

Chemical Analysis Report

CEN-DIST-2023-01-05-01

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

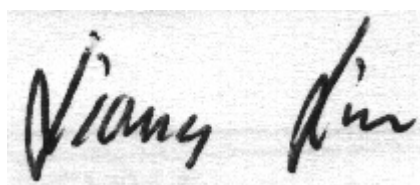
Event Description: **Tiger/Henry/Smart**
Request ID: **RQ-2023-01-02-58**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 25-JAN-2023 10:07

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical 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: Lake Smart @ Center

Collection Date/Time: 01/04/2023 11:54

Field ID: G3CE0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378137	EPA 8321B	2,4-D	0.0095		ug/L	P424181	
		Acesulfame K	0.10	U	ug/L	P424152	
		2,4,5-T	0.0040	U	ug/L	P424181	
		AMPA	0.10	U	ug/L	P424152	
		Acetaminophen	0.0080	U	ug/L	P424181	
		Acetamiprid	0.0020	U	ug/L	P424181	
		Endothall	0.25	U	ug/L	P424152	
		Glufosinate	0.10	U	ug/L	P424152	
		Glyphosate	0.10	U	ug/L	P424152	
		Afidopyropen	0.0020	U	ug/L	P424181	
		Bentazon	0.0065		ug/L	P424181	
		Sucralose	0.98		ug/L	P424152	
		Benzovindiflupyr	0.0020	U	ug/L	P424181	
		Carbamazepine	8.0E-04	U	ug/L	P424181	
		Clothianidin	0.0036	I	ug/L	P424181	
		Dinotefuran	0.0020	U	ug/L	P424181	
		Diuron	0.0020	U	ug/L	P424181	
		Fenuron	0.032	U	ug/L	P424181	
		Fluridone	0.014		ug/L	P424181	
		Imazapyr	0.022		ug/L	P424181	
		Hydrocodone	0.0020	U	ug/L	P424181	
		Ibuprofen	0.20	U	ug/L	P424181	
		Imidacloprid	0.017		ug/L	P424181	
		Linuron	0.0040	U	ug/L	P424181	
		Mandestrobin	0.0020	U	ug/L	P424181	
		MCPP	0.0040	U	ug/L	P424181	
		Naproxen	0.0080	U	ug/L	P424181	
		Primidone	0.0040	U	ug/L	P424181	
		Pyraclostrobin	0.0020	U	ug/L	P424181	
		Silvex	0.0040	U	ug/L	P424181	
		Thiamethoxam	0.0073	I	ug/L	P424181	
		Tolfenpyrad	0.0020	U	ug/L	P424181	
		Triclopyr	0.0040	U	ug/L	P424181	

Sample Location: Lake Henry @ Center

Collection Date/Time: 01/04/2023 10:58

Field ID: G3CE0040

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378113	DEP SOP: NU-094-1	Color (true)	210		PCU	P424171	
	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P424160	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P424402	
		Sulfate	7.0		mg SO4/L	P424405	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P424275	
	SM 2540 C-2015	TDS	110		mg/L	P424662	
	SM 2540 D-2015	TSS	3	I	mg/L	P424518	
2378114	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P424762	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P424562	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P424260	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P424413	
	EPA 365.1 Rev. 2.0	Total-P	0.097		mg P/L	P424330	
2378136	EPA 8321B	SM 5310 B-2011	Organic Carbon	17	mg C/L	P424268	
		2,4-D	0.027		ug/L	P424181	
		Acesulfame K	0.10	U	ug/L	P424152	
		2,4,5-T	0.0040	U	ug/L	P424181	
		AMPA	0.20	I	ug/L	P424152	
		Acetaminophen	0.0080	U	ug/L	P424181	
		Acetamiprid	0.0020	U	ug/L	P424181	
		Endothall	0.25	U	ug/L	P424152	
		Glufosinate	0.10	U	ug/L	P424152	
		Glyphosate	0.43		ug/L	P424152	
		Afidopyropen	0.0020	U	ug/L	P424181	
		Bentazon	0.020		ug/L	P424181	
		Sucralose	1.0		ug/L	P424152	
		Benzovindiflupyr	0.0020	U	ug/L	P424181	
		Carbamazepine	0.0014	I	ug/L	P424181	
		Clothianidin	0.0020	U	ug/L	P424181	
		Dinotefuran	0.0020	U	ug/L	P424181	
		Diuron	0.0020	I	ug/L	P424181	
		Fenuron	0.032	U	ug/L	P424181	
		Fluridone	0.0037		ug/L	P424181	
		Imazapyr	0.027		ug/L	P424181	
		Hydrocodone	0.0020	U	ug/L	P424181	
		Ibuprofen	0.20	U	ug/L	P424181	
		Imidacloprid	0.0049	I	ug/L	P424181	
		Linuron	0.0040	U	ug/L	P424181	
		Mandestrobin	0.0020	U	ug/L	P424181	
		MCPP	0.0040	U	ug/L	P424181	
		Naproxen	0.0080	U	ug/L	P424181	
		Primidone	0.0065	I	ug/L	P424181	
		Pyraclostrobin	0.0020	U	ug/L	P424181	
		Silvex	0.0040	U	ug/L	P424181	
		Thiamethoxam	0.0033	I	ug/L	P424181	

