

Chemical Analysis Report

CEN-DIST-2023-10-20-02

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

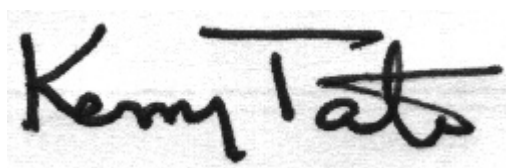
Event Description: **Run 8**
Request ID: **RQ-2023-10-16-10**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

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

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 14-NOV-2023 11:38

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the name.

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: LAKE SMART AT CENTER

Collection Date/Time: 10/19/2023 11:20

Field ID: G3CE0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446457	EPA 8321B	2,4-D	0.080		ug/L	P436890	
		Acesulfame K	0.10	U	ug/L	P436792	
		2,4,5-T	0.0040	U	ug/L	P436890	
		AMPA	0.10	U	ug/L	P436792	
		Acetaminophen	0.0080	U	ug/L	P436890	
		Acetamiprid	0.0020	U	ug/L	P436890	
		Endothall	0.25	U	ug/L	P436792	
		Glufosinate	0.10	U	ug/L	P436792	
		Glyphosate	0.10	U	ug/L	P436792	
		Afidopyropen	0.0020	U	ug/L	P436890	
		Bentazon	0.0039		ug/L	P436890	
		Sucralose	0.86		ug/L	P436792	
		Benzovindiflupyr	0.0020	U	ug/L	P436890	
		Carbamazepine	8.0E-04	U	ug/L	P436890	
		Clothianidin	0.0020	U	ug/L	P436890	
		Dinotefuran	0.0020	U	ug/L	P436890	
		Diuron	0.0020	U	ug/L	P436890	
		Fenuron	0.032	U	ug/L	P436890	MS
		Fluridone	0.010		ug/L	P436890	
		Imazapyr	0.021		ug/L	P436890	
		Hydrocodone	0.0020	U	ug/L	P436890	
		Ibuprofen	0.080	U	ug/L	P436890	
		Imidacloprid	0.0053	I	ug/L	P436890	
		Linuron	0.0040	U	ug/L	P436890	
		Mandestrobin	0.0020	U	ug/L	P436890	
		MCPP	0.0020	U	ug/L	P436890	
		Naproxen	0.0080	U	ug/L	P436890	
		Primidone	0.0040	U	ug/L	P436890	
		Pyraclostrobin	0.0020	U	ug/L	P436890	
		Silvex	0.0040	U	ug/L	P436890	
		Thiamethoxam	0.0020	I	ug/L	P436890	
		Tolfenpyrad	0.0020	U	ug/L	P436890	
		Triclopyr	0.0040	U	ug/L	P436890	

Sample Location: LAKE HENRY AT CENTER

Collection Date/Time: 10/19/2023 12:18

Field ID: G3CE0040

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446439	DEP SOP: NU-094-1	Color (true)	150		PCU	P436827	
	EPA 180.1 Rev. 2.0	Turbidity	8.3		NTU	P436830	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P437219	
		Sulfate	8.2		mg SO4/L	P437222	
	SM 2320 B-2011	Total Alkalinity	20		mg CaCO3/L	P436883	
	SM 2540 C-2015	TDS	104	Q	mg/L	P437681	
	SM 2540 D-2015	TSS	5	I	mg/L	P437213	
2446440	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P436885	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P437031	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P436867	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P437072	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P436841	
2446456	SM 5310 B-2011	Organic Carbon	15		mg C/L	P437110	
	EPA 8321B	2,4-D	0.047		ug/L	P436890	
		Acesulfame K	0.12	I	ug/L	P436792	
		2,4,5-T	0.0040	U	ug/L	P436890	
		AMPA	0.35	I	ug/L	P436792	
		Acetaminophen	0.0080	U	ug/L	P436890	
		Acetamiprid	0.0020	U	ug/L	P436890	
		Endothall	0.25	U	ug/L	P436792	
		Glufosinate	0.10	U	ug/L	P436792	
		Glyphosate	0.34	I	ug/L	P436792	
		Afidopyropen	0.0020	U	ug/L	P436890	
		Bentazon	0.022		ug/L	P436890	
		Sucralose	1.3		ug/L	P436792	
		Benzovindiflupyr	0.0020	U	ug/L	P436890	
		Carbamazepine	0.0012	I	ug/L	P436890	
		Clothianidin	0.0020	U	ug/L	P436890	
		Dinotefuran	0.0020	U	ug/L	P436890	
		Diuron	0.0020	U	ug/L	P436890	
		Fenuron	0.032	U	ug/L	P436890	
		Fluridone	0.0027	I	ug/L	P436890	
		Imazapyr	0.040		ug/L	P436890	
		Hydrocodone	0.0020	U	ug/L	P436890	
		Ibuprofen	0.080	U	ug/L	P436890	
		Imidacloprid	0.0020	U	ug/L	P436890	
		Linuron	0.0040	U	ug/L	P436890	
		Mandestrobin	0.0020	U	ug/L	P436890	
		MCPP	0.0020	U	ug/L	P436890	
		Naproxen	0.0080	U	ug/L	P436890	
		Primidone	0.0046	I	ug/L	P436890	
		Pyraclostrobin	0.0020	U	ug/L	P436890	
		Silvex	0.0040	U	ug/L	P436890	
		Thiamethoxam	0.0020	U	ug/L	P436890	

