

Chemical Analysis Report

TLH-ROC-2018-01-18-02

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

Event Description: **b/t/m PCR-FILTER**
Request ID: **RQ-2018-01-15-20**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 31-JAN-2018 15:06



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: HARVEY CREEK @ HWY20

Collection Date/Time: 01/18/2018 09:25

Field ID: G1TLHR0058

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960449	EPA 8321B	Sucralose**	0.032	I	ug/L	P338431	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338349	
		Diuron	0.0020	U	ug/L	P338349	
		Fenuron	0.0080	U	ug/L	P338349	
		Imidacloprid	0.0021	I	ug/L	P338349	MS
		Bentazon	8.0E-04	U	ug/L	P338349	
		Linuron	0.0040	U	ug/L	P338349	
		Acetaminophen**	0.0080	U	ug/L	P338349	
		MCP	0.0020	U	ug/L	P338349	
		Carbamazepine**	4.0E-04	U	ug/L	P338349	
		Triclopyr**	0.0040	U	ug/L	P338349	
		Primidone**	0.0040	U	ug/L	P338349	
		Fluridone**	4.0E-04	U	ug/L	P338349	RPD

Sample Location: HARVEY CREEK @ JOE THOMAS RD

Collection Date/Time: 01/18/2018 09:50

Field ID: G1TLHR0082

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960450	EPA 8321B	Sucralose**	0.010	U	ug/L	P338457	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338349	
		Diuron	0.0020	U	ug/L	P338349	
		Fenuron	0.0080	U	ug/L	P338349	
		Imidacloprid	0.0020	U	ug/L	P338349	MS
		Bentazon	8.0E-04	U	ug/L	P338349	
		Linuron	0.0040	U	ug/L	P338349	
		Acetaminophen**	0.0080	U	ug/L	P338349	
		MCP	0.0020	U	ug/L	P338349	
		Carbamazepine**	4.0E-04	U	ug/L	P338349	
		Triclopyr**	0.0040	U	ug/L	P338349	
		Primidone**	0.0040	U	ug/L	P338349	
		Fluridone**	4.0E-04	U	ug/L	P338349	RPD

Ref. Method and Comment:
 EPA 8321B: Results confirmed in re-extraction.

Sample Location: HARVEY CREEK @ JOE THOMAS RD

Collection Date/Time: 01/18/2018 09:55

Field ID: G1TLHR0082DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960451	EPA 8321B	Sucralose**	0.010	U	ug/L	P338457	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338349	
		Diuron	0.0020	U	ug/L	P338349	
		Fenuron	0.0080	U	ug/L	P338349	
		Imidacloprid	0.0020	U	ug/L	P338349	MS
		Bentazon	8.0E-04	U	ug/L	P338349	
		Linuron	0.0040	U	ug/L	P338349	

Field ID: G1TLHR0082DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960451	USGS O-2060-01	Acetaminophen**	0.0080	U	ug/L	P338349	
		MCP	0.0020	U	ug/L	P338349	
		Carbamazepine**	4.0E-04	U	ug/L	P338349	
		Triclopyr**	0.0040	U	ug/L	P338349	
		Primidone**	0.0040	U	ug/L	P338349	
		Fluridone**	4.0E-04	U	ug/L	P338349	RPD

Ref. Method and Comment:
EPA 8321B: Results confirmed in re-extraction.

Sample Location: FIELD BLANK

Collection Date/Time: 01/18/2018 09:55

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960452	EPA 8321B	Sucralose**	0.010	U	ug/L	P338431	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338349	
		Diuron	0.0020	U	ug/L	P338349	
		Fenuron	0.0080	U	ug/L	P338349	
		Imidacloprid	0.0020	U	ug/L	P338349	MS
		Bentazon	8.0E-04	U	ug/L	P338349	
		Linuron	0.0040	U	ug/L	P338349	
		Acetaminophen**	0.0080	U	ug/L	P338349	
		MCP	0.0020	U	ug/L	P338349	
		Carbamazepine**	4.0E-04	U	ug/L	P338349	
		Triclopyr**	0.0040	U	ug/L	P338349	
		Primidone**	0.0040	U	ug/L	P338349	
		Fluridone**	4.0E-04	U	ug/L	P338349	RPD