Field ID: G3CE0040

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378136	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P424181	
		Triclopyr	0.0040	U	ug/L	P424181	

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P424171

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424160

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424402

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424405

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424562

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424260

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424413

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424330

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

Reference Method: EPA 8321B
Batch ID: P424152

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: P424152

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

Reference Method: EPA 8321B

Batch ID: P424181

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: P424275

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

Reference Method: SM 2540 C-2015

Batch ID: P424662

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P424518

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P424762

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P424268

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: P424171

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.0		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424160

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424402

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424405

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424260

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424413

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: P424330

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

Reference Method: EPA 8321B
Batch ID: P424152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	88.3		P	40 - 150
Endothall	100		P	40 - 150
Glufosinate	84.1		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P424152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	81.2		P	40 - 150
Sucralose	124		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424181

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	103		P	40 - 150
2,4,5-T	74.4		P	40 - 150
Acetaminophen	82.6		P	30 - 150
Acetamiprid	74.0		P	40 - 150
Afidopyropen	59.2		P	30 - 150
Bentazon	86.8		P	30 - 150
Benzovindiflupyr	72.3		P	40 - 150
Carbamazepine	69.8		P	40 - 150
Clothianidin	90.3		P	40 - 150
Dinotefuran	85.2		P	40 - 150
Diuron	62.1		P	40 - 150
Fenuron	88.9		P	40 - 150
Fluridone	80.0		P	40 - 150
Hydrocodone	76.9		P	40 - 150
Ibuprofen	91.1		P	40 - 150
Imazapyr	81.4		P	40 - 150
Imidacloprid	77.8		P	40 - 150
Linuron	62.4		P	40 - 150
Mandestrobin	81.3		P	40 - 150
MCPP	94.2		P	40 - 150
Naproxen	82.5		P	40 - 150
Primidone	85.0		P	40 - 150
Pyraclostrobin	67.1		P	40 - 150
Silvex	101		P	40 - 150
Thiamethoxam	80.6		P	40 - 150
Tolfenpyrad	34.5		P	30 - 150
Triclopyr	79.6		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P424275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P424662

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

Reference Method: SM 2540 D-2015
Batch ID: P424518

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P424762

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P424268

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378041	Chloride	102		P	90 - 110
2378113	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378041	Sulfate	103		P	90 - 110
2378113	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378461	Ammonia-N	98.2	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424260

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378146	Kjeldahl Nitrogen	96.9	89.5	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378090	NO2NO3-N	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378086	Total-P	108	107	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P424152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378136	Acesulfame K	115	116	P/P	40 - 150
2378136	AMPA	81.7	80.4	P/P	40 - 150
2378136	Endothall	110	110	P/P	40 - 150
2378136	Glufosinate	99.6	87.3	P/P	40 - 150
2378136	Glyphosate	87.6	87.6	P/P	40 - 150
2378136	Sucralose	118	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424181

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378240	2,4-D	110	127	P/P	40 - 150
2378240	2,4,5-T	86.5	100	P/P	40 - 150
2378240	Acetaminophen	102	109	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P424181

