

Chemical Analysis Report

NE-DIST-2023-02-09-01

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

Event Description: **Gainesville 2023**
Request ID: **RQ-2023-02-06-35**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 27-FEB-2023 10:05



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: Upper Little Hatchet at Airport field

Collection Date/Time: 02/08/2023 10:00

Field ID: G1NE0949

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2386165	DEP SOP: NU-094-1	Color (true)	83		PCU	P425617	
	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P425615	
	EPA 300.0 Rev. 2.1	Chloride	8.2	A	mg Cl/L	P426056	
		Sulfate	6.1	A	mg SO4/L	P426059	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P425849	
	SM 2540 C-2015	TDS	137		mg/L	P426111	
	SM 2540 D-2015	TSS	2	I	mg/L	P426004	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P425853	
2386167	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P425978	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P425809	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P425775	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P425761	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P425681	

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: Alachua Sink at end of Boardwalk

Collection Date/Time: 02/08/2023 10:45

Field ID: G1NE0953

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2386166	DEP SOP: NU-094-1	Color (true)	120		PCU	P425617	
	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P425615	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P426056	
		Sulfate	3.6		mg SO4/L	P426059	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P425849	
	SM 2540 C-2015	TDS	93		mg/L	P426111	
	SM 2540 D-2015	TSS	4	I	mg/L	P426004	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P425853	
2386168	EPA 350.1 Rev. 2.0	Ammonia-N	0.076		mg N/L	P425978	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P425803	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P425775	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P425761	
	SM 5310 B-2011	Organic Carbon	19		mg C/L	P425681	

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: Lake Alice Outlet @ Gale Lemerand Dr.

Collection Date/Time: 02/08/2023 12:20

Field ID: G3NE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2386203	EPA 8321B	2,4-D	0.014		ug/L	P425592	
		Acesulfame K	0.31	I	ug/L	P425585	
		2,4,5-T	0.0040	U	ug/L	P425592	
		AMPA	0.18	I	ug/L	P425585	
		Acetaminophen	0.17		ug/L	P425592	
		Acetamiprid	0.0020	U	ug/L	P425592	
		Endothall	0.25	U	ug/L	P425585	MS
		Glufosinate	0.10	U	ug/L	P425585	
		Glyphosate	0.85		ug/L	P425585	
		Afidopyropen	0.0020	U	ug/L	P425592	
		Bentazon	0.0023	I	ug/L	P425592	
		Sucralose	2.0		ug/L	P425585	
		Benzovindiflupyr	0.0020	U	ug/L	P425592	
		Carbamazepine	8.0E-04	UJ	ug/L	P425592	CCV
		Clothianidin	0.0020	U	ug/L	P425592	
		Dinotefuran	0.0068	I	ug/L	P425592	
		Diuron	0.0092		ug/L	P425592	
		Fenuron	0.032	U	ug/L	P425592	
		Fluridone	8.0E-04	U	ug/L	P425592	
		Imazapyr	0.38		ug/L	P425592	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.23	I	ug/L	P425592	
		Imidacloprid	0.011		ug/L	P425592	
		Linuron	0.0040	U	ug/L	P425592	
		Mandestrobin	0.0020	U	ug/L	P425592	
		MCPP	0.0020	U	ug/L	P425592	
		Naproxen	0.054		ug/L	P425592	RPD
		Primidone	0.0040	U	ug/L	P425592	
		Pyraclostrobin	0.0020	U	ug/L	P425592	
		Silvex	0.026		ug/L	P425592	
		Thiamethoxam	0.0020	U	ug/L	P425592	
		Tolfenpyrad	0.0020	U	ug/L	P425592	
		Triclopyr	0.0040	U	ug/L	P425592	

Ref. Method and Comment:

