

Chemical Analysis Report

NE-DIST-2018-09-12-01

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

Event Description: **Alachua County Sampling**
Request ID: **RQ-2018-09-10-56**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way W
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
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Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 01-OCT-2018 13:32

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

NON-CONFORMANCE REPORT INCLUDED

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 groups are included in this report: Nutrients and 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: Alachua Channel - On Payne's Prairie

Collection Date/Time: 09/11/2018 09:40

Field ID: G1NE0908

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2024205	EPA 8321B	2,4-D	0.0023	I	ug/L	P351416	
		Bentazon	8.0E-04	U	ug/L	P351416	
		MCP	0.0020	U	ug/L	P351416	MS
		Triclopyr**	0.0040	U	ug/L	P351416	MS
		Imidacloprid	0.0020	U	ug/L	P351416	
		Diuron	0.0020	U	ug/L	P351416	
		Pyraclostrobin**	0.0020	U	ug/L	P351416	
		Primidone**	0.0077	I	ug/L	P351416	
		Linuron	0.0040	U	ug/L	P351416	
		Acetaminophen**	0.0080	U	ug/L	P351416	
		Fenuron	0.016	U	ug/L	P351416	
		Imazapyr**	0.10		ug/L	P351416	
		Carbamazepine**	0.0073		ug/L	P351416	
		Fluridone**	4.8E-04	I	ug/L	P351416	
		Hydrocodone**	8.0E-04	U	ug/L	P351416	
		Naproxen**	0.0080	U	ug/L	P351416	
		Ibuprofen**	0.020	U	ug/L	P351416	
		Sucralose**	3.8		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	
2024208	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P351686	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P351701	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P351694	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P351600	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P351878	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Bivens Arm Lake - West of US 441, and South of SW 16th Street

Collection Date/Time: 09/11/2018 10:30

Field ID: G1NE0904

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2024206	EPA 8321B	2,4-D	0.14		ug/L	P351416	
		Bentazon	8.0E-04	U	ug/L	P351416	
		MCP	0.0020	U	ug/L	P351416	MS
		Triclopyr**	0.0040	U	ug/L	P351416	MS
		Imidacloprid	0.0045	I	ug/L	P351416	
		Diuron	0.12		ug/L	P351416	
		Pyraclostrobin**	0.0020	U	ug/L	P351416	
		Primidone**	0.0040	U	ug/L	P351416	
		Linuron	0.0040	U	ug/L	P351416	
		Acetaminophen**	0.0080	U	ug/L	P351416	
		Fenuron	0.016	U	ug/L	P351416	
		Imazapyr**	0.0056	I	ug/L	P351416	
		Carbamazepine**	8.0E-04	U	ug/L	P351416	
		Fluridone**	0.0024		ug/L	P351416	
		Hydrocodone**	8.0E-04	U	ug/L	P351416	
		Naproxen**	0.0080	U	ug/L	P351416	
		Ibuprofen**	0.020	U	ug/L	P351416	
		Sucralose**	0.096		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	
2024209	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P351686	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P351746	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P351695	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P351600	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P351878	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Tumblin Creek - S of SW 5th Ave

Collection Date/Time: 09/11/2018 10:55

Field ID: G1NE0914

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2024207	EPA 8321B	2,4-D	0.0049	I	ug/L	P351416	
		Bentazon	0.013		ug/L	P351416	
		MCP	0.011		ug/L	P351416	MS
		Triclopyr**	0.0040	U	ug/L	P351416	MS
		Imidacloprid	0.16		ug/L	P351416	
		Diuron	0.036		ug/L	P351416	
		Pyraclostrobin**	0.0020	U	ug/L	P351416	
		Primidone**	0.0040	U	ug/L	P351416	
		Linuron	0.0040	U	ug/L	P351416	
		Acetaminophen**	0.0080	U	ug/L	P351416	
		Fenuron	0.016	U	ug/L	P351416	
		Imazapyr**	0.0058	I	ug/L	P351416	
		Carbamazepine**	8.0E-04	U	ug/L	P351416	
		Fluridone**	4.0E-04	U	ug/L	P351416	
		Hydrocodone**	8.0E-04	U	ug/L	P351416	
		Naproxen**	0.0080	U	ug/L	P351416	
		Ibuprofen**	0.020	U	ug/L	P351416	
		Sucralose**	0.77		ug/L	P351382	
		Acesulfame K**	0.40	I	ug/L	P351382	
2024210	EPA 350.1 Rev. 2.0	Ammonia-N	0.096	Y	mg N/L	P351686	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55	Y	mg N/L	P351746	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35	Y	mg N/L	P351695	
	EPA 365.1 Rev. 2.0	Total-P	0.13	Y	mg P/L	P351669	
	SM 5310 B-00	Organic Carbon	4.6	Y	mg C/L	P351878	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 353.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 365.1 Rev. 2.0: Total-P: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 5310 B-00: Sample was left out at room temperature overnight, should be stored below 6 degC.

