

Chemical Analysis Report

NE-DIST-2023-08-15-02

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

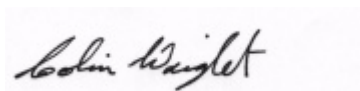
Event Description: **Gainesville 2023**
Request ID: **RQ-2023-08-14-44**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 06-SEP-2023 10:25

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink rectangular background.

Case Narrative

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

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: UPPER LITTLE HATCHET AT AIRPORT FIELD Collection Date/Time: 08/14/2023 10:25

Field ID: G1NE0949

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2430996	DEP SOP: NU-094-1	Color (true)	71		PCU	P433865	
	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P433877	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P434071	
		Sulfate	11		mg SO4/L	P434074	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P434015	
	SM 2540 C-2015	TDS	125		mg/L	P434487	
	SM 2540 D-2015	TSS	2	I	mg/L	P434267	
	SM 4500-F- C-2011	Fluoride	0.097	I	mg F/L	P434018	
2430998	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P434317	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P434319	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.088		mg N/L	P434563	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P433963	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P433955	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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: 08/14/2023 11:00

Field ID: G1NE0953

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2430997	DEP SOP: NU-094-1	Color (true)	170		PCU	P433865	
	EPA 180.1 Rev. 2.0	Turbidity	3.7	A	NTU	P433878	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P434071	
		Sulfate	3.5		mg SO4/L	P434074	
	SM 2320 B-2011	Total Alkalinity	35		mg CaCO3/L	P434015	
	SM 2540 C-2015	TDS	105		mg/L	P434487	
	SM 2540 D-2015	TSS	6	I	mg/L	P434267	
	SM 4500-F- C-2011	Fluoride	0.17		mg F/L	P434018	
2430999	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P434317	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P434319	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P434563	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P433963	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P434115	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

SM 5310 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LAKE ALICE OUTLET AT GALE LEMERAND DR Collection Date/Time: 08/14/2023 11:55

Field ID: G3NE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2431097	EPA 8321B	2,4-D	0.0074	I	ug/L	P433848	
		Acesulfame K	0.48		ug/L	P433790	
		2,4,5-T	0.0040	U	ug/L	P433848	
		AMPA	0.34	I	ug/L	P433790	
		Acetaminophen	0.028	I	ug/L	P433848	
		Acetamiprid	0.0020	U	ug/L	P433848	
		Endothall	0.25	U	ug/L	P433790	
		Glufosinate	0.10	U	ug/L	P433790	
		Glyphosate	1.6		ug/L	P433790	
		Afidopyropen	0.0020	U	ug/L	P433848	
		Bentazon	0.0037		ug/L	P433848	
		Sucralose	3.9		ug/L	P433790	
		Benzovindiflupyr	0.0020	U	ug/L	P433848	
		Carbamazepine	8.0E-04	U	ug/L	P433848	
		Clothianidin	0.0020	U	ug/L	P433848	
		Dinotefuran	0.0089		ug/L	P433848	
		Diuron	0.0055	I	ug/L	P433848	
		Fenuron	0.032	U	ug/L	P433848	
		Fluridone	8.0E-04	U	ug/L	P433848	
		Imazapyr	0.11		ug/L	P433848	
		Hydrocodone	0.0020	U	ug/L	P433848	
		Ibuprofen	0.20	U	ug/L	P433848	
		Imidacloprid	0.014		ug/L	P433848	
		Linuron	0.0040	U	ug/L	P433848	
		Mandestrobin	0.0020	U	ug/L	P433848	
		MCPP	0.0040	U	ug/L	P433848	
		Naproxen	0.0080	U	ug/L	P433848	
		Primidone	0.0040	U	ug/L	P433848	
		Pyraclostrobin	0.0020	U	ug/L	P433848	
		Silvex	0.0040	U	ug/L	P433848	MS
		Thiamethoxam	0.0020	U	ug/L	P433848	
		Tolfenpyrad	0.0020	U	ug/L	P433848	
		Triclopyr	0.0040	U	ug/L	P433848	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to a high concentration of some parameters in the spiked sample.

