

Chemical Analysis Report

SO-DIST-2023-02-17-01

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

Event Description: **Caloosa Creeks**
Request ID: **RQ-2023-02-06-20**
Customer: **SO-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Thomas Baker

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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 13-MAR-2023 13:31



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: Orange River at Boat Ramp

Collection Date/Time: 02/16/2023 08:00

Field ID: G3SD0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388464	DEP SOP: NU-094-1	Color (true)	49		PCU	P426019	
	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P426043	
	EPA 300.0 Rev. 2.1	Chloride	69		mg Cl/L	P426648	
		Sulfate	18		mg SO4/L	P426652	
	SM 2320 B-2011	Total Alkalinity	170		mg CaCO3/L	P426293	
	SM 2540 C-2015	TDS	333		mg/L	P426486	
	SM 2540 D-2015	TSS	8	I	mg/L	P426377	
	SM 4500-F- C-2011	Fluoride	0.17		mg F/L	P426296	
2388468	SM 5310 B-2011 dissolved	Organic Carbon	12		mg C/L	P426223	
2388472	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P426471	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P426401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P426278	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P426133	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P426223	
2388476	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P426035	

Ref. Method and Comment:

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: 02/16/2023 08:15

Field ID: FB_02162023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388480	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P426018	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P426044	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P426648	
		Sulfate	0.20	U	mg SO4/L	P426652	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P426394	
	SM 2540 C-2015	TDS	15	U	mg/L	P426485	
	SM 2540 D-2015	TSS	2	U	mg/L	P426376	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P426397	
2388481	SM 5310 B-2011 dissolved	Organic Carbon	0.67	I	mg C/L	P426223	
2388482	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P426472	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P426401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P426278	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P426217	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P426588	
2388483	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P426036	

Ref. Method and Comment:

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

SM 5310 B-2011 dissolved: The result was confirmed on 03/03/2023.

Sample Location: Roberts Canal @ SR 80

Collection Date/Time: 02/16/2023 09:15

Field ID: G3SD0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388465	DEP SOP: NU-094-1	Color (true)	58		PCU	P426019	
	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P426043	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P426648	
		Sulfate	26		mg SO4/L	P426652	
	SM 2320 B-2011	Total Alkalinity	224		mg CaCO3/L	P426394	
	SM 2540 C-2015	TDS	336		mg/L	P426486	
	SM 2540 D-2015	TSS	15		mg/L	P426377	
	SM 4500-F- C-2011	Fluoride	0.32		mg F/L	P426397	
2388469	SM 5310 B-2011 dissolved	Organic Carbon	15		mg C/L	P426223	
2388473	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P426471	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P426401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P426278	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P426133	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P426223	
2388477	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P426036	

Ref. Method and Comment:

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

Sample Location: NINE MILE CANAL @ SR 80

Collection Date/Time: 02/16/2023 09:55

Field ID: G3SD0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388466	DEP SOP: NU-094-1	Color (true)	120	A	PCU	P426018	
	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P426044	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P426648	
		Sulfate	22		mg SO4/L	P426652	
	SM 2320 B-2011	Total Alkalinity	103		mg CaCO3/L	P426394	
	SM 2540 C-2015	TDS	252		mg/L	P426486	
	SM 2540 D-2015	TSS	11		mg/L	P426377	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P426397	
2388470	SM 5310 B-2011 dissolved	Organic Carbon	18		mg C/L	P426223	
2388474	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P426471	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P426401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P426278	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P426133	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P426223	
2388478	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P426036	

Ref. Method and Comment:

