

Chemical Analysis Report

CEN-DIST-2023-01-20-01

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

Event Description: **Run 9**
Request ID: **RQ-2023-01-16-55**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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3319 Maguire Blvd., Suite 232
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 08-FEB-2023 10:07

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

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: Big Creek @ Lake Nellie Rd.

Collection Date/Time: 01/19/2023 10:40

Field ID: G1CE0117

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382155	DEP SOP: NU-094-1	Color (true)	370		PCU	P424808	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I	NTU	P424818	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P425173	
		Sulfate	0.29	I	mg SO4/L	P425175	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P425184	
	SM 2540 C-2015	TDS	89		mg/L	P425331	
	SM 2540 D-2015	TSS	2	U	mg/L	P425212	
	SM 4500-F- C-2011	Fluoride	0.051	I	mg F/L	P425188	
2382156	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P425410	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P424999	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P425090	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P424980	
	SM 5310 B-2011	Organic Carbon	40		mg C/L	P425085	

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: Mattress Drain @ Rockridge Rd.

Collection Date/Time: 01/19/2023 11:45

Field ID: G4CE0247

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382162	EPA 8321B	2,4-D	0.0020	U	ug/L	P424948	
		Acesulfame K	0.10	U	ug/L	P424718	
		2,4,5-T	0.0040	U	ug/L	P424948	
		AMPA	0.10	U	ug/L	P424718	
		Acetaminophen	0.0080	U	ug/L	P424948	
		Acetamiprid	0.0020	U	ug/L	P424948	
		Endothall	0.25	U	ug/L	P424718	
		Glufosinate	0.10	U	ug/L	P424718	
		Glyphosate	0.10	U	ug/L	P424718	
		Afidopyropen	0.0020	U	ug/L	P424948	
		Bentazon	8.0E-04	U	ug/L	P424948	
		Sucralose	0.012	I	ug/L	P424718	
		Benzovindiflupyr	0.0020	U	ug/L	P424948	
		Carbamazepine	8.0E-04	U	ug/L	P424948	
		Clothianidin	0.0020	U	ug/L	P424948	
		Dinotefuran	0.0020	U	ug/L	P424948	
		Diuron	0.0020	U	ug/L	P424948	
		Fenuron	0.032	U	ug/L	P424948	
		Fluridone	8.0E-04	U	ug/L	P424948	
		Imazapyr	0.0040	U	ug/L	P424948	
		Hydrocodone	0.0020	U	ug/L	P424948	
		Ibuprofen	0.080	U	ug/L	P424948	
		Imidacloprid	0.0020	U	ug/L	P424948	
		Linuron	0.0040	U	ug/L	P424948	
		Mandestrobin	0.0020	U	ug/L	P424948	
		MCPP	0.0020	U	ug/L	P424948	MS
		Naproxen	0.0080	UJ	ug/L	P424948	CCV
		Primidone	0.0040	U	ug/L	P424948	
		Pyraclostrobin	0.0020	U	ug/L	P424948	
		Silvex	0.0040	U	ug/L	P424948	
		Thiamethoxam	0.0020	U	ug/L	P424948	
		Tolfenpyrad	0.0020	U	ug/L	P424948	
		Triclopyr	0.0040	U	ug/L	P424948	

Ref. Method and Comment:

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P424808

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424818

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425173

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425175

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425410

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424999

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425090

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424980

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

Reference Method: EPA 8321B
Batch ID: P424718

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P424718

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P424948

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	0.080	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	0.0020	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: P425184

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

Reference Method: SM 2540 C-2015

Batch ID: P425331

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P425212

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P425085

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P424808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424818

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425173

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425175

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425410

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	105		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425090

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	107		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P424718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.0		P	40 - 150
AMPA	100		P	40 - 150
Endothall	93.2		P	40 - 150
Glufosinate	98.1		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P424718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	99.5		P	40 - 150
Sucralose	91.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424948

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	87.4		P	40 - 150
2,4,5-T	75.7		P	40 - 150
Acetaminophen	90.7		P	30 - 150
Acetamiprid	81.3		P	40 - 150
Afidopyropen	70.8		P	30 - 150
Bentazon	84.1		P	30 - 150
Benzovindiflupyr	80.3		P	40 - 150
Carbamazepine	84.5		P	40 - 150
Clothianidin	98.9		P	40 - 150
Dinotefuran	97.5		P	40 - 150
Diuron	70.7		P	40 - 150
Fenuron	100		P	40 - 150
Fluridone	64.2		P	40 - 150
Hydrocodone	110		P	40 - 150
Ibuprofen	64.7		P	40 - 150
Imazapyr	94.2		P	40 - 150
Imidacloprid	82.7		P	40 - 150
Linuron	66.1		P	40 - 150
Mandestrobin	89.9		P	40 - 150
MCPP	111		P	40 - 150
Naproxen	67.5		P	40 - 150
Primidone	108		P	40 - 150
Pyraclostrobin	72.4		P	40 - 150
Silvex	79.8		P	40 - 150
Thiamethoxam	103		P	40 - 150
Tolfenpyrad	44.1		P	30 - 150
Triclopyr	79.3		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P425184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P425331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.9		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P425212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	99.0		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425173

