

Chemical Analysis Report

NW-DIST-2022-11-15-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

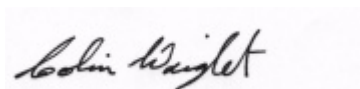
Event Description: **98 Whaler Run**
Request ID: **RQ-2022-11-14-17**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

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Certified by: Colin Wright, Program Administrator

Date Certified: 07-DEC-2022 12:15

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink 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 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 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: Tea Lake (Center)

Collection Date/Time: 11/14/2022 09:15

Field ID: G5NW0035

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369473	EPA 180.1 Rev. 2.0	Turbidity	3.4	A	NTU	P422352	
	SM 2320 B-2011	Total Alkalinity	58		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	8	I	mg/L	P422708	
	SM 4500-F- C-2011	Fluoride	0.61		mg F/L	P422965	
2369474	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P423040	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	I	mg N/L	P422540	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P422581	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P422442	
	SM 5310 B-2011	Organic Carbon	4.1		mg C/L	P422790	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Joes Bayou

Collection Date/Time: 11/14/2022 12:00

Field ID: G3NW0182

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369471	EPA 180.1 Rev. 2.0	Turbidity	0.90	I	NTU	P422352	
	SM 2320 B-2011	Total Alkalinity	99		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	4	I	mg/L	P422708	
	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P422965	
2369472	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P423040	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33	I	mg N/L	P422628	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P422580	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P422442	
	SM 5310 B-2011	Organic Carbon	2.7	I	mg C/L	P422617	
2369494	EPA 8321B	2,4-D	0.0020	U	ug/L	P422538	
		Acesulfame K	0.10	U	ug/L	P422312	
		2,4,5-T	0.0040	U	ug/L	P422538	
		AMPA	10	U	ug/L	P422312	
		Acetaminophen	0.0080	U	ug/L	P422538	
		Endothall	0.25	U	ug/L	P422312	
		Acetamiprid	0.0020	U	ug/L	P422538	MS
		Glufosinate	10	U	ug/L	P422312	
		Glyphosate	10	U	ug/L	P422312	MS
		Afidopyropen	0.0020	U	ug/L	P422538	
		Bentazon	8.0E-04	U	ug/L	P422538	
		Sucralose	0.32		ug/L	P422312	
		Benzovindiflupyr	0.0020	U	ug/L	P422538	
		Carbamazepine	8.0E-04	U	ug/L	P422538	
		Clothianidin	0.0020	U	ug/L	P422538	MS
		Dinotefuran	0.0020	U	ug/L	P422538	
		Diuron	0.0020	U	ug/L	P422538	
		Fenuron	0.032	U	ug/L	P422538	
		Fluridone	8.0E-04	U	ug/L	P422538	
		Imazapyr	0.0040	U	ug/L	P422538	
		Hydrocodone	0.0020	U	ug/L	P422538	
		Ibuprofen	0.20	U	ug/L	P422538	
		Imidacloprid	0.0020	U	ug/L	P422538	
		Linuron	0.0040	U	ug/L	P422538	
		Mandestrobin	0.0020	U	ug/L	P422538	
		MCP	0.0040	U	ug/L	P422538	
		Naproxen	0.0080	U	ug/L	P422538	
		Primidone	0.0040	U	ug/L	P422538	
		Pyraclostrobin	0.0020	U	ug/L	P422538	
		Silvex	0.0040	U	ug/L	P422538	
		Thiamethoxam	0.0020	U	ug/L	P422538	
		Tolfenpyrad	0.0020	U	ug/L	P422538	
		Triclopyr	0.0040	U	ug/L	P422538	

Field ID: G3NW0182

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample. Some MDLs are elevated due to required dilution of sample matrix.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422352

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422628

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422580

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422581

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422442

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

Reference Method: EPA 8321B
Batch ID: P422312

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P422538

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.20	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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P422622