Sample Location: MULE CREEK @ SR12

Collection Date/Time: 01/18/2018 11:45

Field ID: G1TLHR0063

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960453	EPA 8321B	Sucralose**	0.010	U	ug/L	P338431	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338463	
		Diuron	0.0020	U	ug/L	P338463	
		Fenuron	0.0080	U	ug/L	P338463	
		Imidacloprid	0.0020	U	ug/L	P338463	
		Bentazon	8.0E-04	U	ug/L	P338463	
		Linuron	0.0040	U	ug/L	P338463	
		Acetaminophen**	0.0080	U	ug/L	P338463	
		MCP	0.0020	U	ug/L	P338463	
		Carbamazepine**	4.0E-04	U	ug/L	P338463	
		Triclopyr**	0.0040	U	ug/L	P338463	
		Primidone**	0.0040	U	ug/L	P338463	
		Fluridone**	4.0E-04	U	ug/L	P338463	

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P338431

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P338457

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P338349

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

Reference Method: USGS O-2060-01
Batch ID: P338463

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
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: P338431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	102		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P338457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	97.4		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P338349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	75.3		P	40 - 150
Acetaminophen	98.5		P	30 - 150
Bentazon	78.6		P	30 - 150
Carbamazepine	114		P	40 - 150
Diuron	102		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	120		P	40 - 150
Imidacloprid	113		P	40 - 160
Linuron	110		P	40 - 150
MCP	79.5		P	40 - 150
Primidone	109		P	40 - 150
Triclopyr	79.5		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P338463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.4		P	40 - 150
Acetaminophen	97.1		P	30 - 150
Bentazon	80.1		P	30 - 150
Carbamazepine	102		P	40 - 150
Diuron	89.8		P	40 - 150
Fenuron	122		P	40 - 150
Imidacloprid	112		P	40 - 160
Linuron	99.2		P	40 - 150
MCP	81.4		P	40 - 150
Primidone	115		P	40 - 150
Triclopyr	72.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P338431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1959537	Sucralose	87.4	97.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P338457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960487	Sucralose	97.9	93.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P338349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1959579	2,4-D	113	103	P/P	40 - 150
1959579	Acetaminophen	87.9	109	P/P	30 - 150
1959579	Bentazon	148	105	P/P	30 - 150
1959579	Carbamazepine	100	105	P/P	40 - 150
1959579	Diuron	74.3	85.4	P/P	40 - 150
1959579	Fenuron	107	93.4	P/P	40 - 150
1959579	Fluridone	83.5	47.8	P/P	40 - 150
1959579	Imidacloprid	161	223	F/F	40 - 160
1959579	Linuron	87.7	87.0	P/P	40 - 150
1959579	MCP	97.1	75.7	P/P	40 - 150
1959579	Primidone	121	96.4	P/P	40 - 150
1959579	Triclopyr	90.9	75.1	P/P	40 - 150

Reference Method: USGS O-2060-01
 Batch ID: P338463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960453	2,4-D	133	138	P/P	40 - 150
1960453	Acetaminophen	99.9	96.7	P/P	30 - 150
1960453	Bentazon	95.9	97.0	P/P	30 - 150
1960453	Carbamazepine	107	106	P/P	40 - 150
1960453	Diuron	94.8	95.5	P/P	40 - 150
1960453	Fenuron	113	109	P/P	40 - 150
1960453	Imidacloprid	120	118	P/P	40 - 160
1960453	Linuron	99.9	99.1	P/P	40 - 150
1960453	MCP	111	119	P/P	40 - 150
1960453	Primidone	114	112	P/P	40 - 150
1960453	Triclopyr	118	126	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P338431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1959537	Sucralose	11.0	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P338457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960487	Sucralose	4.82	Spike	P	0 - 30