MS

Field ID: G3CE0040

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446456	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P436890	
		Triclopyr	0.0040	U	ug/L	P436890	

Ref. Method and Comment:
SM 2540 C-2015: The sample was reanalyzed out of holding time because of analytical difficulties.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: FB

Collection Date/Time: 10/19/2023 12:40

Field ID: FB_10192023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2446458	EPA 8321B	2,4-D	0.0020	U	ug/L	P436890	
		Acesulfame K	0.10	U	ug/L	P436792	
		2,4,5-T	0.0040	U	ug/L	P436890	
		AMPA	0.10	U	ug/L	P436792	
		Acetaminophen	0.0080	U	ug/L	P436890	
		Acetamiprid	0.0020	U	ug/L	P436890	
		Endothall	0.25	U	ug/L	P436792	
		Glufosinate	0.10	U	ug/L	P436792	
		Glyphosate	0.10	U	ug/L	P436792	
		Afidopyropen	0.0020	U	ug/L	P436890	
		Bentazon	8.0E-04	U	ug/L	P436890	
		Sucralose	0.010	U	ug/L	P436792	
		Benzovindiflupyr	0.0020	U	ug/L	P436890	
		Carbamazepine	8.0E-04	U	ug/L	P436890	
		Clothianidin	0.0020	U	ug/L	P436890	
		Dinotefuran	0.0020	U	ug/L	P436890	
		Diuron	0.0020	U	ug/L	P436890	
		Fenuron	0.032	U	ug/L	P436890	MS
		Fluridone	8.0E-04	U	ug/L	P436890	
		Imazapyr	0.0040	U	ug/L	P436890	
		Hydrocodone	0.0020	U	ug/L	P436890	
		Ibuprofen	0.080	U	ug/L	P436890	
		Imidacloprid	0.0020	U	ug/L	P436890	
		Linuron	0.0040	U	ug/L	P436890	
		Mandestrobin	0.0020	U	ug/L	P436890	
		MCPP	0.0020	U	ug/L	P436890	
		Naproxen	0.0080	U	ug/L	P436890	
		Primidone	0.0040	U	ug/L	P436890	
		Pyraclostrobin	0.0020	U	ug/L	P436890	
		Silvex	0.0040	U	ug/L	P436890	
		Thiamethoxam	0.0020	U	ug/L	P436890	
		Tolfenpyrad	0.0020	U	ug/L	P436890	
		Triclopyr	0.0040	U	ug/L	P436890	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P436827

