

Chemical Analysis Report

SO-DIST-2024-02-23-02

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

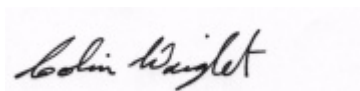
Event Description: **2024 SMP : El Jobean**
Request ID: **RQ-2024-01-15-31**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
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Certified by: Colin Wright, Program Administrator

Date Certified: 19-MAR-2024 09:46



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: MYAKKA RIVER EAST

Collection Date/Time: 02/22/2024 14:40

Field ID: G3SD0220

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2471300	DEP SOP: NU-094-1	Color (true)	100		PCU	P441888	
	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P441894	
	EPA 300.0 Rev. 2.1	Chloride	2.1E+03		mg Cl/L	P442240	
		Sulfate	410		mg SO4/L	P442243	
	SM 2320 B-2011	Total Alkalinity	93		mg CaCO3/L	P442291	RPD
	SM 2540 C-2015	TDS	3.68E+03		mg/L	P442318	
	SM 2540 D-2015	TSS	9	I	mg/L	P442117	
	SM 4500-F- C-2011	Fluoride	0.38		mg F/L	P442292	RPD
	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P441966	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P442020	
2471301	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P442395	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P442504	
	SM 5310 B-2014	Organic Carbon	17		mg C/L	P442047	
	EPA 8321B	2,4-D	0.0069	I	ug/L	P441858	
		Acesulfame K	0.10	U	ug/L	P441916	
		2,4,5-T	0.0040	U	ug/L	P441858	
		AMPA	0.10	U	ug/L	P441916	
		Acetaminophen	0.0080	U	ug/L	P441858	
		Acetamiprid	0.0020	U	ug/L	P441858	
		Endothall	0.25	U	ug/L	P441916	
		Glufosinate	0.10	U	ug/L	P441916	
		Glyphosate	0.10	U	ug/L	P441916	
		Afidopyropen	0.0020	U	ug/L	P441858	
		Bentazon	0.015		ug/L	P441858	
		Sucralose	0.44		ug/L	P441916	
		Benzovindiflupyr	0.0020	U	ug/L	P441858	
		Carbamazepine	8.0E-04	U	ug/L	P441858	
		Clothianidin	0.0020	U	ug/L	P441858	
		Dinotefuran	0.0049	I	ug/L	P441858	
		Diuron	0.0020	U	ug/L	P441858	
		Fenuron	0.032	U	ug/L	P441858	
		Fluridone	0.0024	I	ug/L	P441858	
		Imazapyr	0.038		ug/L	P441858	
		Hydrocodone	0.0020	U	ug/L	P441858	
		Ibuprofen	0.080	U	ug/L	P441858	
		Imidacloprid	0.0093		ug/L	P441858	
		Linuron	0.0040	U	ug/L	P441858	
		Mandestrobin	0.0020	U	ug/L	P441858	
		MCPP	0.0020	U	ug/L	P441858	
		Naproxen	0.0080	U	ug/L	P441858	
		Primidone	0.0040	U	ug/L	P441858	
		Pyraclostrobin	0.0020	U	ug/L	P441858	
		Silvex	0.0040	U	ug/L	P441858	
		Thiamethoxam	0.0020	U	ug/L	P441858	

Field ID: G3SD0220

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2471305	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P441858	
		Triclopyr	0.0040	U	ug/L	P441858	

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

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P441888

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P441894

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442243

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P441966

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442020

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442395

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442504

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

Reference Method: EPA 8321B
Batch ID: P441858

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P441858

Component	Result	Code	Units
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: EPA 8321B

Batch ID: P441916

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: SM 2320 B-2011

Batch ID: P442291

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

Reference Method: SM 2540 C-2015

Batch ID: P442318

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P442117

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P442047

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: P441888

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P441894

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442243

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P441966

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442020

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442395

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442504

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

Reference Method: EPA 8321B
Batch ID: P441858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.2		P	40 - 150
2,4,5-T	77.5		P	40 - 150
Acetaminophen	73.8		P	30 - 150
Acetamiprid	83.9		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P441858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Afidopyropen	61.2		P	30 - 150
Bentazon	81.5		P	30 - 150
Benzovindiflupyr	80.7		P	40 - 150
Carbamazepine	83.4		P	40 - 150
Clothianidin	83.1		P	40 - 150
Dinotefuran	90.5		P	40 - 150
Diuron	87.2		P	40 - 150
Fenuron	87.9		P	40 - 150
Fluridone	88.6		P	40 - 150
Hydrocodone	86.4		P	40 - 150
Ibuprofen	47.3		P	40 - 150
Imazapyr	78.8		P	40 - 150
Imidacloprid	83.5		P	40 - 150
Linuron	64.6		P	40 - 150
Mandestrobin	72.2		P	40 - 150
MCPP	78.5		P	40 - 150
Naproxen	65.6		P	40 - 150
Primidone	75.7		P	40 - 150
Pyraclostrobin	76.4		P	40 - 150
Silvex	74.0		P	40 - 150
Thiamethoxam	87.0		P	40 - 150
Tolfenpyrad	54.1		P	30 - 150
Triclopyr	80.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P441916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 160
AMPA	92.5		P	40 - 160
Endothall	83.1		P	40 - 160
Glufosinate	86.4		P	40 - 160
Glyphosate	88.3		P	40 - 160
Sucralose	118		P	40 - 160

