

Chemical Analysis Report

SW-DIST-2022-12-16-02

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

Event Description: **Pinellas Continuous Monitoring**
Request ID: **RQ-2022-12-26-05**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Date Certified: 10-JAN-2023 11:09



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: Cross Canal (North)

Collection Date/Time: 12/15/2022 09:20

Field ID: G5SW0187

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2375998	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P423692	
	SM 2320 B-2011	Total Alkalinity	114	Q	mg CaCO3/L	P424085	
	SM 2540 D-2015	TSS	8	IA	mg/L	P423858	
	SM 4500-F- C-2011	Fluoride	0.83		mg F/L	P424213	
2376000	EPA 350.1 Rev. 2.0	Ammonia-N	0.068		mg N/L	P424076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P423820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P423770	
	EPA 365.1 Rev. 2.0	Total-P	0.077		mg P/L	P423794	
	SM 5310 B-2011	Organic Carbon	6.2		mg C/L	P424079	
2376002	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P423693	

Ref. Method and Comment:

SM 2320 B-2011: The sample was analyzed out of hold time because the HVAC system in the laboratory was down resulting in excessively cold temperatures.

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

Sample Location: Salt Creek @ Bartlett Park Dock

Collection Date/Time: 12/15/2022 10:25

Field ID: G5SW0188

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2375999	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P423692	
	SM 2320 B-2011	Total Alkalinity	123	Q	mg CaCO3/L	P424085	
	SM 2540 D-2015	TSS	4	I	mg/L	P423858	
	SM 4500-F- C-2011	Fluoride	0.66		mg F/L	P424213	
2376001	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P424076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P423820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P423770	
	EPA 365.1 Rev. 2.0	Total-P	0.086		mg P/L	P423794	
	SM 5310 B-2011	Organic Carbon	9.6		mg C/L	P424079	
2376003	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.045		mg P/L	P423693	

Ref. Method and Comment:

SM 2320 B-2011: The sample was analyzed out of hold time because the HVAC system in the laboratory was down resulting in excessively cold temperatures.

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

Sample Location: Clam Bayou (East Drainage-North) @ 26th Ave S **Collection Date/Time: 12/15/2022 11:00**

Field ID: G5SW0190

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2376010	EPA 8321B	Acesulfame K	0.10	U	ug/L	P423561	
		2,4-D	0.0020	U	ug/L	P423628	
		AMPA	1.0	U	ug/L	P423561	
		2,4,5-T	0.0040	U	ug/L	P423628	
		Acetaminophen	0.0080	U	ug/L	P423628	
		Endothall	0.25	U	ug/L	P423561	
		Acetamiprid	0.0020	U	ug/L	P423628	
		Glufosinate	1.0	U	ug/L	P423561	
		Glyphosate	1.0	U	ug/L	P423561	
		Afidopyropen	0.0020	I	ug/L	P423628	
		Sucralose	0.75		ug/L	P423561	
		Bentazon	0.017		ug/L	P423628	
		Benzovindiflupyr	0.0020	U	ug/L	P423628	
		Carbamazepine	8.0E-04	U	ug/L	P423628	
		Clothianidin	0.0020	U	ug/L	P423628	
		Dinotefuran	0.0020	U	ug/L	P423628	
		Diuron	0.0020	U	ug/L	P423628	
		Fenuron	0.032	U	ug/L	P423628	
		Fluridone	0.0018	I	ug/L	P423628	
		Imazapyr	0.070		ug/L	P423628	
		Hydrocodone	0.0020	U	ug/L	P423628	
		Ibuprofen	0.20	U	ug/L	P423628	
		Imidacloprid	0.0064	I	ug/L	P423628	
		Linuron	0.0040	U	ug/L	P423628	
		Mandestrobin	0.0020	U	ug/L	P423628	
		MCPP	0.0040	U	ug/L	P423628	
		Naproxen	0.0080	U	ug/L	P423628	
		Primidone	0.0050	I	ug/L	P423628	
		Pyraclostrobin	0.0020	U	ug/L	P423628	
		Silvex	0.0040	U	ug/L	P423628	
		Thiamethoxam	0.0020	U	ug/L	P423628	
		Tolfenpyrad	0.0020	U	ug/L	P423628	
		Triclopyr	0.0040	U	ug/L	P423628	