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

Sample Location: Hogtown Creek -Upstream of Haile Sink

Collection Date/Time: 02/08/2023 13:05

Field ID: G1NE0913

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2386204	EPA 8321B	2,4-D	0.0020	U	ug/L	P425592	
		Acesulfame K	0.10	U	ug/L	P425585	
		2,4,5-T	0.0040	U	ug/L	P425592	
		AMPA	0.20	I	ug/L	P425585	
		Acetaminophen	0.0080	U	ug/L	P425592	
		Acetamiprid	0.0020	U	ug/L	P425592	
		Endothall	0.25	U	ug/L	P425585	MS
		Glufosinate	0.10	U	ug/L	P425585	
		Glyphosate	0.19	I	ug/L	P425585	
		Afidopyropen	0.0020	U	ug/L	P425592	
		Bentazon	0.0071		ug/L	P425592	
		Sucralose	0.14		ug/L	P425585	
		Benzovindiflupyr	0.0020	U	ug/L	P425592	
		Carbamazepine	8.0E-04	UJ	ug/L	P425592	CCV
		Clothianidin	0.0020	U	ug/L	P425592	
		Dinotefuran	0.0035	I	ug/L	P425592	
		Diuron	0.0020	U	ug/L	P425592	
		Fenuron	0.032	U	ug/L	P425592	
		Fluridone	0.0011	I	ug/L	P425592	
		Imazapyr	0.043		ug/L	P425592	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.080	U	ug/L	P425592	
		Imidacloprid	0.0083		ug/L	P425592	
		Linuron	0.0040	U	ug/L	P425592	
		Mandestrobin	0.0020	U	ug/L	P425592	
		MCPP	0.0020	U	ug/L	P425592	
		Naproxen	0.0080	U	ug/L	P425592	RPD
		Primidone	0.0040	U	ug/L	P425592	
		Pyraclostrobin	0.0020	U	ug/L	P425592	
		Silvex	0.0040	U	ug/L	P425592	
		Thiamethoxam	0.0020	U	ug/L	P425592	
		Tolfenpyrad	0.0020	U	ug/L	P425592	
		Triclopyr	0.0040	U	ug/L	P425592	

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: P425617

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425615

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426056

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426059

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425978

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425803

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425809

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425775

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425761

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P425585

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

Reference Method: EPA 8321B

Batch ID: P425592

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: P425849

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

Reference Method: SM 2540 C-2015

Batch ID: P426111

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P426004

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425853

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P425681

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: P425617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425615

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426056

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426059

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425978

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425775

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425761

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P425585

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	96.2		P	40 - 150
AMPA	99.0		P	40 - 150
Endothall	98.4		P	40 - 150
Glufosinate	99.2		P	40 - 150
Glyphosate	98.5		P	40 - 150
Sucralose	96.7		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P425592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	85.8		P	40 - 150
2,4,5-T	77.3		P	40 - 150
Acetaminophen	83.3		P	30 - 150
Acetamiprid	82.1		P	40 - 150
Afidopyropen	61.5		P	30 - 150
Bentazon	91.0		P	30 - 150
Benzovindiflupyr	84.8		P	40 - 150
Carbamazepine	90.7		P	40 - 150
Clothianidin	94.4		P	40 - 150
Dinotefuran	98.8		P	40 - 150
Diuron	75.7		P	40 - 150
Fenuron	96.1		P	40 - 150
Fluridone	80.2		P	40 - 150
Hydrocodone	86.0		P	40 - 150
Ibuprofen	56.8		P	40 - 150
Imazapyr	83.3		P	40 - 150
Imidacloprid	84.3		P	40 - 150
Linuron	76.7		P	40 - 150
Mandestrobin	97.8		P	40 - 150
MCPP	97.5		P	40 - 150
Naproxen	63.2		P	40 - 150
Primidone	89.3		P	40 - 150
Pyraclostrobin	78.3		P	40 - 150
Silvex	72.1		P	40 - 150
Thiamethoxam	82.5		P	40 - 150
Tolfenpyrad	44.6		P	30 - 150
Triclopyr	77.2		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P425849

