 150
Fenuron	98.7	95.5	P/P	60 - 150
Fluridone	105	106	P/P	60 - 160
Fluridone	106	104	P/P	60 - 160
Fluridone	108	105	P/P	60 - 160
Hydrocodone	94.3	90.3	P/P	60 - 150
Hydrocodone	96.5	94.3	P/P	60 - 150
Imazapyr	112	94.2	P/P	50 - 150
Imazapyr	91.5	79.9	P/P	50 - 150
Imazapyr	94.2	91.5	P/P	50 - 150
Imidacloprid	90.1	90.9	P/P	60 - 150
Imidacloprid	96.0	90.1	P/P	60 - 150
Linuron	108	99.7	P/P	60 - 150
Linuron	99.7	115	P/P	60 - 150
Primidone	105	100	P/P	60 - 150
Primidone	106	105	P/P	60 - 150
Pyraclostrobin	109	115	P/P	60 - 150
Pyraclostrobin	113	109	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A85629

Included Lab Sample IDs: 2008559, 2008560, 2008564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A85629

Included Lab Sample IDs: 2008559, 2008560, 2008564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.5	128	P/P	50 - 150
MCPP	98.3	99.6	P/P	50 - 150
Triclopyr	99.7	96.9	P/P	50 - 160

* 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	117	139	139		0.511
	Acetaminophen	86.6	106	109		2.89
	Bentazon	98.1	52.6	54.5		3.14
	Carbamazepine	80.4	75.6	81.3		7.06
	Diuron	76.3	73.1	78.4		7.10
	Fenuron	97.7	77.7	87.3		11.5
	Fluridone	80.9	83.2	89.3		7.03
	Hydrocodone	92.2	87.3	97.3		10.9
	Ibuprofen	101	94.3	102		7.50
	Imazapyr	90.3	91.8	106		12.9
	Imidacloprid	91.8	142	153		4.97
	Linuron	84.3	89.6	94.1		4.99
	MCPD	139	162	165		1.75
	Naproxen	116	103	114		10.1
	Primidone	94.8	109	121		9.41
	Pyraclostrobin	85.1	86.7	101		15.7
	Sucralose	92.0	81.0	81.9		1.05
	Sucralose	77.3	75.6	96.9		13.5
	Triclopyr	136	162	162		0.178

Reference Method Descriptions

Method / DoH Cert

EPA 8321B / E31780

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Associated Samples

2008558, 2008559, 2008560, 2008561,
2008562, 2008563, 2008564

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/24/2018 23:46	Juyoung Kim	2008558
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 00:21	Juyoung Kim	2008559
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 00:55	Juyoung Kim	2008560
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 01:30	Juyoung Kim	2008561
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 02:05	Juyoung Kim	2008562
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 02:39	Juyoung Kim	2008563
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 03:48	Juyoung Kim	2008564
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 10:44	Juyoung Kim	2008558
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 11:18	Juyoung Kim	2008559
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/25/2018 11:53	Juyoung Kim	2008561
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 05:53	Juyoung Kim	2008558
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 06:28	Juyoung Kim	2008559
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 07:02	Juyoung Kim	2008560
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 07:37	Juyoung Kim	2008561
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 08:12	Juyoung Kim	2008562
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 08:46	Juyoung Kim	2008563
	07/18/2018	07/20/2018 10:00	Hoor Shaik	07/28/2018 09:21	Juyoung Kim	2008564
	07/18/2018	07/20/2018 10:00	Hoor Shaik	08/02/2018 03:59	Juyoung Kim	2008559
	07/18/2018	07/20/2018 10:00	Hoor Shaik	08/02/2018 04:34	Juyoung Kim	2008560
	07/18/2018	07/20/2018 10:00	Hoor Shaik	08/02/2018 05:08	Juyoung Kim	2008564
	07/18/2018	07/20/2018 16:00	Mohammad Ghaffari	07/21/2018 03:14	Mohammad Ghaffari	2008558
	07/18/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 10:49	Mohammad Ghaffari	2008559
	07/18/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 11:04	Mohammad Ghaffari	2008560
	07/18/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 11:18	Mohammad Ghaffari	2008561
	07/18/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 12:02	Mohammad Ghaffari	2008562
	07/18/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 12:32	Mohammad Ghaffari	2008563
	07/18/2018	07/20/2018 16:30	Mohammad Ghaffari	07/21/2018 12:46	Mohammad Ghaffari	2008564