

Chemical Analysis Report

NE-DIST-2023-12-06-01

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

Event Description: **Gainesville 2023**
Request ID: **RQ-2023-12-04-29**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Kerry Tate, Ph.D.
Marek Topolski, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 20-DEC-2023 11:11



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: 12/05/2023 09:20

Field ID: G1NE0949

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454778	DEP SOP: NU-094-1	Color (true)	76	A	PCU	P438584	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P438590	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P438812	
		Sulfate	9.1		mg SO4/L	P438816	
	SM 2320 B-2011	Total Alkalinity	69		mg CaCO3/L	P438763	
	SM 2540 C-2015	TDS	134		mg/L	P439143	
	SM 2540 D-2015	TSS	2	I	mg/L	P439129	
	SM 4500-F- C-2011	Fluoride	0.099	I	mg F/L	P438765	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P438667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P438652	
2454779	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P438677	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P438836	
	SM 5310 B-2014	Organic Carbon	14		mg C/L	P438688	

Sample Location: LAKE ALICE OUTLET AT GALE LEMERAND DR Collection Date/Time: 12/05/2023 10:55

Field ID: G3NE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454788	EPA 8321B	2,4-D	0.010		ug/L	P438542	
		Acesulfame K	0.14	I	ug/L	P438531	
		2,4,5-T	0.0040	U	ug/L	P438542	
		AMPA	0.49		ug/L	P438531	
		Acetaminophen	0.092		ug/L	P438542	
		Acetamiprid	0.0020	U	ug/L	P438542	
		Endothall	0.25	U	ug/L	P438531	
		Glufosinate	0.10	U	ug/L	P438531	
		Glyphosate	1.8		ug/L	P438531	
		Afidopyropen	0.0020	U	ug/L	P438542	RPD
		Bentazon	8.8E-04	I	ug/L	P438542	
		Sucralose	14		ug/L	P438531	
		Benzovindiflupyr	0.0020	U	ug/L	P438542	
		Carbamazepine	0.0014	I	ug/L	P438542	
		Clothianidin	0.0020	U	ug/L	P438542	
		Dinotefuran	0.057		ug/L	P438542	
		Diuron	0.0045	I	ug/L	P438542	
		Fenuron	0.032	U	ug/L	P438542	
		Fluridone	8.0E-04	U	ug/L	P438542	
		Imazapyr	0.31		ug/L	P438542	
		Hydrocodone	0.0020	U	ug/L	P438542	
		Ibuprofen	0.080	U	ug/L	P438542	
		Imidacloprid	0.015		ug/L	P438542	
		Linuron	0.0040	U	ug/L	P438542	
		Mandestrobin	0.0020	U	ug/L	P438542	
		MCPP	0.0020	U	ug/L	P438542	
		Naproxen	0.0080	U	ug/L	P438542	
		Primidone	0.0076	I	ug/L	P438542	
		Pyraclostrobin	0.0020	U	ug/L	P438542	
		Silvex	0.0040	U	ug/L	P438542	
		Thiamethoxam	0.0020	U	ug/L	P438542	
		Tolfenpyrad	0.0020	U	ug/L	P438542	
		Triclopyr	0.0040	U	ug/L	P438542	

Sample Location: HOGTOWN CREEK UPSTREAM OF HAILE SINK Collection Date/Time: 12/05/2023 11:25