Non-Conformance Report

NCR ID: 7210

Event(s)

NE-DIST-2018-09-12-01

Job(s)

TLH-2018-09-12-21

Sample(s)

2024210

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample stored outside of the acceptable temperature range after login.

Resolution: Sample placed in refrigerator on 9/13/18 at 11:00. Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 9/28/2018

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351686

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351701

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351746

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351694

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351695

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351600

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351669

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P351382

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P351416

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P351416

Component	Result	Code	Units
Carbamazepine	8.0E-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: SM 5310 B-00
Batch ID: P351878

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	106		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	101		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351669

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	102		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P351382

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.3		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.8		P	40 - 150
Acetaminophen	83.5		P	30 - 150
Bentazon	87.4		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P351416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbamazepine	89.2		P	40 - 150
Diuron	79.5		P	40 - 150
Fenuron	95.9		P	40 - 150
Fluridone	79.3		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	109		P	40 - 150
Imazapyr	77.5		P	40 - 150
Imidacloprid	85.6		P	40 - 160
Linuron	69.1		P	40 - 150
MCPP	96.5		P	40 - 150
Naproxen	102		P	40 - 150
Primidone	69.6		P	40 - 150
Pyraclostrobin	80.5		P	40 - 150
Triclopyr	95.0		P	40 - 150

Reference Method: SM 5310 B-00
Batch ID: P351878

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024058	Kjeldahl Nitrogen	94.0	94.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024210	Kjeldahl Nitrogen	98.9	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024197	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024209	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351600

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024163	Total-P	106	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351669

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024210	Total-P	102	99.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P351382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	Acesulfame K	68.6	81.6	P/P	40 - 150
2023766	Sucralose	117	114	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	2,4-D	139	144	P/P	40 - 150
2023766	Acetaminophen	76.4	69.6	P/P	30 - 150
2023766	Bentazon	68.5	80.6	P/P	30 - 150
2023766	Carbamazepine	65.8	60.9	P/P	40 - 150
2023766	Diuron	57.8	51.6	P/P	40 - 150
2023766	Fenuron	53.6	52.1	P/P	40 - 150
2023766	Fluridone	83.4	77.5	P/P	40 - 150
2023766	Hydrocodone	77.8	73.3	P/P	40 - 150
2023766	Ibuprofen	102	103	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P351416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	Imazapyr	89.4	86.9	P/P	40 - 150
2023766	Imidacloprid	113	112	P/P	40 - 160
2023766	Linuron	59.2	58.8	P/P	40 - 150
2023766	MCP	148	176	P/F	40 - 150
2023766	Naproxen	137	142	P/P	40 - 150
2023766	Primidone	62.7	61.4	P/P	40 - 150
2023766	Pyraclostrobin	81.5	80.8	P/P	40 - 150
2023766	Triclopyr	167	178	F/F	40 - 150

Reference Method: SM 5310 B-00
Batch ID: P351878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024208	Organic Carbon	95.2	94.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024198	Ammonia-N	1.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024058	Kjeldahl Nitrogen	0.0383	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024210	Kjeldahl Nitrogen	2.75	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024197	NO2NO3-N	1.48	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024209	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024163	Total-P	4.48	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351669