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.0		P	94 - 106

Reference Method: SM 2540 C-2015

Batch ID: P426111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.9		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P426004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.5		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P425853

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

Reference Method: SM 5310 B-2011
Batch ID: P425681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386165	Chloride	91.6		P	90 - 110
2386243	Chloride	95.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426059

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386165	Sulfate	93.0		P	90 - 110
2386243	Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386245	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386272	Kjeldahl Nitrogen	93.8	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386461	Kjeldahl Nitrogen	98.7	91.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386167	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385987	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P425585

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386143	Acesulfame K	77.6	79.3	P/P	40 - 150
2386143	AMPA	95.2	101	P/P	40 - 150
2386143	Endothall	153	152	F/F	40 - 150
2386143	Glufosinate	117	116	P/P	40 - 150
2386143	Glyphosate	126	133	P/P	40 - 150
2386143	Sucralose	62.3	65.5	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P425592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385435	2,4-D	127	98.5	P/P	40 - 150
2385435	2,4,5-T	111	106	P/P	40 - 150
2385435	Acetaminophen	107	96.4	P/P	30 - 150
2385435	Acetamiprid	96.2	106	P/P	40 - 150
2385435	Afidopyropen	65.1	73.9	P/P	30 - 150
2385435	Bentazon	91.0	88.0	P/P	30 - 150
2385435	Benzovindiflupyr	98.2	92.0	P/P	40 - 150
2385435	Carbamazepine	86.9	84.5	P/P	40 - 150
2385435	Clothianidin	125	116	P/P	40 - 150
2385435	Dinotefuran	122	116	P/P	40 - 150
2385435	Diuron	71.9	65.6	P/P	40 - 150
2385435	Fenuron	87.7	85.7	P/P	40 - 150
2385435	Fluridone	83.6	71.6	P/P	40 - 150
2385435	Hydrocodone	112	102	P/P	40 - 150
2385435	Ibuprofen	79.3	81.3	P/P	40 - 150
2385435	Imazapyr	122	113	P/P	40 - 150
2385435	Imidacloprid	149	131	P/P	40 - 150
2385435	Linuron	96.3	73.0	P/P	40 - 150
2385435	Mandestrobin	111	105	P/P	40 - 150
2385435	MCCP	123	116	P/P	40 - 150
2385435	Naproxen	126	78.6	P/P	40 - 150
2385435	Primidone	114	104	P/P	40 - 150
2385435	Pyraclostrobin	94.3	86.2	P/P	40 - 150
2385435	Silvex	86.5	83.6	P/P	40 - 150
2385435	Thiamethoxam	118	111	P/P	40 - 150
2385435	Tolfenpyrad	57.2	49.7	P/P	30 - 150
2385435	Triclopyr	88.3	82.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P425853

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385842	Fluoride	101	102	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P425681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386245	Organic Carbon	96.6	98.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P425617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386262	Color (true)	1.04	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386139	Turbidity	2.79	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386165	Chloride	2.55	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386165	Sulfate	2.91	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386245	Ammonia-N	1.18	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386272	Kjeldahl Nitrogen	4.32	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386461	Kjeldahl Nitrogen	4.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386167	NO2NO3-N	0.471	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P425761

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385987	Total-P	2.68	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P425585

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386143	Acesulfame K	2.19	Spike	P	0 - 30
2386143	AMPA	5.09	Spike	P	0 - 30
2386143	Endothall	1.24	Spike	P	0 - 30
2386143	Glufosinate	0.483	Spike	P	0 - 30
2386143	Glyphosate	5.44	Spike	P	0 - 30
2386143	Sucralose	4.88	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P425592