Field ID: G1NE0913

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454789	EPA 8321B	2,4-D	0.0020	U	ug/L	P438542	
		Acesulfame K	0.10	U	ug/L	P438531	
		2,4,5-T	0.0040	U	ug/L	P438542	
		AMPA	0.19	I	ug/L	P438531	
		Acetaminophen	0.0080	U	ug/L	P438542	
		Acetamiprid	0.0020	U	ug/L	P438542	
		Endothall	0.25	U	ug/L	P438531	
		Glufosinate	0.10	U	ug/L	P438531	
		Glyphosate	0.18	I	ug/L	P438531	
		Afidopyropen	0.0020	U	ug/L	P438542	RPD
		Bentazon	0.023		ug/L	P438542	
		Sucralose	0.19		ug/L	P438531	
		Benzovindiflupyr	0.0020	U	ug/L	P438542	
		Carbamazepine	8.0E-04	U	ug/L	P438542	
		Clothianidin	0.0020	U	ug/L	P438542	
		Dinotefuran	0.0031	I	ug/L	P438542	
		Diuron	0.0020	U	ug/L	P438542	
		Fenuron	0.032	U	ug/L	P438542	
		Fluridone	9.9E-04	I	ug/L	P438542	
		Imazapyr	0.033		ug/L	P438542	
		Hydrocodone	0.0020	U	ug/L	P438542	
		Ibuprofen	0.080	U	ug/L	P438542	
		Imidacloprid	0.0079	I	ug/L	P438542	
		Linuron	0.0040	U	ug/L	P438542	
		Mandestrobin	0.0020	U	ug/L	P438542	
		MCPP	0.0020	U	ug/L	P438542	
		Naproxen	0.0080	U	ug/L	P438542	
		Primidone	0.0040	U	ug/L	P438542	
		Pyraclostrobin	0.0020	U	ug/L	P438542	
		Silvex	0.0040	U	ug/L	P438542	
		Thiamethoxam	0.0020	U	ug/L	P438542	
		Tolfenpyrad	0.0020	U	ug/L	P438542	
		Triclopyr	0.0040	U	ug/L	P438542	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P438584

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438590

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438812

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438816

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438667

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438652

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438677

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438836

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

Reference Method: EPA 8321B
Batch ID: P438531

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: P438531

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

Reference Method: EPA 8321B
Batch ID: P438542

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: P438763

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

Reference Method: SM 2540 C-2015
Batch ID: P439143

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P439129

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P438688

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: P438584

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: P438590

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438812

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438816

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438667

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: P438652

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438677

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P438531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	109		P	40 - 150
AMPA	99.4		P	40 - 160
Endothall	101		P	40 - 160
Glufosinate	99.1		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P438531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	95.8		P	40 - 160
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P438542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	100		P	40 - 150
2,4,5-T	122		P	40 - 150
Acetaminophen	95.7		P	30 - 150
Acetamiprid	85.4		P	40 - 150
Afidopyropen	68.5		P	30 - 150
Bentazon	74.4		P	30 - 150
Benzovindiflupyr	90.2		P	40 - 150
Carbamazepine	85.4		P	40 - 150
Clothianidin	95.2		P	40 - 150
Dinotefuran	106		P	40 - 150
Diuron	80.8		P	40 - 150
Fenuron	96.5		P	40 - 150
Fluridone	92.8		P	40 - 150
Hydrocodone	93.6		P	40 - 150
Ibuprofen	70.0		P	40 - 150
Imazapyr	95.4		P	40 - 150
Imidacloprid	90.9		P	40 - 150
Linuron	82.8		P	40 - 150
Mandestrobin	96.3		P	40 - 150
MCPP	97.2		P	40 - 150
Naproxen	87.4		P	40 - 150
Primidone	88.6		P	40 - 150
Pyraclostrobin	80.9		P	40 - 150
Silvex	92.2		P	40 - 150
Thiamethoxam	93.8		P	40 - 150
Tolfenpyrad	52.3		P	30 - 150
Triclopyr	125		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P438763

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P439143

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	103		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P439129

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	106		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P438688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454598	Chloride	97.8		P	90 - 110
2454778	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438816

