

Chemical Analysis Report

CEN-DIST-2023-09-13-02

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

Event Description: **Run 9**
Request ID: **RQ-2023-09-11-33**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Colin Wright, Program Administrator

Date Certified: 29-SEP-2023 13:43



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: MATTRESS DRAIN AT ROCKRIDGE RD

Collection Date/Time: 09/12/2023 10:31

Field ID: G4CE0247

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2436363	EPA 8321B	2,4-D	0.023		ug/L	P434924	
		Acesulfame K	0.10	U	ug/L	P434773	
		2,4,5-T	0.0040	U	ug/L	P434924	
		AMPA	0.10	U	ug/L	P434773	
		Acetaminophen	0.0080	U	ug/L	P434924	
		Acetamiprid	0.0020	U	ug/L	P434924	
		Endothall	0.25	U	ug/L	P434773	
		Glufosinate	0.10	U	ug/L	P434773	
		Glyphosate	0.10	U	ug/L	P434773	
		Afidopyropen	0.0020	U	ug/L	P434924	
		Bentazon	0.0042		ug/L	P434924	
		Sucralose	0.010	U	ug/L	P434773	
		Benzovindiflupyr	0.0020	U	ug/L	P434924	
		Carbamazepine	8.0E-04	U	ug/L	P434924	
		Clothianidin	0.0020	U	ug/L	P434924	
		Dinotefuran	0.0020	U	ug/L	P434924	
		Diuron	0.0020	U	ug/L	P434924	
		Fenuron	0.032	U	ug/L	P434924	
		Fluridone	8.0E-04	U	ug/L	P434924	
		Imazapyr	0.014	I	ug/L	P434924	
		Hydrocodone	0.0020	U	ug/L	P434924	
		Ibuprofen	0.080	U	ug/L	P434924	
		Imidacloprid	0.0039	I	ug/L	P434924	
		Linuron	0.0040	U	ug/L	P434924	
		Mandestrobin	0.0020	U	ug/L	P434924	
		MCPP	0.0020	U	ug/L	P434924	
		Naproxen	0.0080	U	ug/L	P434924	
		Primidone	0.0040	U	ug/L	P434924	
		Pyraclostrobin	0.0020	U	ug/L	P434924	
		Silvex	0.0040	U	ug/L	P434924	
		Thiamethoxam	0.0020	U	ug/L	P434924	
		Tolfenpyrad	0.0020	U	ug/L	P434924	
		Triclopyr	0.0040	U	ug/L	P434924	

Sample Location: BIG CREEK AT LAKE NELLIE RD

Collection Date/Time: 09/12/2023 11:36

Field ID: G1CE0117

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2436356	DEP SOP: NU-094-1	Color (true)	530		PCU	P434942	
	EPA 180.1 Rev. 2.0	Turbidity	0.60	I	NTU	P434940	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P435111	
		Sulfate	0.20	U	mg SO4/L	P435115	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P435266	
	SM 2540 C-2015	TDS	131		mg/L	P435389	
	SM 2540 D-2015	TSS	3	I	mg/L	P435298	
	SM 4500-F- C-2011	Fluoride	0.064	I	mg F/L	P435271	RPD
2436357	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P435134	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P435486	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P435281	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P435034	
	SM 5310 B-2011	Organic Carbon	59		mg C/L	P435437	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P434942

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434940

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435111

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435115

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435134

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435486

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435281

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435034

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

Reference Method: EPA 8321B
Batch ID: P434773

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: P434773

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

Reference Method: EPA 8321B
Batch ID: P434924

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: P435266

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

Reference Method: SM 2540 C-2015
Batch ID: P435389

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P435298

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P435271

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P435437

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: P434942

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434940

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435111

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435115

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435134

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435486

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435281

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435034

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

Reference Method: EPA 8321B
Batch ID: P434773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	137		P	40 - 150
AMPA	83.8		P	40 - 150
Endothall	100		P	40 - 150
Glufosinate	99.2		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P434773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	98.6		P	40 - 150
Sucralose	94.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P434924