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 D-2015

Batch ID: P422708

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P422965

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P422617

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P422790

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422442

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

Reference Method: EPA 8321B
Batch ID: P422312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	124		P	40 - 150
AMPA	117		P	40 - 150
Endothall	97.3		P	40 - 150
Glufosinate	113		P	40 - 150
Glyphosate	114		P	40 - 150
Sucralose	101		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P422538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	81.0		P	40 - 150
Acetaminophen	84.5		P	30 - 150
Acetamiprid	81.1		P	40 - 150
Afidopyropen	58.9		P	30 - 150
Bentazon	78.2		P	30 - 150
Benzovindiflupyr	77.2		P	40 - 150
Carbamazepine	78.0		P	40 - 150
Clothianidin	88.4		P	40 - 150
Dinotefuran	87.5		P	40 - 150
Diuron	72.0		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	88.2		P	40 - 150
Hydrocodone	92.3		P	40 - 150
Ibuprofen	81.4		P	40 - 150
Imazapyr	80.6		P	40 - 150
Imidacloprid	96.6		P	40 - 150
Linuron	69.4		P	40 - 150
Mandestrobin	85.6		P	40 - 150
MCPP	99.7		P	40 - 150
Naproxen	78.4		P	40 - 150
Primidone	92.2		P	40 - 150
Pyraclostrobin	72.1		P	40 - 150
Silvex	84.0		P	40 - 150
Thiamethoxam	92.8		P	40 - 150
Tolfenpyrad	37.7		P	30 - 150
Triclopyr	86.1		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P422622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.2		P	94 - 106

Reference Method: SM 2540 D-2015

Batch ID: P422708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.1		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P422965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P422617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P422790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369474	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	94.4	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370058	Kjeldahl Nitrogen	95.6	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369224	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369474	NO2NO3-N	108	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369472	Total-P	99.0	101	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P422312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369532	Acesulfame K	135	139	P/P	40 - 150
2369532	AMPA	100	103	P/P	40 - 150
2369532	Endothall	99.2	101	P/P	40 - 150
2369532	Glufosinate	128	116	P/P	40 - 150
2369532	Glyphosate	156	143	F/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P422538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369273	2,4-D	105	100	P/P	40 - 150
2369273	2,4,5-T	73.2	62.7	P/P	40 - 150
2369273	Acetaminophen	86.0	87.0	P/P	30 - 150
2369273	Acetamiprid	25.2	25.4	F/F	40 - 150
2369273	Afidopyropen	71.7	71.4	P/P	30 - 150
2369273	Benzovindiflupyr	73.4	77.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P422538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369273	Clothianidin	18.3	10.5	F/F	40 - 150
2369273	Diuron	46.2	44.5	P/P	40 - 150
2369273	Fenuron	82.6	77.6	P/P	40 - 150
2369273	Fluridone	75.4	74.9	P/P	40 - 150
2369273	Hydrocodone	106	106	P/P	40 - 150
2369273	Ibuprofen	74.2	78.1	P/P	40 - 150
2369273	Imazapyr	126	124	P/P	40 - 150
2369273	Linuron	76.1	76.9	P/P	40 - 150
2369273	Mandestrobin	81.0	80.7	P/P	40 - 150
2369273	MCPP	79.6	73.3	P/P	40 - 150
2369273	Naproxen	78.0	84.4	P/P	40 - 150
2369273	Pyraclostrobin	80.1	81.0	P/P	40 - 150
2369273	Silvex	94.9	84.1	P/P	40 - 150
2369273	Thiamethoxam	122	122	P/P	40 - 150
2369273	Tolfenpyrad	54.3	56.4	P/P	30 - 150
2369273	Triclopyr	67.5	68.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369410	Fluoride	100	102	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368330	Organic Carbon	88.1	88.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370843	Organic Carbon	96.2	97.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369473	Turbidity	3.49	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369474	Ammonia-N	1.09	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	1.68	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370058	Kjeldahl Nitrogen	6.23	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369224	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369474	NO2NO3-N	1.53	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369472	Total-P	2.22	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P422312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369532	Acesulfame K	3.32	Spike	P	0 - 30
2369532	AMPA	2.85	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P422312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369532	Endothall	1.69	Spike	P	0 - 30
2369532	Glufosinate	10.1	Spike	P	0 - 30
2369532	Glyphosate	8.22	Spike	P	0 - 30
2369532	Sucralose	6.61	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P422538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369273	2,4-D	3.22	Spike	P	0 - 30
2369273	2,4,5-T	15.5	Spike	P	0 - 30
2369273	Acetaminophen	1.17	Spike	P	0 - 30
2369273	Acetamiprid	0.268	Spike	P	0 - 30
2369273	Afidopyropen	0.392	Spike	P	0 - 30
2369273	Bentazon	5.65	Spike	P	0 - 30
2369273	Benzovindiflupyr	5.05	Spike	P	0 - 30
2369273	Carbamazepine	4.33	Spike	P	0 - 30
2369273	Clothianidin	7.07	Spike	P	0 - 30
2369273	Dinotefuran	3.04	Spike	P	0 - 30
2369273	Diuron	3.34	Spike	P	0 - 30
2369273	Fenuron	6.21	Spike	P	0 - 30
2369273	Fluridone	0.650	Spike	P	0 - 30
2369273	Hydrocodone	0.0742	Spike	P	0 - 30
2369273	Ibuprofen	5.11	Spike	P	0 - 30
2369273	Imazapyr	1.28	Spike	P	0 - 30
2369273	Imidacloprid	2.04	Spike	P	0 - 30
2369273	Linuron	1.02	Spike	P	0 - 30
2369273	Mandestrobin	0.314	Spike	P	0 - 30
2369273	MCPP	4.86	Spike	P	0 - 30
2369273	Naproxen	7.87	Spike	P	0 - 30
2369273	Primidone	3.57	Spike	P	0 - 30
2369273	Pyraclostrobin	1.14	Spike	P	0 - 30
2369273	Silvex	12.0	Spike	P	0 - 30
2369273	Thiamethoxam	0.177	Spike	P	0 - 30
2369273	Tolfenpyrad	3.84	Spike	P	0 - 30
2369273	Triclopyr	1.05	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P422622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369410	Total Alkalinity	0.356	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369410	Fluoride	0.986	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P422617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368330	Organic Carbon	0.278	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P422790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370843	Organic Carbon	0.945	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2369494