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454598	Sulfate	98.8		P	90 - 110
2454778	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454779	Ammonia-N	98.4	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454779	Kjeldahl Nitrogen	103	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454779	NO2NO3-N	95.4	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454729	Total-P	108	104	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P438531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454732	Acesulfame K	101	102	P/P	40 - 150
2454732	AMPA	76.1	91.2	P/P	40 - 160
2454732	Endothall	113	120	P/P	40 - 160
2454732	Glufosinate	93.9	99.5	P/P	40 - 160
2454732	Glyphosate	90.4	93.4	P/P	40 - 160
2454732	Sucralose	112	88.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P438542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454732	2,4-D	114	85.5	P/P	40 - 150
2454732	2,4,5-T	97.3	106	P/P	40 - 150
2454732	Acetaminophen	102	85.4	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P438542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454732	Acetamiprid	91.7	71.6	P/P	40 - 150
2454732	Afidopyropen	83.8	50.2	P/P	30 - 150
2454732	Bentazon	72.5	60.2	P/P	30 - 150
2454732	Benzovindiflupyr	94.7	81.2	P/P	40 - 150
2454732	Carbamazepine	91.6	79.5	P/P	40 - 150
2454732	Clothianidin	104	85.7	P/P	40 - 150
2454732	Dinotefuran	113	94.6	P/P	40 - 150
2454732	Diuron	83.6	71.8	P/P	40 - 150
2454732	Fenuron	99.6	85.1	P/P	40 - 150
2454732	Fluridone	100	85.5	P/P	40 - 150
2454732	Hydrocodone	96.4	84.9	P/P	40 - 150
2454732	Ibuprofen	74.5	58.4	P/P	40 - 150
2454732	Imazapyr	101	81.9	P/P	40 - 150
2454732	Imidacloprid	101	82.8	P/P	40 - 150
2454732	Linuron	85.6	70.2	P/P	40 - 150
2454732	Mandestrobin	101	83.5	P/P	40 - 150
2454732	MCCP	102	83.7	P/P	40 - 150
2454732	Naproxen	67.2	57.9	P/P	40 - 150
2454732	Primidone	95.5	77.4	P/P	40 - 150
2454732	Pyraclostrobin	87.8	75.3	P/P	40 - 150
2454732	Silvex	96.3	77.0	P/P	40 - 150
2454732	Thiamethoxam	86.8	73.9	P/P	40 - 150
2454732	Tolfenpyrad	56.8	47.3	P/P	30 - 150
2454732	Triclopyr	99.2	99.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454955	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P438688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454779	Organic Carbon	98.5	99.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P438584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454778	Color (true)	2.50	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454739	Turbidity	7.14	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454598	Chloride	1.22	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454598	Sulfate	1.55	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454779	Ammonia-N	0.158	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454779	Kjeldahl Nitrogen	3.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454779	NO2NO3-N	1.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454729	Total-P	3.56	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P438531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454732	Acesulfame K	0.640	Spike	P	0 - 30
2454732	AMPA	18.1	Spike	P	0 - 30
2454732	Endothall	5.69	Spike	P	0 - 30
2454732	Glufosinate	5.79	Spike	P	0 - 30
2454732	Glyphosate	3.27	Spike	P	0 - 30
2454732	Sucralose	22.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P438542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454732	2,4-D	28.4	Spike	P	0 - 30
2454732	2,4,5-T	8.97	Spike	P	0 - 30
2454732	Acetaminophen	17.7	Spike	P	0 - 30
2454732	Acetamiprid	24.6	Spike	P	0 - 30
2454732	Afidopyropen	50.1	Spike	F	0 - 30
2454732	Bentazon	18.5	Spike	P	0 - 30
2454732	Benzovindiflupyr	15.3	Spike	P	0 - 30
2454732	Carbamazepine	14.1	Spike	P	0 - 30
2454732	Clothianidin	15.7	Spike	P	0 - 30
2454732	Dinotefuran	17.5	Spike	P	0 - 30
2454732	Diuron	15.2	Spike	P	0 - 30
2454732	Fenuron	15.7	Spike	P	0 - 30
2454732	Fluridone	15.8	Spike	P	0 - 30
2454732	Hydrocodone	12.7	Spike	P	0 - 30
2454732	Ibuprofen	24.2	Spike	P	0 - 30
2454732	Imazapyr	20.9	Spike	P	0 - 30
2454732	Imidacloprid	19.7	Spike	P	0 - 30
2454732	Linuron	19.8	Spike	P	0 - 30
2454732	Mandestrobin	19.3	Spike	P	0 - 30
2454732	MCPP	19.9	Spike	P	0 - 30
2454732	Naproxen	14.9	Spike	P	0 - 30
2454732	Primidone	20.9	Spike	P	0 - 30
2454732	Pyraclostrobin	15.3	Spike	P	0 - 30
2454732	Silvex	22.3	Spike	P	0 - 30
2454732	Thiamethoxam	16.1	Spike	P	0 - 30
2454732	Tolfenpyrad	18.3	Spike	P	0 - 30
2454732	Triclopyr	0.0424	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P438763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454955	Total Alkalinity	2.56	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P439143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454289	TDS	3.89	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P439129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454289	TSS	8.33	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P438765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454955	Fluoride	0.516	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P438688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454779	Organic Carbon	0.412	Spike	P	0 - 15