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378240	Acetamiprid	106	116	P/P	40 - 150
2378240	Afidopyropen	82.4	87.7	P/P	30 - 150
2378240	Bentazon	72.5	69.9	P/P	30 - 150
2378240	Benzovindiflupyr	76.6	83.7	P/P	40 - 150
2378240	Carbamazepine	72.7	78.5	P/P	40 - 150
2378240	Clothianidin	110	125	P/P	40 - 150
2378240	Dinotefuran	105	115	P/P	40 - 150
2378240	Diuron	57.2	59.6	P/P	40 - 150
2378240	Fenuron	92.2	94.3	P/P	40 - 150
2378240	Fluridone	74.4	87.7	P/P	40 - 150
2378240	Hydrocodone	103	104	P/P	40 - 150
2378240	Ibuprofen	81.5	101	P/P	40 - 150
2378240	Imazapyr	104	121	P/P	40 - 150
2378240	Imidacloprid	116	142	P/P	40 - 150
2378240	Linuron	71.2	69.3	P/P	40 - 150
2378240	Mandestrobin	90.5	97.5	P/P	40 - 150
2378240	MCPP	109	118	P/P	40 - 150
2378240	Naproxen	98.9	80.8	P/P	40 - 150
2378240	Primidone	95.6	106	P/P	40 - 150
2378240	Pyraclostrobin	71.9	80.9	P/P	40 - 150
2378240	Silvex	107	118	P/P	40 - 150
2378240	Thiamethoxam	101	111	P/P	40 - 150
2378240	Tolfenpyrad	43.5	43.9	P/P	30 - 150
2378240	Triclopyr	87.5	114	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P424762

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378153	Fluoride	97.6	98.2	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P424268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378023	Organic Carbon	97.8	96.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378082	Color (true)	4.42	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378022	Turbidity	0.364	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378041	Chloride	0.439	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378041	Sulfate	2.25	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378461	Ammonia-N	0.753	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378146	Kjeldahl Nitrogen	4.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378090	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378086	Total-P	0.345	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P424152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378136	Acesulfame K	0.746	Spike	P	0 - 30
2378136	AMPA	1.45	Spike	P	0 - 30
2378136	Endothall	0.207	Spike	P	0 - 30
2378136	Glufosinate	13.1	Spike	P	0 - 30
2378136	Glyphosate	0.0596	Spike	P	0 - 30
2378136	Sucralose	2.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P424181

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378240	2,4-D	13.8	Spike	P	0 - 30
2378240	2,4,5-T	14.9	Spike	P	0 - 30
2378240	Acetaminophen	6.27	Spike	P	0 - 30
2378240	Acetamiprid	8.87	Spike	P	0 - 30
2378240	Afidopyropen	6.25	Spike	P	0 - 30
2378240	Bentazon	2.47	Spike	P	0 - 30
2378240	Benzovindiflupyr	8.83	Spike	P	0 - 30
2378240	Carbamazepine	7.74	Spike	P	0 - 30
2378240	Clothianidin	12.8	Spike	P	0 - 30
2378240	Dinotefuran	8.73	Spike	P	0 - 30
2378240	Diuron	3.99	Spike	P	0 - 30
2378240	Fenuron	2.29	Spike	P	0 - 30
2378240	Fluridone	15.1	Spike	P	0 - 30
2378240	Hydrocodone	1.78	Spike	P	0 - 30
2378240	Ibuprofen	21.5	Spike	P	0 - 30
2378240	Imazapyr	10.4	Spike	P	0 - 30
2378240	Imidacloprid	20.0	Spike	P	0 - 30
2378240	Linuron	2.63	Spike	P	0 - 30
2378240	Mandestrobin	7.42	Spike	P	0 - 30
2378240	MCPP	7.82	Spike	P	0 - 30
2378240	Naproxen	20.2	Spike	P	0 - 30
2378240	Primidone	10.3	Spike	P	0 - 30
2378240	Pyraclostrobin	11.8	Spike	P	0 - 30
2378240	Silvex	9.93	Spike	P	0 - 30
2378240	Thiamethoxam	9.46	Spike	P	0 - 30
2378240	Tolfenpyrad	0.998	Spike	P	0 - 30
2378240	Triclopyr	26.1	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P424275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378370	Total Alkalinity	0.0946	Sample	P	0 - 3.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P424662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378463	TDS	4.76	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P424762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378153	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P424268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378023	Organic Carbon	1.29	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2378136
Field Sample ID: G3CE0040