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.0		P	40 - 150
2,4,5-T	77.3		P	40 - 150
Acetaminophen	70.9		P	30 - 150
Acetamiprid	84.3		P	40 - 150
Afidopyropen	73.1		P	30 - 150
Bentazon	91.6		P	30 - 150
Benzovindiflupyr	82.8		P	40 - 150
Carbamazepine	89.8		P	40 - 150
Clothianidin	89.3		P	40 - 150
Dinotefuran	97.3		P	40 - 150
Diuron	87.2		P	40 - 150
Fenuron	90.6		P	40 - 150
Fluridone	80.5		P	40 - 150
Hydrocodone	94.6		P	40 - 150
Ibuprofen	77.2		P	40 - 150
Imazapyr	74.1		P	40 - 150
Imidacloprid	83.5		P	40 - 150
Linuron	77.8		P	40 - 150
Mandestrobin	97.2		P	40 - 150
MCPP	90.2		P	40 - 150
Naproxen	64.1		P	40 - 150
Primidone	87.1		P	40 - 150
Pyraclostrobin	78.3		P	40 - 150
Silvex	76.5		P	40 - 150
Thiamethoxam	91.0		P	40 - 150
Tolfenpyrad	42.8		P	30 - 150
Triclopyr	82.3		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P435266

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P435389

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

Reference Method: SM 2540 D-2015
Batch ID: P435298

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	103		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P435271

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435437

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436448	Chloride	104		P	90 - 110
2436595	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436448	Sulfate	101		P	90 - 110
2436595	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435134

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436098	Ammonia-N	98.6	97.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435281

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2434714	NO2NO3-N	99.0	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436351	Total-P	108	110	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P434773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2435764	Acesulfame K	147	144	P/P	40 - 150
2435764	AMPA	68.0	66.8	P/P	40 - 150
2435764	Endothall	146	145	P/P	40 - 150
2435764	Glufosinate	85.3	90.6	P/P	40 - 150
2435764	Glyphosate	80.8	88.5	P/P	40 - 150
2435764	Sucralose	101	97.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P434924

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2435764	2,4-D	105	112	P/P	40 - 150
2435764	2,4,5-T	106	108	P/P	40 - 150
2435764	Acetaminophen	84.0	83.8	P/P	30 - 150
2435764	Acetamiprid	61.2	62.7	P/P	40 - 150
2435764	Afidopyropen	73.7	68.9	P/P	30 - 150
2435764	Bentazon	57.6	56.6	P/P	30 - 150
2435764	Benzovindiflupyr	113	110	P/P	40 - 150
2435764	Carbamazepine	74.8	75.5	P/P	40 - 150
2435764	Clothianidin	90.5	90.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P434924

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2435764	Dinotefuran	61.3	60.4	P/P	40 - 150
2435764	Diuron	64.1	64.3	P/P	40 - 150
2435764	Fenuron	48.7	49.4	P/P	40 - 150
2435764	Fluridone	70.6	66.5	P/P	40 - 150
2435764	Hydrocodone	59.6	58.3	P/P	40 - 150
2435764	Ibuprofen	74.2	76.6	P/P	40 - 150
2435764	Imazapyr	76.0	76.5	P/P	40 - 150
2435764	Imidacloprid	116	116	P/P	40 - 150
2435764	Linuron	74.2	73.9	P/P	40 - 150
2435764	Mandestrobin	107	101	P/P	40 - 150
2435764	MCPP	117	122	P/P	40 - 150
2435764	Naproxen	82.6	94.2	P/P	40 - 150
2435764	Primidone	92.2	88.8	P/P	40 - 150
2435764	Pyraclostrobin	98.2	97.5	P/P	40 - 150
2435764	Silvex	110	105	P/P	40 - 150
2435764	Thiamethoxam	74.7	77.0	P/P	40 - 150
2435764	Tolfenpyrad	72.6	70.0	P/P	30 - 150
2435764	Triclopyr	122	117	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P435271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436938	Fluoride	99.0	96.8	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P435437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436026	Organic Carbon	98.0	99.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P434942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436350	Color (true)	0.200	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436306	Turbidity	0.778	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436448	Chloride	0.190	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436448	Sulfate	0.732	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435134

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436098	Ammonia-N	1.05	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436389	Kjeldahl Nitrogen	3.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435281

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2434714	NO2NO3-N	0.755	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436351	Total-P	1.37	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P434773

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2435764	Acesulfame K	2.10	Spike	P	0 - 30
2435764	AMPA	1.75	Spike	P	0 - 30
2435764	Endothall	0.524	Spike	P	0 - 30
2435764	Glufosinate	6.02	Spike	P	0 - 30
2435764	Glyphosate	9.12	Spike	P	0 - 30
2435764	Sucralose	3.11	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P434924