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

Quality Assurance Report Surrogates

Lab Sample ID: 2454788
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.1	P	30 - 160
EPA 8321B	Diuron-d6	53.3	P	30 - 160
EPA 8321B	Endothall-d6	93.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	57.7	P	30 - 160
EPA 8321B	Primidone-d5	89.2	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	30 - 160

Lab Sample ID: 2454789
Field Sample ID: G1NE0913

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.3	P	30 - 160
EPA 8321B	Diuron-d6	55.2	P	30 - 160
EPA 8321B	Endothall-d6	95.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	63.8	P	30 - 160
EPA 8321B	Primidone-d5	86.2	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A123059

Included Lab Sample IDs: 2454778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A123061

Included Lab Sample IDs: 2454778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123081

Included Lab Sample IDs: 2454779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123088

Included Lab Sample IDs: 2454779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Reference Method: SM 5310 B-2014

Run ID: A123093

Included Lab Sample IDs: 2454779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	108	96.2	P/P	70 - 130

Reference Method: EPA 8321B

Run ID: A123094

Included Lab Sample IDs: 2454788, 2454789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	108	P/P	60 - 160
Endothall	114	112	P/P	60 - 160
Glufosinate	102	96.5	P/P	60 - 160
Glyphosate	102	97.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A123117

Included Lab Sample IDs: 2454788, 2454789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	110	125	P/P	60 - 160
Sucralose	104	110	P/P	60 - 160
Sucralose	106	111	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123118

Included Lab Sample IDs: 2454778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	101	P/P	90 - 110
Sulfate	102	99.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A123127

Included Lab Sample IDs: 2454788, 2454789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	103	P/P	50 - 150
2,4,5-T	111	96.8	P/P	50 - 150
Acetaminophen	111	110	P/P	60 - 160
Acetamiprid	106	107	P/P	50 - 150
Afidopyropen	97.3	92.5	P/P	50 - 150
Bentazon	97.0	89.1	P/P	50 - 160
Benzovindiflupyr	108	108	P/P	50 - 150
Carbamazepine	109	107	P/P	60 - 150
Clothianidin	105	108	P/P	60 - 150
Dinotefuran	108	110	P/P	50 - 150
Diuron	106	104	P/P	60 - 160
Fenuron	104	105	P/P	60 - 150
Fluridone	108	112	P/P	60 - 160
Hydrocodone	108	108	P/P	60 - 150
Ibuprofen	107	93.0	P/P	50 - 160
Imazapyr	98.9	88.6	P/P	50 - 150
Imidacloprid	96.6	102	P/P	60 - 150
Linuron	103	97.6	P/P	60 - 150
Mandestrobin	107	109	P/P	50 - 150
MCPP	111	97.7	P/P	50 - 150
Naproxen	97.4	69.7	P/P	50 - 160
Primidone	95.8	94.3	P/P	60 - 150
Pyraclostrobin	107	105	P/P	60 - 150
Silvex	108	103	P/P	50 - 150
Thiamethoxam	109	109	P/P	50 - 150
Tolfenpyrad	96.2	99.6	P/P	60 - 150
Triclopyr	105	102	P/P	50 - 150

Reference Method: SM 2320 B-2011

Run ID: A123130

Included Lab Sample IDs: 2454778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.1	97.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A123130

Included Lab Sample IDs: 2454778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	103	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123168

Included Lab Sample IDs: 2454779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.2	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123197