Ref. Method and Comment:
 EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423692

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423820

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423770

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423794

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423693

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P423561

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P423628

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P423628

Component	Result	Code	Units
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.20	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P424085

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

Reference Method: SM 2540 D-2015

Batch ID: P423858

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P424213

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P424079

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423692

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423820

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423770

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423794

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423693

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

Reference Method: EPA 8321B
Batch ID: P423561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	74.1		P	40 - 150
AMPA	106		P	40 - 150
Endothall	97.9		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	98.6		P	40 - 150
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P423628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	102		P	40 - 150
2,4,5-T	76.0		P	40 - 150
Acetaminophen	95.1		P	30 - 150
Acetamiprid	83.1		P	40 - 150
Afidopyropen	64.9		P	30 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P423628

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	69.1		P	30 - 150
Benzovindiflupyr	85.1		P	40 - 150
Carbamazepine	81.2		P	40 - 150
Clothianidin	93.6		P	40 - 150
Dinotefuran	95.1		P	40 - 150
Diuron	69.3		P	40 - 150
Fenuron	93.5		P	40 - 150
Fluridone	78.0		P	40 - 150
Hydrocodone	86.3		P	40 - 150
Ibuprofen	96.7		P	40 - 150
Imazapyr	83.6		P	40 - 150
Imidacloprid	85.4		P	40 - 150
Linuron	77.2		P	40 - 150
Mandestrobin	91.0		P	40 - 150
MCPP	102		P	40 - 150
Naproxen	87.6		P	40 - 150
Primidone	89.9		P	40 - 150
Pyraclostrobin	78.4		P	40 - 150
Silvex	82.2		P	40 - 150
Thiamethoxam	86.6		P	40 - 150
Tolfenpyrad	40.8		P	30 - 150
Triclopyr	73.2		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P424085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	94 - 106

Reference Method: SM 2540 D-2015

Batch ID: P423858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	102		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P424213