Field Sample ID: G3NW0182

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	132	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.5	P	30 - 160
EPA 8321B	Diuron-d6	74.1	P	30 - 160
EPA 8321B	Endothall-d6	56.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	125	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.8	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115942

Included Lab Sample IDs: 2369471, 2369473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A115978

Included Lab Sample IDs: 2369494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	126	119	P/P	60 - 160
Sucralose	101	98.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A115981

Included Lab Sample IDs: 2369494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	108	P/P	60 - 160
Endothall	97.4	61.4	P/P	60 - 160
Glufosinate	81.1	84.7	P/P	60 - 160
Glyphosate	106	108	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116028

Included Lab Sample IDs: 2369472, 2369474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	106	P/P	90 - 110
NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116040

Included Lab Sample IDs: 2369472, 2369474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	99.2	P/P	90 - 110
Total-P	99.2	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116048

Included Lab Sample IDs: 2369472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	98.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116055

Included Lab Sample IDs: 2369471, 2369473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.3	96.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A116081
Included Lab Sample IDs: 2369494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.0	97.3	P/P	50 - 150
2,4,5-T	102	112	P/P	50 - 150
Acetaminophen	98.1	102	P/P	60 - 160
Acetamiprid	106	104	P/P	50 - 150
Afidopyropen	96.3	95.8	P/P	50 - 150
Bentazon	97.3	96.9	P/P	50 - 160
Benzovindiflupyr	104	98.1	P/P	50 - 150
Carbamazepine	105	98.9	P/P	60 - 150
Clothianidin	112	105	P/P	60 - 150
Dinotefuran	103	111	P/P	50 - 150
Diuron	103	104	P/P	60 - 160
Fenuron	103	107	P/P	60 - 150
Fluridone	103	99.9	P/P	60 - 160
Hydrocodone	104	99.5	P/P	60 - 150
Ibuprofen	141	107	P/P	50 - 160
Imazapyr	97.5	102	P/P	50 - 150
Imidacloprid	97.4	106	P/P	60 - 150
Linuron	99.8	103	P/P	60 - 150
Mandestrobin	106	108	P/P	50 - 150
MCPP	103	106	P/P	50 - 150
Naproxen	103	127	P/P	50 - 160
Primidone	106	100	P/P	60 - 150
Pyraclostrobin	105	104	P/P	60 - 150
Silvex	100	104	P/P	50 - 150
Thiamethoxam	99.6	100	P/P	50 - 150
Tolfenpyrad	99.7	104	P/P	60 - 150
Triclopyr	114	114	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A116085
Included Lab Sample IDs: 2369474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.4	91.8	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A116142
Included Lab Sample IDs: 2369474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A116158
Included Lab Sample IDs: 2369472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.6	93.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A116202

Included Lab Sample IDs: 2369471, 2369473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116231

Included Lab Sample IDs: 2369472, 2369474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.1	P/P	90 - 110