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436830

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437219

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437222

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437031

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436867

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437072

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436841

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

Reference Method: EPA 8321B
Batch ID: P436792

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: P436792

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

Reference Method: EPA 8321B
Batch ID: P436890

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: P436883

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

Reference Method: SM 2540 C-2015
Batch ID: P437681

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P437213

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P436885

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P437110

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: P436827

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: P436830

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437219

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437222

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437031

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436867

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437072

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436841

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

Reference Method: EPA 8321B
Batch ID: P436792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	99.1		P	40 - 160
Endothall	101		P	40 - 160
Glufosinate	104		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P436792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	95.7		P	40 - 160
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P436890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.0		P	40 - 150
2,4,5-T	76.0		P	40 - 150
Acetaminophen	94.0		P	30 - 150
Acetamiprid	85.3		P	40 - 150
Afidopyropen	79.7		P	30 - 150
Bentazon	92.2		P	30 - 150
Benzovindiflupyr	82.5		P	40 - 150
Carbamazepine	80.1		P	40 - 150
Clothianidin	90.7		P	40 - 150
Dinotefuran	100		P	40 - 150
Diuron	79.8		P	40 - 150
Fenuron	90.6		P	40 - 150
Fluridone	90.0		P	40 - 150
Hydrocodone	90.1		P	40 - 150
Ibuprofen	63.7		P	40 - 150
Imazapyr	81.9		P	40 - 150
Imidacloprid	84.3		P	40 - 150
Linuron	79.7		P	40 - 150
Mandestrobin	90.0		P	40 - 150
MCPP	88.5		P	40 - 150
Naproxen	79.0		P	40 - 150
Primidone	85.2		P	40 - 150
Pyraclostrobin	83.3		P	40 - 150
Silvex	76.5		P	40 - 150
Thiamethoxam	86.0		P	40 - 150
Tolfenpyrad	54.9		P	30 - 150
Triclopyr	83.5		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P436883

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.7		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P437681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.6		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P437213

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	105		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P436885

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

Reference Method: SM 5310 B-2011
Batch ID: P437110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446361	Chloride	103		P	90 - 110
2446439	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446361	Sulfate	103		P	90 - 110
2446439	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446618	Ammonia-N	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446369	Kjeldahl Nitrogen	94.5	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437072

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446237	NO2NO3-N	96.4	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446414	Total-P	105	105	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P436792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446420	Acesulfame K	149	149	P/P	40 - 150
2446420	AMPA	85.3	86.6	P/P	40 - 160
2446420	Endothall	94.8	97.9	P/P	40 - 160
2446420	Glufosinate	83.3	93.3	P/P	40 - 160
2446420	Glyphosate	56.9	54.1	P/P	40 - 160
2446420	Sucralose	106	114	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P436890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446387	2,4-D	90.1	85.9	P/P	40 - 150
2446387	2,4,5-T	102	105	P/P	40 - 150
2446387	Acetaminophen	61.9	65.6	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P436890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446387	Acetamiprid	48.1	46.8	P/P	40 - 150
2446387	Afidopyropen	72.6	69.7	P/P	30 - 150
2446387	Bentazon	42.0	40.9	P/P	30 - 150
2446387	Benzovindiflupyr	76.9	77.6	P/P	40 - 150
2446387	Carbamazepine	48.4	48.7	P/P	40 - 150
2446387	Clothianidin	51.6	52.4	P/P	40 - 150
2446387	Dinotefuran	46.2	48.4	P/P	40 - 150
2446387	Diuron	46.1	46.0	P/P	40 - 150
2446387	Fenuron	31.7	32.2	F/F	40 - 150
2446387	Fluridone	54.0	52.1	P/P	40 - 150
2446387	Hydrocodone	48.6	49.2	P/P	40 - 150
2446387	Ibuprofen	61.7	65.7	P/P	40 - 150
2446387	Imazapyr	69.0	64.1	P/P	40 - 150
2446387	Imidacloprid	77.0	79.0	P/P	40 - 150
2446387	Linuron	59.2	58.5	P/P	40 - 150
2446387	Mandestrobin	83.5	79.9	P/P	40 - 150
2446387	MCPP	109	105	P/P	40 - 150
2446387	Naproxen	63.2	72.0	P/P	40 - 150
2446387	Primidone	49.3	48.6	P/P	40 - 150
2446387	Pyraclostrobin	79.3	79.4	P/P	40 - 150
2446387	Silvex	102	99.4	P/P	40 - 150
2446387	Thiamethoxam	54.7	55.1	P/P	40 - 150
2446387	Tolfenpyrad	52.8	52.2	P/P	30 - 150
2446387	Triclopyr	106	107	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P436885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446318	Fluoride	101	100	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P437110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446365	Organic Carbon	96.7	95.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P436827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446413	Color (true)	0.804	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446286	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446361	Chloride	0.484	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446361	Sulfate	0.309	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446618	Ammonia-N	2.97	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446369	Kjeldahl Nitrogen	5.93	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446237	NO2NO3-N	0.449	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446414	Total-P	0.266	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P436792