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

Sample Location: BEE BRANCH @ LOBLOLLY BAY RD

Collection Date/Time: 02/16/2023 10:40

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388484	DEP SOP: NU-094-1	Color (true)	180		PCU	P426018	
	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P426044	
	EPA 300.0 Rev. 2.1	Chloride	34	A	mg Cl/L	P426649	
		Sulfate	13	A	mg SO4/L	P426653	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P426394	
	SM 2540 C-2015	TDS	141		mg/L	P426486	
	SM 2540 D-2015	TSS	2	I	mg/L	P426377	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P426397	
2388485	SM 5310 B-2011 dissolved	Organic Carbon	24		mg C/L	P426223	
2388486	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P426472	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P426401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P426278	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P426217	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P426223	
2388487	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P426036	
2388494	EPA 8321B	2,4-D	0.0020	U	ug/L	P426090	
		Acesulfame K	0.10	U	ug/L	P425983	MS
		2,4,5-T	0.0040	U	ug/L	P426090	
		AMPA	0.10	U	ug/L	P425983	
		Acetaminophen	0.0080	U	ug/L	P426090	
		Acetamiprid	0.0020	U	ug/L	P426090	
		Endothall	0.25	U	ug/L	P425983	
		Glufosinate	0.10	U	ug/L	P425983	MS
		Glyphosate	0.14	I	ug/L	P425983	
		Afidopyropen	0.0020	U	ug/L	P426090	
		Bentazon	8.0E-04	U	ug/L	P426090	
		Sucralose	0.034	I	ug/L	P425983	
		Benzovindiflupyr	0.0020	U	ug/L	P426090	
		Carbamazepine	8.0E-04	U	ug/L	P426090	
		Clothianidin	0.0020	U	ug/L	P426090	
		Dinotefuran	0.0020	U	ug/L	P426090	
		Diuron	0.0020	U	ug/L	P426090	
		Fenuron	0.032	U	ug/L	P426090	
		Fluridone	8.0E-04	U	ug/L	P426090	
		Imazapyr	0.0040	U	ug/L	P426090	
		Hydrocodone	0.0020	U	ug/L	P426090	
		Ibuprofen	0.080	U	ug/L	P426090	
		Imidacloprid	0.019		ug/L	P426090	
		Linuron	0.0040	U	ug/L	P426090	
		Mandestrobin	0.0020	U	ug/L	P426090	
		MCP	0.0020	U	ug/L	P426090	
		Naproxen	0.0080	U	ug/L	P426090	
		Primidone	0.0040	U	ug/L	P426090	

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388494	EPA 8321B	Pyraclostrobin	0.0020	U	ug/L	P426090	
		Silvex	0.0040	U	ug/L	P426090	
		Thiamethoxam	0.0020	U	ug/L	P426090	
		Tolfenpyrad	0.0020	U	ug/L	P426090	
		Triclopyr	0.0040	U	ug/L	P426090	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Telegraph Creek Sonde @ USGS Sonde Station Collection Date/Time: 02/16/2023 11:25

Field ID: G3SD0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388467	DEP SOP: NU-094-1	Color (true)	150		PCU	P426018	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P426044	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P426648	
		Sulfate	4.0		mg SO4/L	P426652	
	SM 2320 B-2011	Total Alkalinity	176		mg CaCO3/L	P426394	
	SM 2540 C-2015	TDS	282		mg/L	P426486	
	SM 2540 D-2015	TSS	2	I	mg/L	P426377	
	SM 4500-F- C-2011	Fluoride	0.12		mg F/L	P426397	
2388471	SM 5310 B-2011 dissolved	Organic Carbon	22		mg C/L	P426223	
2388475	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P426471	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P426401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P426278	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P426133	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P426223	
2388479	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P426036	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 03/01/2023

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The result was confirmed on 03/09/2023.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P426018

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P426019

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426043

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426044

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426648

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426649

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426652

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426653

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426471

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426472

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426401

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426278

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426133

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426217

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P426035

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P426036

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

Reference Method: EPA 8321B
Batch ID: P425983

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P426090

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: P426293

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

Reference Method: SM 2320 B-2011

Batch ID: P426394

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

Reference Method: SM 2540 C-2015

Batch ID: P426485

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015

Batch ID: P426486

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P426376

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P426377

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P426296

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P426223

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

Reference Method: SM 5310 B-2011
Batch ID: P426588

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

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P426223

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: P426018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.9		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P426019

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426043

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426044

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426648

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426649

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426652

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426653

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426471

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426472

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: P426401

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426278

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426133

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426217

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P426035

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P426036

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.8		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P425983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	119		P	40 - 150
AMPA	107		P	40 - 150
Endothall	105		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	105		P	40 - 150
Sucralose	111		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P426090