Sample Location: HOGTOWN CREEK UPSTREAM OF HAILE SINK Collection Date/Time: 08/14/2023 13:05

Field ID: G1NE0913

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2431096	EPA 8321B	2,4-D	0.015		ug/L	P433848	
		Acesulfame K	0.10	U	ug/L	P433790	
		2,4,5-T	0.0040	U	ug/L	P433848	
		AMPA	0.21	I	ug/L	P433790	
		Acetaminophen	0.0080	U	ug/L	P433848	
		Acetamiprid	0.0020	U	ug/L	P433848	
		Endothall	0.25	U	ug/L	P433790	
		Glufosinate	0.10	U	ug/L	P433790	
		Glyphosate	0.10	U	ug/L	P433790	
		Afidopyropen	0.0020	U	ug/L	P433848	
		Bentazon	0.0069		ug/L	P433848	
		Sucralose	0.13		ug/L	P433790	
		Benzovindiflupyr	0.0020	U	ug/L	P433848	
		Carbamazepine	8.0E-04	U	ug/L	P433848	
		Clothianidin	0.0020	U	ug/L	P433848	
		Dinotefuran	0.0020	U	ug/L	P433848	
		Diuron	0.0020	U	ug/L	P433848	
		Fenuron	0.032	U	ug/L	P433848	
		Fluridone	0.0017	I	ug/L	P433848	
		Imazapyr	0.055		ug/L	P433848	
		Hydrocodone	0.0020	U	ug/L	P433848	
		Ibuprofen	0.20	U	ug/L	P433848	
		Imidacloprid	0.013		ug/L	P433848	
		Linuron	0.0040	U	ug/L	P433848	
		Mandestrobin	0.0020	U	ug/L	P433848	
		MCPP	0.0040	U	ug/L	P433848	
		Naproxen	0.0080	U	ug/L	P433848	
		Primidone	0.0040	U	ug/L	P433848	
		Pyraclostrobin	0.0020	U	ug/L	P433848	
		Silvex	0.0040	U	ug/L	P433848	MS
		Thiamethoxam	0.0020	U	ug/L	P433848	
		Tolfenpyrad	0.0020	U	ug/L	P433848	
		Triclopyr	0.0040	U	ug/L	P433848	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to a high concentration of some parameters in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P433865

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433877

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433878

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434071

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434074

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434317

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434319

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434563

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433963

Component	Result	Code	Units
Total-P	0.004	I	mg P/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P433790

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: P433848

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: P434015

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

Reference Method: SM 2540 C-2015

Batch ID: P434487

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P434267

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P434018

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P433955

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

Reference Method: SM 5310 B-2011
Batch ID: P434115

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: P433865

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433877

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433878

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434074

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434317

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434319

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: P434563

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433963

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P433790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	105		P	40 - 150
AMPA	117		P	40 - 150
Endothall	109		P	40 - 150
Glufosinate	103		P	40 - 150
Glyphosate	99.6		P	40 - 150
Sucralose	96.4		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P433848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	98.3		P	30 - 160
2,4,5-T	103		P	30 - 160
Acetaminophen	82.2		P	30 - 160
Acetamiprid	90.5		P	30 - 160
Afidopyropen	30.6		P	30 - 160
Bentazon	115		P	30 - 160
Benzovindiflupyr	93.4		P	30 - 160
Carbamazepine	100		P	30 - 160
Clothianidin	89.0		P	30 - 160
Dinotefuran	107		P	30 - 160
Diuron	92.7		P	30 - 160
Fenuron	87.3		P	30 - 160
Fluridone	95.5		P	30 - 160
Hydrocodone	92.6		P	30 - 160
Ibuprofen	66.5		P	30 - 160
Imazapyr	98.9		P	30 - 160
Imidacloprid	98.0		P	30 - 160
Linuron	82.6		P	30 - 160
Mandestrobin	96.7		P	30 - 160
MCPP	105		P	30 - 160
Naproxen	81.7		P	30 - 160
Primidone	88.0		P	30 - 160
Pyraclostrobin	94.1		P	30 - 160
Silvex	109		P	30 - 160
Thiamethoxam	104		P	30 - 160
Tolfenpyrad	64.2		P	30 - 160
Triclopyr	95.4		P	30 - 160