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446420	Acesulfame K	0.0370	Spike	P	0 - 30
2446420	AMPA	1.50	Spike	P	0 - 30
2446420	Endothall	3.19	Spike	P	0 - 30
2446420	Glufosinate	11.3	Spike	P	0 - 30
2446420	Glyphosate	5.04	Spike	P	0 - 30
2446420	Sucralose	7.88	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P436890

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446387	2,4-D	4.71	Spike	P	0 - 30
2446387	2,4,5-T	2.34	Spike	P	0 - 30
2446387	Acetaminophen	5.93	Spike	P	0 - 30
2446387	Acetamiprid	2.82	Spike	P	0 - 30
2446387	Afidopyropen	4.14	Spike	P	0 - 30
2446387	Bentazon	2.48	Spike	P	0 - 30
2446387	Benzovindiflupyr	0.860	Spike	P	0 - 30
2446387	Carbamazepine	0.671	Spike	P	0 - 30
2446387	Clothianidin	1.57	Spike	P	0 - 30
2446387	Dinotefuran	4.62	Spike	P	0 - 30
2446387	Diuron	0.118	Spike	P	0 - 30
2446387	Fenuron	1.42	Spike	P	0 - 30
2446387	Fluridone	3.59	Spike	P	0 - 30
2446387	Hydrocodone	1.26	Spike	P	0 - 30
2446387	Ibuprofen	6.28	Spike	P	0 - 30
2446387	Imazapyr	4.82	Spike	P	0 - 30
2446387	Imidacloprid	2.54	Spike	P	0 - 30
2446387	Linuron	1.12	Spike	P	0 - 30
2446387	Mandestrobin	4.43	Spike	P	0 - 30
2446387	MCPP	3.61	Spike	P	0 - 30
2446387	Naproxen	13.1	Spike	P	0 - 30
2446387	Primidone	1.39	Spike	P	0 - 30
2446387	Pyraclostrobin	0.192	Spike	P	0 - 30
2446387	Silvex	2.78	Spike	P	0 - 30
2446387	Thiamethoxam	0.839	Spike	P	0 - 30
2446387	Tolfenpyrad	1.27	Spike	P	0 - 30
2446387	Triclopyr	0.428	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P436883

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446318	Total Alkalinity	0.623	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P437681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447864	TDS	4.13	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P436885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446318	Fluoride	0.483	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P437110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446365	Organic Carbon	1.08	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2446456

Field Sample ID: G3CE0040

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	70.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.1	P	30 - 160
EPA 8321B	Diuron-d6	48.7	P	30 - 160
EPA 8321B	Endothall-d6	82.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.6	P	30 - 160
EPA 8321B	Primidone-d5	49.0	P	30 - 160
EPA 8321B	Sucralose-d6	99.6	P	30 - 160

Lab Sample ID: 2446457

Field Sample ID: G3CE0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.2	P	30 - 160
EPA 8321B	Diuron-d6	64.6	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.4	P	30 - 160
EPA 8321B	Primidone-d5	62.8	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2446458

Field Sample ID: FB_10192023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.7	P	30 - 160
EPA 8321B	Diuron-d6	85.4	P	30 - 160
EPA 8321B	Endothall-d6	94.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.9	P	30 - 160
EPA 8321B	Primidone-d5	81.0	P	30 - 160
EPA 8321B	Sucralose-d6	98.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A122268

Included Lab Sample IDs: 2446439

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122269

Included Lab Sample IDs: 2446439

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

Reference Method: SM 2320 B-2011

Run ID: A122296

Included Lab Sample IDs: 2446439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.6	96.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A122296

Included Lab Sample IDs: 2446439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122307