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	140		P	40 - 150
2,4,5-T	105		P	40 - 150
Acetaminophen	94.6		P	30 - 150
Acetamiprid	103		P	40 - 150
Afidopyropen	80.8		P	30 - 150
Bentazon	134		P	30 - 150
Benzovindiflupyr	90.3		P	40 - 150
Carbamazepine	95.2		P	40 - 150
Clothianidin	72.7		P	40 - 150
Dinotefuran	115		P	40 - 150
Diuron	70.3		P	40 - 150
Fenuron	78.2		P	40 - 150
Fluridone	83.5		P	40 - 150
Hydrocodone	88.0		P	40 - 150
Ibuprofen	65.6		P	40 - 150
Imazapyr	94.9		P	40 - 150
Imidacloprid	107		P	40 - 150
Linuron	71.4		P	40 - 150
Mandestrobin	102		P	40 - 150
MCPP	96.7		P	40 - 150
Naproxen	75.2		P	40 - 150
Primidone	94.3		P	40 - 150
Pyraclostrobin	82.1		P	40 - 150
Silvex	102		P	40 - 150
Thiamethoxam	87.7		P	40 - 150
Tolfenpyrad	49.5		P	30 - 150
Triclopyr	93.9		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P426293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	94 - 106

Reference Method: SM 2320 B-2011

Batch ID: P426394

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

Reference Method: SM 2540 C-2015

Batch ID: P426485

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

Reference Method: SM 2540 C-2015

Batch ID: P426486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.7		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P426376

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P426377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.2		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P426296

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426223

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.9		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P426588

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P426223

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388411	Chloride	96.4		P	90 - 110
2388412	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388484	Chloride	96.7		P	90 - 110
2388699	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388411	Sulfate	100		P	90 - 110
2388412	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388484	Sulfate	101		P	90 - 110
2388699	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388420	Ammonia-N	98.8	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388706	Ammonia-N	96.4	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388420	Kjeldahl Nitrogen	94.8	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426278

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388473	NO2NO3-N	98.8	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388413	Total-P	99.7	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388646	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P426035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388365	O-Phosphate-P	98.6	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P426036

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388477	O-Phosphate-P	97.7	99.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P425983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388155	Acesulfame K	150	151	F/F	40 - 150
2388155	Endothall	110	113	P/P	40 - 150
2388155	Glufosinate	232	184	F/F	40 - 150
2388155	Sucralose	108	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P426090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388382	2,4-D	103	108	P/P	40 - 150
2388382	2,4,5-T	96.2	98.7	P/P	40 - 150
2388382	Acetaminophen	96.8	109	P/P	30 - 150
2388382	Acetamiprid	79.0	69.2	P/P	40 - 150
2388382	Afidopyropen	55.5	52.6	P/P	30 - 150
2388382	Bentazon	90.4	93.0	P/P	30 - 150
2388382	Benzovindiflupyr	77.8	88.0	P/P	40 - 150
2388382	Carbamazepine	64.8	72.3	P/P	40 - 150
2388382	Clothianidin	67.5	65.4	P/P	40 - 150
2388382	Dinotefuran	102	107	P/P	40 - 150
2388382	Diuron	47.5	51.0	P/P	40 - 150
2388382	Fenuron	53.0	52.8	P/P	40 - 150
2388382	Fluridone	65.6	63.1	P/P	40 - 150
2388382	Hydrocodone	71.6	71.9	P/P	40 - 150
2388382	Ibuprofen	79.0	86.7	P/P	40 - 150
2388382	Imazapyr	90.7	96.1	P/P	40 - 150
2388382	Linuron	61.5	68.4	P/P	40 - 150
2388382	Mandestrobin	87.5	90.9	P/P	40 - 150
2388382	MCPP	91.6	97.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P426090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388382	Naproxen	111	101	P/P	40 - 150
2388382	Primidone	75.1	81.6	P/P	40 - 150
2388382	Pyraclostrobin	80.7	80.8	P/P	40 - 150
2388382	Silvex	111	113	P/P	40 - 150
2388382	Thiamethoxam	82.2	78.2	P/P	40 - 150
2388382	Tolfenpyrad	55.8	53.8	P/P	30 - 150
2388382	Triclopyr	104	116	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P426296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388331	Fluoride	98.6	99.4	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388643	Fluoride	102	99.7	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387290	Organic Carbon	94.7	95.7	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P426588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387934	Organic Carbon	94.4	96.0	P/P	85 - 115