Reference Method: SM 2320 B-2011
Batch ID: P442291

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P442318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	102		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P442117

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.0		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P442047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471341	Chloride	103		P	90 - 110
2471438	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471341	Sulfate	103		P	90 - 110
2471438	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P441966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471208	Ammonia-N	96.8	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471206	Kjeldahl Nitrogen	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471275	NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2473411	Total-P	95.0	97.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P441858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2470865	2,4-D	85.6	81.8	P/P	40 - 150
2470865	2,4,5-T	83.7	88.4	P/P	40 - 150
2470865	Acetaminophen	65.9	74.0	P/P	30 - 150
2470865	Acetamiprid	71.4	69.3	P/P	40 - 150
2470865	Afidopyropen	66.1	67.1	P/P	30 - 150
2470865	Bentazon	92.4	81.0	P/P	30 - 150
2470865	Benzovindiflupyr	80.9	79.2	P/P	40 - 150
2470865	Carbamazepine	76.7	83.9	P/P	40 - 150
2470865	Clothianidin	82.9	86.7	P/P	40 - 150
2470865	Dinotefuran	91.3	94.4	P/P	40 - 150
2470865	Diuron	82.2	83.5	P/P	40 - 150
2470865	Fenuron	84.5	88.9	P/P	40 - 150
2470865	Fluridone	83.1	90.7	P/P	40 - 150
2470865	Hydrocodone	84.3	86.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P441858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2470865	Ibuprofen	59.1	63.6	P/P	40 - 150
2470865	Imazapyr	86.8	85.4	P/P	40 - 150
2470865	Imidacloprid	85.9	89.1	P/P	40 - 150
2470865	Linuron	76.1	89.5	P/P	40 - 150
2470865	Mandestrobin	76.5	71.6	P/P	40 - 150
2470865	MCCP	83.2	81.0	P/P	40 - 150
2470865	Naproxen	95.8	83.0	P/P	40 - 150
2470865	Primidone	76.1	85.5	P/P	40 - 150
2470865	Pyraclostrobin	82.0	83.1	P/P	40 - 150
2470865	Silvex	77.1	74.0	P/P	40 - 150
2470865	Thiamethoxam	78.3	84.4	P/P	40 - 150
2470865	Tolfenpyrad	54.8	54.6	P/P	30 - 150
2470865	Triclopyr	78.7	88.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P441916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471088	Acesulfame K	99.4	99.4	P/P	40 - 160
2471088	AMPA	88.2	86.5	P/P	40 - 160
2471088	Endothall	94.0	89.4	P/P	40 - 160
2471088	Glufosinate	78.3	85.9	P/P	40 - 160
2471088	Glyphosate	83.2	85.1	P/P	40 - 160
2471088	Sucralose	112	116	P/P	40 - 160

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471438	Fluoride	94.9	98.2	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P442047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471289	Organic Carbon	91.0	92.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P441888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471287	Color (true)	6.95	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P441894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471203	Turbidity	2.99	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471341	Chloride	0.136	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471341	Sulfate	0.257	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P441966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471208	Ammonia-N	0.385	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471206	Kjeldahl Nitrogen	0.992	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471275	NO2NO3-N	0.426	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2473411	Total-P	2.78	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P441858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2470865	2,4-D	4.55	Spike	P	0 - 30
2470865	2,4,5-T	5.47	Spike	P	0 - 30
2470865	Acetaminophen	11.7	Spike	P	0 - 30
2470865	Acetamiprid	2.98	Spike	P	0 - 30
2470865	Afidopyropen	1.46	Spike	P	0 - 30
2470865	Bentazon	13.2	Spike	P	0 - 30
2470865	Benzovindiflupyr	2.11	Spike	P	0 - 30
2470865	Carbamazepine	8.41	Spike	P	0 - 30
2470865	Clothianidin	4.45	Spike	P	0 - 30
2470865	Dinotefuran	3.42	Spike	P	0 - 30
2470865	Diuron	1.58	Spike	P	0 - 30
2470865	Fenuron	5.18	Spike	P	0 - 30
2470865	Fluridone	8.79	Spike	P	0 - 30
2470865	Hydrocodone	2.43	Spike	P	0 - 30
2470865	Ibuprofen	7.40	Spike	P	0 - 30
2470865	Imazapyr	1.17	Spike	P	0 - 30
2470865	Imidacloprid	3.19	Spike	P	0 - 30
2470865	Linuron	16.3	Spike	P	0 - 30
2470865	Mandestrobin	6.61	Spike	P	0 - 30
2470865	MCP	2.65	Spike	P	0 - 30
2470865	Naproxen	14.3	Spike	P	0 - 30
2470865	Primidone	11.6	Spike	P	0 - 30
2470865	Pyraclostrobin	1.38	Spike	P	0 - 30
2470865	Silvex	4.15	Spike	P	0 - 30
2470865	Thiamethoxam	7.51	Spike	P	0 - 30
2470865	Tolfenpyrad	0.361	Spike	P	0 - 30
2470865	Triclopyr	11.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P441916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471088	Acesulfame K	0.0326	Spike	P	0 - 30
2471088	AMPA	2.00	Spike	P	0 - 30
2471088	Endothall	4.92	Spike	P	0 - 30
2471088	Glufosinate	9.28	Spike	P	0 - 30
2471088	Glyphosate	2.13	Spike	P	0 - 30
2471088	Sucralose	2.94	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P442291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471438	Total Alkalinity	4.41	Sample	F	0 - 3.9