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385435	2,4-D	18.6	Spike	P	0 - 30
2385435	2,4,5-T	5.22	Spike	P	0 - 30
2385435	Acetaminophen	10.5	Spike	P	0 - 30
2385435	Acetamiprid	9.76	Spike	P	0 - 30
2385435	Afidopyropen	12.6	Spike	P	0 - 30
2385435	Bentazon	3.34	Spike	P	0 - 30
2385435	Benzovindiflupyr	6.57	Spike	P	0 - 30
2385435	Carbamazepine	2.86	Spike	P	0 - 30
2385435	Clothianidin	7.49	Spike	P	0 - 30
2385435	Dinotefuran	5.58	Spike	P	0 - 30
2385435	Diuron	9.24	Spike	P	0 - 30
2385435	Fenuron	2.26	Spike	P	0 - 30
2385435	Fluridone	15.6	Spike	P	0 - 30
2385435	Hydrocodone	9.17	Spike	P	0 - 30
2385435	Ibuprofen	2.45	Spike	P	0 - 30
2385435	Imazapyr	6.55	Spike	P	0 - 30
2385435	Imidacloprid	12.9	Spike	P	0 - 30
2385435	Linuron	27.5	Spike	P	0 - 30
2385435	Mandestrobin	5.39	Spike	P	0 - 30
2385435	MCP	6.06	Spike	P	0 - 30
2385435	Naproxen	46.1	Spike	F	0 - 30
2385435	Primidone	9.12	Spike	P	0 - 30
2385435	Pyraclostrobin	8.98	Spike	P	0 - 30
2385435	Silvex	3.48	Spike	P	0 - 30
2385435	Thiamethoxam	6.64	Spike	P	0 - 30
2385435	Tolfenpyrad	14.1	Spike	P	0 - 30
2385435	Triclopyr	7.10	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P425849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385842	Total Alkalinity	2.50	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P426111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385790	TDS	7.87	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P425853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385842	Fluoride	0.506	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P425681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386245	Organic Carbon	1.49	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2386203
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.7	P	30 - 160
EPA 8321B	Diuron-d6	45.3	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.2	P	30 - 160
EPA 8321B	Primidone-d5	85.0	P	30 - 160
EPA 8321B	Sucralose-d6	68.6	P	30 - 160

Lab Sample ID: 2386204
Field Sample ID: G1NE0913

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.7	P	30 - 160
EPA 8321B	Diuron-d6	64.7	P	30 - 160
EPA 8321B	Endothall-d6	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Ibuprofen-d3	78.6	P	30 - 160
EPA 8321B	Primidone-d5	93.8	P	30 - 160
EPA 8321B	Sucralose-d6	74.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117357

Included Lab Sample IDs: 2386165, 2386166

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

Reference Method: DEP SOP: NU-094-1

Run ID: A117358

Included Lab Sample IDs: 2386165, 2386166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A117394

Included Lab Sample IDs: 2386167, 2386168

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

Reference Method: EPA 8321B

Run ID: A117405

Included Lab Sample IDs: 2386203, 2386204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	119	P/P	50 - 150
2,4,5-T	107	85.1	P/P	50 - 150
Acetaminophen	102	100	P/P	60 - 160
Acetamiprid	104	97.9	P/P	50 - 150
Afidopyropen	90.2	57.5	P/P	50 - 150
Bentazon	117	126	P/P	50 - 160
Benzovindiflupyr	106	111	P/P	50 - 150
Carbamazepine	111	160*	P/F	60 - 150
Clothianidin	102	108	P/P	60 - 150
Dinotefuran	101	105	P/P	50 - 150
Diuron	113	104	P/P	60 - 160
Fenuron	94.7	94.6	P/P	60 - 150
Fluridone	110	113	P/P	60 - 160
Hydrocodone	105	102	P/P	60 - 150
Ibuprofen	104	95.5	P/P	50 - 160
Imazapyr	94.9	95.0	P/P	50 - 150
Imidacloprid	91.0	92.2	P/P	60 - 150
Linuron	97.7	109	P/P	60 - 150
Mandestrobin	106	107	P/P	50 - 150
MCPP	110	110	P/P	50 - 150
Naproxen	84.0	88.1	P/P	50 - 160
Primidone	99.2	100	P/P	60 - 150
Pyraclostrobin	109	108	P/P	60 - 150
Silvex	104	103	P/P	50 - 150
Thiamethoxam	93.3	95.3	P/P	50 - 150
Tolfenpyrad	104	103	P/P	60 - 150
Triclopyr	93.1	75.7	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A117416