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024210	Total-P	1.73	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P351382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	Acesulfame K	17.2	Spike	P	0 - 30
2023766	Sucralose	2.41	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P351416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	2,4-D	3.06	Spike	P	0 - 30
2023766	Acetaminophen	9.28	Spike	P	0 - 30
2023766	Bentazon	9.75	Spike	P	0 - 30
2023766	Carbamazepine	7.80	Spike	P	0 - 30
2023766	Diuron	11.3	Spike	P	0 - 30
2023766	Fenuron	2.94	Spike	P	0 - 30
2023766	Fluridone	7.11	Spike	P	0 - 30
2023766	Hydrocodone	5.84	Spike	P	0 - 30
2023766	Ibuprofen	1.39	Spike	P	0 - 30
2023766	Imazapyr	1.67	Spike	P	0 - 30
2023766	Imidacloprid	1.43	Spike	P	0 - 30
2023766	Linuron	0.627	Spike	P	0 - 30
2023766	MCP	17.4	Spike	P	0 - 30
2023766	Naproxen	3.24	Spike	P	0 - 30
2023766	Primidone	2.18	Spike	P	0 - 30
2023766	Pyraclostrobin	0.821	Spike	P	0 - 30
2023766	Triclopyr	6.32	Spike	P	0 - 30

Reference Method: SM 5310 B-00
 Batch ID: P351878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024208	Organic Carbon	0.575	Spike	P	0 - 20

* 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: 2024205
Field Sample ID: G1NE0908

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.1	P	30 - 160
EPA 8321B	Diuron-d6	57.0	P	30 - 160
EPA 8321B	Endothall-d6	135	P	40 - 160
EPA 8321B	Ibuprofen-d3	113	P	30 - 160
EPA 8321B	Primidone-d5	63.7	P	30 - 160
EPA 8321B	Sucralose-d6	148	P	40 - 160

Lab Sample ID: 2024206
Field Sample ID: G1NE0904

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.3	P	30 - 160
EPA 8321B	Diuron-d6	52.6	P	30 - 160
EPA 8321B	Endothall-d6	119	P	40 - 160
EPA 8321B	Ibuprofen-d3	104	P	30 - 160
EPA 8321B	Primidone-d5	63.7	P	30 - 160
EPA 8321B	Sucralose-d6	127	P	40 - 160

Lab Sample ID: 2024207
Field Sample ID: G1NE0914

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.7	P	30 - 160
EPA 8321B	Diuron-d6	74.9	P	30 - 160
EPA 8321B	Endothall-d6	109	P	40 - 160
EPA 8321B	Ibuprofen-d3	105	P	30 - 160
EPA 8321B	Primidone-d5	81.1	P	30 - 160
EPA 8321B	Sucralose-d6	136	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86482

Included Lab Sample IDs: 2024205, 2024206, 2024207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	105	94.8	P/P	60 - 160
Acesulfame K	111	105	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86488

Included Lab Sample IDs: 2024208, 2024209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	106	108	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86500

Included Lab Sample IDs: 2024208, 2024209, 2024210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86506

Included Lab Sample IDs: 2024208, 2024209, 2024210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	101	P/P	90 - 110
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86514

Included Lab Sample IDs: 2024210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86520

Included Lab Sample IDs: 2024205, 2024206, 2024207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	91.5	P/P	60 - 160
Sucralose	109	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86528

Included Lab Sample IDs: 2024205, 2024206, 2024207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.2	97.7	P/P	50 - 150
Bentazon	125	66.2	P/P	50 - 160
Ibuprofen	118	122	P/P	50 - 160
MCP	95.9	92.0	P/P	50 - 150
Naproxen	86.7	96.6	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86528

Included Lab Sample IDs: 2024205, 2024206, 2024207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	94.1	87.7	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86551

Included Lab Sample IDs: 2024208, 2024209, 2024210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.0	98.4	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A86574

Included Lab Sample IDs: 2024208, 2024209, 2024210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	94.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86696