Reference Method: SM 2320 B-2011

Batch ID: P434015

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.0		P	92 - 105

Reference Method: SM 2540 C-2015

Batch ID: P434487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.3		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P434267

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.4		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P434018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433955

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P434115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430783	Chloride	98.3		P	90 - 110
2430996	Chloride	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430783	Sulfate	97.2		P	90 - 110
2430996	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430901	Ammonia-N	99.2	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430998	Kjeldahl Nitrogen	105	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430999	NO2NO3-N	95.5	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431053	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P433790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430880	Acesulfame K	128	132	P/P	40 - 150
2430880	AMPA	62.5	60.4	P/P	40 - 150
2430880	Endothall	135	138	P/P	40 - 150
2430880	Glufosinate	83.0	84.0	P/P	40 - 150
2430880	Glyphosate	93.9	101	P/P	40 - 150
2430880	Sucralose	97.4	94.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P433848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430532	2,4,5-T	135	121	P/P	30 - 160
2430532	Acetaminophen	120	102	P/P	30 - 160
2430532	Acetamiprid	60.2	79.6	P/P	30 - 160

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P433848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430532	Afidopyropen	36.8	36.2	P/P	30 - 160
2430532	Benzovindiflupyr	84.9	84.4	P/P	30 - 160
2430532	Carbamazepine	72.0	81.9	P/P	30 - 160
2430532	Dinotefuran	92.4	103	P/P	30 - 160
2430532	Diuron	64.1	66.6	P/P	30 - 160
2430532	Fenuron	62.1	68.8	P/P	30 - 160
2430532	Fluridone	79.2	79.6	P/P	30 - 160
2430532	Hydrocodone	69.1	77.2	P/P	30 - 160
2430532	Ibuprofen	41.9	40.4	P/P	30 - 160
2430532	Imidacloprid	129	129	P/P	30 - 160
2430532	Linuron	58.4	60.9	P/P	30 - 160
2430532	Mandestrobin	85.6	85.8	P/P	30 - 160
2430532	MCPP	147	136	P/P	30 - 160
2430532	Naproxen	88.3	97.7	P/P	30 - 160
2430532	Primidone	98.6	96.9	P/P	30 - 160
2430532	Pyraclostrobin	92.4	91.4	P/P	30 - 160
2430532	Silvex	165	135	F/P	30 - 160
2430532	Thiamethoxam	94.8	104	P/P	30 - 160
2430532	Tolfenpyrad	64.3	61.9	P/P	30 - 160
2430532	Triclopyr	126	118	P/P	30 - 160

Reference Method: SM 4500-F- C-2011
Batch ID: P434018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431101	Fluoride	99.5	99.5	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427797	Organic Carbon	93.3	95.2	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P434115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429953	Organic Carbon	98.0		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433865