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382066	Chloride	93.3		P	90 - 110
2382155	Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425175

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382066	Sulfate	92.2		P	90 - 110
2382155	Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425410

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382103	Ammonia-N	98.0	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382103	Kjeldahl Nitrogen	94.8	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382103	NO2NO3-N	98.9	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382116	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P424718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382026	Acesulfame K	97.9	98.3	P/P	40 - 150
2382026	AMPA	115	106	P/P	40 - 150
2382026	Endothall	95.0	93.9	P/P	40 - 150
2382026	Glufosinate	92.0	94.8	P/P	40 - 150
2382026	Glyphosate	106	84.5	P/P	40 - 150
2382026	Sucralose	90.7	93.1	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382256	2,4-D	98.2	85.5	P/P	40 - 150
2382256	2,4,5-T	101	92.0	P/P	40 - 150
2382256	Acetaminophen	110	100	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P424948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382256	Acetamiprid	101	85.1	P/P	40 - 150
2382256	Afidopyropen	85.0	67.4	P/P	30 - 150
2382256	Bentazon	84.3	79.5	P/P	30 - 150
2382256	Benzovindiflupyr	92.3	85.9	P/P	40 - 150
2382256	Carbamazepine	89.4	82.9	P/P	40 - 150
2382256	Clothianidin	130	104	P/P	40 - 150
2382256	Dinotefuran	117	110	P/P	40 - 150
2382256	Diuron	81.0	79.7	P/P	40 - 150
2382256	Fenuron	120	105	P/P	40 - 150
2382256	Fluridone	79.7	73.3	P/P	40 - 150
2382256	Hydrocodone	133	110	P/P	40 - 150
2382256	Ibuprofen	94.4	85.8	P/P	40 - 150
2382256	Imazapyr	113	102	P/P	40 - 150
2382256	Imidacloprid	111	109	P/P	40 - 150
2382256	Linuron	80.4	72.2	P/P	40 - 150
2382256	Mandestrobin	98.4	98.5	P/P	40 - 150
2382256	MCPP	157	141	F/P	40 - 150
2382256	Naproxen	71.3	64.9	P/P	40 - 150
2382256	Primidone	124	119	P/P	40 - 150
2382256	Pyraclostrobin	93.1	83.4	P/P	40 - 150
2382256	Silvex	89.6	78.0	P/P	40 - 150
2382256	Thiamethoxam	103	103	P/P	40 - 150
2382256	Tolfenpyrad	55.3	48.4	P/P	30 - 150
2382256	Triclopyr	96.7	85.6	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P425188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382077	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P425085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382116	Organic Carbon	102	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382201	Color (true)	2.56	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382112	Turbidity	1.07	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425173