Included Lab Sample IDs: 2386203, 2386204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	96.4	102	P/P	60 - 160
Sucralose	98.6	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117425

Included Lab Sample IDs: 2386203, 2386204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.7	100	P/P	60 - 160
Endothall	103	63.9	P/P	60 - 160
Glufosinate	93.5	84.5	P/P	60 - 160
Glyphosate	89.9	91.5	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117426

Included Lab Sample IDs: 2386165, 2386166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	94.9	94.9	P/P	90 - 110
Sulfate	99.2	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117432

Included Lab Sample IDs: 2386167, 2386168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117452

Included Lab Sample IDs: 2386165, 2386166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.4	96.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117452

Included Lab Sample IDs: 2386165, 2386166

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117466

Included Lab Sample IDs: 2386168

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117469

Included Lab Sample IDs: 2386167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.8	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117495

Included Lab Sample IDs: 2386167, 2386168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117528

Included Lab Sample IDs: 2386167

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117612

Included Lab Sample IDs: 2386168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	102	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)	99.8			1.04	
EPA 180.1 Rev. 2.0	Turbidity	101			2.79	
EPA 300.0 Rev. 2.1	Chloride	95.3	91.6	95.9	2.55	
	Sulfate	99.8	93.0	98.1	2.91	
EPA 350.1 Rev. 2.0	Ammonia-N	100	102	101		1.18
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.1	93.8	98.8		4.32
	Kjeldahl Nitrogen	97.5	98.7	91.4		4.99
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	102		0.471
EPA 365.1 Rev. 2.0	Total-P	102	104	101		2.68
EPA 8321B	2,4-D	85.8	127	98.5		18.6
	2,4,5-T	77.3	111	106		5.22
	Acesulfame K	96.2	77.6	79.3		2.19
	Acetaminophen	83.3	107	96.4		10.5
	Acetamiprid	82.1	96.2	106		9.76
	Afidopyropen	61.5	65.1	73.9		12.6
	AMPA	99.0	95.2	101		5.09
	Bentazon	91.0	91.0	88.0		3.34
	Benzovindiflupyr	84.8	98.2	92.0		6.57
	Carbamazepine	90.7	86.9	84.5		2.86
	Clothianidin	94.4	125	116		7.49
	Dinotefuran	98.8	122	116		5.58
	Diuron	75.7	71.9	65.6		9.24
	Endothall	98.4	153	152		1.24
	Fenuron	96.1	87.7	85.7		2.26
	Fluridone	80.2	83.6	71.6		15.6
	Glufosinate	99.2	117	116		0.483
	Glyphosate	98.5	126	133		5.44
	Hydrocodone	86.0	112	102		9.17
	Ibuprofen	56.8	79.3	81.3		2.45
	Imazapyr	83.3	122	113		6.55
	Imidacloprid	84.3	149	131		12.9
	Linuron	76.7	96.3	73.0		27.5
	Mandestrobin	97.8	111	105		5.39
	MCPP	97.5	123	116		6.06
	Naproxen	63.2	126	78.6		46.1
	Primidone	89.3	114	104		9.12
	Pyraclostrobin	78.3	94.3	86.2		8.98
	Silvex	72.1	86.5	83.6		3.48
	Sucralose	96.7	62.3	65.5		4.88
	Thiamethoxam	82.5	118	111		6.64
	Tolfenpyrad	44.6	57.2	49.7		14.1
	Triclopyr	77.2	88.3	82.2		7.10
SM 2320 B-2011	Total Alkalinity	99.0			2.50	
SM 2540 C-2015	TDS	98.9			7.87	
SM 2540 D-2015	TSS	96.5				
SM 4500-F- C-2011	Fluoride	102	101	102		0.506
SM 5310 B-2011	Organic Carbon	99.8	96.6	98.1		1.49