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430958	Color (true)	3.61	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430893	Turbidity	7.35	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430997	Turbidity	6.77	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430783	Chloride	1.49	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430901	Ammonia-N	0.214	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430998	Kjeldahl Nitrogen	2.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430999	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431053	Total-P	0.967	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P433790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430880	Acesulfame K	3.44	Spike	P	0 - 30
2430880	AMPA	2.83	Spike	P	0 - 30
2430880	Endothall	1.84	Spike	P	0 - 30
2430880	Glufosinate	1.22	Spike	P	0 - 30
2430880	Glyphosate	6.56	Spike	P	0 - 30
2430880	Sucralose	3.17	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P433848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430532	2,4-D	8.27	Spike	P	0 - 30
2430532	2,4,5-T	10.5	Spike	P	0 - 30
2430532	Acetaminophen	15.6	Spike	P	0 - 30
2430532	Acetamiprid	27.8	Spike	P	0 - 30
2430532	Afidopyropen	1.51	Spike	P	0 - 30
2430532	Bentazon	0.617	Spike	P	0 - 30
2430532	Benzovindiflupyr	0.673	Spike	P	0 - 30
2430532	Carbamazepine	11.8	Spike	P	0 - 30
2430532	Clothianidin	4.93	Spike	P	0 - 30
2430532	Dinotefuran	10.6	Spike	P	0 - 30
2430532	Diuron	3.38	Spike	P	0 - 30
2430532	Fenuron	10.2	Spike	P	0 - 30
2430532	Fluridone	0.426	Spike	P	0 - 30
2430532	Hydrocodone	11.0	Spike	P	0 - 30
2430532	Ibuprofen	3.64	Spike	P	0 - 30
2430532	Imazapyr	10.4	Spike	P	0 - 30
2430532	Imidacloprid	0.207	Spike	P	0 - 30
2430532	Linuron	4.26	Spike	P	0 - 30
2430532	Mandestrobin	0.152	Spike	P	0 - 30
2430532	MCPP	7.98	Spike	P	0 - 30
2430532	Naproxen	10.1	Spike	P	0 - 30
2430532	Primidone	1.52	Spike	P	0 - 30
2430532	Pyraclostrobin	1.10	Spike	P	0 - 30
2430532	Silvex	19.9	Spike	P	0 - 30
2430532	Thiamethoxam	8.40	Spike	P	0 - 30
2430532	Tolfenpyrad	3.91	Spike	P	0 - 30
2430532	Triclopyr	7.09	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P434015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431101	Total Alkalinity	0.916	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P434487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430825	TDS	3.87	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P434018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431101	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P433955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427797	Organic Carbon	1.76	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2431096
Field Sample ID: G1NE0913

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.2	P	30 - 160
EPA 8321B	Diuron-d6	50.1	P	30 - 160
EPA 8321B	Endothall-d6	127	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	115	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.5	P	30 - 160
EPA 8321B	Primidone-d5	74.2	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2431097
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	131	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.9	P	30 - 160
EPA 8321B	Diuron-d6	53.2	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.1	P	30 - 160
EPA 8321B	Primidone-d5	90.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A121044

Included Lab Sample IDs: 2430996, 2430997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121048

Included Lab Sample IDs: 2430996, 2430997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105
Turbidity	99.0	98.5	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121057

Included Lab Sample IDs: 2430996, 2430997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.1	96.9	P/P	90 - 110
Chloride	98.7	97.1	P/P	90 - 110
Sulfate	96.8	96.9	P/P	90 - 110
Sulfate	97.7	96.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A121079

Included Lab Sample IDs: 2430998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.5	94.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121082

Included Lab Sample IDs: 2431096, 2431097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	131	112	P/P	60 - 160
Sucralose	93.3	97.3	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121084

Included Lab Sample IDs: 2431096, 2431097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	83.6	137	P/P	60 - 160
Endothall	103	105	P/P	60 - 160
Glufosinate	92.0	98.0	P/P	60 - 160
Glyphosate	102	103	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121107

Included Lab Sample IDs: 2430999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A121111

Included Lab Sample IDs: 2430996, 2430997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.3	95.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121111

Included Lab Sample IDs: 2430996, 2430997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	104	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A121148

Included Lab Sample IDs: 2430999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121151