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P424079

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375221	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375979	Kjeldahl Nitrogen	97.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374821	NO2NO3-N	95.1	96.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376054	Total-P	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376003	O-Phosphate-P	99.7	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P423561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375144	Acesulfame K	77.0	95.0	P/P	40 - 150
2375144	AMPA	99.4	99.4	P/P	40 - 150
2375144	Endothall	103	100	P/P	40 - 150
2375144	Glufosinate	111	110	P/P	40 - 150
2375144	Glyphosate	97.5	102	P/P	40 - 150
2375144	Sucralose	112	110	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P423628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375490	2,4-D	108	102	P/P	40 - 150
2375490	2,4,5-T	80.2	74.0	P/P	40 - 150
2375490	Acetaminophen	103	100	P/P	30 - 150
2375490	Acetamiprid	87.9	83.9	P/P	40 - 150
2375490	Afidopyrophen	64.1	70.2	P/P	30 - 150
2375490	Bentazon	70.5	75.8	P/P	30 - 150
2375490	Benzovindiflupyr	93.9	88.2	P/P	40 - 150
2375490	Carbamazepine	86.2	83.4	P/P	40 - 150
2375490	Clothianidin	100	103	P/P	40 - 150
2375490	Dinotefuran	103	97.9	P/P	40 - 150
2375490	Diuron	79.8	76.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P423628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375490	Fenuron	100	101	P/P	40 - 150
2375490	Fluridone	78.9	81.6	P/P	40 - 150
2375490	Hydrocodone	90.1	92.1	P/P	40 - 150
2375490	Ibuprofen	99.9	92.6	P/P	40 - 150
2375490	Imazapyr	90.6	89.4	P/P	40 - 150
2375490	Imidacloprid	92.5	91.9	P/P	40 - 150
2375490	Linuron	81.9	80.5	P/P	40 - 150
2375490	Mandestrobin	94.3	99.3	P/P	40 - 150
2375490	MCPD	105	96.5	P/P	40 - 150
2375490	Naproxen	89.4	66.8	P/P	40 - 150
2375490	Primidone	95.7	95.6	P/P	40 - 150
2375490	Pyraclostrobin	88.7	85.3	P/P	40 - 150
2375490	Silvex	78.6	88.1	P/P	40 - 150
2375490	Thiamethoxam	95.2	95.2	P/P	40 - 150
2375490	Tolfenpyrad	50.0	42.3	P/P	30 - 150
2375490	Triclopyr	87.9	74.1	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P424213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375965	Fluoride	98.2	98.8	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P424079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376054	Organic Carbon	88.6	88.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375970	Turbidity	4.51	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375221	Ammonia-N	0.567	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375979	Kjeldahl Nitrogen	3.09	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374821	NO2NO3-N	1.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376054	Total-P	1.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376003	O-Phosphate-P	1.79	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P423561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375144	Acesulfame K	21.0	Spike	P	0 - 30
2375144	AMPA	0.00724	Spike	P	0 - 30
2375144	Endothall	2.13	Spike	P	0 - 30
2375144	Glufosinate	0.419	Spike	P	0 - 30
2375144	Glyphosate	4.40	Spike	P	0 - 30
2375144	Sucralose	0.765	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P423628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375490	2,4-D	6.37	Spike	P	0 - 30
2375490	2,4,5-T	8.04	Spike	P	0 - 30
2375490	Acetaminophen	3.22	Spike	P	0 - 30
2375490	Acetamiprid	4.61	Spike	P	0 - 30
2375490	Afidopyropen	9.12	Spike	P	0 - 30
2375490	Bentazon	7.20	Spike	P	0 - 30
2375490	Benzovindiflupyr	6.34	Spike	P	0 - 30
2375490	Carbamazepine	3.33	Spike	P	0 - 30
2375490	Clothianidin	2.29	Spike	P	0 - 30
2375490	Dinotefuran	4.92	Spike	P	0 - 30
2375490	Diuron	4.49	Spike	P	0 - 30
2375490	Fenuron	0.949	Spike	P	0 - 30
2375490	Fluridone	3.36	Spike	P	0 - 30
2375490	Hydrocodone	2.16	Spike	P	0 - 30
2375490	Ibuprofen	7.56	Spike	P	0 - 30
2375490	Imazapyr	1.32	Spike	P	0 - 30
2375490	Imidacloprid	0.616	Spike	P	0 - 30
2375490	Linuron	1.69	Spike	P	0 - 30
2375490	Mandestrobin	5.14	Spike	P	0 - 30
2375490	MCP	8.12	Spike	P	0 - 30
2375490	Naproxen	29.0	Spike	P	0 - 30
2375490	Primidone	0.111	Spike	P	0 - 30
2375490	Pyraclostrobin	3.99	Spike	P	0 - 30
2375490	Silvex	11.4	Spike	P	0 - 30
2375490	Thiamethoxam	0.0381	Spike	P	0 - 30
2375490	Tolfenpyrad	16.5	Spike	P	0 - 30
2375490	Triclopyr	17.0	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P424085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376772	Total Alkalinity	1.32	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P424213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375965	Fluoride	0.464	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P424079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376054	Organic Carbon	0.130	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2376010

Field Sample ID: G5SW0190

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.2	P	30 - 160
EPA 8321B	Diuron-d6	60.7	P	30 - 160
EPA 8321B	Endothall-d6	97.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	64.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.1	P	30 - 160
EPA 8321B	Primidone-d5	94.4	P	30 - 160
EPA 8321B	Sucralose-d6	58.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116515