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P426223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387290	Organic Carbon	94.7	95.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P426018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388466	Color (true)	3.54	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P426019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388418	Color (true)	0.327	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388304	Turbidity	0.422	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388466	Turbidity	1.47	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388411	Chloride	0.325	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388484	Chloride	1.92	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388411	Sulfate	0.532	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388484	Sulfate	1.54	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P426471

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388420	Ammonia-N	1.20	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P426472

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388706	Ammonia-N	1.69	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P426401

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388420	Kjeldahl Nitrogen	4.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P426278

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388473	NO2NO3-N	0.458	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P426133

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388413	Total-P	0.439	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P426217

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388646	Total-P	0.244	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P426035

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388365	O-Phosphate-P	0.606	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P426036

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388477	O-Phosphate-P	1.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P425983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388155	Acesulfame K	0.853	Spike	P	0 - 30
2388155	AMPA	2.29	Spike	P	0 - 30
2388155	Endothall	2.28	Spike	P	0 - 30
2388155	Glufosinate	23.4	Spike	P	0 - 30
2388155	Glyphosate	1.90	Spike	P	0 - 30
2388155	Sucralose	2.95	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P426090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388382	2,4-D	4.39	Spike	P	0 - 30
2388382	2,4,5-T	2.53	Spike	P	0 - 30
2388382	Acetaminophen	11.7	Spike	P	0 - 30
2388382	Acetamiprid	13.3	Spike	P	0 - 30
2388382	Afidopyropen	5.46	Spike	P	0 - 30
2388382	Bentazon	2.83	Spike	P	0 - 30
2388382	Benzovindiflupyr	12.3	Spike	P	0 - 30
2388382	Carbamazepine	10.8	Spike	P	0 - 30
2388382	Clothianidin	2.18	Spike	P	0 - 30
2388382	Dinotefuran	4.68	Spike	P	0 - 30
2388382	Diuron	6.48	Spike	P	0 - 30
2388382	Fenuron	0.337	Spike	P	0 - 30
2388382	Fluridone	3.86	Spike	P	0 - 30
2388382	Hydrocodone	0.472	Spike	P	0 - 30
2388382	Ibuprofen	9.21	Spike	P	0 - 30
2388382	Imazapyr	5.34	Spike	P	0 - 30
2388382	Imidacloprid	4.45	Spike	P	0 - 30
2388382	Linuron	10.5	Spike	P	0 - 30
2388382	Mandestrobin	3.84	Spike	P	0 - 30
2388382	MCPP	6.09	Spike	P	0 - 30
2388382	Naproxen	9.58	Spike	P	0 - 30
2388382	Primidone	8.35	Spike	P	0 - 30
2388382	Pyraclostrobin	0.147	Spike	P	0 - 30
2388382	Silvex	1.65	Spike	P	0 - 30
2388382	Thiamethoxam	3.28	Spike	P	0 - 30
2388382	Tolfenpyrad	3.77	Spike	P	0 - 30
2388382	Triclopyr	10.7	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P426293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388331	Total Alkalinity	0.394	Sample	P	0 - 3.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P426394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388643	Total Alkalinity	1.19	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P426485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387726	TDS	4.89	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P426486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388411	TDS	1.46	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P426296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388331	Fluoride	0.477	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388643	Fluoride	1.49	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P426223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387290	Organic Carbon	0.909	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P426588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387934	Organic Carbon	1.42	Spike	P	0 - 20