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2435764	2,4-D	6.19	Spike	P	0 - 30
2435764	2,4,5-T	1.74	Spike	P	0 - 30
2435764	Acetaminophen	0.272	Spike	P	0 - 30
2435764	Acetamiprid	2.54	Spike	P	0 - 30
2435764	Afidopyropen	6.73	Spike	P	0 - 30
2435764	Bentazon	1.65	Spike	P	0 - 30
2435764	Benzovindiflupyr	2.30	Spike	P	0 - 30
2435764	Carbamazepine	1.02	Spike	P	0 - 30
2435764	Clothianidin	0.161	Spike	P	0 - 30
2435764	Dinotefuran	1.49	Spike	P	0 - 30
2435764	Diuron	0.295	Spike	P	0 - 30
2435764	Fenuron	1.58	Spike	P	0 - 30
2435764	Fluridone	5.92	Spike	P	0 - 30
2435764	Hydrocodone	2.10	Spike	P	0 - 30
2435764	Ibuprofen	3.17	Spike	P	0 - 30
2435764	Imazapyr	0.580	Spike	P	0 - 30
2435764	Imidacloprid	0.332	Spike	P	0 - 30
2435764	Linuron	0.444	Spike	P	0 - 30
2435764	Mandestrobin	5.32	Spike	P	0 - 30
2435764	MCPP	3.92	Spike	P	0 - 30
2435764	Naproxen	13.2	Spike	P	0 - 30
2435764	Primidone	3.70	Spike	P	0 - 30
2435764	Pyraclostrobin	0.746	Spike	P	0 - 30
2435764	Silvex	4.77	Spike	P	0 - 30
2435764	Thiamethoxam	3.09	Spike	P	0 - 30
2435764	Tolfenpyrad	3.60	Spike	P	0 - 30
2435764	Triclopyr	3.85	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P435266

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436938	Total Alkalinity	0.789	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P435389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436430	TDS	7.67	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P435271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436938	Fluoride	1.97	Spike	F	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P435437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436026	Organic Carbon	1.67	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2436363
Field Sample ID: G4CE0247

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	35.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	43.2	P	30 - 160
EPA 8321B	Diuron-d6	39.7	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.9	P	30 - 160
EPA 8321B	Primidone-d5	53.5	P	30 - 160
EPA 8321B	Sucralose-d6	94.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121509

Included Lab Sample IDs: 2436356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.0	97.0	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A121511

Included Lab Sample IDs: 2436356

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

Reference Method: EPA 8321B

Run ID: A121513

Included Lab Sample IDs: 2436363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	139	129	P/P	60 - 160
Sucralose	106	91.2	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121515

Included Lab Sample IDs: 2436363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	80.9	86.1	P/P	60 - 160
Endothall	96.2	103	P/P	60 - 160
Glufosinate	102	105	P/P	60 - 160
Glyphosate	89.1	96.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121518

Included Lab Sample IDs: 2436363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.5	93.4	P/P	50 - 150
2,4,5-T	82.6	82.1	P/P	50 - 150
Acetaminophen	89.6	89.8	P/P	60 - 160
Acetamiprid	114	114	P/P	50 - 150
Afidopyropen	119	105	P/P	50 - 150
Bentazon	113	117	P/P	50 - 160
Benzovindiflupyr	105	109	P/P	50 - 150
Carbamazepine	114	120	P/P	60 - 150
Clothianidin	105	104	P/P	60 - 150
Dinotefuran	116	116	P/P	50 - 150
Diuron	112	117	P/P	60 - 160
Fenuron	109	110	P/P	60 - 150
Fluridone	101	98.3	P/P	60 - 160
Hydrocodone	118	121	P/P	60 - 150
Ibuprofen	77.3	115	P/P	50 - 160
Imazapyr	90.2	85.5	P/P	50 - 150
Imidacloprid	101	99.9	P/P	60 - 150
Linuron	104	109	P/P	60 - 150
Mandestrobin	114	120	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A121518
Included Lab Sample IDs: 2436363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCPD	89.0	88.8	P/P	50 - 150
Naproxen	74.5	122	P/P	50 - 160
Primidone	105	103	P/P	60 - 150
Pyraclostrobin	111	112	P/P	60 - 150
Silvex	83.1	95.1	P/P	50 - 150
Thiamethoxam	114	116	P/P	50 - 150
Tolfenpyrad	103	103	P/P	60 - 150
Triclopyr	89.9	100	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A121585
Included Lab Sample IDs: 2436356

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A121598
Included Lab Sample IDs: 2436357

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A121626
Included Lab Sample IDs: 2436357

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	102	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A121658
Included Lab Sample IDs: 2436356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.3	93.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A121658
Included Lab Sample IDs: 2436356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A121662
Included Lab Sample IDs: 2436357

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

Quality Assurance Report

Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A121744

Included Lab Sample IDs: 2436357

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.7	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121802