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.7	P	30 - 160
EPA 8321B	Diuron-d6	47.8	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.8	P	30 - 160
EPA 8321B	Primidone-d5	94.9	P	30 - 160
EPA 8321B	Sucralose-d6	72.8	P	30 - 160

Lab Sample ID: 2378137
Field Sample ID: G3CE0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.6	P	30 - 160
EPA 8321B	Diuron-d6	56.8	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.4	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	74.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116749

Included Lab Sample IDs: 2378113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A116752

Included Lab Sample IDs: 2378113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.5	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116794

Included Lab Sample IDs: 2378114

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116795

Included Lab Sample IDs: 2378113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	94.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A116802

Included Lab Sample IDs: 2378136, 2378137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	110	115	P/P	60 - 160
Sucralose	117	123	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A116805

Included Lab Sample IDs: 2378136, 2378137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	90.7	83.7	P/P	60 - 160
Endothall	103	87.3	P/P	60 - 160
Glufosinate	99.0	85.0	P/P	60 - 160
Glyphosate	88.5	86.7	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116830

Included Lab Sample IDs: 2378114

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.6	96.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116833

Included Lab Sample IDs: 2378113

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116841

Included Lab Sample IDs: 2378114

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116843

Included Lab Sample IDs: 2378114

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A116846

Included Lab Sample IDs: 2378136, 2378137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	114	121	P/P	50 - 150
2,4,5-T	111	98.6	P/P	50 - 150
Acetaminophen	122	120	P/P	60 - 160
Acetamiprid	136	132	P/P	50 - 150
Afidopyropen	128	115	P/P	50 - 150
Bentazon	138	144	P/P	50 - 160
Benzovindiflupyr	104	117	P/P	50 - 150
Carbamazepine	110	122	P/P	60 - 150
Clothianidin	132	140	P/P	60 - 150
Dinotefuran	120	122	P/P	50 - 150
Diuron	120	132	P/P	60 - 160
Fenuron	118	119	P/P	60 - 150
Fluridone	123	126	P/P	60 - 160
Hydrocodone	119	125	P/P	60 - 150
Ibuprofen	126	145	P/P	50 - 160
Imazapyr	104	115	P/P	50 - 150
Imidacloprid	113	113	P/P	60 - 150
Linuron	119	119	P/P	60 - 150
Mandestrobin	125	122	P/P	50 - 150
MCPP	111	108	P/P	50 - 150
Naproxen	107	104	P/P	50 - 160
Primidone	117	109	P/P	60 - 150
Pyraclostrobin	112	113	P/P	60 - 150
Silvex	124	126	P/P	50 - 150
Thiamethoxam	127	122	P/P	50 - 150
Tolfenpyrad	101	106	P/P	60 - 150
Triclopyr	110	92.0	P/P	50 - 150

Quality Assurance Report

Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116902

Included Lab Sample IDs: 2378114

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	98.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117000