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382066	Chloride	3.08	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382066	Sulfate	2.81	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382103	Ammonia-N	0.611	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382103	Kjeldahl Nitrogen	8.36	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382103	NO2NO3-N	0.866	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382116	Total-P	2.21	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P424718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382026	Acesulfame K	0.448	Spike	P	0 - 30
2382026	AMPA	8.17	Spike	P	0 - 30
2382026	Endothall	1.18	Spike	P	0 - 30
2382026	Glufosinate	3.03	Spike	P	0 - 30
2382026	Glyphosate	22.4	Spike	P	0 - 30
2382026	Sucralose	2.52	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P424948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382256	2,4-D	13.1	Spike	P	0 - 30
2382256	2,4,5-T	8.87	Spike	P	0 - 30
2382256	Acetaminophen	9.32	Spike	P	0 - 30
2382256	Acetamiprid	16.8	Spike	P	0 - 30
2382256	Afidopyropen	23.0	Spike	P	0 - 30
2382256	Bentazon	5.90	Spike	P	0 - 30
2382256	Benzovindiflupyr	7.17	Spike	P	0 - 30
2382256	Carbamazepine	7.58	Spike	P	0 - 30
2382256	Clothianidin	22.0	Spike	P	0 - 30
2382256	Dinotefuran	5.94	Spike	P	0 - 30
2382256	Diuron	1.71	Spike	P	0 - 30
2382256	Fenuron	12.7	Spike	P	0 - 30
2382256	Fluridone	8.40	Spike	P	0 - 30
2382256	Hydrocodone	18.9	Spike	P	0 - 30
2382256	Ibuprofen	9.52	Spike	P	0 - 30
2382256	Imazapyr	10.0	Spike	P	0 - 30
2382256	Imidacloprid	1.78	Spike	P	0 - 30
2382256	Linuron	10.7	Spike	P	0 - 30
2382256	Mandestrobin	0.0787	Spike	P	0 - 30
2382256	MCPP	10.6	Spike	P	0 - 30
2382256	Naproxen	9.41	Spike	P	0 - 30
2382256	Primidone	4.14	Spike	P	0 - 30
2382256	Pyraclostrobin	11.0	Spike	P	0 - 30
2382256	Silvex	13.7	Spike	P	0 - 30
2382256	Thiamethoxam	0.126	Spike	P	0 - 30
2382256	Tolfenpyrad	13.3	Spike	P	0 - 30
2382256	Triclopyr	12.1	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P425184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382077	Total Alkalinity	0.401	Sample	P	0 - 3.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P425331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382201	TDS	6.71	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382077	Fluoride	1.00	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P425085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382116	Organic Carbon	1.00	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2382162

Field Sample ID: G4CE0247

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.5	P	30 - 160
EPA 8321B	Diuron-d6	50.3	P	30 - 160
EPA 8321B	Endothall-d6	127	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.0	P	30 - 160
EPA 8321B	Primidone-d5	60.4	P	30 - 160
EPA 8321B	Sucralose-d6	79.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117009

Included Lab Sample IDs: 2382155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117014

Included Lab Sample IDs: 2382155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117051

Included Lab Sample IDs: 2382155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	98.5	P/P	90 - 110
Sulfate	98.8	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117080

Included Lab Sample IDs: 2382162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	91.7	92.8	P/P	60 - 160
Sucralose	86.9	88.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117084

Included Lab Sample IDs: 2382162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	92.5	99.2	P/P	60 - 160
Endothall	91.6	93.6	P/P	60 - 160
Glufosinate	78.6	95.6	P/P	60 - 160
Glyphosate	91.7	98.9	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117119

Included Lab Sample IDs: 2382156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117129

Included Lab Sample IDs: 2382162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	103	P/P	50 - 150
2,4,5-T	110	105	P/P	50 - 150
Acetaminophen	116	114	P/P	60 - 160
Acetamiprid	116	116	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A117129
Included Lab Sample IDs: 2382162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	92.9	84.1	P/P	50 - 150
Bentazon	114	108	P/P	50 - 160
Benzovindiflupyr	116	105	P/P	50 - 150
Carbamazepine	104	108	P/P	60 - 150
Clothianidin	115	118	P/P	60 - 150
Dinotefuran	116	115	P/P	50 - 150
Diuron	114	110	P/P	60 - 160
Fenuron	112	117	P/P	60 - 150
Fluridone	99.9	110	P/P	60 - 160
Hydrocodone	143	145	P/P	60 - 150
Ibuprofen	128	120	P/P	50 - 160
Imazapyr	117	116	P/P	50 - 150
Imidacloprid	99.8	100	P/P	60 - 150
Linuron	115	95.0	P/P	60 - 150
Mandestrobin	106	115	P/P	50 - 150
MCPP	111	105	P/P	50 - 150
Naproxen	170*	147	F/P	50 - 160
Primidone	126	129	P/P	60 - 150
Pyraclostrobin	116	113	P/P	60 - 150
Silvex	111	106	P/P	50 - 150
Thiamethoxam	126	116	P/P	50 - 150
Tolfenpyrad	111	111	P/P	60 - 150
Triclopyr	108	95.6	P/P	50 - 150

Reference Method: SM 5310 B-2011
Run ID: A117136
Included Lab Sample IDs: 2382156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	106	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A117138
Included Lab Sample IDs: 2382156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A117148
Included Lab Sample IDs: 2382156

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

Reference Method: SM 2320 B-2011
Run ID: A117172
Included Lab Sample IDs: 2382155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.3	94.5	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A117172