Reference Method: USGS O-2060-01
 Batch ID: P338349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P338349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1959579	2,4-D	8.07	Spike	P	0 - 30
1959579	Acetaminophen	21.2	Spike	P	0 - 30
1959579	Bentazon	12.6	Spike	P	0 - 30
1959579	Carbamazepine	4.22	Spike	P	0 - 30
1959579	Diuron	12.2	Spike	P	0 - 30
1959579	Fenuron	13.3	Spike	P	0 - 30
1959579	Fluridone	36.3	Spike	F	0 - 30
1959579	Imidacloprid	28.3	Spike	P	0 - 30
1959579	Linuron	0.843	Spike	P	0 - 30
1959579	MCP	23.6	Spike	P	0 - 30
1959579	Primidone	22.8	Spike	P	0 - 30
1959579	Triclopyr	19.0	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P338463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960453	2,4-D	3.61	Spike	P	0 - 30
1960453	Acetaminophen	3.31	Spike	P	0 - 30
1960453	Bentazon	1.19	Spike	P	0 - 30
1960453	Carbamazepine	0.659	Spike	P	0 - 30
1960453	Diuron	0.799	Spike	P	0 - 30
1960453	Fenuron	3.70	Spike	P	0 - 30
1960453	Imidacloprid	1.68	Spike	P	0 - 30
1960453	Linuron	0.804	Spike	P	0 - 30
1960453	MCP	7.48	Spike	P	0 - 30
1960453	Primidone	2.39	Spike	P	0 - 30
1960453	Triclopyr	5.98	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: 1960449
Field Sample ID: G1TLHR0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	97.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	97.9	P	30 - 160
EPA 8321B	Primidone-d5	125	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	40 - 160
USGS O-2060-01	2,4-D-d3	79.1	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	97.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	107	P	30 - 160
USGS O-2060-01	Diuron-d6	97.9	P	30 - 160
USGS O-2060-01	Primidone-d5	125	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1960449

Field Sample ID: G1TLHR0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Sucralose-d6	103	P	40 - 160

Lab Sample ID: 1960450

Field Sample ID: G1TLHR0082

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	92.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	94.6	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	40 - 160
EPA 8321B	Sucralose-d6	107	P	40 - 160
USGS O-2060-01	2,4-D-d3	79.5	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	92.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	106	P	30 - 160
USGS O-2060-01	Diuron-d6	94.6	P	30 - 160
USGS O-2060-01	Primidone-d5	115	P	30 - 160
USGS O-2060-01	Sucralose-d6	95.8	P	40 - 160
USGS O-2060-01	Sucralose-d6	107	P	40 - 160

Lab Sample ID: 1960451

Field Sample ID: G1TLHR0082DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	92.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	99.7	P	30 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Sucralose-d6	95.4	P	40 - 160
EPA 8321B	Sucralose-d6	114	P	40 - 160
USGS O-2060-01	2,4-D-d3	77.5	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	92.1	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	101	P	30 - 160
USGS O-2060-01	Diuron-d6	99.7	P	30 - 160
USGS O-2060-01	Primidone-d5	127	P	30 - 160
USGS O-2060-01	Sucralose-d6	95.4	P	40 - 160
USGS O-2060-01	Sucralose-d6	114	P	40 - 160

Lab Sample ID: 1960452

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	96.4	P	30 - 160
EPA 8321B	Primidone-d5	120	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	40 - 160
USGS O-2060-01	2,4-D-d3	71.9	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	107	P	30 - 160
USGS O-2060-01	Diuron-d6	96.4	P	30 - 160
USGS O-2060-01	Primidone-d5	120	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1960452
 Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Sucralose-d6	105	P	40 - 160

Lab Sample ID: 1960453
 Field Sample ID: G1TLHR0063

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	91.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	94.8	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	99.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	122	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	91.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	111	P	30 - 160
USGS O-2060-01	Diuron-d6	94.8	P	30 - 160
USGS O-2060-01	Primidone-d5	111	P	30 - 160
USGS O-2060-01	Sucralose-d6	99.6	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A81591
 Included Lab Sample IDs: 1960449, 1960452, 1960453