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P426223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387290	Organic Carbon	0.909	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2388494
Field Sample ID: G3SD0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.9	P	30 - 160
EPA 8321B	Diuron-d6	41.2	P	30 - 160
EPA 8321B	Endothall-d6	133	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	128	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.4	P	30 - 160
EPA 8321B	Primidone-d5	68.9	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117519

Included Lab Sample IDs: 2388464, 2388465, 2388466, 2388467, 2388480, 2388484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 110
Color (true)	101	101	P/P	90 - 110
Color (true)	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A117521

Included Lab Sample IDs: 2388476, 2388477, 2388478, 2388479, 2388483, 2388487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	99.2	P/P	90 - 110
O-Phosphate-P	98.7	98.0	P/P	90 - 110
O-Phosphate-P	99.2	98.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117527

Included Lab Sample IDs: 2388464, 2388465, 2388466, 2388467, 2388480, 2388484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105
Turbidity	102	101	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A117585

Included Lab Sample IDs: 2388494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	115	107	P/P	60 - 160
Endothall	116	111	P/P	60 - 160
Glufosinate	111	91.1	P/P	60 - 160
Glyphosate	111	93.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117586

Included Lab Sample IDs: 2388494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	130	125	P/P	60 - 160
Sucralose	119	119	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117588

Included Lab Sample IDs: 2388472, 2388473, 2388474

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

Reference Method: SM 5310 B-2011

Run ID: A117592

Included Lab Sample IDs: 2388472, 2388473, 2388474, 2388475, 2388486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A117592

Included Lab Sample IDs: 2388472, 2388473, 2388474, 2388475, 2388486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	101	P/P	90 - 110
Organic Carbon	96.6	100	P/P	90 - 110

Reference Method: SM 5310 B-2011 dissolved

Run ID: A117592

Included Lab Sample IDs: 2388468, 2388469, 2388470, 2388471, 2388481, 2388485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	101	P/P	90 - 110
Organic Carbon	96.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117610

Included Lab Sample IDs: 2388475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117620

Included Lab Sample IDs: 2388472, 2388473, 2388474, 2388475, 2388482, 2388486

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

Reference Method: SM 2320 B-2011

Run ID: A117622

Included Lab Sample IDs: 2388464

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.8	96.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117622

Included Lab Sample IDs: 2388464

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117624

Included Lab Sample IDs: 2388486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117627

Included Lab Sample IDs: 2388482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117627

Included Lab Sample IDs: 2388482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	97.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117655

Included Lab Sample IDs: 2388494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.3	118	P/P	50 - 150
2,4,5-T	93.2	99.9	P/P	50 - 150
Acetaminophen	107	103	P/P	60 - 160
Acetamiprid	112	77.9	P/P	50 - 150
Afidopyropen	97.6	107	P/P	50 - 150
Bentazon	118	127	P/P	50 - 160
Benzovindiflupyr	110	106	P/P	50 - 150
Carbamazepine	118	119	P/P	60 - 150
Clothianidin	91.7	105	P/P	60 - 150
Dinotefuran	116	115	P/P	50 - 150
Diuron	110	108	P/P	60 - 160
Fenuron	93.7	108	P/P	60 - 150
Fluridone	100	107	P/P	60 - 160
Hydrocodone	106	124	P/P	60 - 150
Ibuprofen	94.8	125	P/P	50 - 160
Imazapyr	95.5	101	P/P	50 - 150
Imidacloprid	109	78.6	P/P	60 - 150
Linuron	94.5	91.9	P/P	60 - 150
Mandestrobin	119	116	P/P	50 - 150
MCPP	105	102	P/P	50 - 150
Naproxen	144	106	P/P	50 - 160
Primidone	93.8	103	P/P	60 - 150
Pyraclostrobin	108	106	P/P	60 - 150
Silvex	101	95.8	P/P	50 - 150
Thiamethoxam	103	115	P/P	50 - 150
Tolfenpyrad	101	99.9	P/P	60 - 150
Triclopyr	92.9	101	P/P	50 - 150

Reference Method: SM 2320 B-2011

Run ID: A117667

Included Lab Sample IDs: 2388465, 2388466, 2388467, 2388480, 2388484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.1	96.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117667