Included Lab Sample IDs: 2454779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.2	98.0	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
DEP SOP: NU-094-1	Color (true)	101				2.50
EPA 180.1 Rev. 2.0	Turbidity	104				7.14
EPA 300.0 Rev. 2.1	Chloride	104	97.8	102		1.22
	Sulfate	102	98.8	102		1.55
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	98.4	98.6		
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	103	98.8		0.158
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	95.4	96.9		3.44
EPA 365.1 Rev. 2.0	Total-P	106	108	104		1.14
EPA 8321B	2,4-D	100	114	85.5		3.56
	2,4,5-T	122	97.3	106		28.4
	Acesulfame K	109	101	102		8.97
	Acetaminophen	95.7	102	85.4		0.640
	Acetamiprid	85.4	91.7	71.6		17.7
	Afidopyropen	68.5	83.8	50.2		24.6
	AMPA	99.4	76.1	91.2		50.1
	Bentazon	74.4	72.5	60.2		18.1
	Benzovindiflupyr	90.2	94.7	81.2		18.5
	Carbamazepine	85.4	91.6	79.5		15.3
	Clothianidin	95.2	104	85.7		14.1
	Dinotefuran	106	113	94.6		15.7
	Diuron	80.8	83.6	71.8		17.5
	Endothall	101	113	120		15.2
	Fenuron	96.5	99.6	85.1		5.69
	Fluridone	92.8	100	85.5		15.7
	Glufosinate	99.1	93.9	99.5		15.8
	Glyphosate	95.8	90.4	93.4		5.79
	Hydrocodone	93.6	96.4	84.9		3.27
	Ibuprofen	70.0	74.5	58.4		12.7
	Imazapyr	95.4	101	81.9		24.2
	Imidacloprid	90.9	101	82.8		20.9
	Linuron	82.8	85.6	70.2		19.7
	Mandestrobin	96.3	101	83.5		19.8
	MCPP	97.2	102	83.7		19.3
	Naproxen	87.4	67.2	57.9		19.9
	Primidone	88.6	95.5	77.4		14.9
	Pyraclostrobin	80.9	87.8	75.3		20.9
	Silvex	92.2	96.3	77.0		15.3
	Sucralose	106	112	88.7		22.3
	Thiamethoxam	93.8	86.8	73.9		22.8
	Tolfenpyrad	52.3	56.8	47.3		16.1
	Triclopyr	125	99.2	99.2		18.3
SM 2320 B-2011	Total Alkalinity	95.6				0.0424
SM 2540 C-2015	TDS	103				2.56
SM 2540 D-2015	TSS	106				3.89
SM 4500-F- C-2011	Fluoride	103	103	103		8.33
SM 5310 B-2014	Organic Carbon	98.7	98.5	99.0		0.516
						0.412

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2454778
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2454778
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2454778

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2454778
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2454779
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2454779
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2454779
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2454779
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2454788, 2454789
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2454778
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2454778
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2454778
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2454778
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2454779

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	12/06/2023			12/06/2023 14:00	Blanca Fach	2454778
EPA 180.1 Rev. 2.0	12/06/2023			12/06/2023 14:12	Anna M. Plaviak	2454778
EPA 300.0 Rev. 2.1	12/06/2023			12/09/2023 05:42	Anna M. Plaviak	2454778
EPA 350.1 Rev. 2.0	12/06/2023			12/07/2023 12:45	Khloe J Berg	2454779
EPA 351.2 Rev. 2.0	12/06/2023	12/08/2023 10:33	Ping Hua	12/12/2023 12:37	Samantha L Bates	2454779
EPA 353.2 Rev. 2.0	12/06/2023			12/07/2023 14:22	Fadila Guebre	2454779
EPA 365.1 Rev. 2.0	12/06/2023	12/12/2023 14:15	Adam P Silver	12/13/2023 15:07	Simonne.V. Calhoun	2454779
EPA 8321B	12/06/2023	12/07/2023 13:00	Tae K Lee	12/07/2023 16:23	Hana Lee	2454788
	12/06/2023	12/07/2023 13:00	Tae K Lee	12/07/2023 16:37	Hana Lee	2454789
	12/06/2023	12/07/2023 13:00	Tae K Lee	12/07/2023 21:47	Hana Lee	2454788
	12/06/2023	12/07/2023 13:00	Tae K Lee	12/07/2023 22:01	Hana Lee	2454789
	12/06/2023	12/07/2023 13:00	Tae K Lee	12/08/2023 08:15	Hana Lee	2454788
	12/06/2023	12/08/2023 09:00	Hoor Shaik	12/08/2023 16:37	Juyoung Kim	2454788
	12/06/2023	12/08/2023 09:00	Hoor Shaik	12/08/2023 16:54	Juyoung Kim	2454789
SM 2320 B-2011	12/06/2023			12/08/2023 00:42	Adam P Silver	2454778
SM 2540 C-2015	12/06/2023			12/08/2023 16:18	Yijie Li	2454778
SM 2540 D-2015	12/06/2023			12/08/2023 16:18	Yijie Li	2454778
SM 4500-F- C-2011	12/06/2023			12/08/2023 00:42	Adam P Silver	2454778
SM 5310 B-2014	12/06/2023			12/07/2023 20:07	Kenneth H Lee	2454779