Quality Assurance Report
Precision

Reference Method: SM 2540 C-2015
Batch ID: P442318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471318	TDS	1.76	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471438	Fluoride	1.92	Spike	F	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P442047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471289	Organic Carbon	1.59	Spike	P	0 - 15

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

Quality Assurance Report

Surrogates

Lab Sample ID: 2471305

Field Sample ID: G3SD0220

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	55.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.2	P	30 - 160
EPA 8321B	Diuron-d6	53.8	P	30 - 160
EPA 8321B	Endothall-d6	77.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.9	P	30 - 160
EPA 8321B	Primidone-d5	58.2	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A124359
Included Lab Sample IDs: 2471300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.4	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A124363
Included Lab Sample IDs: 2471300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A124389
Included Lab Sample IDs: 2471301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.3	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A124424
Included Lab Sample IDs: 2471305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	93.3	89.6	P/P	60 - 160
Endothall	78.0	73.0	P/P	60 - 160
Glufosinate	83.6	76.7	P/P	60 - 160
Glyphosate	90.5	86.2	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A124426
Included Lab Sample IDs: 2471305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	99.7	P/P	60 - 160
Sucralose	119	120	P/P	60 - 160

Reference Method: SM 5310 B-2014
Run ID: A124437
Included Lab Sample IDs: 2471301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	101	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A124439
Included Lab Sample IDs: 2471300

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A124467
Included Lab Sample IDs: 2471301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	106	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A124488
Included Lab Sample IDs: 2471305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	78.7	70.7	P/P	50 - 150
2,4,5-T	69.6	75.6	P/P	50 - 150
Acetaminophen	76.4	74.2	P/P	60 - 160
Acetamiprid	74.6	72.7	P/P	50 - 150
Afidopyropen	70.1	73.1	P/P	50 - 150
Bentazon	68.0	74.9	P/P	50 - 160
Benzovindiflupyr	96.5	89.0	P/P	50 - 150
Carbamazepine	88.2	81.8	P/P	60 - 150
Clothianidin	73.4	76.5	P/P	60 - 150
Dinotefuran	87.0	89.8	P/P	50 - 150
Diuron	78.0	82.4	P/P	60 - 160
Fenuron	81.1	79.3	P/P	60 - 150
Fluridone	82.0	81.5	P/P	60 - 160
Hydrocodone	82.5	79.2	P/P	60 - 150
Ibuprofen	133	120	P/P	50 - 160
Imazapyr	76.1	71.0	P/P	50 - 150
Imidacloprid	69.8	71.6	P/P	60 - 150
Linuron	95.8	93.2	P/P	60 - 150
Mandestrobin	74.7	77.1	P/P	50 - 150
MCPP	67.3	75.5	P/P	50 - 150
Naproxen	88.7	78.9	P/P	50 - 160
Primidone	84.7	81.9	P/P	60 - 150
Pyraclostrobin	99.3	98.2	P/P	60 - 150
Silvex	70.0	78.7	P/P	50 - 150
Thiamethoxam	79.4	77.8	P/P	50 - 150
Tolfenpyrad	93.0	91.2	P/P	60 - 150
Triclopyr	67.4	70.7	P/P	50 - 150

Reference Method: SM 2320 B-2011
Run ID: A124531
Included Lab Sample IDs: 2471300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.0	98.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A124531
Included Lab Sample IDs: 2471300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A124579
Included Lab Sample IDs: 2471301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A124669
Included Lab Sample IDs: 2471301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.6	98.9	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report

Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	102			6.95	
EPA 180.1 Rev. 2.0	Turbidity	104			2.99	
EPA 300.0 Rev. 2.1	Chloride	104	103	104	0.136	
	Sulfate	104	103	105	0.257	
EPA 350.1 Rev. 2.0	Ammonia-N	94.0	96.8	96.4		0.385
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.8	100	101		0.992
EPA 353.2 Rev. 2.0	NO2NO3-N	100	96.5			0.426
EPA 365.1 Rev. 2.0	Total-P	100	95.0	97.7		2.78
EPA 8321B	2,4-D	79.2	81.8	85.6		4.55
	2,4,5-T	77.5	88.4	83.7		5.47
	Acesulfame K	102	99.4	99.4		0.0326
	Acetaminophen	73.8	74.0	65.9		11.7
	Acetamiprid	83.9	69.3	71.4		2.98
	Afidopyropen	61.2	67.1	66.1		1.46
	AMPA	92.5	88.2	86.5		2.00
	Bentazon	81.5	81.0	92.4		13.2
	Benzovindiflupyr	80.7	79.2	80.9		2.11
	Carbamazepine	83.4	83.9	76.7		8.41
	Clothianidin	83.1	86.7	82.9		4.45
	Dinotefuran	90.5	94.4	91.3		3.42
	Diuron	87.2	83.5	82.2		1.58
	Endothall	83.1	94.0	89.4		4.92
	Fenuron	87.9	88.9	84.5		5.18
	Fluridone	88.6	90.7	83.1		8.79
	Glufosinate	86.4	78.3	85.9		9.28
	Glyphosate	88.3	83.2	85.1		2.13
	Hydrocodone	86.4	86.4	84.3		2.43
	Ibuprofen	47.3	59.1	63.6		7.40
	Imazapyr	78.8	85.4	86.8		1.17
	Imidacloprid	83.5	89.1	85.9		3.19
	Linuron	64.6	89.5	76.1		16.3
	Mandestrobin	72.2	71.6	76.5		6.61
	MCPP	78.5	81.0	83.2		2.65
	Naproxen	65.6	83.0	95.8		14.3
	Primidone	75.7	85.5	76.1		11.6
	Pyraclostrobin	76.4	83.1	82.0		1.38
	Silvex	74.0	77.1	74.0		4.15
	Sucralose	118	112	116		2.94
	Thiamethoxam	87.0	84.4	78.3		7.51
	Tolfenpyrad	54.1	54.6	54.8		0.361
	Triclopyr	80.3	88.4	78.7		11.7
SM 2320 B-2011	Total Alkalinity	98.9			4.41	
SM 2540 C-2015	TDS	102			1.76	
SM 2540 D-2015	TSS	96.0				
SM 4500-F- C-2011	Fluoride	100	94.9	98.2		1.92
SM 5310 B-2014	Organic Carbon	100	91.0	92.9		1.59

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2471300
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2471300
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2471300

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2471300
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2471301
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2471301
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2471301
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2471301
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2471305
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2471300
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2471300
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2471300
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2471300
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2471301

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	02/23/2024			02/23/2024 13:02	Jessica K Wilks	2471300
EPA 180.1 Rev. 2.0	02/23/2024			02/23/2024 12:26	Chandler E Cox	2471300
EPA 300.0 Rev. 2.1	02/23/2024			03/01/2024 06:01	James L Waggeberby	2471300
EPA 350.1 Rev. 2.0	02/23/2024			02/26/2024 14:08	Kenneth H Lee	2471301
EPA 351.2 Rev. 2.0	02/23/2024	02/28/2024 07:55	Samantha L Bates	02/29/2024 11:10	Robyn Blevins	2471301
EPA 353.2 Rev. 2.0	02/23/2024			03/05/2024 12:58	Fadila Guebre	2471301
EPA 365.1 Rev. 2.0	02/23/2024	03/08/2024 12:35	Josephine W Gitau	03/11/2024 10:59	Chandler E Cox	2471301
EPA 8321B	02/23/2024	02/26/2024 09:00	Hoor Shaik	03/01/2024 16:07	Juyoung Kim	2471305
	02/23/2024	02/27/2024 07:30	Tae K Lee	02/27/2024 12:34	Tae K Lee	2471305
	02/23/2024	02/27/2024 07:30	Tae K Lee	02/27/2024 23:51	Tae K Lee	2471305
SM 2320 B-2011	02/23/2024			03/01/2024 22:22	Dale L. Simmons	2471300
SM 2540 C-2015	02/23/2024			02/26/2024 15:21	Yijie Li	2471300
SM 2540 D-2015	02/23/2024			02/26/2024 15:21	Yijie Li	2471300
SM 4500-F- C-2011	02/23/2024			03/01/2024 22:22	Dale L. Simmons	2471300
SM 5310 B-2014	02/23/2024			02/26/2024 19:36	Khloe J Berg	2471301