Included Lab Sample IDs: 2431096, 2431097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	104	P/P	50 - 150
2,4,5-T	108	110	P/P	50 - 150
Acetaminophen	89.6	94.0	P/P	60 - 160
Acetamiprid	121	121	P/P	50 - 150
Afidopyropen	94.1	88.0	P/P	50 - 150
Bentazon	131	126	P/P	50 - 160
Benzovindiflupyr	117	116	P/P	50 - 160
Carbamazepine	126	127	P/P	60 - 150
Clothianidin	94.7	98.2	P/P	60 - 150
Dinotefuran	123	124	P/P	50 - 150
Diuron	128	121	P/P	60 - 160
Fenuron	104	104	P/P	60 - 150
Fluridone	116	110	P/P	60 - 160
Hydrocodone	104	109	P/P	60 - 150
Ibuprofen	140	107	P/P	50 - 160
Imazapyr	120	112	P/P	50 - 150
Imidacloprid	107	105	P/P	60 - 150
Linuron	106	111	P/P	60 - 150
Mandestrobin	119	117	P/P	50 - 150
MCPP	112	104	P/P	50 - 150
Naproxen	107	89.5	P/P	50 - 160
Primidone	101	97.8	P/P	60 - 150
Pyraclostrobin	129	127	P/P	60 - 150
Silvex	123	115	P/P	50 - 150
Thiamethoxam	115	111	P/P	50 - 150
Tolfenpyrad	116	115	P/P	60 - 150
Triclopyr	102	99.9	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121176

Included Lab Sample IDs: 2430998

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121231

Included Lab Sample IDs: 2430998, 2430999

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121247

Included Lab Sample IDs: 2430998, 2430999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.9	98.0	P/P	90 - 110
Kjeldahl Nitrogen	98.0	94.3	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	SMP	MS
DEP SOP: NU-094-1	Color (true)	101				3.61	
EPA 180.1 Rev. 2.0	Turbidity	98.5				7.35	
	Turbidity	98.0				6.77	
EPA 300.0 Rev. 2.1	Chloride	98.6	98.3	98.0		1.49	
	Sulfate	96.8	97.2	95.7			
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	99.2	98.8			0.214
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	105	108			2.33
EPA 353.2 Rev. 2.0	NO2NO3-N	101	95.5	95.0			0.494
EPA 365.1 Rev. 2.0	Total-P	100	104	102			0.967
EPA 8321B	2,4-D	98.3					8.27
	2,4,5-T	103	135	121			10.5
	Acesulfame K	105	128	132			3.44
	Acetaminophen	82.2	120	102			15.6
	Acetamiprid	90.5	60.2	79.6			27.8
	Afidopyropen	30.6	36.8	36.2			1.51
	AMPA	117	62.5	60.4			2.83
	Bentazon	115					0.617
	Benzovindiflupyr	93.4	84.9	84.4			0.673
	Carbamazepine	100	72.0	81.9			11.8
	Clothianidin	89.0					4.93
	Dinotefuran	107	92.4	103			10.6
	Diuron	92.7	64.1	66.6			3.38
	Endothall	109	135	138			1.84
	Fenuron	87.3	62.1	68.8			10.2
	Fluridone	95.5	79.2	79.6			0.426
	Glufosinate	103	83.0	84.0			1.22
	Glyphosate	99.6	93.9	101			6.56
	Hydrocodone	92.6	69.1	77.2			11.0
	Ibuprofen	66.5	41.9	40.4			3.64
	Imazapyr	98.9					10.4
	Imidacloprid	98.0	129	129			0.207
	Linuron	82.6	58.4	60.9			4.26
	Mandestrobin	96.7	85.6	85.8			0.152
	MCPPP	105	147	136			7.98
	Naproxen	81.7	88.3	97.7			10.1
	Primidone	88.0	98.6	96.9			1.52
	Pyraclostrobin	94.1	92.4	91.4			1.10
	Silvex	109	165	135			19.9
	Sucralose	96.4	97.4	94.4			3.17
	Thiamethoxam	104	94.8	104			8.40
	Tolfenpyrad	64.2	64.3	61.9			3.91
	Triclopyr	95.4	126	118			7.09
SM 2320 B-2011	Total Alkalinity	98.0				0.916	
SM 2540 C-2015	TDS	93.3				3.87	
SM 2540 D-2015	TSS	91.4					
SM 4500-F- C-2011	Fluoride	101	99.5	99.5			0.0
SM 5310 B-2011	Organic Carbon	94.4	93.3	95.2			1.76
	Organic Carbon	97.3	98.0				