Included Lab Sample IDs: 2388465, 2388466, 2388467, 2388480, 2388484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117687

Included Lab Sample IDs: 2388464, 2388465, 2388466, 2388467, 2388480, 2388484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.1	96.6	P/P	90 - 110
Chloride	96.2	96.1	P/P	90 - 110
Sulfate	98.7	99.0	P/P	90 - 110
Sulfate	99.0	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117701

Included Lab Sample IDs: 2388472, 2388473, 2388474, 2388475, 2388482, 2388486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	98.4	P/P	90 - 110
Ammonia-N	98.8	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A117756

Included Lab Sample IDs: 2388482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.1	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117796

Included Lab Sample IDs: 2388472, 2388473, 2388474, 2388475, 2388482, 2388486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	99.0	P/P	90 - 110
Kjeldahl Nitrogen	99.0	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		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	99.9			3.54	
	Color (true)	100			0.327	
EPA 180.1 Rev. 2.0	Turbidity	101			0.422	
	Turbidity	101			1.47	
EPA 300.0 Rev. 2.1	Chloride	97.0	96.4	97.2	0.325	
	Chloride	99.3	96.7	100	1.92	
	Sulfate	101	100	101	0.532	
	Sulfate	103	101	104	1.54	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	98.8	100		1.20
	Ammonia-N	100	96.4	98.2		1.69
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.1	94.8	101		4.45
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	98.8	98.3		0.458
EPA 365.1 Rev. 2.0	Total-P	98.1	99.7	99.2		0.439
	Total-P	98.6	102	103		0.244
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	98.6	99.3		0.606
	O-Phosphate-P	98.8	97.7	99.3		1.45
EPA 8321B	2,4-D	140	103	108		4.39
	2,4,5-T	105	96.2	98.7		2.53
	Acesulfame K	119	150	151		0.853
	Acetaminophen	94.6	96.8	109		11.7
	Acetamiprid	103	79.0	69.2		13.3
	Afidopyropen	80.8	55.5	52.6		5.46
	AMPA	107				2.29
	Bentazon	134	90.4	93.0		2.83
	Benzovindiflupyr	90.3	77.8	88.0		12.3
	Carbamazepine	95.2	64.8	72.3		10.8
	Clothianidin	72.7	67.5	65.4		2.18
	Dinotefuran	115	102	107		4.68
	Diuron	70.3	47.5	51.0		6.48
	Endothall	105	110	113		2.28
	Fenuron	78.2	53.0	52.8		0.337
	Fluridone	83.5	65.6	63.1		3.86
	Glufosinate	101	232	184		23.4
	Glyphosate	105				1.90
	Hydrocodone	88.0	71.6	71.9		0.472
	Ibuprofen	65.6	79.0	86.7		9.21
	Imazapyr	94.9	90.7	96.1		5.34
	Imidacloprid	107				4.45
	Linuron	71.4	61.5	68.4		10.5
	Mandestrobin	102	87.5	90.9		3.84
	MCPP	96.7	91.6	97.3		6.09
	Naproxen	75.2	111	101		9.58
	Primidone	94.3	75.1	81.6		8.35
	Pyraclostrobin	82.1	80.7	80.8		0.147
	Silvex	102	111	113		1.65
	Sucralose	111	108	113		2.95
	Thiamethoxam	87.7	82.2	78.2		3.28
	Tolfenpyrad	49.5	55.8	53.8		3.77
	Triclopyr	93.9	104	116		10.7
SM 2320 B-2011	Total Alkalinity	99.1			0.394	
	Total Alkalinity	98.1			1.19	
SM 2540 C-2015	TDS	104			4.89	
	TDS	93.7			1.46	
SM 2540 D-2015	TSS	95.3				

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 2540 D-2015	TSS	91.2				
SM 4500-F- C-2011	Fluoride	97.5	98.6	99.4		0.477
	Fluoride	101	102	99.7		1.49
SM 5310 B-2011	Organic Carbon	99.9	94.7	95.7		0.909
	Organic Carbon	95.0	94.4	96.0		1.42
SM 5310 B-2011 dissolved	Organic Carbon	99.9	94.7	95.7		0.909