Included Lab Sample IDs: 2446456, 2446457, 2446458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	104	126	P/P	60 - 160
Acesulfame K	126	142	P/P	60 - 160
Sucralose	101	103	P/P	60 - 160
Sucralose	103	109	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122310

Included Lab Sample IDs: 2446440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122367

Included Lab Sample IDs: 2446456, 2446457, 2446458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	78.2	84.8	P/P	50 - 150
2,4,5-T	76.1	85.3	P/P	50 - 150
Acetaminophen	107	110	P/P	60 - 160
Acetamiprid	106	107	P/P	50 - 150
Afidopyropen	89.6	95.0	P/P	50 - 150
Bentazon	99.2	102	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A122367

Included Lab Sample IDs: 2446456, 2446457, 2446458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Benzovindiflupyr	104	100	P/P	50 - 150
Carbamazepine	104	101	P/P	60 - 150
Clothianidin	103	105	P/P	60 - 150
Dinotefuran	113	114	P/P	50 - 150
Diuron	112	107	P/P	60 - 160
Fenuron	107	107	P/P	60 - 150
Fluridone	115	117	P/P	60 - 160
Hydrocodone	112	111	P/P	60 - 150
Ibuprofen	99.3	67.4	P/P	50 - 160
Imazapyr	90.9	89.9	P/P	50 - 150
Imidacloprid	98.3	99.1	P/P	60 - 150
Linuron	106	109	P/P	60 - 150
Mandestrobin	106	106	P/P	50 - 150
MCPP	78.9	98.3	P/P	50 - 150
Naproxen	60.0	86.0	P/P	50 - 160
Primidone	99.4	100	P/P	60 - 150
Pyraclostrobin	108	106	P/P	60 - 150
Silvex	82.8	75.3	P/P	50 - 150
Thiamethoxam	109	110	P/P	50 - 150
Tolfenpyrad	104	97.4	P/P	60 - 150
Triclopyr	84.6	80.8	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122370

Included Lab Sample IDs: 2446440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122373

Included Lab Sample IDs: 2446456, 2446457, 2446458

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	97.2	P/P	60 - 160
AMPA	104	100	P/P	60 - 160
Endothall	96.6	81.7	P/P	60 - 160
Endothall	99.2	96.6	P/P	60 - 160
Glufosinate	97.2	86.0	P/P	60 - 160
Glufosinate	99.6	97.2	P/P	60 - 160
Glyphosate	101	87.2	P/P	60 - 160
Glyphosate	95.7	101	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122380

Included Lab Sample IDs: 2446440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122402

Included Lab Sample IDs: 2446440

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

Reference Method: SM 5310 B-2011

Run ID: A122424

Included Lab Sample IDs: 2446440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	97.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122479

Included Lab Sample IDs: 2446439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.9	101	P/P	90 - 110
Sulfate	99.8	101	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)	101				0.804	
EPA 180.1 Rev. 2.0	Turbidity	104				0.0	
EPA 300.0 Rev. 2.1	Chloride	101	103	102		0.484	
	Sulfate	102	103	102		0.309	
EPA 350.1 Rev. 2.0	Ammonia-N	100	101	104			2.97
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	94.5	104			5.93
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	96.4	95.8			0.449
EPA 365.1 Rev. 2.0	Total-P	103	105	105			0.266
EPA 8321B	2,4-D	77.0	90.1	85.9			4.71
	2,4,5-T	76.0	102	105			2.34
	Acesulfame K	107	149	149			0.0370
	Acetaminophen	94.0	61.9	65.6			5.93
	Acetamiprid	85.3	48.1	46.8			2.82
	Afidopyropen	79.7	72.6	69.7			4.14
	AMPA	99.1	85.3	86.6			1.50
	Bentazon	92.2	42.0	40.9			2.48
	Benzovindiflupyr	82.5	76.9	77.6			0.860
	Carbamazepine	80.1	48.4	48.7			0.671
	Clothianidin	90.7	51.6	52.4			1.57
	Dinotefuran	100	46.2	48.4			4.62
	Diuron	79.8	46.1	46.0			0.118
	Endothall	101	94.8	97.9			3.19
	Fenuron	90.6	31.7	32.2			1.42
	Fluridone	90.0	54.0	52.1			3.59
	Glufosinate	104	83.3	93.3			11.3
	Glyphosate	95.7	56.9	54.1			5.04
	Hydrocodone	90.1	48.6	49.2			1.26
	Ibuprofen	63.7	61.7	65.7			6.28
	Imazapyr	81.9	69.0	64.1			4.82
	Imidacloprid	84.3	77.0	79.0			2.54
	Linuron	79.7	59.2	58.5			1.12
	Mandestrobin	90.0	83.5	79.9			4.43
	MCPP	88.5	109	105			3.61
	Naproxen	79.0	63.2	72.0			13.1
	Primidone	85.2	49.3	48.6			1.39
	Pyraclostrobin	83.3	79.3	79.4			0.192
	Silvex	76.5	102	99.4			2.78
	Sucralose	105	106	114			7.88
	Thiamethoxam	86.0	54.7	55.1			0.839
	Tolfenpyrad	54.9	52.8	52.2			1.27
	Triclopyr	83.5	106	107			0.428
SM 2320 B-2011	Total Alkalinity	97.7				0.623	
SM 2540 C-2015	TDS	93.6				4.13	
SM 2540 D-2015	TSS	105					
SM 4500-F- C-2011	Fluoride	101	101	100			0.483
SM 5310 B-2011	Organic Carbon	97.0	96.7	95.1			1.08