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	101	P/P	60 - 150

Reference Method: USGS O-2060-01
 Run ID: A81623
 Included Lab Sample IDs: 1960449, 1960450, 1960451, 1960452

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	82.4	72.6	P/P	50 - 150
2,4-D	83.9	82.4	P/P	50 - 150
Acetaminophen	113	104	P/P	60 - 150
Bentazon	101	100	P/P	50 - 150
Bentazon	97.5	101	P/P	50 - 150
Carbamazepine	120	117	P/P	60 - 150
Diuron	114	113	P/P	60 - 150
Fenuron	109	109	P/P	60 - 150
Fluridone	118	115	P/P	60 - 160
Imidacloprid	112	102	P/P	60 - 150
Linuron	113	116	P/P	60 - 150
MCP	101	94.1	P/P	50 - 150
MCP	94.1	91.5	P/P	50 - 150
Primidone	102	95.9	P/P	60 - 150
Triclopyr	85.5	88.1	P/P	50 - 150
Triclopyr	88.0	85.5	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A81671

Included Lab Sample IDs: 1960453

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.9	89.8	P/P	50 - 150
Acetaminophen	103	101	P/P	60 - 150
Bentazon	104	96.6	P/P	50 - 150
Carbamazepine	103	112	P/P	60 - 150
Diuron	105	111	P/P	60 - 150
Fenuron	102	105	P/P	60 - 150
Fluridone	113	122	P/P	60 - 160
Imidacloprid	96.1	107	P/P	60 - 150
Linuron	89.2	104	P/P	60 - 150
MCP	95.7	94.8	P/P	50 - 150
Primidone	103	103	P/P	60 - 150
Triclopyr	99.5	84.0	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A81725

Included Lab Sample IDs: 1960450, 1960451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	102	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	MS
			LCS			
EPA 8321B	Sucralose	102	87.4	97.6		11.0
	Sucralose	97.4	97.9	93.1		4.82
USGS O-2060-01	2,4-D	75.3	113	103		8.07
	2,4-D	79.4	138	133		3.61
	Acetaminophen	98.5	87.9	109		21.2
	Acetaminophen	97.1	99.9	96.7		3.31
	Bentazon	78.6	148	105		12.6
	Bentazon	80.1	97.0	95.9		1.19
	Carbamazepine	114	100	105		4.22
	Carbamazepine	102	107	106		0.659
	Diuron	102	74.3	85.4		12.2
	Diuron	89.8	94.8	95.5		0.799
	Fenuron	114	107	93.4		13.3
	Fenuron	122	113	109		3.70
	Fluridone	120	83.5	47.8		36.3
	Imidacloprid	113	161	223		28.3
	Imidacloprid	112	120	118		1.68
	Linuron	110	87.7	87.0		0.843
	Linuron	99.2	99.9	99.1		0.804
	MCP	79.5	97.1	75.7		23.6
	MCP	81.4	119	111		7.48

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
USGS O-2060-01	Primidone	109	121	96.4		22.8
	Primidone	115	114	112		2.39
	Triclopyr	79.5	90.9	75.1		19.0
	Triclopyr	72.2	126	118		5.98

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1960449, 1960450, 1960451, 1960452, 1960453
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1960449, 1960450, 1960451, 1960452, 1960453
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1960449, 1960450, 1960451, 1960452, 1960453

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/18/2018	01/19/2018	Juyoung Kim	01/20/2018	Juyoung Kim	1960449, 1960452, 1960453
	01/18/2018	01/25/2018	Juyoung Kim	01/26/2018	Juyoung Kim	1960450, 1960451
USGS O-2060-01	01/18/2018	01/19/2018	Hoor Shaik	01/20/2018	Julie Michelle Frank	1960449, 1960450, 1960451, 1960452
	01/18/2018	01/19/2018	Hoor Shaik	01/21/2018	Julie Michelle Frank	1960449, 1960450, 1960451, 1960452
	01/18/2018	01/23/2018	Hoor Shaik	01/24/2018	Julie Michelle Frank	1960453