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2388472, 2388473, 2388474, 2388475, 2388482, 2388486
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2388472, 2388473, 2388474, 2388475, 2388482, 2388486
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2388472, 2388473, 2388474, 2388475, 2388482, 2388486
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2388472, 2388473, 2388474, 2388475, 2388482, 2388486
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2388476, 2388477, 2388478, 2388479, 2388483, 2388487
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2388494
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2388472, 2388473, 2388474, 2388475, 2388482, 2388486
SM 5310 B-2011 dissolved	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2388468, 2388469, 2388470, 2388471, 2388481, 2388485

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	02/17/2023			02/17/2023 14:05	Alexis Price	2388467
	02/17/2023			02/17/2023 14:06	Alexis Price	2388480
	02/17/2023			02/17/2023 14:17	Alexis Price	2388464, 2388465
	02/17/2023			02/17/2023 14:29	Alexis Price	2388466, 2388484
EPA 180.1 Rev. 2.0	02/17/2023			02/17/2023 13:56	Khloe J Berg	2388464
	02/17/2023			02/17/2023 13:57	Khloe J Berg	2388465
	02/17/2023			02/17/2023 14:02	Khloe J Berg	2388466
	02/17/2023			02/17/2023 14:04	Khloe J Berg	2388467
EPA 300.0 Rev. 2.1	02/17/2023			02/17/2023 14:06	Khloe J Berg	2388480
	02/17/2023			02/17/2023 14:15	Khloe J Berg	2388484
	02/17/2023			03/02/2023 00:13	Judith K. Clark	2388464
	02/17/2023			03/02/2023 00:28	Judith K. Clark	2388465
EPA 350.1 Rev. 2.0	02/17/2023			03/02/2023 00:43	Judith K. Clark	2388466
	02/17/2023			03/02/2023 00:58	Judith K. Clark	2388467
	02/17/2023			03/02/2023 01:13	Judith K. Clark	2388480
	02/17/2023			03/02/2023 02:58	Judith K. Clark	2388484
EPA 351.2 Rev. 2.0	02/17/2023			02/28/2023 11:06	Ping Hua	2388472
	02/17/2023			02/28/2023 11:08	Ping Hua	2388473
	02/17/2023			02/28/2023 11:09	Ping Hua	2388474
	02/17/2023			02/28/2023 11:10	Ping Hua	2388475
EPA 353.2 Rev. 2.0	02/17/2023			02/28/2023 11:28	Ping Hua	2388486
	02/17/2023			02/28/2023 11:29	Ping Hua	2388482
	02/17/2023	02/27/2023 12:30	Simonne.V. Calhoun	03/03/2023 15:50	Judith K. Clark	2388472
	02/17/2023	02/27/2023 12:30	Simonne.V. Calhoun	03/03/2023 15:54	Judith K. Clark	2388473
EPA 365.1 Rev. 2.0	02/17/2023	02/27/2023 12:30	Simonne.V. Calhoun	03/03/2023 15:55	Judith K. Clark	2388474
	02/17/2023	02/27/2023 12:30	Simonne.V. Calhoun	03/03/2023 15:57	Judith K. Clark	2388475
	02/17/2023	02/27/2023 12:30	Simonne.V. Calhoun	03/03/2023 15:58	Judith K. Clark	2388482
	02/17/2023	02/27/2023 12:30	Simonne.V. Calhoun	03/03/2023 16:00	Judith K. Clark	2388486
EPA 365.1 Rev. 2.0 dissolved	02/17/2023			02/23/2023 09:30	Beverly Y. Sanders	2388473
	02/17/2023			02/23/2023 09:36	Beverly Y. Sanders	2388472
	02/17/2023			02/23/2023 09:37	Beverly Y. Sanders	2388474
	02/17/2023			02/23/2023 09:38	Beverly Y. Sanders	2388475
EPA 365.1 Rev. 2.0	02/17/2023			02/23/2023 09:40	Beverly Y. Sanders	2388482
	02/17/2023			02/23/2023 09:41	Beverly Y. Sanders	2388486
	02/17/2023	02/21/2023 12:56	Adam P Silver	02/22/2023 10:15	James L Waggeberby	2388472
	02/17/2023	02/21/2023 12:56	Adam P Silver	02/22/2023 10:16	James L Waggeberby	2388473, 2388474
EPA 365.1 Rev. 2.0	02/17/2023	02/21/2023 12:56	Adam P Silver	02/22/2023 16:31	James L Waggeberby	2388475
	02/17/2023	02/22/2023 13:36	Adam P Silver	02/23/2023 12:28	Simonne.V. Calhoun	2388486
	02/17/2023	02/22/2023 13:36	Adam P Silver	02/23/2023 13:47	Simonne.V. Calhoun	2388482
	02/17/2023			02/17/2023 15:40	Elise M. Gillis	2388476