Included Lab Sample IDs: 2024205, 2024206, 2024207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	69.1	71.1	P/P	60 - 160
Carbamazepine	110	110	P/P	60 - 160
Diuron	111	107	P/P	60 - 150
Fenuron	103	99.3	P/P	60 - 150
Fluridone	95.7	104	P/P	60 - 160
Hydrocodone	92.9	91.4	P/P	60 - 150
Imazapyr	76.8	82.9	P/P	50 - 150
Imidacloprid	88.8	80.7	P/P	60 - 150
Linuron	103	96.2	P/P	60 - 150
Primidone	83.5	86.3	P/P	60 - 150
Pyraclostrobin	100	103	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		LCS	Precision	MS
						SMP	
EPA 350.1 Rev. 2.0	Ammonia-N	106					1.22
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	94.0	94.0			0.0383
	Kjeldahl Nitrogen	102	98.9	95.0			2.75
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	102			1.48
	NO2NO3-N	100	100	102			0.990
EPA 365.1 Rev. 2.0	Total-P	104	106	102			4.48
	Total-P	102	102	99.3			1.73
EPA 8321B	2,4-D	95.8	139	144			3.06
	Acesulfame K	78.3	68.6	81.6			17.2
	Acetaminophen	83.5	76.4	69.6			9.28
	Bentazon	87.4	68.5	80.6			9.75
	Carbamazepine	89.2	65.8	60.9			7.80
	Diuron	79.5	57.8	51.6			11.3
	Fenuron	95.9	53.6	52.1			2.94
	Fluridone	79.3	83.4	77.5			7.11
	Hydrocodone	105	77.8	73.3			5.84
	Ibuprofen	109	102	103			1.39
	Imazapyr	77.5	89.4	86.9			1.67
	Imidacloprid	85.6	113	112			1.43
	Linuron	69.1	59.2	58.8			0.627
	MCP	96.5	148	176			17.4
	Naproxen	102	137	142			3.24
	Primidone	69.6	62.7	61.4			2.18
	Pyraclostrobin	80.5	81.5	80.8			0.821
	Sucralose	100	117	114			2.41
	Triclopyr	95.0	167	178			6.32
	Organic Carbon	96.0	95.2	94.2			0.575
SM 5310 B-00							

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2024208, 2024209, 2024210
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2024208, 2024209, 2024210
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2024208, 2024209, 2024210
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2024208, 2024209, 2024210
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2024205, 2024206, 2024207
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2024208, 2024209, 2024210

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	09/12/2018			09/14/2018 12:32	Adrian Shelby	2024208
	09/12/2018			09/14/2018 12:34	Adrian Shelby	2024209
	09/12/2018			09/14/2018 12:41	Adrian Shelby	2024210
EPA 351.2 Rev. 2.0	09/12/2018	09/17/2018 15:30	Adrian Shelby	09/18/2018 11:28	Joseph Suarez	2024208
	09/12/2018	09/17/2018 15:30	Adrian Shelby	09/18/2018 11:32	Joseph Suarez	2024209
	09/12/2018	09/17/2018 15:30	Adrian Shelby	09/18/2018 11:34	Joseph Suarez	2024210
EPA 353.2 Rev. 2.0	09/12/2018			09/14/2018 12:14	Lauren Bottorf	2024208
	09/12/2018			09/14/2018 12:21	Lauren Bottorf	2024209
	09/12/2018			09/14/2018 12:31	Lauren Bottorf	2024210
EPA 365.1 Rev. 2.0	09/12/2018	09/13/2018 15:36	Sima Feizi	09/14/2018 10:40	Beverly Y. Sanders	2024208
	09/12/2018	09/13/2018 15:36	Sima Feizi	09/14/2018 10:41	Beverly Y. Sanders	2024209
	09/12/2018	09/14/2018 11:50	Sima Feizi	09/17/2018 09:50	Beverly Y. Sanders	2024210
EPA 8321B	09/12/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 17:13	Mohammad Ghaffari	2024205
	09/12/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 17:42	Mohammad Ghaffari	2024206
	09/12/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 17:57	Mohammad Ghaffari	2024207
	09/12/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 19:13	Mohammad Ghaffari	2024205
	09/12/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 19:42	Mohammad Ghaffari	2024206
	09/12/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 19:57	Mohammad Ghaffari	2024207
	09/12/2018	09/13/2018 14:00	Hoor Shaik	09/15/2018 16:59	Juyoung Kim	2024205
	09/12/2018	09/13/2018 14:00	Hoor Shaik	09/15/2018 17:33	Juyoung Kim	2024206
	09/12/2018	09/13/2018 14:00	Hoor Shaik	09/15/2018 18:08	Juyoung Kim	2024207
	09/12/2018	09/13/2018 14:00	Hoor Shaik	09/22/2018 20:37	Mohammad Ghaffari	2024205
	09/12/2018	09/13/2018 14:00	Hoor Shaik	09/22/2018 21:12	Mohammad Ghaffari	2024206
	09/12/2018	09/13/2018 14:00	Hoor Shaik	09/22/2018 21:46	Mohammad Ghaffari	2024207
	09/12/2018			09/17/2018 16:42	Megan Treadwell	2024208
	09/12/2018			09/17/2018 17:56	Megan Treadwell	2024209
	09/12/2018			09/17/2018 18:29	Megan Treadwell	2024210