Included Lab Sample IDs: 2378113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	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	
DEP SOP: NU-094-1	Color (true)	99.0				4.42	
EPA 180.1 Rev. 2.0	Turbidity	102				0.364	
EPA 300.0 Rev. 2.1	Chloride	103	102	101		0.439	
	Sulfate	104	103	103		2.25	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	98.2	99.0			0.753
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.0	96.9	89.5			4.45
EPA 353.2 Rev. 2.0	NO2NO3-N	104	98.2				0.0
EPA 365.1 Rev. 2.0	Total-P	105	108	107			0.345
EPA 8321B	2,4-D	103	110	127			13.8
	2,4,5-T	74.4	86.5	100			14.9
	Acesulfame K	107	115	116			0.746
	Acetaminophen	82.6	102	109			6.27
	Acetamiprid	74.0	106	116			8.87
	Afidopyropen	59.2	82.4	87.7			6.25
	AMPA	88.3	81.7	80.4			1.45
	Bentazon	86.8	72.5	69.9			2.47
	Benzovindiflupyr	72.3	76.6	83.7			8.83
	Carbamazepine	69.8	72.7	78.5			7.74
	Clothianidin	90.3	110	125			12.8
	Dinotefuran	85.2	105	115			8.73
	Diuron	62.1	57.2	59.6			3.99
	Endothall	100	110	110			0.207
	Fenuron	88.9	92.2	94.3			2.29
	Fluridone	80.0	74.4	87.7			15.1
	Glufosinate	84.1	99.6	87.3			13.1
	Glyphosate	81.2	87.6	87.6			0.0596
	Hydrocodone	76.9	103	104			1.78
	Ibuprofen	91.1	81.5	101			21.5
	Imazapyr	81.4	104	121			10.4
	Imidacloprid	77.8	116	142			20.0
	Linuron	62.4	71.2	69.3			2.63
	Mandestrobin	81.3	90.5	97.5			7.42
	MCPP	94.2	109	118			7.82
	Naproxen	82.5	98.9	80.8			20.2
	Primidone	85.0	95.6	106			10.3
	Pyraclostrobin	67.1	71.9	80.9			11.8
	Silvex	101	107	118			9.93
	Sucralose	124	118	113			2.99
	Thiamethoxam	80.6	101	111			9.46
	Tolfenpyrad	34.5	43.5	43.9			0.998
	Triclopyr	79.6	87.5	114			26.1
SM 2320 B-2011	Total Alkalinity	96.8				0.0946	
SM 2540 C-2015	TDS	102				4.76	
SM 2540 D-2015	TSS	91.1					
SM 4500-F- C-2011	Fluoride	97.5	97.6	98.2			0.480
SM 5310 B-2011	Organic Carbon	95.2	97.8	96.6			1.29

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2378113
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2378113
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2378113

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2378113
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2378114
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2378114
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2378114
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2378114
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2378136, 2378137
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2378113
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2378113
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2378113
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2378113
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2378114

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	01/05/2023			01/05/2023 15:35	Anna M. Plaviak	2378113
EPA 180.1 Rev. 2.0	01/05/2023			01/05/2023 14:22	Khloe J Berg	2378113
EPA 300.0 Rev. 2.1	01/05/2023			01/11/2023 05:20	Anna M. Plaviak	2378113
EPA 350.1 Rev. 2.0	01/05/2023			01/13/2023 12:27	Ping Hua	2378114
EPA 351.2 Rev. 2.0	01/05/2023	01/09/2023 13:30	Simonne.V. Calhoun	01/10/2023 15:23	Samantha L Bates	2378114
EPA 353.2 Rev. 2.0	01/05/2023			01/11/2023 11:12	Beverly Y. Sanders	2378114
EPA 365.1 Rev. 2.0	01/05/2023	01/10/2023 15:33	Adam P Silver	01/11/2023 11:38	James L Waggerby	2378114
EPA 8321B	01/05/2023	01/06/2023 06:00	June Rhew	01/06/2023 15:03	Manjita Shrestha	2378136
	01/05/2023	01/06/2023 06:00	June Rhew	01/06/2023 15:18	Manjita Shrestha	2378137
	01/05/2023	01/06/2023 06:00	June Rhew	01/06/2023 22:41	Manjita Shrestha	2378136
	01/05/2023	01/06/2023 06:00	June Rhew	01/06/2023 22:54	Manjita Shrestha	2378137
	01/05/2023	01/09/2023 09:30	June Rhew	01/09/2023 22:36	Juyoung Kim	2378136
	01/05/2023	01/09/2023 09:30	June Rhew	01/09/2023 22:55	Juyoung Kim	2378137
SM 2320 B-2011	01/05/2023			01/07/2023 09:28	Dale L. Simmons	2378113
SM 2540 C-2015	01/05/2023			01/09/2023 16:29	Yijie Li	2378113
SM 2540 D-2015	01/05/2023			01/09/2023 16:29	Yijie Li	2378113
SM 4500-F- C-2011	01/05/2023			01/19/2023 19:58	Adam P Silver	2378113
SM 5310 B-2011	01/05/2023			01/06/2023 20:13	Elise M. Gillis	2378114