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	02/17/2023			02/17/2023 15:54	Elise M. Gillis	2388477
	02/17/2023			02/17/2023 15:56	Elise M. Gillis	2388478
	02/17/2023			02/17/2023 15:57	Elise M. Gillis	2388483
	02/17/2023			02/17/2023 15:58	Elise M. Gillis	2388487
	02/17/2023			02/17/2023 16:06	Elise M. Gillis	2388479
EPA 8321B	02/17/2023	02/21/2023 12:00	Manjita Shrestha	02/21/2023 14:54	Manjita Shrestha	2388494
	02/17/2023	02/21/2023 12:00	Manjita Shrestha	02/21/2023 23:03	Manjita Shrestha	2388494
	02/17/2023	02/23/2023 08:30	Hoor Shaik	02/23/2023 22:16	Juyoung Kim	2388494
SM 2320 B-2011	02/17/2023			02/22/2023 19:31	Chandler E Cox	2388464
	02/17/2023			02/25/2023 07:27	Dale L. Simmons	2388465
	02/17/2023			02/25/2023 07:42	Dale L. Simmons	2388466
	02/17/2023			02/25/2023 07:57	Dale L. Simmons	2388467
	02/17/2023			02/25/2023 08:06	Dale L. Simmons	2388480
SM 2540 C-2015	02/17/2023			02/25/2023 08:19	Dale L. Simmons	2388484
	02/17/2023			02/20/2023 15:46	Yijie Li	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
SM 2540 D-2015	02/17/2023			02/20/2023 15:46	Yijie Li	2388464, 2388465, 2388466, 2388467, 2388480, 2388484
SM 4500-F- C-2011	02/17/2023			02/22/2023 19:31	Chandler E Cox	2388464
	02/17/2023			02/25/2023 07:27	Dale L. Simmons	2388465
	02/17/2023			02/25/2023 07:42	Dale L. Simmons	2388466
	02/17/2023			02/25/2023 07:57	Dale L. Simmons	2388467
	02/17/2023			02/25/2023 08:06	Dale L. Simmons	2388480
SM 5310 B-2011	02/17/2023			02/25/2023 08:19	Dale L. Simmons	2388484
	02/17/2023			02/21/2023 20:00	Elise M. Gillis	2388472
	02/17/2023			02/21/2023 20:27	Elise M. Gillis	2388473
	02/17/2023			02/21/2023 21:00	Elise M. Gillis	2388474
	02/17/2023			02/21/2023 22:02	Elise M. Gillis	2388475
SM 5310 B-2011 dissolved	02/17/2023			02/21/2023 22:56	Elise M. Gillis	2388486
	02/17/2023			03/01/2023 13:31	Elise M. Gillis	2388482
	02/17/2023			02/21/2023 20:13	Elise M. Gillis	2388468
	02/17/2023			02/21/2023 20:41	Elise M. Gillis	2388469
	02/17/2023			02/21/2023 21:16	Elise M. Gillis	2388470
	02/17/2023			02/21/2023 22:16	Elise M. Gillis	2388471
	02/17/2023			02/21/2023 22:43	Elise M. Gillis	2388481
	02/17/2023			02/21/2023 23:13	Elise M. Gillis	2388485