Included Lab Sample IDs: 2375998, 2375999

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A116518

Included Lab Sample IDs: 2376002, 2376003

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A116536

Included Lab Sample IDs: 2376010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	90.5	89.7	P/P	60 - 160
Sucralose	114	110	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A116538

Included Lab Sample IDs: 2376010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	93.6	95.8	P/P	60 - 160
Endothall	99.3	96.3	P/P	60 - 160
Glufosinate	98.2	96.1	P/P	60 - 160
Glyphosate	100	98.9	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116570

Included Lab Sample IDs: 2376000, 2376001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	95.5	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116633

Included Lab Sample IDs: 2376000, 2376001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	100	P/P	90 - 110
Total-P	99.5	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A116684

Included Lab Sample IDs: 2376010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	105	P/P	50 - 150
2,4,5-T	99.8	107	P/P	50 - 150
Acetaminophen	111	111	P/P	60 - 160
Acetamiprid	100	101	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A116684
Included Lab Sample IDs: 2376010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	74.0	77.9	P/P	50 - 150
Bentazon	96.6	95.2	P/P	50 - 160
Benzovindiflupyr	114	112	P/P	50 - 150
Carbamazepine	99.8	94.6	P/P	60 - 150
Clothianidin	106	107	P/P	60 - 150
Dinotefuran	106	108	P/P	50 - 150
Diuron	114	107	P/P	60 - 160
Fenuron	100	99.3	P/P	60 - 150
Fluridone	95.3	101	P/P	60 - 160
Hydrocodone	105	100	P/P	60 - 150
Ibuprofen	92.7	103	P/P	50 - 160
Imazapyr	92.0	96.5	P/P	50 - 150
Imidacloprid	93.6	92.4	P/P	60 - 150
Linuron	90.8	94.4	P/P	60 - 150
Mandestrobin	113	106	P/P	50 - 150
MCPP	97.1	96.8	P/P	50 - 150
Naproxen	64.1	89.1	P/P	50 - 160
Primidone	96.9	100	P/P	60 - 150
Pyraclostrobin	118	122	P/P	60 - 150
Silvex	101	105	P/P	50 - 150
Thiamethoxam	104	106	P/P	50 - 150
Tolfenpyrad	98.8	95.4	P/P	60 - 150
Triclopyr	95.1	114	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A116710
Included Lab Sample IDs: 2376000, 2376001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.3	95.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A116711
Included Lab Sample IDs: 2376000, 2376001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.2	97.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A116712
Included Lab Sample IDs: 2376000, 2376001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.9	94.7	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A116713
Included Lab Sample IDs: 2375998, 2375999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.2	95.3	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A116769

Included Lab Sample IDs: 2375998, 2375999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	97.2	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	
EPA 180.1 Rev. 2.0	Turbidity	101				4.51	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	101	102			0.567
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	97.2	100			3.09
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	95.5	95.1	96.6			1.57
EPA 365.1 Rev. 2.0	Total-P	103	103	101			1.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	99.7	102			1.79
EPA 8321B	2,4-D	102	108	102			6.37
	2,4,5-T	76.0	80.2	74.0			8.04
	Acesulfame K	74.1	77.0	95.0			21.0
	Acetaminophen	95.1	103	100			3.22
	Acetamiprid	83.1	87.9	83.9			4.61
	Afidopyropen	64.9	64.1	70.2			9.12
	AMPA	106	99.4	99.4			0.0072
	Bentazon	69.1	70.5	75.8			7.20
	Benzovindiflupyr	85.1	93.9	88.2			6.34
	Carbamazepine	81.2	86.2	83.4			3.33
	Clothianidin	93.6	100	103			2.29
	Dinotefuran	95.1	103	97.9			4.92
	Diuron	69.3	79.8	76.3			4.49
	Endothall	97.9	103	100			2.13
	Fenuron	93.5	100	101			0.949
	Fluridone	78.0	78.9	81.6			3.36
	Glufosinate	100	111	110			0.419
	Glyphosate	98.6	97.5	102			4.40
	Hydrocodone	86.3	90.1	92.1			2.16
	Ibuprofen	96.7	99.9	92.6			7.56
	Imazapyr	83.6	90.6	89.4			1.32
	Imidacloprid	85.4	92.5	91.9			0.616
	Linuron	77.2	81.9	80.5			1.69
	Mandestrobin	91.0	94.3	99.3			5.14
	MCPP	102	105	96.5			8.12
	Naproxen	87.6	89.4	66.8			29.0
	Primidone	89.9	95.7	95.6			0.111
	Pyraclostrobin	78.4	88.7	85.3			3.99
	Silvex	82.2	78.6	88.1			11.4
	Sucralose	113	112	110			0.765
	Thiamethoxam	86.6	95.2	95.2			0.0381
	Tolfenpyrad	40.8	50.0	42.3			16.5
	Triclopyr	73.2	87.9	74.1			17.0
SM 2320 B-2011	Total Alkalinity	98.1				1.32	
SM 2540 D-2015	TSS	102					
SM 4500-F- C-2011	Fluoride	98.2	98.2	98.8			0.464
SM 5310 B-2011	Organic Carbon	98.0	88.6	88.5			0.130