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2386165, 2386166
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2386165, 2386166

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2386165, 2386166
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2386165, 2386166
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2386167, 2386168
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2386167, 2386168
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2386167, 2386168
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2386167, 2386168
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2386203, 2386204
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2386165, 2386166
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2386165, 2386166
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2386165, 2386166
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2386165, 2386166
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2386167, 2386168

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	02/09/2023			02/09/2023 15:00	Anna M. Plaviak	2386165, 2386166
EPA 180.1 Rev. 2.0	02/09/2023			02/09/2023 13:13	Chandler E Cox	2386165
	02/09/2023			02/09/2023 13:14	Chandler E Cox	2386166
EPA 300.0 Rev. 2.1	02/09/2023			02/18/2023 00:23	Anna M. Plaviak	2386165
	02/09/2023			02/18/2023 02:08	Anna M. Plaviak	2386166
EPA 350.1 Rev. 2.0	02/09/2023			02/16/2023 13:02	Ping Hua	2386167
	02/09/2023			02/16/2023 13:03	Ping Hua	2386168
EPA 351.2 Rev. 2.0	02/09/2023	02/15/2023 11:45	Samantha L Bates	02/22/2023 15:03	Samantha L Bates	2386168
	02/09/2023	02/15/2023 11:46	Samantha L Bates	02/17/2023 16:04	Samantha L Bates	2386167
EPA 353.2 Rev. 2.0	02/09/2023			02/14/2023 10:56	Beverly Y. Sanders	2386167
	02/09/2023			02/14/2023 11:08	Beverly Y. Sanders	2386168
EPA 365.1 Rev. 2.0	02/09/2023	02/14/2023 13:21	Adam P Silver	02/15/2023 14:16	Simonne.V. Calhoun	2386168
	02/09/2023	02/14/2023 13:21	Adam P Silver	02/15/2023 15:51	Simonne.V. Calhoun	2386167
EPA 8321B	02/09/2023	02/10/2023 10:00	June Rhew	02/11/2023 03:57	Juyoung Kim	2386203
	02/09/2023	02/10/2023 10:00	June Rhew	02/11/2023 04:16	Juyoung Kim	2386204
	02/09/2023	02/13/2023 10:00	Manjita Shrestha	02/13/2023 13:57	Manjita Shrestha	2386203
	02/09/2023	02/13/2023 10:00	Manjita Shrestha	02/13/2023 14:11	Manjita Shrestha	2386204
	02/09/2023	02/13/2023 10:00	Manjita Shrestha	02/13/2023 21:15	Manjita Shrestha	2386203
	02/09/2023	02/13/2023 10:00	Manjita Shrestha	02/13/2023 21:28	Manjita Shrestha	2386204
SM 2320 B-2011	02/09/2023			02/15/2023 02:18	Dale L. Simmons	2386165
	02/09/2023			02/15/2023 02:31	Dale L. Simmons	2386166
SM 2540 C-2015	02/09/2023			02/10/2023 16:01	Yijie Li	2386165, 2386166
SM 2540 D-2015	02/09/2023			02/10/2023 16:01	Yijie Li	2386165, 2386166
SM 4500-F- C-2011	02/09/2023			02/15/2023 02:18	Dale L. Simmons	2386165
	02/09/2023			02/15/2023 02:31	Dale L. Simmons	2386166
SM 5310 B-2011	02/09/2023			02/11/2023 00:54	Elise M. Gillis	2386167
	02/09/2023			02/11/2023 01:08	Elise M. Gillis	2386168