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2446439
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2446439
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2446439

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2446439
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2446440
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2446440
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2446440
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2446440
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2446456, 2446457, 2446458
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2446439
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2446439
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2446439
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2446439
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2446440

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	10/20/2023			10/20/2023 14:45	Anna M. Plaviak	2446439
EPA 180.1 Rev. 2.0	10/20/2023			10/20/2023 13:30	Khloe J Berg	2446439
EPA 300.0 Rev. 2.1	10/20/2023			10/30/2023 23:39	James L Waggeberby	2446439
EPA 350.1 Rev. 2.0	10/20/2023			10/26/2023 09:54	Ping Hua	2446440
EPA 351.2 Rev. 2.0	10/20/2023	10/24/2023 11:15	Ping Hua	10/26/2023 11:00	Samantha L Bates	2446440
EPA 353.2 Rev. 2.0	10/20/2023			10/26/2023 14:30	Fadila Guebre	2446440
EPA 365.1 Rev. 2.0	10/20/2023	10/23/2023 13:55	Simonne.V. Calhoun	10/24/2023 12:50	Simonne.V. Calhoun	2446440
EPA 8321B	10/20/2023	10/24/2023 12:00	Hana Lee	10/24/2023 16:10	Tae K Lee	2446456
	10/20/2023	10/24/2023 12:00	Hana Lee	10/24/2023 16:24	Tae K Lee	2446457
	10/20/2023	10/24/2023 12:00	Hana Lee	10/24/2023 16:52	Tae K Lee	2446458
	10/20/2023	10/24/2023 12:00	Hana Lee	10/25/2023 12:04	Tae K Lee	2446456
	10/20/2023	10/24/2023 12:00	Hana Lee	10/25/2023 12:18	Tae K Lee	2446457
	10/20/2023	10/24/2023 12:00	Hana Lee	10/25/2023 12:46	Tae K Lee	2446458
	10/20/2023	10/25/2023 09:00	Hoor Shaik	10/25/2023 19:57	Juyoung Kim	2446456
	10/20/2023	10/25/2023 09:00	Hoor Shaik	10/25/2023 20:14	Juyoung Kim	2446457
	10/20/2023	10/25/2023 09:00	Hoor Shaik	10/25/2023 20:32	Juyoung Kim	2446458
SM 2320 B-2011	10/20/2023			10/23/2023 21:53	Adam P Silver	2446439
SM 2540 C-2015	10/20/2023			11/03/2023 15:32	Yijie Li	2446439
SM 2540 D-2015	10/20/2023			10/24/2023 15:22	Yijie Li	2446439
SM 4500-F- C-2011	10/20/2023			10/23/2023 21:53	Adam P Silver	2446439
SM 5310 B-2011	10/20/2023			10/27/2023 02:09	Elise M. Gillis	2446440