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2375998, 2375999
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2376000, 2376001
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2376000, 2376001
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2376000, 2376001
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2376000, 2376001

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2376002, 2376003
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2376010
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2375998, 2375999
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2375998, 2375999
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2375998, 2375999
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2376000, 2376001

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	12/16/2022			12/16/2022 14:22	Khloe J Berg	2375998
	12/16/2022			12/16/2022 14:23	Khloe J Berg	2375999
EPA 350.1 Rev. 2.0	12/16/2022			01/03/2023 17:03	Ping Hua	2376000
	12/16/2022			01/03/2023 17:04	Ping Hua	2376001
EPA 351.2 Rev. 2.0	12/16/2022	12/21/2022 16:20	Simonne.V. Calhoun	01/03/2023 13:23	Samantha L Bates	2376000
	12/16/2022	12/21/2022 16:20	Simonne.V. Calhoun	01/03/2023 13:25	Samantha L Bates	2376001
EPA 353.2 Rev. 2.0	12/16/2022			12/19/2022 17:39	Touraj Touran	2376000
	12/16/2022			12/19/2022 17:40	Touraj Touran	2376001
EPA 365.1 Rev. 2.0	12/16/2022	12/21/2022 15:15	Simonne.V. Calhoun	12/22/2022 12:08	James L Waggeberby	2376000
	12/16/2022	12/21/2022 15:15	Simonne.V. Calhoun	12/22/2022 12:15	James L Waggeberby	2376001
EPA 365.1 Rev. 2.0 dissolved	12/16/2022			12/16/2022 15:23	Chandler E Cox	2376002, 2376003
EPA 8321B	12/16/2022	12/16/2022 12:30	Manjita Shrestha	12/16/2022 16:05	Manjita Shrestha	2376010
	12/16/2022	12/16/2022 12:30	Manjita Shrestha	12/16/2022 16:57	Manjita Shrestha	2376010
	12/16/2022	12/16/2022 12:30	Manjita Shrestha	12/17/2022 00:14	Manjita Shrestha	2376010
	12/16/2022	12/20/2022 08:30	June Rhew	12/20/2022 21:54	Juyoung Kim	2376010
SM 2320 B-2011	12/16/2022			01/04/2023 01:06	Adam P Silver	2375998
	12/16/2022			01/04/2023 01:17	Adam P Silver	2375999
SM 2540 D-2015	12/16/2022			12/19/2022 16:08	Yijie Li	2375998, 2375999
SM 4500-F- C-2011	12/16/2022			01/05/2023 16:08	Dale L. Simmons	2375998
	12/16/2022			01/05/2023 16:14	Dale L. Simmons	2375999
SM 5310 B-2011	12/16/2022			01/04/2023 03:04	Khloe J Berg	2376000
	12/16/2022			01/04/2023 03:38	Khloe J Berg	2376001