Included Lab Sample IDs: 2436357

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	98.5	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	99.8				0.200	
EPA 180.1 Rev. 2.0	Turbidity	101				0.778	
EPA 300.0 Rev. 2.1	Chloride	104	104	105		0.190	
	Sulfate	102	101	102		0.732	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	98.6	97.4			1.05
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101					3.85
EPA 353.2 Rev. 2.0	NO2NO3-N	102	99.0	98.0			0.755
EPA 365.1 Rev. 2.0	Total-P	105	108	110			1.37
EPA 8321B	2,4-D	89.0	105	112			6.19
	2,4,5-T	77.3	106	108			1.74
	Acesulfame K	137	147	144			2.10
	Acetaminophen	70.9	84.0	83.8			0.272
	Acetamiprid	84.3	61.2	62.7			2.54
	Afidopyropen	73.1	73.7	68.9			6.73
	AMPA	83.8	68.0	66.8			1.75
	Bentazon	91.6	57.6	56.6			1.65
	Benzovindiflupyr	82.8	113	110			2.30
	Carbamazepine	89.8	74.8	75.5			1.02
	Clothianidin	89.3	90.5	90.6			0.161
	Dinotefuran	97.3	61.3	60.4			1.49
	Diuron	87.2	64.1	64.3			0.295
	Endothall	100	146	145			0.524
	Fenuron	90.6	48.7	49.4			1.58
	Fluridone	80.5	70.6	66.5			5.92
	Glufosinate	99.2	85.3	90.6			6.02
	Glyphosate	98.6	80.8	88.5			9.12
	Hydrocodone	94.6	59.6	58.3			2.10
	Ibuprofen	77.2	74.2	76.6			3.17
	Imazapyr	74.1	76.0	76.5			0.580
	Imidacloprid	83.5	116	116			0.332
	Linuron	77.8	74.2	73.9			0.444
	Mandestrobin	97.2	107	101			5.32
	MCPP	90.2	117	122			3.92
	Naproxen	64.1	82.6	94.2			13.2
	Primidone	87.1	92.2	88.8			3.70
	Pyraclostrobin	78.3	98.2	97.5			0.746
	Silvex	76.5	110	105			4.77
	Sucralose	94.9	101	97.9			3.11
	Thiamethoxam	91.0	74.7	77.0			3.09
	Tolfenpyrad	42.8	72.6	70.0			3.60
	Triclopyr	82.3	122	117			3.85
SM 2320 B-2011	Total Alkalinity	96.6				0.789	
SM 2540 C-2015	TDS	103				7.67	
SM 2540 D-2015	TSS	103					
SM 4500-F- C-2011	Fluoride	98.3	99.0	96.8			1.97
SM 5310 B-2011	Organic Carbon	96.1	98.0	99.6			1.67

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2436356
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2436356
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2436356

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2436356
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2436357
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2436357
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2436357
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2436357
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2436363
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2436356
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2436356
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2436356
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2436356
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2436357

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	09/13/2023			09/13/2023 16:45	Alexis Price	2436356
EPA 180.1 Rev. 2.0	09/13/2023			09/13/2023 14:25	Alexis Price	2436356
EPA 300.0 Rev. 2.1	09/13/2023			09/16/2023 09:23	James L Waggeberby	2436356
EPA 350.1 Rev. 2.0	09/13/2023			09/18/2023 12:22	Khloe J Berg	2436357
EPA 351.2 Rev. 2.0	09/13/2023	09/26/2023 11:48	Simonne.V. Calhoun	09/27/2023 16:17	Samantha L Bates	2436357
EPA 353.2 Rev. 2.0	09/13/2023			09/19/2023 14:06	Anna M. Plaviak	2436357
EPA 365.1 Rev. 2.0	09/13/2023	09/15/2023 14:15	Adam P Silver	09/19/2023 13:45	James L Waggeberby	2436357
EPA 8321B	09/13/2023	09/13/2023 12:30	Hana Lee	09/13/2023 12:38	Tae K Lee	2436363
	09/13/2023	09/13/2023 12:30	Hana Lee	09/13/2023 22:20	Tae K Lee	2436363
	09/13/2023	09/13/2023 14:00	Hoor Shaik	09/13/2023 23:54	Juyoung Kim	2436363
SM 2320 B-2011	09/13/2023			09/20/2023 04:44	Adam P Silver	2436356
SM 2540 C-2015	09/13/2023			09/15/2023 16:01	Yijie Li	2436356
SM 2540 D-2015	09/13/2023			09/15/2023 16:01	Yijie Li	2436356
SM 4500-F- C-2011	09/13/2023			09/20/2023 04:44	Adam P Silver	2436356
SM 5310 B-2011	09/13/2023			09/23/2023 00:00	Elise M. Gillis	2436357