Included Lab Sample IDs: 2382155

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117272

Included Lab Sample IDs: 2382156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	99.9	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		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	100			2.56	
EPA 180.1 Rev. 2.0	Turbidity	100			1.07	
EPA 300.0 Rev. 2.1	Chloride	102	93.3	97.7	3.08	
	Sulfate	101	92.2	96.8	2.81	
EPA 350.1 Rev. 2.0	Ammonia-N	101	98.0	98.8		0.611
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	94.8	106		8.36
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	98.9	97.9		0.866
EPA 365.1 Rev. 2.0	Total-P	107	105	108		2.21
EPA 8321B	2,4-D	87.4	98.2	85.5		13.1
	2,4,5-T	75.7	101	92.0		8.87
	Acesulfame K	97.0	97.9	98.3		0.448
	Acetaminophen	90.7	110	100		9.32
	Acetamiprid	81.3	101	85.1		16.8
	Afidopyropen	70.8	85.0	67.4		23.0
	AMPA	100	115	106		8.17
	Bentazon	84.1	84.3	79.5		5.90
	Benzovindiflupyr	80.3	92.3	85.9		7.17
	Carbamazepine	84.5	89.4	82.9		7.58
	Clothianidin	98.9	130	104		22.0
	Dinotefuran	97.5	117	110		5.94
	Diuron	70.7	81.0	79.7		1.71
	Endothall	93.2	95.0	93.9		1.18
	Fenuron	100	120	105		12.7
	Fluridone	64.2	79.7	73.3		8.40
	Glufosinate	98.1	92.0	94.8		3.03
	Glyphosate	99.5	106	84.5		22.4
	Hydrocodone	110	133	110		18.9
	Ibuprofen	64.7	94.4	85.8		9.52
	Imazapyr	94.2	113	102		10.0
	Imidacloprid	82.7	111	109		1.78
	Linuron	66.1	80.4	72.2		10.7
	Mandestrobin	89.9	98.4	98.5		0.0787
	MCPP	111	157	141		10.6
	Naproxen	67.5	71.3	64.9		9.41
	Primidone	108	124	119		4.14
	Pyraclostrobin	72.4	93.1	83.4		11.0
	Silvex	79.8	89.6	78.0		13.7
	Sucralose	91.7	90.7	93.1		2.52
	Thiamethoxam	103	103	103		0.126
	Tolfenpyrad	44.1	55.3	48.4		13.3
	Triclopyr	79.3	96.7	85.6		12.1
SM 2320 B-2011	Total Alkalinity	96.6			0.401	
SM 2540 C-2015	TDS	96.9			6.71	
SM 2540 D-2015	TSS	99.0				
SM 4500-F- C-2011	Fluoride	101	101	100		1.00
SM 5310 B-2011	Organic Carbon	104	102	104		1.00

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2382155
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2382155
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2382155

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2382155
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2382156
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2382156
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2382156
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2382156
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2382162
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2382155
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2382155
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2382155
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2382155
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2382156

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	01/20/2023			01/20/2023 14:39	Alexis Price	2382155
EPA 180.1 Rev. 2.0	01/20/2023			01/20/2023 15:13	Chandler E Cox	2382155
EPA 300.0 Rev. 2.1	01/20/2023			01/27/2023 12:44	Anna M. Plaviak	2382155
EPA 350.1 Rev. 2.0	01/20/2023			02/06/2023 10:25	Ping Hua	2382156
EPA 351.2 Rev. 2.0	01/20/2023	01/26/2023 10:00	Simonne.V. Calhoun	01/27/2023 17:20	Judith K. Clark	2382156
EPA 353.2 Rev. 2.0	01/20/2023			01/27/2023 10:36	Beverly Y. Sanders	2382156
EPA 365.1 Rev. 2.0	01/20/2023	01/25/2023 13:55	Adam P Silver	01/26/2023 14:30	James L Waggerby	2382156
EPA 8321B	01/20/2023	01/24/2023 12:00	Manjita Shrestha	01/24/2023 18:50	Manjita Shrestha	2382162
	01/20/2023	01/24/2023 12:00	Manjita Shrestha	01/25/2023 05:02	Manjita Shrestha	2382162
	01/20/2023	01/26/2023 09:30	June Rhew	01/26/2023 21:45	Juyoung Kim	2382162
SM 2320 B-2011	01/20/2023			01/30/2023 21:40	Dale L. Simmons	2382155
SM 2540 C-2015	01/20/2023			01/25/2023 12:55	Yijie Li	2382155
SM 2540 D-2015	01/20/2023			01/25/2023 12:55	Yijie Li	2382155
SM 4500-F- C-2011	01/20/2023			01/30/2023 21:40	Dale L. Simmons	2382155
SM 5310 B-2011	01/20/2023			01/27/2023 05:48	Khloe J Berg	2382156