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2430996, 2430997

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2430996, 2430997
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2430996, 2430997
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2430996, 2430997
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2430998, 2430999
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2430998, 2430999
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2430998, 2430999
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2430998, 2430999
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2431096, 2431097
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2430996, 2430997
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2430996, 2430997
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2430996, 2430997
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2430996, 2430997
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2430998, 2430999

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	08/15/2023			08/15/2023 14:43	Samantha L Bates	2430996
	08/15/2023			08/15/2023 14:44	Samantha L Bates	2430997
EPA 180.1 Rev. 2.0	08/15/2023			08/15/2023 14:43	Chandler E Cox	2430996
	08/15/2023			08/15/2023 14:55	Chandler E Cox	2430997
EPA 300.0 Rev. 2.1	08/15/2023			08/17/2023 21:10	James L Waggeberby	2430996
	08/15/2023			08/18/2023 01:03	James L Waggeberby	2430997
EPA 350.1 Rev. 2.0	08/15/2023			08/24/2023 13:31	Ping Hua	2430998
	08/15/2023			08/24/2023 13:32	Ping Hua	2430999
EPA 351.2 Rev. 2.0	08/15/2023	08/24/2023 12:32	Dana G. Hughes	08/25/2023 11:00	Samantha L Bates	2430998
	08/15/2023	08/24/2023 12:32	Dana G. Hughes	08/25/2023 11:08	Samantha L Bates	2430999
EPA 353.2 Rev. 2.0	08/15/2023			09/01/2023 10:48	Anna M. Plaviak	2430999
	08/15/2023			09/01/2023 10:55	Anna M. Plaviak	2430998
EPA 365.1 Rev. 2.0	08/15/2023	08/17/2023 14:21	Adam P Silver	08/17/2023 16:41	James L Waggeberby	2430999
	08/15/2023	08/17/2023 14:21	Adam P Silver	08/22/2023 11:38	James L Waggeberby	2430998
EPA 8321B	08/15/2023	08/16/2023 04:30	Tae K Lee	08/16/2023 08:09	Hana Lee	2431096
	08/15/2023	08/16/2023 04:30	Tae K Lee	08/16/2023 08:23	Hana Lee	2431097
	08/15/2023	08/16/2023 04:30	Tae K Lee	08/16/2023 14:36	Hana Lee	2431096
	08/15/2023	08/16/2023 04:30	Tae K Lee	08/16/2023 14:50	Hana Lee	2431097
	08/15/2023	08/16/2023 13:00	Hoor Shaik	08/19/2023 00:17	Juyoung Kim	2431096
	08/15/2023	08/16/2023 13:00	Hoor Shaik	08/19/2023 00:35	Juyoung Kim	2431097
SM 2320 B-2011	08/15/2023			08/17/2023 13:34	Dale L. Simmons	2430996
	08/15/2023			08/17/2023 13:47	Dale L. Simmons	2430997
SM 2540 C-2015	08/15/2023			08/18/2023 16:04	Yijie Li	2430996, 2430997
SM 2540 D-2015	08/15/2023			08/18/2023 16:04	Yijie Li	2430996, 2430997
SM 4500-F- C-2011	08/15/2023			08/17/2023 13:34	Dale L. Simmons	2430996
	08/15/2023			08/17/2023 13:47	Dale L. Simmons	2430997
SM 5310 B-2011	08/15/2023			08/16/2023 14:16	Elise M. Gillis	2430998
	08/15/2023			08/19/2023 01:10	Elise M. Gillis	2430999