* 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 180.1 Rev. 2.0	Turbidity	99.3				3.49	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	101	103			1.09
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.5	94.4	96.2			1.68
	Kjeldahl Nitrogen	95.5	95.6	103			6.23
EPA 353.2 Rev. 2.0	NO2NO3-N	104	106	106			0.0
	NO2NO3-N	104	108	106			1.53
EPA 365.1 Rev. 2.0	Total-P	103	99.0	101			2.22
EPA 8321B	2,4-D	110	105	100			3.22
	2,4,5-T	81.0	73.2	62.7			15.5
	Acesulfame K	124	135	139			3.32
	Acetaminophen	84.5	86.0	87.0			1.17
	Acetamiprid	81.1	25.2	25.4			0.268
	Afidopyropen	58.9	71.7	71.4			0.392
	AMPA	117	100	103			2.85
	Bentazon	78.2					5.65
	Benzovindiflupyr	77.2	73.4	77.2			5.05
	Carbamazepine	78.0					4.33
	Clothianidin	88.4	18.3	10.5			7.07
	Dinotefuran	87.5					3.04
	Diuron	72.0	46.2	44.5			3.34
	Endothall	97.3	99.2	101			1.69
	Fenuron	101	82.6	77.6			6.21
	Fluridone	88.2	75.4	74.9			0.650
	Glufosinate	113	128	116			10.1
	Glyphosate	114	156	143			8.22
	Hydrocodone	92.3	106	106			0.0742
	Ibuprofen	81.4	74.2	78.1			5.11
	Imazapyr	80.6	126	124			1.28
	Imidacloprid	96.6					2.04
	Linuron	69.4	76.1	76.9			1.02
	Mandestrobin	85.6	81.0	80.7			0.314
	MCPP	99.7	79.6	73.3			4.86
	Naproxen	78.4	78.0	84.4			7.87
	Primidone	92.2					3.57
	Pyraclostrobin	72.1	80.1	81.0			1.14
	Silvex	84.0	94.9	84.1			12.0
	Sucralose	101					6.61
	Thiamethoxam	92.8	122	122			0.177
	Tolfenpyrad	37.7	54.3	56.4			3.84
	Triclopyr	86.1	67.5	68.2			1.05
SM 2320 B-2011	Total Alkalinity	97.2				0.356	
SM 2540 D-2015	TSS	91.1					
SM 4500-F- C-2011	Fluoride	102	100	102			0.986
SM 5310 B-2011	Organic Carbon	99.2	88.1	88.5			0.278
	Organic Carbon	96.4	96.2	97.4			0.945

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2369471, 2369473
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2369472, 2369474
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2369472, 2369474
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2369472, 2369474

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2369472, 2369474
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2369494
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2369471, 2369473
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2369471, 2369473
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2369471, 2369473
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2369472, 2369474

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	11/15/2022			11/15/2022 14:36	Anna M. Plaviak	2369471
	11/15/2022			11/15/2022 14:37	Anna M. Plaviak	2369473
EPA 350.1 Rev. 2.0	11/15/2022			12/02/2022 10:41	Ping Hua	2369474
	11/15/2022			12/02/2022 10:50	Ping Hua	2369472
EPA 351.2 Rev. 2.0	11/15/2022	11/18/2022 10:00	Alexandra J Mattheus	11/21/2022 17:42	Judith K. Clark	2369474
	11/15/2022	11/21/2022 13:28	Alexandra J Mattheus	11/28/2022 15:28	Judith K. Clark	2369472
EPA 353.2 Rev. 2.0	11/15/2022			11/18/2022 11:35	Beverly Y. Sanders	2369472
	11/15/2022			11/18/2022 11:45	Beverly Y. Sanders	2369474
EPA 365.1 Rev. 2.0	11/15/2022	11/17/2022 13:57	Adam P Silver	11/18/2022 15:00	Simonne.V. Calhoun	2369472
	11/15/2022	11/17/2022 13:57	Adam P Silver	11/18/2022 15:10	Simonne.V. Calhoun	2369474
EPA 8321B	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/16/2022 15:16	Umesh Chiluwal	2369494
	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/16/2022 20:02	Umesh Chiluwal	2369494
	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/17/2022 03:13	Umesh Chiluwal	2369494
	11/15/2022	11/18/2022 09:30	June Rhew	11/21/2022 19:46	Juyoung Kim	2369494
SM 2320 B-2011	11/15/2022			11/18/2022 03:48	Dale L. Simmons	2369471
	11/15/2022			11/18/2022 04:01	Dale L. Simmons	2369473
SM 2540 D-2015	11/15/2022			11/18/2022 16:39	Yijie Li	2369471, 2369473
SM 4500-F- C-2011	11/15/2022			12/01/2022 09:28	Dale L. Simmons	2369471
	11/15/2022			12/01/2022 09:33	Dale L. Simmons	2369473
SM 5310 B-2011	11/15/2022			11/19/2022 07:33	Khloe J Berg	2369472
	11/15/2022			11/23/2022 02:44	Touraj Touran	2369474